CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST LOUIS, MO, U. S. A.

BUICK

"LE SABRE" – MODEL 4400

POWER PACKAGE

1959

AFB Four-Bore Down-Draft Climatic® Control **Carbureter No. 2877S**

CARBURETER SPECIFICATIONS

For Buick 8 Cylinder 364 Cu. In. Engine: Vacuum at Idle 16 to 17 Inches

Dimensions: Flange four bore—4 bolt type
Throttle bore primary, 1 9/16 inch secondary 1 11/16 inch I D
Primary venturi size primary side 7/16 inch secondary side 11/32 inch I D
Main venturi size primary side 1¼ inch secondary side 1 9/16 inch I D

Vents: Inside (4) in air horn Outside (5) in air horn (4) in body

Low Speed Circuit: (Primary side only) Jet size No 56 (.0465 inch) drill
By-pass, size No 54 (.055 inch) drill
Economizer size No 60 (.040 inch) drill
Idle bleed size (.053 inch) diameter
Idle port slot type length .200 inch, width .030 inch

Idle Port Opening: .156 to .162 inch above top edge of valve with valve tightly closed

Set Idle Adjustment Screw: ¼ to 1¾ turns open For richer mixture turn screw out Do not idle engine below 475 r p m Automatic transmission in neutral, 550 r p m for cars with air conditioning

Main Nozzle: Installed permanently DO NOT REMOVE Anti percolator bleed primary (tube in venturi assembly) size No 70 (.028 inch) drill Secondary (drilled hole in venturi assembly) size No 60 (.040 inch) drill

Secondary Initial Discharge (In venturi assembly secondary side only)
Pick up tube size No 60 (.040 inch) drill
Air bleed size (.0275 inch) diameter
Discharge port size (.051 inch) diameter

Accelerating Pump: Discharge jet (twin) primary side only size No 70 (.028 inch) drill Intake ball check seat (screw plug) size .115 to .120 inch diameter Discharge needle seat size No 50 (.070 inch) drill

Choke: Carter Climatic® Control set one point rich Butterfly type—offset choke valve primary side only Choke heat suction hole restriction in body size (.078 inch) diameter

Vacuum Spark Port: Horizontal slot (round end) .040 x .130 inch Bottom of port .008 to .016 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter

Spark Plug Gap .033"	Breaker Point Setting .015"	Ignition Timing Breaker Points to Open: 12° B. T. D. C. At Vibration Damper	Float Setting 7/32 Inch (Use Gauge T109-106)	Idle Adjustment Screw Setting ¼ to 1¾ Auto. Trans. 475 R.P.M. In Neutral

NOTE: These cars are equipped with Hydraulic Valve Lifters — NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Procedure Form 3701

FLOAT ALIGNMENT: Side of floats parallel to edge of casting Minimum clearance between lever and air horn lugs without binding To adjust, bend float lever

FLOAT LEVEL: 7/32 inch (Gauge T109 106) between top of floats (at outer end) and air horn gasket To adjust bend float lever

FLOAT DROP: 23/32 inch between top of floats (at outer end) and air horn gasket To adjust bend stop tabs on float brackets

PUMP: 33/64 inch from the top of the bowl cover to the top of the plunger shaft To adjust, bend throttle connector rod

CHOKE PISTON LEVER ADJUSTMENT: 010 inch (Gauge T109-200) between choke lever and stop in piston housing with choke valve closed To adjust, bend choke connector rod

FAST IDLE LINKAGE ADJUSTMENT: With slight clearance between lug on fast idle cam and stop on flange casting and inner choke shaft lever contacting lug on outer choke shaft lever align index mark on cam with adjusting screw To adjust, bend fast idle con nector rod

FAST IDLE THROTTLE VALVE CLEARANCE: 020 inch (Gauge T109 29) between lower edge of valve and bore with adjusting screw on index mark of cam

FAST IDLE ON CAR: 1500 R P M hot engine with fast idle screw on index mark of cam

UNLOADER: 3/16 inch (Gauge T109 28) between upper edge of choke valve and inner wall of air horn To adjust bend unloader lip on throttle lever

SECONDARY THROTTLE LEVER ADJUSTMENT: 1 Primary and secondary throttle valves must reach wide open position at the same time. To adjust, bend secondary operating rod **NOTE:** Secondary throttle valves will be a few degrees from wide open when primary valves are wide open Upper edge of secondary valve should just contact auxiliary valve when auxiliary valve is wide open **IMPORTANT:** The wide open stop lug on secondary throttle lever should contact boss on flange to prevent secondary valves from going past wide open If necessary bend stop lug 2 With primary and secondary throttle valves tightly closed there should be 010 to 030 inch gauge T109-29 between positive closing shoes on primary and secondary throttle levers To adjust, bend shoe on secondary lever

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: Crack throttle valves and manually open and close the choke valve Tang on secondary throttle lever should freely engage in notch of lock-out dog To adjust bend tang on secondary throttle lever

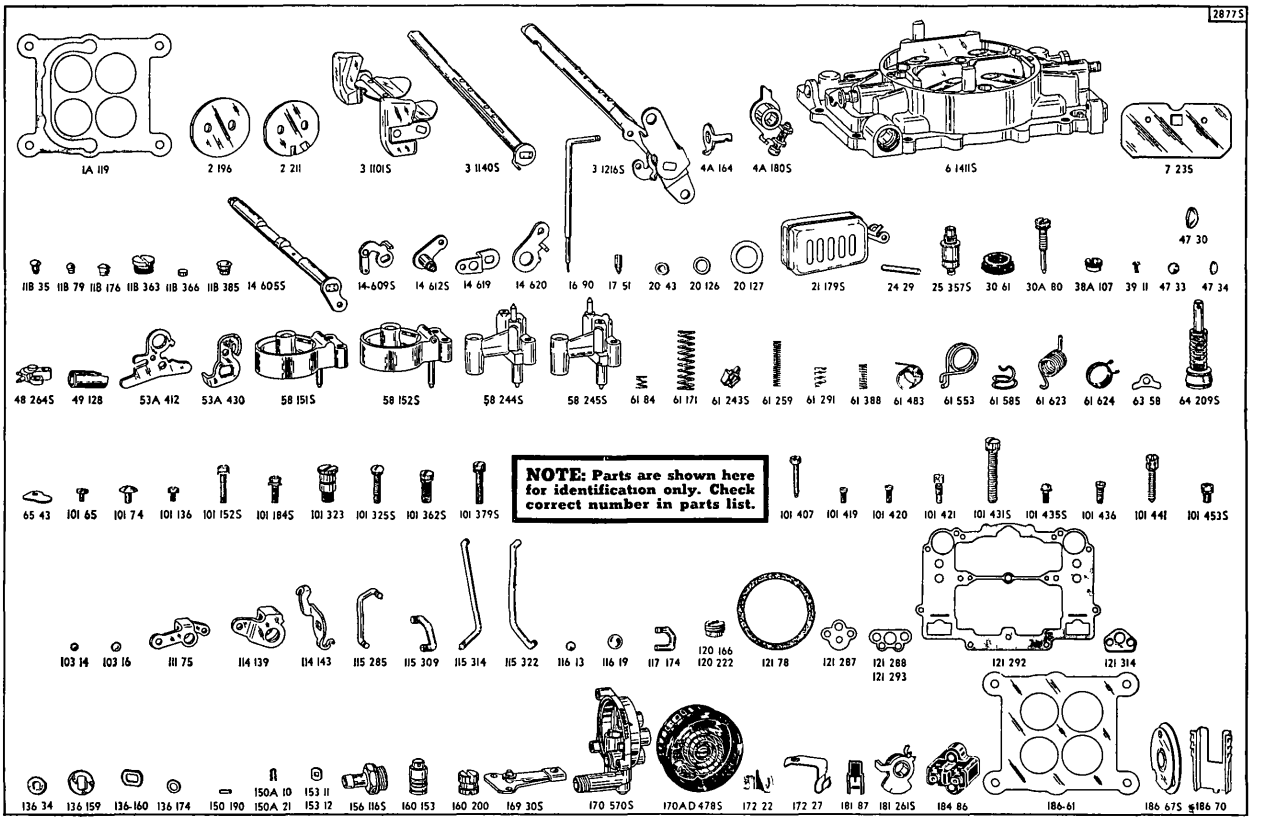
CAR STARTER SWITCH ADJUSTMENT: Should con tact between 19/64 inch and 9/16 inch travel of top edge of throttle lever stop lug and idle speed screw (Idle speed screw just touching stop lug with valve seating)

To adjust, add or remove shims from switch

TOOLS REQUIRED FOR SERVICING CARBURETER:

T109-28	3/16" Unloader gauge	T109 106	7/32' Float gauge
T109-29	020" Wire gauge	T109-200	010" Wire gauge
T109-41	Bending tool	T109 213	Bending tool

CARBURETER
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Buick—1959—Carbureter No. 2877S

WHEN SERVICING, USE GASKET ASSORTMENT No. 323; RE-CARBURETION KIT No. 1980N

PART NAMES, IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF RE-CARBURETION KIT

Part No.	PART NAME	
1A-119	FLANGE GASKET	
2-196	Secondary throttle valve	(2)
2-211	Primary throttle valve	(2)
3-1101S	Auxiliary throttle shaft valve and weight assembly	
3-1140S	Secondary throttle shaft and lever assembly	
3-1216S	Primary throttle shaft and lever assembly	
4A-164	Primary throttle shaft dog	
4A-180S	Primary throttle shaft dog and screw assembly	
6-1411S	Air horn assembly	
7-235	Choke valve	
11B-35	Rivet plug	
11B-79	Rivet plug	(5)
11B-176	Idle port rivet plug	(2)
11B-363	Pump intake screw plug	
11B-366	Lead plug	(4)
11B-385	Fuel passage plug	(2)
14-605S	Choke lever and shaft assembly	
14-609S	Choke piston lever and link assembly	
14-612S	Choke shaft and lever assembly (piston housing)	
14-619	Choke shaft lever	
14-620	Cam trip lever	
16-90	—STEP UP ROD (.0655" x .054")	(2)
17-51	Pump discharge check needle	
20-43	Piston housing gasket	
20-126	Needle seat gasket	(2)

Part No.	PART NAME	
20-127	Fuel inlet fitting gasket	
21-179S	Float and lever assembly	(2)
24-29	Float lever pin	(2)
25-357S	NEEDLE AND SEAT ASSEMBLY (.111")	(2)
30-61	Switch strainer	
30A-80	Idle adjustment screw	(2)
38A-107	Pump intake check ball seat	
39-11	Choke valve attaching screw	(2)
47-30	Piston housing welsh plug	
47-33	Venturi welsh plug	(4)
47-34	Spark port welsh plug	
48-264S	Pump jet and housing assembly	
49-128	Switch plunger	
53A-412	Lockout dog	
53A-430	Secondary throttle operating lever	
58-151S	Secondary venturi assembly (choke side)	
58-152S	Secondary venturi assembly (pump side)	
58-244S	Primary venturi assembly (choke side)	
58-245S	Primary venturi assembly (pump side)	
61-84	Idle adjustment screw spring	(2)
61-171	Pump spring (lower)	
61-243S	Contact spring and washer assembly	
61-259	VACUUM PISTON SPRING	(2)
61-291	Throttle lever adjusting screw spring	
61-388	Switch return spring	

Part N .	PART NAME	
61-483	Secondary throttle return spring	
61-553	Primary throttle shaft dog spring	
61-585	Step up rod retaining spring	(2)
61-623	Throttle flex spring	
61-624	Fast idle cam spring	
63-58	Coil housing retainer	(3)
64-209S	PUMP PLUNGER ROD AND SPRING ASSEMBLY	
65-43	Step up piston cover plate	(2)
101-65	Choke shaft lever attaching screw	(2)
101-74	Throttle shaft lever attaching screw	(2)
101-136	Coil housing attaching screw	(3)
101-152S	Air horn attaching screw and washer assembly	
101-184S	Pump jet housing attaching screw and washer assembly	(2)
101-323	Fast idle cam attaching screw	
101-325S	Switch attaching screw and washer assembly	(2)
101-362S	Air horn attaching screw and washer assembly	(8)
101-379S	Secondary and primary venturi attaching screw and washer assembly	(8)
101-407	Fast idle adjustment screw	
101-419	Secondary throttle valve attaching screw	(4)
101-420	Primary throttle valve attaching screw	(4)
101-421	Pump arm attaching screw	
101-431S	Air horn attaching screw and washer assembly	
101-435S	Step up piston cover plate attaching screw and washer assembly	(2)
101-436	Piston housing attaching screw	(3)
101-441	Throttle lever adjusting screw	
101-453S	Thermostatic valve attaching screw and washer assembly	(2)
103-14	Lead shot (180")	
103-16	Lead shot (200")	(2)
111-75	Pump arm	
114-139	Primary throttle shaft arm (inner)	
114-143	Primary throttle shaft arm (outer)	
115-285	Choke connector rod	
115 309	Throttle operating rod	
115-314	Fast idle connector rod	

Part No.	PART NAME	
115-322	Throttle connector rod	
116-13	Pump intake check ball	
116-19	Switch ball	
117-174	Pump connector link	
120-166	PRIMARY METERING JET (0935")	(2)
120-222	Secondary metering jet (070")	(2)
121-78	COIL HOUSING GASKET	
121-287	PUMP JET HOUSING GASKET	
121-288	PRIMARY VENTURI CLUSTER GASKET	(2)
121-292	AIR HORN GASKET	
121-293	SECONDARY VENTURI CLUSTER GASKET	(2)
121-314	Thermostatic valve gasket	
136-34	Choke piston lever retaining washer	
136-159	Primary throttle shaft washer	
136-160	Secondary throttle shaft washer	
136-174	Throttle lever adjusting screw washer	
150-190	Choke piston pin	
150A-10	Pin spring	(6)
150A-21	Pin spring	
153-11	Switch contact spring shim (018")	
153-12	Switch contact spring shim (006")	
156-116S	Fuel inlet fitting assembly	
160-153	Step up piston	(2)
160-200	Choke piston	
169-30S	Thermostatic valve assembly	
170-570S	Piston housing and plug assembly	
170AD-478S	Thermostatic coil and housing assembly	
172-22	Throttle connector rod retainer	
172-27	Cable clip	
181-87	Switch guide block	
181-261S	Fast idle cam assembly	
184-86	Switch terminal cap	
186-61	FLANGE BAFFLE PLATE	
186-67S	Choke baffle plate assembly	
186-70	Fuel bowl baffle	(2)
192-38U	Carter starter switch unit	

—Parts so marked are new and listed for the first time

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.

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CARTER CARBURETOR

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GENERAL BULLETIN

ALL CARBURETER ACCOUNTS

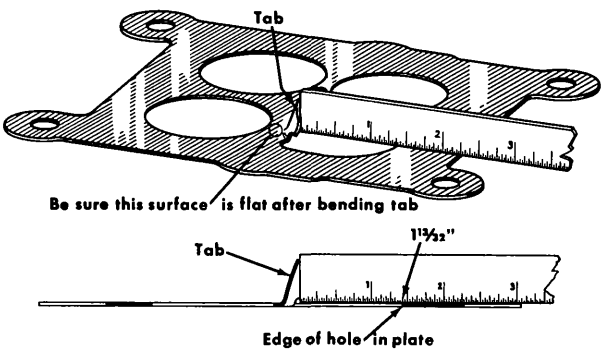
BULLETIN NO. 26 BUICK
DATE March 16, 1959

SUBJECT: 1959 BUICK V8

ENGINE ROUGHNESS ON ACCELERATION
AFB-2840S (4 BORE) CARBURETER

Two modifications have been approved:

1. A thin steel baffle plate is located between the carbureter flange and the intake manifold gasket. It protects the aluminum carbureter castings from the corrosive effect of exhaust gases. The baffle is a part of the "de-icer" system. A deflector tab on the baffle extends into the left primary bore of the intake manifold. (see illustration). The purpose of the baffle tab is to aid fuel distribution in the intake manifold. The tab is correctly positioned when it is 20° from vertical in relation to the flat surface of the plate.



   Earlier production deflector tabs may be reformed if care is exercised. The 20° angle may be secured by bending the tab until the distance from the top of the tab to the opposite side of the bore hole is 1 13/32" measured as illustrated. Clamp the plate in a vise while reforming. Make certain the baffle plate is flat before reinstalling. A good gasket seal is important.

   The baffle plate with this dimension went into production November 26th on Buicks starting with Engine Production Code No. 4F96981.

2. A change has been made in the step-up rod and step-up piston spring to provide a slightly richer mixture to improve light part throttle acceleration. The new rod is stamped 16-82X. The new step piston spring 61-259 is slightly stronger than the original 61-246 spring.

   Step-up rods stamped 16-82 (without the "X") in field stocks should be returned to your Carter supplier for replacement. The 61-246 spring has many other applications on current model carbureters. An initial shipment of a limited quantity of parts 16-82X and 61-259 is being made to Carter Central Distributors. Carter warranty applies.

Insufficient intake manifold temperatures can cause a similar engine roughness on accelerations. The manifold heat valve should be checked as follows:

1. The heat valve shaft must be free. Lubricate with a mixture of kerosene and graphite if necessary.

2. Make certain that the spring steel stop is not bent, allowing the valve to travel past the open or closed position.

3. The thermostatic coil spring should have about 180° wrap with the valve in the closed position and the thermostat at room temperature (70° F.).

DETONATION COMPLAINTS ON LIGHT THROTTLE ACCELERATION LE SABRE SERIES 4400 2 BORE APPLICATION

This complaint is sometimes confused with carbureter malfunction. The correction involves a slight reduction in the spark advance supplied by the distributor vacuum advance unit.

A special service distributor vacuum advance mechanism part number 1116155 has been released by Buick. This change will apply for service only where this complaint is encountered. It is important that the initial spark timing be set at 12° and premium fuel be used with this engine.

FUEL LINE OBSTRUCTION - ALL MODELS

The synthetic rubber hose fuel line should be inspected for damage when investigating complaints indicating fuel starvation. Examine the hose for "pinched" conditions at the supporting clamps. Check to be sure the hose is not flattened by being pulled too tightly around one or more of its bends under the car.

Bending or repositioning the clamps and relocating the slack in the line will usually correct these conditions on a new car where the hose has not taken a permanent set.

R. J. Mullin
Service Supervisor

RJM/dg

cc: Personnel and Extra Copies - Canada and U.S.A.

IMPORTANT: THIS BULLETIN CONTAINS INFORMATI N OF VALUE TO YOU AND WAS PREPARED AT CONSIDERABLE EXPENSE TO BE OF SERVICE TO YOU FAILURE T USE THIS INFORMATION MAY COST YOU MONEY WE SUGGEST THAT YOU ISSUE COPIES OF IT TO THOSE OF YOUR STAFF INTERESTED, SO THAT THEY CAN BE FILED IN REGULAR CARTER SALES AND SERVICE MANUAL.

FORM C-2914E

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BUICK

"INVICTA" – MODEL 4600

"ELECTRA" – MODEL 4700

"ELECTRA 225" – MODEL 4800

1959

AFB Four-Bore Down-Draft Climatic® Control **Carbureter No. 2840S**

CARBURETER SPECIFICATIONS

For Buick 8 Cylinder 401 Cu. In. Engine: Vacuum at Idle 16 Inches

Dimensions: Flange four bore—4 bolt type
Throttle bore primary 1 9/16 inch, secondary 1 11/16 inch I D
Primary venturi size primary side 7/16 inch secondary 11/32 inch I D
Main venturi size primary side 1 3/16 inch secondary side 1 9/16 inch I D

Vents Inside (4) in air horn Outside (5) in air horn (4) in body

Low Speed Circuit: (Primary side only) Jet size No 56 (0465 inch) drill
By pass size No 55 (052 inch) drill
Economizer size No 61 (039 inch) drill
Idle bleed size (053 inch) diameter
Idle port slot type length 200 inch width 030 inch

Idle Port Opening: 156 to 162 inch above top edge of valve with valve tightly closed

Set Idle Adjustment Screw: 1/4 to 1 3/4 turns open For richer mixture turn screw out Do not idle engine below 475 R P M Automatic transmission in neutral 550 R P M for cars with air conditioning

Main Nozzle· Installed permanently DO NOT REMOVE Anti percolator bleed primary (tube in venturi assembly) size No 70 (028 inch) drill Secondary, (drilled hole in venturi assembly) size No 60 (040 inch) drill

Secondary Initial Discharge: (In venturi assembly secondary side only)
Pick up tube size No 60 (040 inch) drill
Air bleed size (0275 inch) diameter
Discharge port size (051 inch) diameter

Accelerating Pump. Discharge jet (twin) primary side only size No 70 (028 inch) drill Intake ball check seat (screw plug) installed from inside of bowl size 115 to 120 inch diameter Discharge needle seat size No 50 (070 inch) drill

Choke Carter Climatic® Control set one point rich Butterfly type—offset choke valve primary side only Choke heat suction hole restriction in body size (098 inch) diameter

Vacuum Spark Port. Horizontal slot (round end) 040 x 130 inch Bottom of port 002 to 010 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .033"	Breaker Point Setting .015"	Ignition Timing Breaker Points to Open 12° B. T. D. C. At Vibration Damper	Float Setting 7/32 Inch (Use Gauge T109-106)	Idle Adjustment Screw Setting 1/4 to 1 3/4 Auto. Trans. 475 R.P.M. In Neutral

NOTE These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Procedure Form 3701

FLOAT ALIGNMENT: Side of floats parallel to edge of casting. Minimum clearance between lever and air horn lugs without binding. To adjust, bend float lever.

FLOAT LEVEL: 7/32 inch (Gauge T109-106) plus or minus 1/64 inch between top of floats (at outer end) and air horn gasket. To adjust, bend float lever.

FLOAT DROP. 23/32 inch plus or minus 1/16 inch between top of floats (at outer end) and air horn gasket. To adjust, bend stop tabs on float brackets.

PUMP: 33/64 inch from the top of the bowl cover to the top of the plunger shaft. To adjust, bend throttle connector rod.

CHOKE PISTON LEVER ADJUSTMENT: .010 inch (Gauge T109-200) between choke lever and stop in piston housing with choke valve closed. To adjust, bend choke connector rod. NOTE: Choke valve should be held closed by applying pressure to piston lever in piston housing.

FAST IDLE LINKAGE ADJUSTMENT: With choke valve closed index mark on cam should align with adjusting screw. To adjust, bend fast idle connector rod.

NOTE: It may be necessary to bend stop lug on fast idle cam.

FAST IDLE THROTTLE VALVE CLEARANCE: .020 inch (Gauge T109-29) between lower edge of valve and bore with adjusting screw on index mark of cam.

FAST IDLE ON CAR: 1500 R.P.M. hot engine with fast idle screw on index mark of cam.

UNLOADER: 3/16 inch (Gauge T109-28) between upper edge of choke valve and inner wall of air horn. To adjust, bend unloader lip on throttle lever.

SECONDARY THROTTLE LEVER ADJUSTMENT: 1. Primary and secondary throttle valves must reach wide open position at the same time. To adjust, bend secondary operating rod. NOTE: Secondary throttle valves will be a few degrees from wide open when primary valves are wide open. Upper edge of secondary valve should just contact auxiliary valve when auxiliary valve is wide open. **IMPORTANT:** The wide open stop lug on secondary throttle lever should contact boss on flange to prevent secondary valves from going past wide open. If necessary bend stop lug.

2. With primary and secondary throttle valves tightly closed, there should be .010 to .030 inch (gauge T109-29) between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on secondary lever.

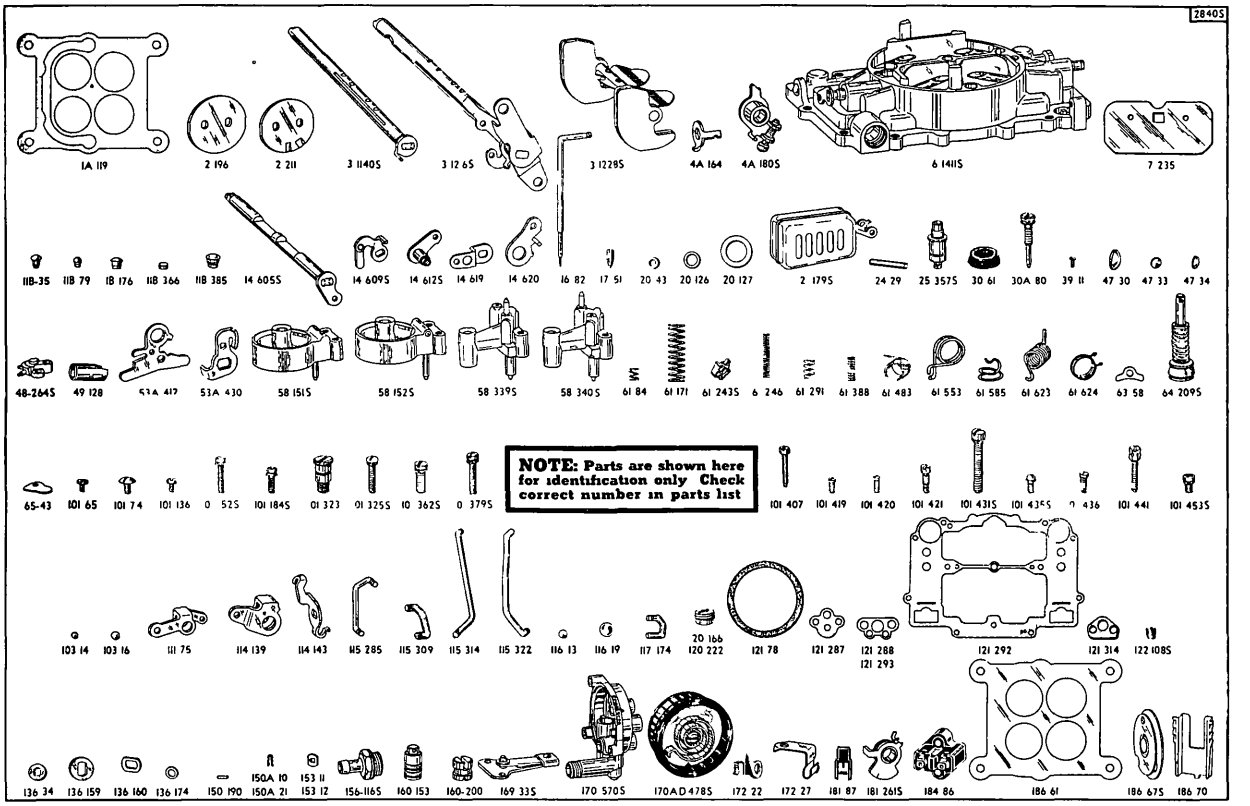
SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: Crack throttle valves and manually open and close the choke valve. Tang on secondary throttle lever should freely engage in notch of lock-out dog. To adjust, bend tang on secondary throttle lever.

CAR STARTER SWITCH ADJUSTMENT: Should contact between 19/64 inch and 9/16 inch travel to top edge of throttle lever stop lug and idle speed screw. (Idle speed screw just touching stop lug with valve seating.) To adjust, add or remove shims from switch.

TOOLS REQUIRED FOR SERVICING CARBURETER:

T109-28	3/16" Unloader gauge	T109-106	7/32" Float gauge
T109-29	.020" Wire gauge	T109-200	.010" Wire gauge
T109-41	Bending Tool	T109-213	Bending Tool

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Buick—1959—Carbureter No. 2840S

WHEN SERVICING, USE GASKET ASSORTMENT No. 323, RE-CARBURETION KIT No. 1971N

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF RE-CARBURETION KIT

Part No.	PART NAME	
1A-119	FLANGE GASKET	
2-196	Secondary throttle valve	(2)
2-211	Primary throttle valve	(2)
3-1140S	Secondary throttle shaft and lever assembly	
3-1216S	—Primary throttle shaft and lever assembly	
3-1228S	—Auxiliary throttle shaft valve and weight assembly	
4A-164	Primary throttle shaft dog	
4A-180S	Primary throttle shaft dog and screw assembly	
6-1411S	—Air horn assembly	
7-235	—Choke valve	
11B-35	Rivet plug	
11B-79	Rivet plug	(5)
11B-176	Idle port rivet plug	(2)
11B-366	Lead plug	(4)
11B-385	Fuel passage plug	(2)
14-605S	Choke lever and shaft assembly	
14-609S	Choke piston lever and link assembly	
14-612S	Choke shaft and lever assembly (piston housing)	
14-619	—Choke shaft lever	
14-620	—Cam trip lever	
16-82	—STEP UP ROD (0685" x 061")	(2)
17-51	Pump discharge check needle	
20-43	Piston housing gasket	
20-126	Needle seat gasket	(2)
20-127	Fuel inlet fitting gasket	

Part No.	PART NAME	
21-179S	Float and lever assembly	(2)
24-29	Float lever pin	(2)
25-357S	NEEDLE AND SEAT ASSEMBLY (111)	(2)
30-61	Switch strainer	
30A-80	Idle adjustment screw	(2)
39-11	Choke valve attaching screw	(2)
47-30	Piston housing welsh plug	
47-33	Venturi welsh plug	(4)
47-34	Spark port welsh plug	
48-264S	Pump jet and housing assembly	
49-128	Switch plunger	
53A-412	Lockout dog	
53A-430	Secondary throttle operating lever	
58-151S	Secondary venturi assembly (choke side)	
58-152S	Secondary venturi assembly (pump side)	
58-339S	—Primary venturi assembly (choke side)	
58-340S	—Primary venturi assembly (pump side)	
61-84	Idle adjustment screw spring	(2)
61-171	Pump spring (lower)	
61-243S	Contact spring and washer assembly	
61-246	VACUUM PISTON SPRING	(2)
61-291	Throttle lever adjusting screw spring	
61-388	Switch return spring	
61-483	Secondary throttle return spring	
61-553	Primary throttle shaft dog spring	

Part No.	PART NAME	
61-585	Step up rod retaining spring	(2)
61-623	Throttle flex spring	
61-624	—Fast idle cam spring	
63-58	Coil housing retainer	(3)
64-209S	PUMP PLUNGER ROD AND SPRING ASSEMBLY	
65-43	Step up piston cover plate	(2)
101-65	Choke shaft lever attaching screw	(2)
101-74	Throttle shaft lever attaching screw	(2)
101-136	Coil housing attaching screw	(3)
101-152S	Air horn attaching screw and washer assembly	
101-184S	Pump jet housing attaching screw and washer assembly	(2)
101-323	Fast idle cam attaching screw	
101-325S	Switch attaching screw and washer assembly	(2)
101-362S	Air horn attaching screw and washer assembly	(8)
101-379S	Secondary and primary venturi attaching screw and washer assembly	(8)
101-407	Fast idle adjustment screw	
101-419	Secondary throttle valve attaching screw	(4)
101-420	Primary throttle valve attaching screw	(4)
101-421	Pump arm attaching screw	
101-431S	Air horn attaching screw and washer assembly	
101-435S	Step up piston cover plate attaching screw and washer assembly	(2)
101-436	Piston housing attaching screw	(3)
101-441	Throttle lever adjusting screw	
101 453S	Thermostatic valve attaching screw and washer assembly	(2)
103-14	Lead shot (180)	
103-16	Lead shot (200)	(2)
111-75	Pump arm	
114-139	Primary throttle shaft arm (inner)	
114-143	Primary throttle shaft arm (outer)	
115-285	Choke connector rod	
115-309	Throttle operating rod	
115-314	—Fast idle connector rod	
115-322	—Throttle connector rod	

Part No.	PART NAME	
116-13	Pump intake check ball	
116-19	Switch ball	
117-174	Pump connector link	
120-166	PRIMARY METERING JET (0935)	(2)
120-222	Secondary metering jet (070)	(2)
121-78	COIL HOUSING GASKET	
121-287	PUMP JET HOUSING GASKET	
121-288	PRIMARY VENTURI CLUSTER GASKET	(2)
121-292	AIR HORN GASKET	
121-293	SECONDARY VENTURI CLUSTER GASKET	(2)
121-314	Thermostatic valve gasket	
122-108S	—Pump intake ball check assembly	
136-34	Choke piston lever retaining washer	
136-159	Primary throttle shaft washer	
136-160	Secondary throttle shaft washer	
136-174	Throttle lever adjusting screw washer	
150-190	Choke piston pin	
150A-10	Pin spring	(6)
150A-21	Pin spring	
153-11	Switch contact spring shim (018)	
153-12	Switch contact spring shim (006)	
156-116S	Fuel inlet fitting assembly	
160-153	Step up piston	(2)
160-200	—Choke piston	
169-33S	—Thermostatic valve assembly	
170-570S	Piston housing and plug assembly	
170AD-478S	Thermostatic coil and housing assembly	
172-22	Throttle connector rod retainer	
172-27	Cable clip	
181-87	Switch guide block	
181-261S	Fast idle cam assembly	
184-86	Switch terminal cap	
186-67S	Choke baffle plate assembly	
186-70	Fuel bowl baffle	(2)
186-85	FLANGE BAFFLE PLATE	
192-38U	Carter starter switch unit	

—Parts so marked are new and listed for the first time

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

CARBURETER
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BUICK "V-8"

(2837S) SYNCHROMESH TRANSMISSION

LE SABRE

MODEL 4400

1959

(2838S) DYNAFLOW TRANSMISSION

WGD Dual Down-Draft Climatic® Control **Carbureters Nos. 2837S-2838S**

CARBURETER SPECIFICATIONS

For Buick 8 Cylinder 364 Cu. In. Engine: Vacuum at Idle 16 Inches

Dimensions· Flange size 1¼ inch dual 4 bolt type
Primary venturi 11/32 inch I D
Main venturi 1 3/16 inch I D

Vents Outside bowl cover—one flange—two

Low Speed Circuit· Jet size (2837S) No 69 (0292 inch) (2838S) No 71 (026 inch) drill By pass in air horn (057 inch) diameter Economizer in air horn (061 inch) diameter Idle bleed in air horn No 50 (070 inch) drill Idle port slot type length 150 inch width 030 inch

Idle Port Opening: 087 to 093 inch above top edge of valve with valve tightly closed

Set Idle Adjusting Screw. ¾ to 2 turns open For richer mixture turn screw out Idle engine at 475 R P M Auto Trans in neutral 475 R P M Std Trans For cars with air conditioning idle engine at 550 R P M in neutral

Main Nozzle Nozzle is installed permanently DO NOT REMOVE Anti percolating well bleed in plug size No 70 (028 inch) drill

Accelerating Pump: Discharge jet (twin) size No 68 (031 inch) Intake check seat size 115 to 120 inch diameter Discharge (needle seat) size No 50 (070 inch) drill Pump jet air bleed passage to outside ⅛ inch drill

Choke Carter Climatic® Control—(2837S) set 1 point lean (2838S) set on index Butterfly type offset valve Choke heat suction hole plug between air horn and piston housing size (2837S) No 42 (0935 inch), (2838S) No 48 (076 inch) drill

Vacuum Spark Port: Horizontal slot type 130 by 040 inch Bottom of port to be 010 to 016 inch above upper edge of valve with valve tightly closed

Motor Tune-Up — Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .033"	Breaker Point Setting .015"	Ignition Timing Breaker Points to Open: 12° B. T. D. C. At Vibration Damper	Float Setting ¼ Inch (Use Gauge T109-31)	Idle Adjustment Screw Setting ¾ to 2 Auto. Trans. 475 R. P. M. Std. Trans. 475 R. P. M.

NOTE: These cars are equipped with Hydraulic Valve Lifters — NO ADJUSTMENT.

CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3643

Float Level: ¼ inch (Gauge T109 31) between top of float (at center) and bowl cover To adjust bend float lever

Float Alignment. Side of float parallel to edge of casting Minimum clearance between lever and air horn lugs without binding To adjust bend float lever

Pump· With pump connector link in outer hole (long stroke) flat on pump arm should parallel straight edge on dust cover boss To adjust bend throttle connector rod

Metering Rod Metering rod should bottom with throttle valves seated

Choke Lever Clearance· With slight clearance between tang on fast idle cam and stop on flange casting and inner choke shaft lever contacting lug on outer choke shaft lever align index mark on cam with adjusting screw To adjust bend lug on outer choke shaft lever

Fast Idle Throttle Valve Clearance 026' (Gauge T109 189) between lower edge of valve and bore with adjusting screw on high step of cam

Fast Idle on Car 1500 R P M hot engine with fast idle screw on index mark of cam

Unloader: 3/16" (Gauge T109 28) between top edge of valve and inner wall of air horn To adjust bend unloader arm on throttle lever

Car Starter Switch: Should contact between 31/64" and 11/16 travel to top edge of throttle lever stop lug and idle speed screw (Idle speed screw just touching stop lug with valve seating) To adjust add or remove shims from switch

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Buick "V-8"—1959—Carbureters Nos. 2837S-2838S

WHEN SERVICING USE GASKET ASSORTMENT No 305 RE-CARBURETION KIT No. 1966N (2837S), No. 1967N (2838S)

PART NAMES IN CAPITAL LETTERS, LISTED BELOW INDICATE CONTENTS OF RE-CARBURETION KIT

Part N	PART NAME	
1-1431S	Body flange assembly (2837S)	
1-1586S	Body flange assembly (2838S)	
1A-95	FLANGE GASKET	
2 101	Throttle valve	(2)
3-1087S	Throttle shaft and lever assembly (2837S)	
3-1219S	Throttle shaft and lever assembly (2838S)	
6-1334S	Air horn assembly (2838S)	
6 1360S	Air horn assembly (2837S)	
7-219	Choke valve (2838S)	
7-223	Choke valve (2837S)	
11-245S	Low speed jet assembly (0292) (2837S)	(2)
11-293S	Low speed jet assembly (026) (2838S)	(2)
11B 12	Rivet plug	
11B 42	Spark port rivet plug	
11B-223	Nozzle passage rivet plug	(2)
11B 294	Idle port rivet plug	(2)
11B 332	Rivet plug	
14 512	Choke shaft lever	
14 514S	Choke piston lever link and shaft assembly	
14-525	Choke lever	
17-70	Pump check needle	
20-126	Needle seat gasket	
21-172S	Float and lever assembly	
24 24	Float lever pin	
25 372S	—NEEDLE AND SEAT ASSEMBLY (111)	
30-61	Switch strainer	
30A 76	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
47-30	Welsh plug	
48-266	Pump jet housing	
49-128	Switch plunger	
53A-391S	Pump operating lever and countershaft assembly	
61 84	Idle adjustment screw spring	(2)
61-134	VACUUM PISTON SPRING	
61-150	Lower pump spring	
61-243S	Contact spring and washer assembly	
61 291	Throttle lever adjusting screw spring	
61-382	Metering rod spring	
61-388	Switch return spring	
61-558	Pump operating lever spring	
63-45	Pump check ball retainer ring	
63-58	Coil housing retainer	(3)
63-118	Throttle shaft retaining ring	
64-208S	PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
75-1438	—METERING ROD—STANDARD (2837S)	(2)
75-1439	—METERING ROD—STANDARD (2838S)	(2)
101-33	Metering rod arm clamp screw	
101-65	Choke lever screw	
101-74	Throttle shaft arm attaching screw	
101-81	Fast idle cam attaching screw	
101-84	Fast idle ad usting screw	
101-136	Coil housing and pump arm attaching screw	(4)

Part No	PART NAME	
101-149S	Body flange attaching screw and washer assembly	(2)
101-152S	Body flange attaching screw and washer assembly	(2)
101 155S	Pump jet housing attaching screw assembly	(2)
101 284	Piston housing attaching screw	(3)
101-297S	Dust cover attaching screw and washer assembly	(2)
101-307S	Air horn attaching screw and washer assembly	(8)
101-325S	Switch attaching screw and washer assembly	(2)
101-406	Throttle lever adjustment screw	
101-427	Throttle valve attaching screw	(4)
103-14	Lead shot	(4)
103-15	Lead shot	(3)
103-16	Lead shot	(2)
111-60S	Metering rod arm and screw assembly	
111-73S	Pump arm and screw assembly	
114-135	Throttle shaft arm	
115-255	Throttle connector rod	
115-266	Choke connector rod	
116-13	Pump intake check ball	
116-19	Switch ball	
117-133	Vacumeter piston link	
117-165	Pump connector link	
118-120	Dust cover	
120-203	METERING ROD JET (090)	(2)
121-78	COIL HOUSING GASKET	
121-270	AIR HORN GASKET	
121 271	BODY FLANGE GASKET	
121 272	PUMP JET GASKET	
121-300	AIR CLEANER GASKET	
136-34	Choke shaft washer	
136-38	Throttle shaft washer	
150-190	Choke piston pin	
150A 10	Pin spring	(2)
153 11	Switch contact spring shim (018)	(3)
153-12	Switch contact spring shim (006)	(2)
156-114	Gas line nipple	
160-67S	Vacuum piston and pin assembly	
160-122	Choke piston (2837S)	
160-157	Choke piston (2838S)	
170-418S	Piston housing and plug assembly	
170AA 374S	Thermostatic coil and housing assembly (2838S)	
170AD-374S	Thermostatic coil and housing assembly (2837S)	
172-22	Throttle connector rod retainer (lower)	
172-24	Throttle connector rod retainer (upper)	
172-27	Cable clip	
181-87	Switch guide block	
181-220	Fast idle cam (2837S)	
181-239	Fast idle cam (2838S)	
184 86	Terminal cap	
186 51S	Choke baffle plate assembly (2838S)	
186-56S	Choke baffle plate assembly (2837S)	
192-38U	Carter starter switch unit	

—Parts so marked are new and listed for the first time

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used.

BUICK

"SUPER" – MODEL 50
"CENTURY" – MODEL 60
"ROADMASTER" – MODEL 70
"LIMITED" – MODEL 700

1958

AFB Four-Bore Down-Draft Climatic® Control **Carbureter No. 2800S**

CARBURETER SPECIFICATIONS

For Buick 8 Cylinder 364 Cu. In. Engine· Vacuum at Idle 14 to 15 Inches

Dimensions: Flange four bore—4 bolt type
Throttle bore primary, 1-9/16 inch, secondary 1-11/16 inch I D
Primary venturi size primary side, 7/16 inch, secondary side, 11/32 inch I D
Main venturi size primary side 1¼ inch, secondary side, 1 9/16 inch I D

Vents Inside (4) in air horn Outside (5) in air horn, (4) in body

Low Speed Circuit· (Primary side only) Jet size No 56 (0465 inch) drill
By pass size No 54 (055 inch) drill
Economizer size No 61 (039 inch) drill
Idle bleed size (053 inch) diameter
Idle port slot type length 200 inch, width 030 inch

Idle Port Opening: 156 to 162 inch above top edge of valve with valve tightly closed.

Set Idle Adjustment Screw: ¼ to 1¾ turns open For richer mixture turn screw out Do not idle engine below 475 r p m Automatic transmission in neutral, 550 r p m for cars with air conditioning

Main Nozzle: Installed permanently DO NOT REMOVE Anti-percolator bleed, primary, (tube in venturi assembly) size No 70 (028 inch) drill Secondary, (drilled hole in venturi assembly) size No 60 (040 inch) drill

Secondary Initial Discharge: (In venturi assembly secondary side only)
Pick up tube size No 60 (040 inch) drill
Air bleed, size (0275 inch) diameter
Discharge port size (051 inch) diameter

Accelerating Pump: Discharge jet (twin) primary side only size No 70 (028 inch) drill Intake ball check seat (screw plug) size 115 to 120 inch diameter Discharge needle seat size No 50 (070 inch) drill

Choke: Carter Climatic® Control set one point rich Butterfly type—offset choke valve primary side only Choke heat suction hole restriction in body size (0807 inch) diameter

Vacuum Spark Port: Horizontal slot (round end) 040 x 130 inch Bottom of port 008 to 016 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .033"	Breaker Point Setting .015"	Ignition Timing Breaker Points to Open: 5° B. T. D. C. At Vibration Damper	Float Setting 7/32 Inch (Use Gauge T109-106)	Idle Adjustment Screw Setting ¼ to 1¾ Auto. Trans. 475 R.P.M. In Neutral

NOTE: These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Procedure Form 3701

FLOAT ALIGNMENT: Side of floats parallel to edge of casting. Minimum clearance between lever and air horn lugs without binding. To adjust, bend float lever.

FLOAT LEVEL: 7/32 inch (Gauge T109-106) between top of floats (at outer end) and air horn gasket. To adjust, bend float lever.

FLOAT DROP: 23/32 inch between top of floats (at outer end) and air horn gasket. To adjust, bend stop tabs on float brackets.

PUMP: 33/64 inch from the top of the bowl cover to the top of the plunger shaft. To adjust, bend throttle connector rod.

CHOKE PISTON LEVER ADJUSTMENT: .045 inch (Gauge T109-158) between choke lever and stop in piston housing with choke valve closed. To adjust, bend choke connector rod.

FAST IDLE LINKAGE ADJUSTMENT: With slight clearance between lug on fast idle cam and stop on flange casting, and inner choke shaft lever contacting lug on outer choke shaft lever align index mark on cam with adjusting screw. To adjust, bend fast idle connector rod.

FAST IDLE THROTTLE VALVE CLEARANCE: .020 inch (Gauge T109-29) between lower edge of valve and bore with adjusting screw on index mark of cam.

FAST IDLE ON CAR: 1500 R.P.M. hot engine with fast idle screw on index mark of cam.

UNLOADER: 3/16 inch (Gauge T109-28) between upper edge of choke valve and inner wall of air horn. To adjust, bend unloader lip on throttle lever.

SECONDARY THROTTLE LEVER ADJUSTMENT: 1. Primary and secondary throttle valves must reach wide open position at the same time. To adjust, bend secondary operating rod. **NOTE:** Secondary throttle valves will be a few degrees from wide open when primary valves are wide open. Upper edge of secondary valve should just contact auxiliary valve when auxiliary valve is wide open. **IMPORTANT:** The wide open stop lug on secondary throttle lever should contact boss on flange to prevent secondary valves from going past wide open. If necessary bend stop lug. 2. With primary and secondary throttle valves tightly closed, there should be .010 to .030 inch gauge T109-29 between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on secondary lever.

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: Crack throttle valves and manually open and close the choke valve. Tang on secondary throttle lever should freely engage in notch of lock-out dog. To adjust, bend tang on secondary throttle lever.

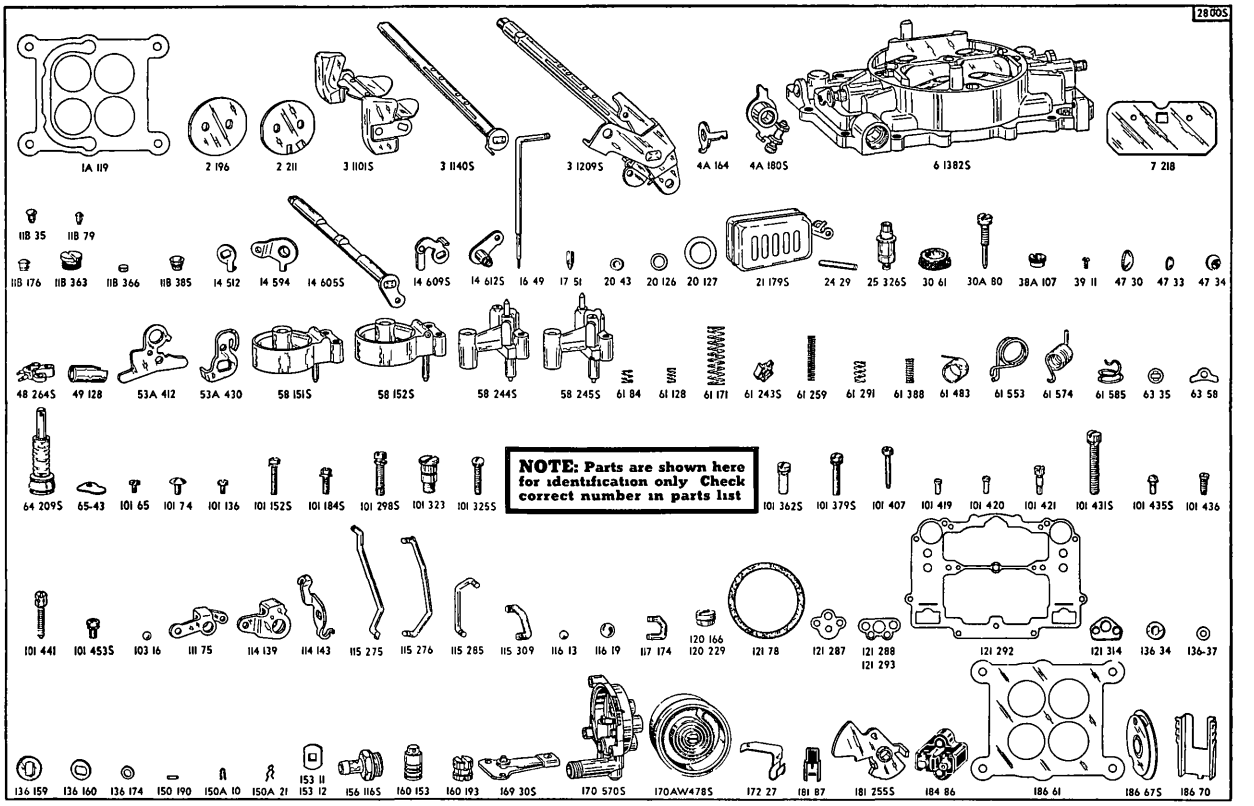
CAR STARTER SWITCH ADJUSTMENT: Should contact between 19/64 inch and 9/16 inch travel of top edge of throttle lever stop lug and idle speed screw. (Idle speed screw just touching stop lug with valve seating.)

To adjust, add or remove shims from switch.

TOOLS REQUIRED FOR SERVICING CARBURETER:

T109-28	3/16" Unloader gauge	T109-106	7/32" Float gauge
T109-29	.020" Wire gauge	T109-158	.045" Wire gauge
T109-41	Bending tool	T109-189	.026" Wire gauge
		T109-213	Bending tool

CARBURETER
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Buick—1958—Carbureter No. 2800S

WHEN SERVICING, USE GASKET ASSORTMENT No. 323; RE-CARBURETION KIT No. 1941N

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF RE-CARBURETION KIT

Part No.	PART NAME	
1A-119	FLANGE GASKET	
2-196	Secondary throttle valve	(2)
2-211	Primary throttle valve	(2)
3-1101S	Auxiliary throttle shaft valve and weight assembly	
3-1140S	Secondary throttle shaft and lever assembly	
3-1209S	Primary throttle shaft and lever assembly	
4A-164	Primary throttle shaft dog	
4A-180S	Primary throttle shaft dog and screw assembly	
6-1382S	—Air horn assembly	
7-218	Choke valve	
11B-35	Rivet plug	
11B-79	Rivet plug	(5)
11B-176	Idle port rivet plug	(2)
11B-363	Pump intake screw plug	
11B-366	Lead plug	(4)
11B-385	Fuel passage plug	(2)
14-512	Outside choke shaft lever	
14-594	Inside choke shaft lever	
14-605S	Choke lever and shaft assembly	
14-609S	—Choke piston lever and link assembly	
14-612S	—Choke shaft and lever assembly (piston housing)	
16-49	STEP UP ROD (.0675" x .059")	(2)
17-51	Pump discharge check needle	
20-43	Piston housing gasket	
20-126	Needle seat gasket	(2)
20-127	Fuel inlet fitting gasket	

Part No.	PART NAME	
21-179S	Float and lever assembly	(2)
24-29	Float lever pin	(2)
25-326S	NEEDLE AND SEAT ASSEMBLY (.111") (Sup by 25 357S)	(2)
25-357S	—Needle and seat assembly (.111")	(2)
30-61	Switch strainer	
30A-80	Idle adjustment screw	(2)
38A-107	Pump intake check ball seat	
39-11	Choke valve attaching screw	(2)
47-30	Piston housing welsh plug	
47-33	Venturi welsh plug	(4)
47-34	Spark port welsh plug	
48-264S	Pump jet and housing assembly	
49-128	Switch plunger	
53A-412	Lockout dog	
53A-430	Secondary throttle operating lever	
58-151S	Secondary venturi assembly (choke side)	
58-152S	Secondary venturi assembly (pump side)	
58-244S	Primary venturi assembly (choke side)	
58-245S	Primary venturi assembly (pump side)	
61-84	Idle adjustment screw spring	(2)
61-128	Throttle connector rod spring	
61-171	Pump spring (lower)	
61-243S	Contact spring and washer assembly	
61-259	VACUUM PISTON SPRING	(2)
61-291	Throttle lever adjusting screw spring	

Part No.	PART NAME	
61-388	Switch return spring	
61-483	Secondary throttle return spring	
61-553	Primary throttle shaft dog spring	
61-574	Throttle flex spring	
61-585	Step up rod retaining spring	(2)
63-35	Throttle connector rod retainer	
63-58	Coil housing retainer	(3)
64-209S	PUMP PLUNGER ROD AND SPRING ASSEMBLY	
65-43	Step up piston cover plate	(2)
101-65	Choke shaft lever attaching screw	(2)
101-74	Throttle shaft lever attaching screw	(2)
101-136	Coil housing attaching screw	(3)
101-152S	Air horn attaching screw and washer assembly	
101-184S	Pump jet housing attaching screw and washer assembly	(2)
101-298S	Primary venturi attaching screw and washer assembly	(4)
101-323	Fast idle cam attaching screw	
101-325S	Switch attaching screw and washer assembly	(2)
101-362S	Air horn attaching screw and washer assembly	(8)
101-379S	Secondary venturi attaching screw and washer assembly	(4)
101-407	Fast idle adjustment screw	
101-419	Secondary throttle valve attaching screw	(4)
101-420	Primary throttle valve attaching screw	(4)
101-421	Pump arm attaching screw	
101-431S	Air horn attaching screw and washer assembly	
101-435S	Step up piston cover plate attaching screw and washer assembly	(2)
101-436	Piston housing attaching screw	(3)
101-441	Throttle lever adjusting screw	
101-453S	—Thermostatic valve attaching screw and washer assembly	(2)
103-15	Lead shot	
103-16	Lead shot	(2)
111-75	Pump arm	
114-139	Primary throttle shaft arm (inner)	
114-143	Primary throttle shaft arm (outer)	
115-275	Fast idle connector rod	
115-276	Throttle connector rod	
115-285	Choke connector rod	
115-309	Throttle operating rod	
116-13	Pump intake check ball	
116-19	Switch ball	
117-174	Pump connector link	
120-166	PRIMARY METERING JET (.0935")	(2)
120-229	Secondary metering jet (.0748")	(2)
121-78	COIL HOUSING GASKET	
121-287	PUMP JET HOUSING GASKET	
121-288	PRIMARY VENTURI CLUSTER GASKET	(2)
121-292	AIR HORN GASKET	
121-293	SECONDARY VENTURI CLUSTER GASKET	(2)
121-314	—Thermostatic valve gasket	
136-34	Choke piston lever retaining washer	
136-37	Throttle operating rod washer	
136-159	Primary throttle shaft washer	
136-160	Secondary throttle shaft washer	
136-174	Throttle lever adjusting screw washer	
150-190	Choke piston pin	
150A-10	Pin spring	(6)
150A-21	Pin spring	
153-11	Switch contact spring shim (.018)	
153-12	Switch contact spring shim (.006)	
156-116S	Fuel inlet fitting assembly	
160-153	Step up piston	(2)
160-193	—Choke piston	
169-30S	—Thermostatic valve assembly	
170-570S	—Piston housing and plug assembly	
170AW-478S	—Thermostatic coil and housing assembly	
172-27	Cable clip	
181-87	Switch guide block	
181-255S	Fast idle cam assembly	
184-86	Switch terminal cap	
186-61	FLANGE BAFFLE PLATE	
186-67S	Choke baffle plate assembly	
186-70	Fuel bowl baffle	(2)
192-38U	Carter starter switch unit	

—Parts so marked are new and listed for the first time

NOTE **Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.**

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BUICK "V-8"

SPECIAL

MODEL 40

1958

(2674S) SYNCHROMESH TRANSMISSION

(2675S-2845S) DYNAFLOW TRANSMISSION

WGD Dual Down-Draft Climatic® Control Carbureters Nos. 2674S-2675S-2845S

CARBURETER SPECIFICATIONS

For Buick 8 Cylinder 364 Cu. In. Engine: Vacuum at Idle (2674S) 17.0 Inches; (2675S-2845S) 14 to 15 Inches

Dimensions: Flange size 1¼ inch dual, 4 bolt type.
Primary venturi, 11/32 inch I. D.
Main venturi, 1-3/16 inch I. D.

Vents: Outside, bowl cover—one, flange—two.

Low Speed Circuit: Jet, size (2674S) No. 69 (.0292 inch), (2675S-2845S) No. 71 (.026 inch) drill. By-pass, in air horn, (.057 inch) diameter. Economizer, in air horn, (.061 inch) diameter. Idle bleed, in air horn, No. 50 (.070 inch) drill. Idle port, slot type, length .150 inch; width .030 inch.

Idle Port Opening: .087 to .093 inch above top edge of valve with valve tightly closed.

Set Idle Adjusting Screw: ¾ to 2 turns open. For richer mixture turn screw out. Idle engine at 475 R. P. M. Auto. Trans. in neutral; 450 R. P. M. Std. Trans. For cars with air conditioning idle engine at 550 R. P. M. in neutral.

Main Nozzle: Nozzle is installed permanently. DO NOT REMOVE. Anti-percolating well bleed, in plug, size No. 70 (.028 inch) drill.

Accelerating Pump: Discharge jet (twin) size (2674S) No. 68 (.031 inch), (2675S-2845S) No. 69 (.0292 inch) drill.
Intake check seat size .115 to .120 inch diameter.
Discharge (needle seat) size No. 50 (.070 inch) drill.
Pump jet air bleed passage to outside 1/8 inch drill.

Choke: Carter Climatic® Control—(2674S) set 1 point lean, (2675S-2845S) set on index. Butterfly type, offset valve. Choke heat suction hole plug between air horn and piston housing size (2674S) No. 42 (.0935 inch), (2675S-2845S) No. 48 (.076 inch) drill.

Vacuum Spark Port: Horizontal slot type .130 by .040 inch. Bottom of port to be .010 to .016 inch above upper edge of valve with valve tightly closed.

Motor Tune-Up — Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open:	Float Setting	Idle Adjustment Screw Setting
.030"-.035"	.015"	5° B. T. D. C. At Vibration Damper	¼ Inch (Use Gauge T109-31)	¾ to 2 Auto. Trans. 475 R. P. M. Std. Trans. 450 R. P. M.

NOTE: These cars are equipped with Hydraulic Valve Lifters — NO ADJUSTMENT.

CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3643

Float Level: ¼ inch (Gauge T109-31) between top of float (at center) and bowl cover. To adjust: bend float lever.

Float Alignment: Side of float parallel to edge of casting. Minimum clearance between lever and air horn lugs without binding. To adjust: bend float lever.

Pump: With pump connector link in outer hole (long stroke) flat on pump arm should parallel straight edge on dust cover boss. To adjust: bend throttle connector rod.

Metering Rod: Metering rod should bottom with throttle valves seated.

Choke Lever Clearance: With slight clearance between tang on fast idle cam and stop on flange casting and inner choke shaft lever contacting lug on outer choke shaft lever align index mark on cam with adjusting screw. To adjust: bend lug on outer choke shaft lever.

Fast Idle Throttle Valve Clearance: .026" (Gauge T109-189) between lower edge of valve and bore with adjusting screw on high step of cam.

Fast Idle on Car: 1500 R. P. M. hot engine with fast idle screw on index mark of cam.

Unloader: 3/16" (Gauge T109-28) between top edge of valve and inner wall of air horn. To adjust: bend unloader arm on throttle lever.

Car Starter Switch: Should contact between 31/64" and 11/16" travel to top edge of throttle lever stop lug and idle speed screw. (Idle speed screw just touching stop lug with valve seating.) To adjust: add or remove shims from switch.

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Buick "V-8"—1958—Carbureters Nos. 2674S-2675S-2845S

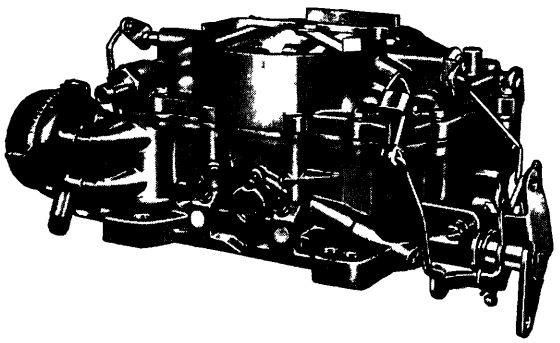
WHEN SERVICING, USE GASKET ASSORTMENT No. 305; RE-CARBURETION KIT No. 1939N (2674S), No. 1940N (2675S-2845S)

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF RE-CARBURETION KIT

Part No.	PART NAME	
1-1431S	Body flange assembly (2674S)	
1-1554S	—Body flange assembly (2675S)	
1-1586S	—Body flange assembly (2845S)	
1A-95	FLANGE GASKET	
2-101	Throttle valve	(2)
3-1087S	Throttle shaft and lever assembly (2674S)	
3-1208S	—Throttle shaft and lever assembly (2675S)	
3-1219S	—Throttle shaft and lever assembly (2845S)	
6-1334S	—Air horn assembly (2675S-2845S)	
6-1360S	—Air horn assembly (2674S)	
7-219	Choke valve (2675S-2845S)	
7-223	Choke valve (2674S)	
11-245S	Low speed jet assembly (.0292") (2674S)	(2)
11-293S	Low speed jet assembly (.026") (2675S-2845S)	(2)
11B-12	Rivet plug	
11B-42	Spark port rivet plug	
11B-223	Nozzle passage rivet plug	(2)
11B-294	Idle port rivet plug	(2)
11B-332	—Rivet plug	
14-512	Choke shaft lever	
14-514S	Choke piston lever link and shaft assembly	
14-525	Choke lever	
17-70	Pump check needle	
20-126	Needle seat gasket	
21-172S	Float and lever assembly	
24-24	Float lever pin	
25-280S	Needle and seat assembly (.1015") (2674S-2675S) (Sup by 25 358S)	
25-358S	NEEDLE AND SEAT ASSEMBLY (.1015")	
30 61	Switch strainer	
30A-76	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
47-30	Welsh plug	
48-252	Pump jet housing (2675S-2845S)	
48-266	Pump jet housing (2674S)	
49-128	Switch plunger	
53A-391S	Pump operating lever and countershaft assembly	
61-84	Idle adjustment screw spring	(2)
61-134	VACUUM PISTON SPRING	
61-150	Lower pump spring	
61-243S	Contact spring and washer assembly	
61-291	Throttle lever adjusting screw spring	
61-382	Metering rod spring	
61-388	Switch return spring	
61-558	Pump operating lever spring	
63-45	Pump check ball retainer ring	
63-58	Coil housing retainer	(3)
63-118	Throttle shaft retaining ring	
64-208S	PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
75-1346	METERING ROD—STANDARD .0625" x .0495" x .041" (2675S 2845S)	(2)
75-1422	—METERING ROD—STANDARD .059" x .045" x .041" (2674S)	(2)
101-33	Metering rod arm clamp screw	
101-65	Choke lever screw	
101-74	Throttle shaft arm attaching screw	
101-81	Fast idle cam attaching screw	
101-84	Fast idle adjusting screw	
101-136	Coil housing and pump arm attaching screw	(4)
101-149S	Body flange attaching screw and washer assembly	(2)
101-152S	Body flange attaching screw and washer assembly	(2)
101-155S	Pump jet housing attaching screw assembly	(2)
101-272S	Air horn attaching screw and washer assembly	(2)
101-284	Piston housing attaching screw	(3)
101-297S	Dust cover attaching screw and washer assembly	(2)
101-307S	Air horn attaching screw and washer assembly	(6)
101-325S	Switch attaching screw and washer assembly	(2)
101-406	Throttle lever adjustment screw	
101-427	Throttle valve attaching screw	(4)
103-14	Lead shot	(4)
103-15	Lead shot	(3)
103-16	Lead shot	(2)
111-60S	Metering rod arm and screw assembly	
111-73S	Pump arm and screw assembly	
114-135	Throttle shaft arm	
115-255	Throttle connector rod	
115-266	Choke connector rod	
116-13	Pump intake check ball	
116-19	Switch ball	
117-133	Vacumeter piston link	
117-165	Pump connector link	
118-120	Dust cover	
120-203	METERING ROD JET (.090")	(2)
121-78	COIL HOUSING GASKET	
121-270	AIR HORN GASKET	
121-271	BODY FLANGE GASKET	
121-272	PUMP JET GASKET	
121-300	AIR CLEANER GASKET	
136-34	Choke shaft washer	
136-38	Throttle shaft washer	
150-190	Choke piston pin	
150A-10	Pin spring	(2)
153-11	Switch contact spring shim (.018")	(3)
153-12	Switch contact spring shim (.006")	(2)
156-114	Gas line nipple	
160-67S	Vacuum piston and pin assembly	
160-122	Choke piston (2674S)	
160-157	Choke piston (2675S-2845S)	
170-418S	Piston housing and plug assembly	
170AA-374S	Thermostatic coil and housing assembly (2675S-2845S)	
170AD-374S	Thermostatic coil and housing assembly (2674S)	
172-22	Throttle connector rod retainer (lower)	
172-24	Throttle connector rod retainer (upper)	
172-27	Cable clip	
181-87	Switch guide block	
181-220	Fast idle cam (2674S)	
181-239	Fast idle cam (2675S-2845S)	
184-86	Terminal cap	
186-51S	Choke baffle plate assembly (2675S-2845S)	
186-56S	Choke baffle plate assembly (2674S)	
192-38U	Carter starter switch unit	

—Parts so marked are new and listed for the first time

NOTE· Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.



BUICK "V-8"

"SUPER"—MODEL 50
"CENTURY"—MODEL 60
"ROADMASTER"—MODEL 70

1957

AFB Four-Bore Down-Draft Climatic® Control **Carbureter No. 2507S**

CARBURETER SPECIFICATIONS

For Buick 8 Cylinder Engine 4 125 Inch Bore, 3 4 Inch Stroke

Dimensions Flange four bore—4 bolt type
Throttle bore primary 1 9/16 inch secondary 1 11/16 inch I D
Primary venturi size primary side 7/16 inch secondary side 11/32 inch I D
Main venturi size primary s de 1¼ inch secondary side 1 9/16 inch I D

Vents Inside (4) in air horn Outside (5) in air horn (4) in body

Gasoline Intake Size No 34 (111 inch) drill hole in needle seat

Low Speed Jet Tube (In venturi assembly primary side only)
Jet size No 69 (0292 inch) drill
By pass size (057 inch) diameter
Econom zer size (0492 inch) diameter
Idle bleed size No 55 (052 inch) drill

Idle Port (Upper) slot type Primary length 200 inch width 030 inch Secondary none

Idle Port Opening Primary 156 to 162 inch above top edge of valve w th valve tightly closed Secondary none

Set Idle Adjustment Screw ¾ to 1¾ turns open For richer mixture turn screw out Do not idle engine below 485 r p m Transm ssion n neutral or park position

Main Nozzle Installed permanently DO NOT REMOVE Anti percolator bleed primary (tube in venturi assembly) size No 70 (028 inch) drill Secondary (drilled hole in venturi as sembly) size No 60 (040 inch) drill

Secondary Initial Discharge (In venturi assembly secondary s de only)
Pick up tube size No 60 (040 inch) drill
Air bleed size (0275 inch) diameter
Discharge port size (051 inch) diameter

Step-Up Rod (Vacumeter type) see parts list for size

Metering Jet Primary size 0935 inch diameter (for step up rod)
Secondary size 0748 inch diameter (no step up rod)

Accelerating Pump Discharge jet (twin) primary side only size No 70 (028 inch) drill Intake ball check seat Iscrew plug) size 115 to 120 inch diameter Discharge needle seat size No 50 (070 inch) drill

Choke Carter Climatic® Control set on index Butterfly type—offset choke valve primary side only Choke heat suction hole restriction in body size No 48 (076 inch) drill

Vacuum Spark Port Horizontal slot (round end) 040 x 130 inch Early prod with valve 2 186 bottom of port 000 to 010 inch Late prod with valve 2 211 bottom of port 008 to 016 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open	Float Setting	Idle Adjustment Screw Setting
030"- 035"	125" 175" (or 30 degrees dwell)	5° B T D C At Vibration Damper (Distributor disconnected engine idling below 400 R P M)	7/32 Inch (Use Gauge T109-106)	¾ to 1¾ Turns Open 485 R P M In Neutral or Park Position

NOTE These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT

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CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3701

FLOAT ALIGNMENT: Side of floats parallel to edge of casting. Minimum clearance between lever and air horn lugs without binding. To adjust, bend float lever.

FLOAT LEVEL: 7/32 inch (Gauge T109-106) between top of floats (at outer end) and air horn gasket. To adjust, bend float lever.

FLOAT DROP: 23/32 inch between top of floats (at outer end) and air horn gasket. To adjust, bend stop tabs on float brackets.

PUMP: 33/64 inch from the top of the bowl cover to the top of the plunger shaft. To adjust, bend throttle connector rod.

CHOKE PISTON LEVER ADJUSTMENT: .045 inch (Gauge T109-158) between choke lever and stop in piston housing with choke valve closed. To adjust, bend choke connector rod.

CHOKE SHAFT LEVER ADJUSTMENT: .010 inch (Gauge T109-200) between lug on outer choke shaft lever and stop on inner choke shaft lever with choke valve tightly closed and fast idle cam against stop on casting. To adjust, bend fast idle connector rod. Optional adjustment (late prod.) with slight clearance between lug on fast idle cam and stop on flange casting, and inner choke shaft lever contacting lug on outer choke shaft lever align index mark on cam with adjusting screw. To adjust bend fast idle connector rod.

FAST IDLE THROTTLE VALVE CLEARANCE: .026 inch (Gauge T109-189) between lower edge of valve and bore with adjusting screw on high step of cam.

FAST IDLE ON CAR: 1500 R.P.M. hot engine with fast idle screw on high step of cam.

UNLOADER: 3/16 inch (Gauge T109-28) between upper edge of choke valve and inner wall of air horn. To adjust, bend unloader lip on throttle lever.

SECONDARY THROTTLE LEVER ADJUSTMENT: 1. Primary and secondary throttle valves must reach wide open position at the same time. To adjust, bend secondary operating rod. **NOTE:** Secondary throttle valves will be a few degrees from wide open when primary valves are wide open. Upper edge of secondary valve should just contact auxiliary valve when auxiliary valve is wide open. **IMPORTANT:** The wide open stop lug on secondary throttle lever should contact boss on flange to prevent secondary valves from going past wide open. If necessary bend stop lug. 2. With primary and secondary throttle valves tightly closed, there should be .017 to .022 inch gauge T109-29 between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on secondary lever.

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: Crack throttle valves and manually open and close the choke valve. Tang on secondary throttle lever should freely engage in notch of lock-out dog. To adjust, bend tang on secondary throttle lever.

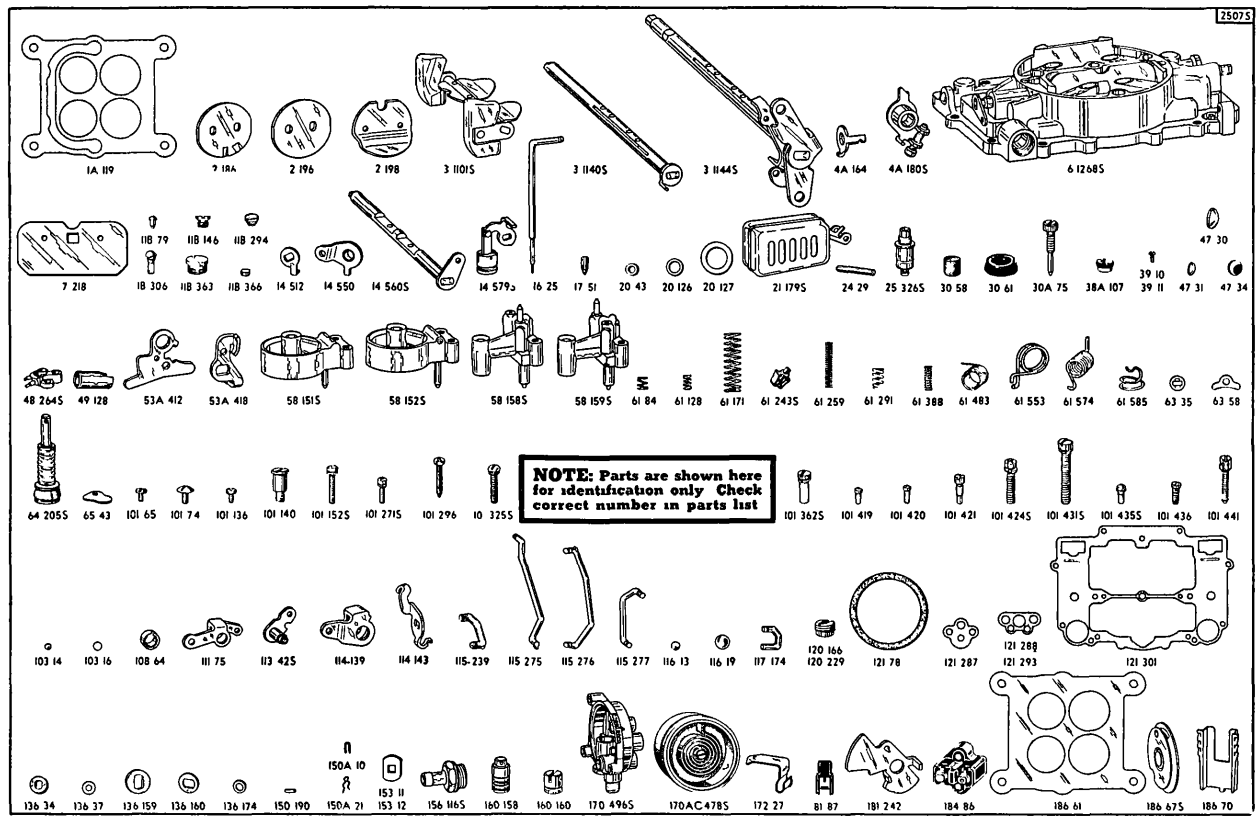
CAR STARTER SWITCH ADJUSTMENT: Should contact between 19/64 inch and 9/16 inch travel of top edge of throttle lever stop lug and idle speed screw. (Idle speed screw just touching stop lug with valve seating.)

To adjust, add or remove shims from switch.

TOOLS REQUIRED FOR SERVICING CARBURETER:

T109-28	3/16" Unloader gauge	T109-158	.045" Wire gauge
T109-29	.020" Wire gauge	T109-189	.026" Wire gauge
T109-41	Bending tool	T109-200	.010" Wire gauge
T109-106	7/32" Float gauge	T109-213	Bending tool

CARBURETER
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Buick—1957—Carbureter No. 2507S

WHEN SERVICING USE GASKET ASSORTMENT No 304 REPAIR PACKAGE No 1866N

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1A-119	FLANGE GASKET	
2-186	Primary throttle valve (early prod)	(2)
2-196	Secondary throttle valve	(2)
2 198	Auxiliary throttle valve	(2)
2-208	*Primary throttle valve (early prod)	(2)
2 211	Primary throttle valve (late prod)	(2)
3 1101S	Auxiliary throttle shaft valve and weight assembly	
3 1140S	Secondary throttle shaft and lever assembly	
3 1144S	Primary throttle shaft and lever assembly	
4A-164	Primary throttle shaft dog	
4A 180S	Primary throttle shaft dog and screw assembly	
6 1268S	Air horn assembly	
7 218	Choke valve	
7 224	Choke valve (Sup by 7 218)	
11B-79	Rivet plug	(5)
11B 146	Level sight plug (Sup by 11B 372)	
11B-176	Idle port rivet plug	
11B-294	Idle port rivet plug (Sup by 11B 176)	(2)
11B 306	Fuel passage plug	(2)
11B-363	Pump intake screw plug	
11B 366	Nozzle well rivet plug	(4)
11B-372	Level sight plug	
14 512	Outside choke shaft lever	
14 550	Inside choke shaft lever	
14 560S	Choke lever and shaft assembly	
14 579S	Choke piston lever link and pin assembly (Sup by 14 581S 150 190 and 160 160)	
14 581S	Choke piston lever and link assembly	
16 19	Step up rod 067" x 054" (Sup by 16 25)	(2)
16-25	STEP UP ROD 066" x 054"	(2)
16-26	Step up rod 0675" x 056"—1 size lean	(2)
16-29	Step up rod 06475" x 052"—1 size rich	(2)
16-37	†Unitized package (Consists of 2—16 36 1—53A 430 1—61 602 1—107 48 1—160 159 1—drill (0512") and 1—instruction sheet)	
16 41U	Step up rod and jet unit (Consists of 2—16 27 and 2—120 175) 2 sizes lean	
17-51	Pump discharge check needle	
20-43	Piston housing gasket	
20-126	Needle seat gasket	(2)
20-127	Fuel inlet fitting gasket	
21-179S	Float and lever assembly	(2)
24-29	Float lever pin	(2)
25-326S	NEEDLE AND SEAT ASSEMBLY	(2)
30-58	Fuel inlet strainer (early prod only)	
30-61	Switch strainer	
30A-75	Idle adjustment screw	(2)
38A-107	Pump intake check ball seat	
39-10	Auxiliary throttle valve attaching screw (early prod)	(4)
39-11	Choke valve attaching screw	(2)
47-30	Piston housing welsh plug	
47-31	Venturi welsh plug	(4)
47-33	Venturi welsh plug	(4)
47-34	Spark port welsh plug	
48-264S	Pump jet and housing assembly	
49-128	Switch plunger	
53A-412	Lockout dog	
53A-414	Secondary throttle operating lever (Sup by 53A 419)	
53A-418	Secondary throttle operating lever (Sup by 53A 414)	

Part No.	PART NAME	
53A-419	Secondary throttle operating lever (grind flat on secondary throttle shaft washer if necessary) (Sup by 53A 430)	
53A-430	Secondary throttle operating lever	
58-151S	Secondary venturi assembly (choke side)	
58-152S	Secondary venturi assembly (pump side)	
58-158S	Primary venturi assembly (choke side)	
58-159S	Primary venturi assembly (pump side)	
61-84	Idle adjustment screw spring	(2)
61-128	Throttle connector rod spring	
61-171	Pump spring (lower)	
61-243S	Contact spring and washer assembly	
61-259	VACUUM PISTON SPRING	(2)
61-291	Throttle lever adjusting screw spring	
61-388	Switch return spring	
61-475	Throttle lever adjusting screw spring (Sup by 61 291)	
61-483	Secondary throttle return spring	
61-553	Primary throttle shaft dog spring	
61-574	Throttle flex spring	
61-585	Step up rod retaining spring	(2)
63-35	Throttle connector rod retainer	
63-58	Coil housing retainer	(3)
64-205S	Pump plunger, rod and spring assembly (Sup by 64 209S)	
64-207S	Pump plunger rod and spring assembly (Sup by 64 205S)	
64-209S	PUMP PLUNGER ROD AND SPRING ASSEMBLY	
65-43	Step up piston cover plate	(2)
101-65	Choke shaft lever attaching screw	(2)
101-74	Throttle shaft lever attaching screw	(2)
101-136	Coil housing attaching screw	(3)
101-140	Fast idle cam attaching screw (Sup by 101 323)	
101-152S	Air horn attaching screw and washer assembly	
101-184S	Pump jet housing attaching screw and washer assembly	(2)
101-271S	Pump jet housing attaching screw and washer assembly (Sup by 101-184S	(2)
101-296	Fast idle adjustment screw	
101-298S	Primary venturi attaching screw and washer assembly (late prod)	(4)
101-323	Fast idle cam attaching screw	
101-325S	Switch attaching screw and washer assembly	(2)
101-362S	Air horn attaching screw and washer assembly	(8)
101-376	Throttle lever adjusting screw (Sup by 101 441)	
101-379S	Secondary venturi attaching screw and washer assembly (late prod)	(4)
101-419	Secondary throttle valve attaching screw	(4)
101-420	Primary throttle valve attaching screw	(4)
101-421	Pump arm attaching screw	
101-424S	Venturi attaching screw and washer assembly (early prod)	(8)
101-431S	Air horn attaching screw and washer assembly	
101-435S	Step up piston cover plate attaching screw and washer assembly	(2)
101-436	Piston housing attaching screw	(3)
101-441	Throttle lever adjusting screw	
103-14	Lead shot	
103-16	Lead shot	(2)

Part No.	PART NAME	
108-64	Fast idle cam spacer	
111-75	Pump arm	
113-42S	Choke shaft and lever assembly (piston housing)	
114-139	Primary throttle shaft arm (inner)	
114-143	Primary throttle shaft arm (outer)	
115-239	Throttle operating rod (Sup by 115 292)	
115-275	Fast idle connector rod	
115-276	Throttle connector rod	
115-277	Choke connector rod (Sup by 115 297)	
115-292	Throttle operating rod	
115-297	Choke connector rod	
116-13	Pump intake check ball	
116-19	Switch ball	
117-174	Pump connector link	
120-166	PRIMARY METERING JET	(2)
120-229	Secondary metering jet	(2)
121-78	COIL HOUSING GASKET	
121-287	PUMP JET HOUSING GASKET	
121-288	PRIMARY VENTURI CLUSTER GASKET	(2)
121-292	Air horn gasket (Sup by 121 301)	
121-293	SECONDARY VENTURI CLUSTER GASKET	(2)
121-301	AIR HORN GASKET	
136-34	Choke piston lever retaining washer	(2)
136-37	Throttle operating rod washer	(5)
136-159	Primary throttle shaft washer	
136-160	Secondary throttle shaft washer	
136-174	Throttle lever adjusting screw washer	
150-190	Choke piston pin (Use with 14 581S)	
150A-10	Pin spring	(6)
150A-21	Pin spring	
153-11	Switch contact spring shim (018)	(3)
153-12	Switch contact spring shim (006)	(2)
156-116S	Fuel inlet fitting	
160-125	Choke piston (use with 14 581S)	
160-153	Step up piston	(2)
160-158	Step up piston (Sup by 160 153)	(2)
160-160	Choke piston (Use with 14 581S) (Sup by 160 125)	
160-175U	★Unitized package (consists of 1—53A 419 1—61 602 and 1—160 125) (Sup by 160 187U)	
160-187U	★Unitized package (Consists of 1—53A 430 1—61 602 and 1—160 125)	
170-496S	Piston housing and plug assembly	
170AC478S	Thermostatic coil and housing assembly	
170AR478S	Thermostatic coil and housing assembly (Sup by 170AC478S)	
172-27	Cable clip	
181-87	Switch guide block	
181-242	Fast idle cam	
184-86	Switch terminal cap	
186-61	FLANGE BAFFLE PLATE	
186-67S	Choke baffle plate assembly	
186-70	Fuel bowl baffle	(2)
192-38U	Carter starter switch unit	

*Used to correct excessive spark port vacuum at idle on early production carbureters in place of 2 186

†For Canadian use only

★To correct stumble and choke loading

NOTE **Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.**

Form 3701B
November, 1956
Revised September, 1957

CARTER MODEL AFB CARBURETER FOR BUICK
(SERVICE ADJUSTMENT PROCEDURE)

NOTE: The parts and specification pages referred to are catalog pages. These pages can be obtained from Carter Carburetor, Catalog Department, St. Louis (7), Missouri. Specify the carbureter number found on the base of the carbureter, when requesting specification pages.

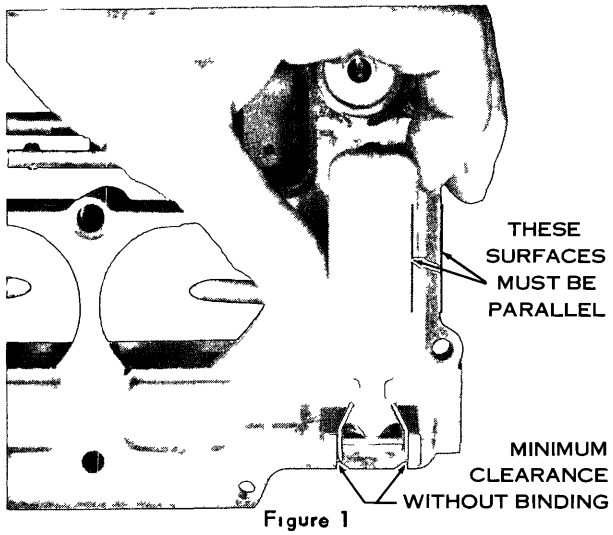


Figure 1

FLOAT ALIGNMENT ADJUSTMENT (Fig. 1):

1. Sight down the side of the float shell to determine if the side of the float is parallel to the outer edge of the air horn casting. TO ADJUST: Bend float lever by applying pressure to the end of the float shell with the fingers while supporting the float lever with the thumb.

   CAUTION: To avoid damaging the float, apply only enough pressure to bend float lever.

2. After aligning float, remove as much clearance as possible between arms of float lever and lugs on air horn by bending the float lever. Arms of float lever should be as parallel to the inner surfaces of lugs on air horn as possible.

   Floats must operate freely without excess clearance on its hinge pin.

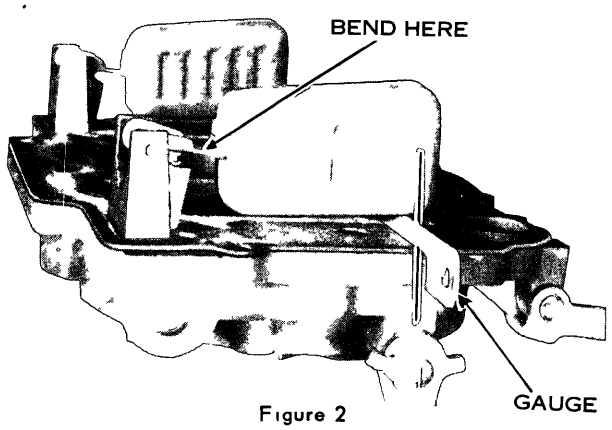


Figure 2

FLOAT LEVEL ADJUSTMENT (Fig. 2):

With air horn inverted, bowl cover gasket in place and needle seated, the clearance between top of float (at outer end) and air horn gasket should be as listed on carburetor specification page. To adjust, bend float arm. Adjust both floats. Recheck float alignment.

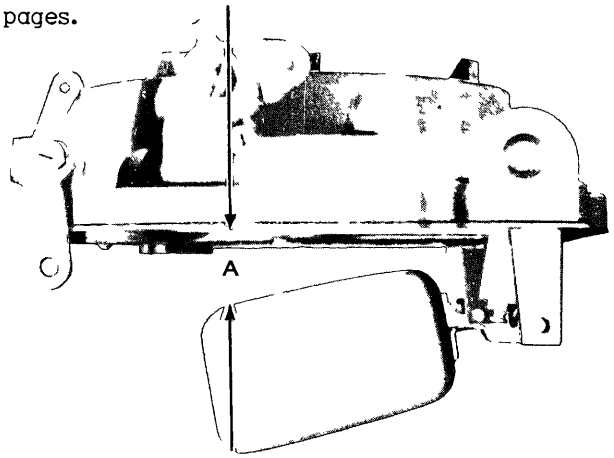


Figure 3

FLOAT DROP ADJUSTMENT (Fig. 3):

With bowl cover held in upright position and measuring from outer end of each float, the distance between tip of floats and bowl cover gasket should be as listed on carbureter specification page. To adjust, bend tabs on float brackets.

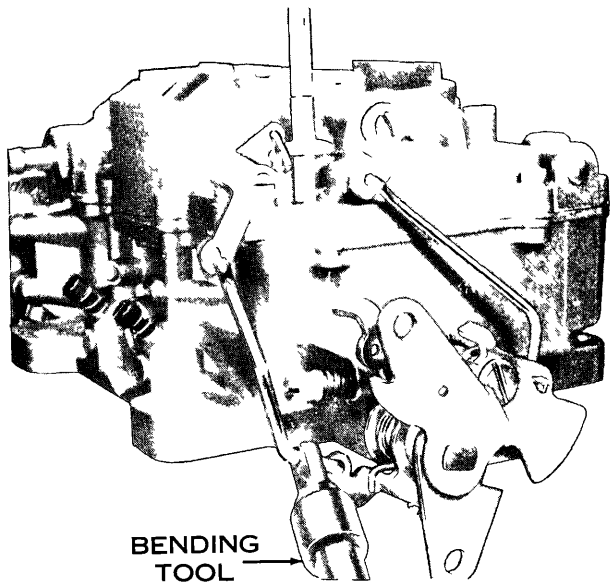


Figure 4

PUMP ADJUSTMENT (Fig. 4):

1. Back out idle speed screw until throttle valves seat in bores of carbureter. NOTE: Be sure choke is wide open so fast idle cam does not hold throttle valve open.

2. The distance from the top of the bowl cover to the top of the plunger shaft should be as listed on carburetor specification page.

3. Adjust by bending throttle connector rod at lower angle (use tool T109-213).

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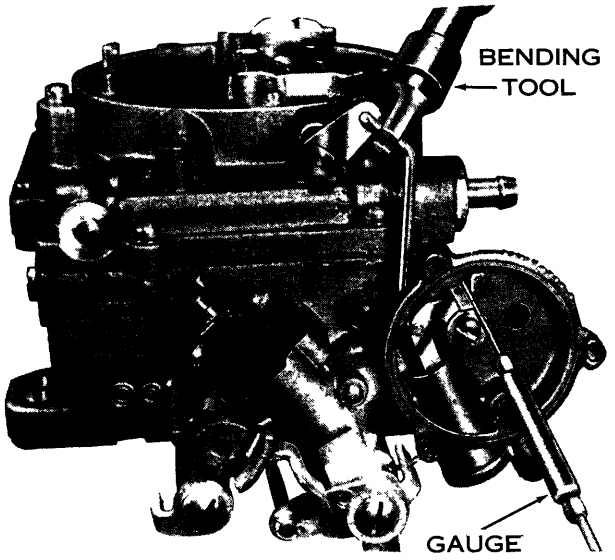


Figure 5

CHOKE PISTON LEVER ADJUSTMENT (Fig. 5):

With ch ke valv tightly closed, the clearance between ch k l ver and stop in piston housing should be as list d n carbureter specification page. To adjust, bend ch k c nnect r rod (use tool T109-213).

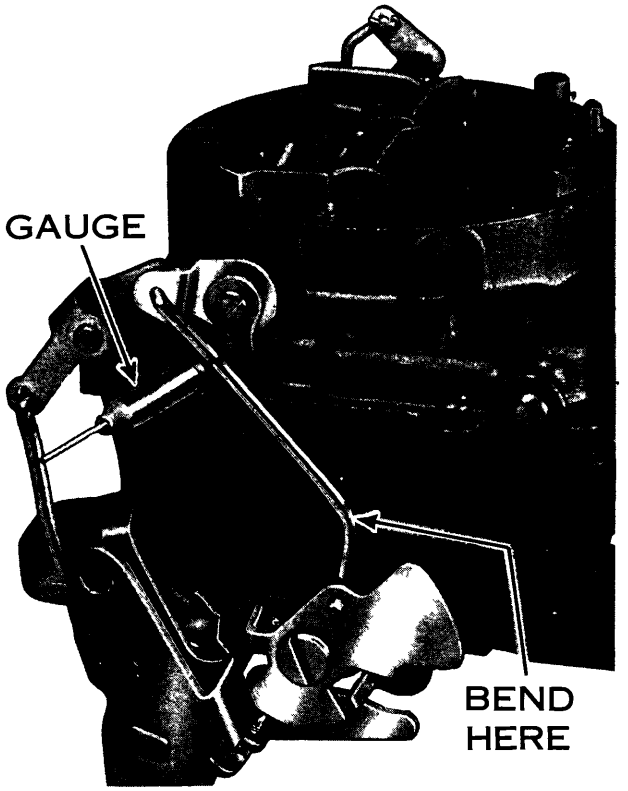


Figure 6

CHOKE SHAFT LEVER ADJUSTMENT (Fig. 6):

With ch k valve tightly closed and fast idle cam against stop on casting, the cl aranc between lug on ut r choke shaft lev r and stop on inner chok shaft lever sh uld b as list d n carbur ter specificati n pag . To adjust, b nd fast idle conn ctor rod (us tool T109-213).

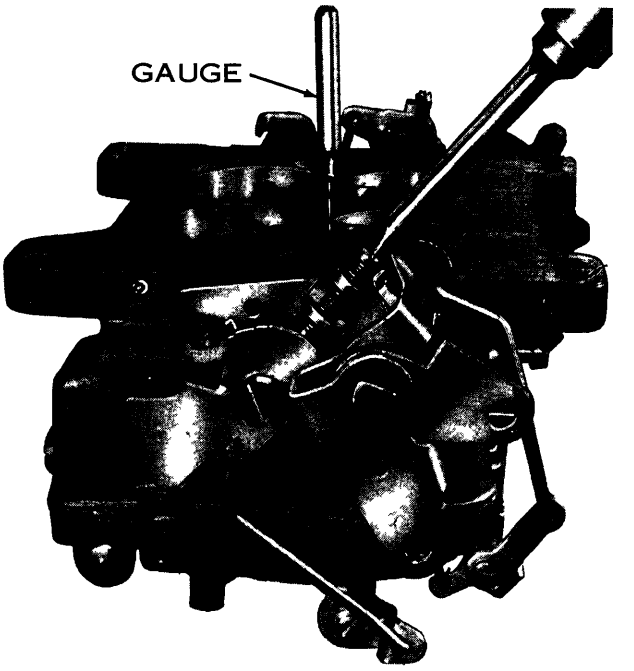


Figure 7

FAST IDLE THROTTLE VALVE CLEARANCE ADJUSTMENT (Fig. 7):

With choke valve tightly closed, tighten fast idle adjusting screw (on high step of cam) until the clearance between throttle valve and bore of carbureter, side opposite idle port, is as listed on carbureter specification page.

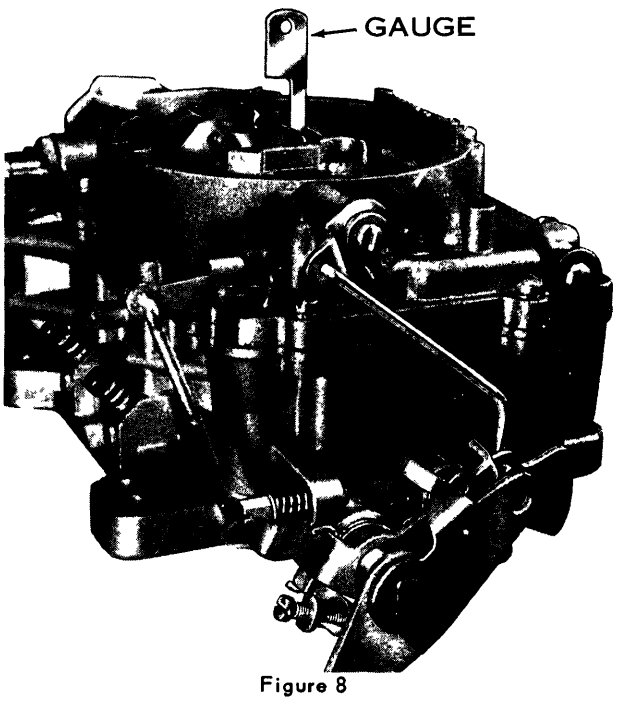


Figure 8

UNLOADER ADJUSTMENT (Fig. 8):

With throttle wide open, the clearance between upp r edge of choke valve and inner wall of air horn should be as listed on carbureter specification pag . To adjust, bend unloader lip on throttle shaft lever. (Use tool T109-41.)

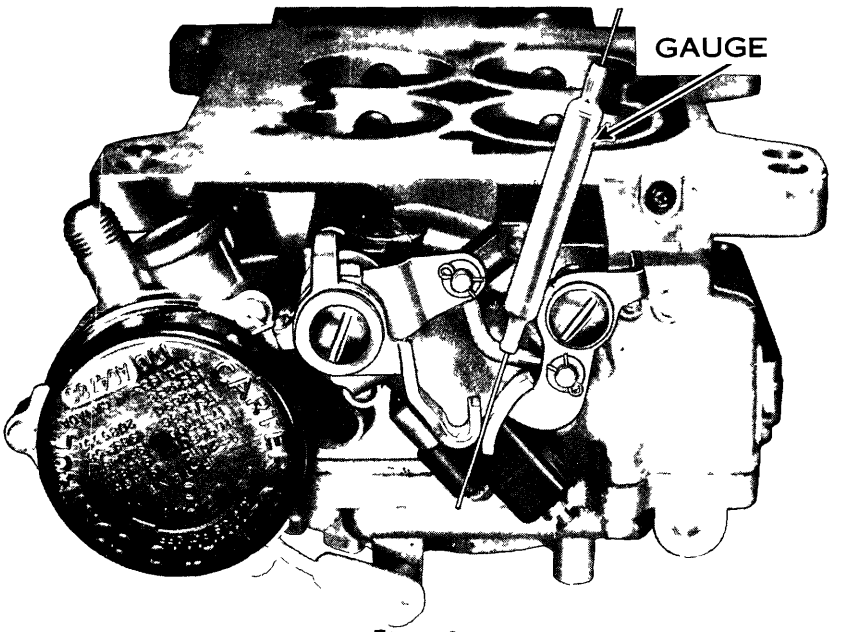


Figure 9

SECONDARY THROTTLE LEVER ADJUSTMENT (Fig. 9):

1. The stop lugs on both primary and secondary throttl lev rs should contact boss on flang at the same time. T adjust: b nd secondary throttl operating rod at angle (use bending to l T109-213). NOTE: Secondary thr ttl valv s will be a few degrees fr m v rticcl at wide open throttle
2. With primary and s condary throttle valves in tightly closed position, the clearance betw , n positive closing shoes on primary and secondary throttle levers should be as listed on carbureter specification page. To adjust, bend shoe on secondary lever.

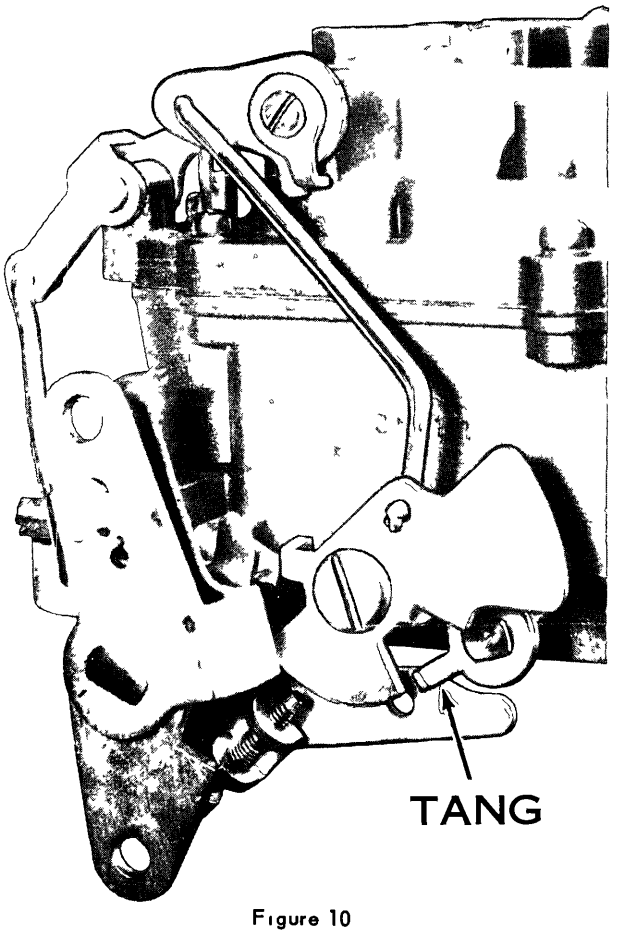


Figure 10

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT (Fig. 10):

Crack throttle valves and manually op n and clos the choke valve. Tang on secondary throttl lever should fr ly engage in notch of lock-out dog. If n cessary to adjust, bend tang on secondary throttle lever.

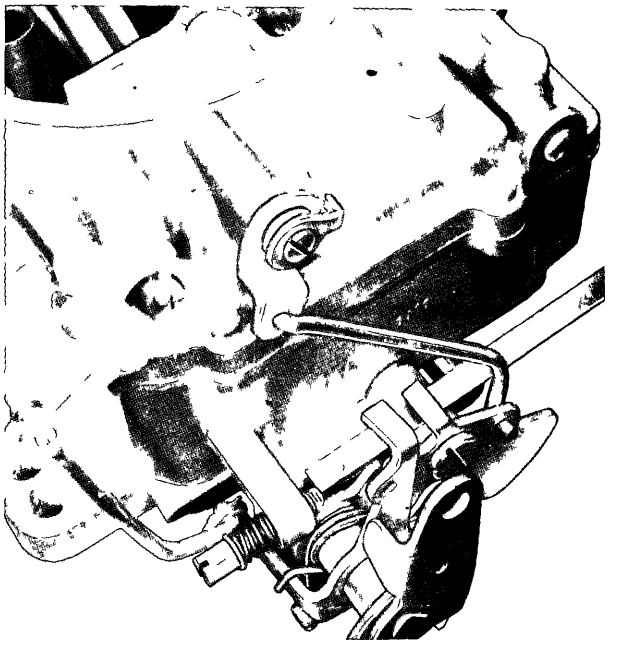


Figure 11

CAR STARTER SWITCH ADJUSTMENT (Fig 11):

1. Connect a test lamp across the start r switch t rminal.
2. Hold choke valve wide open and adjust idle sp d screw until it just contacts stop lug on throttl l v r when throttle is fully closed.
3. Holding a scale between center of idle sp d scr w and top edge of throttle lever stop lug; open throttl until test light indicates starter switch contact. Switch should make contact when th distance from top edge of stop lug and center of idl sp d scr w is b tw en 19/64" and 9/16". To adjust: if switch makes contact too arly decrease th numb r f shims in th switch guide block. If th switch makes contact too late incr as the number of shims in th switch guid block. Two sizes of shims ar availabl , Carter parts 153-11 (.018") and 153-12 (.006").

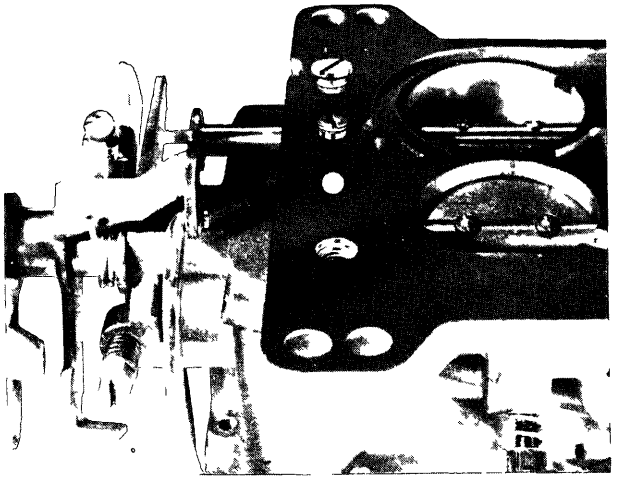


Figure 12

(Fig. 12):

Pump intake check ball, seat and screw plug are removed by inverting carbureter and removing from lower side of flange.

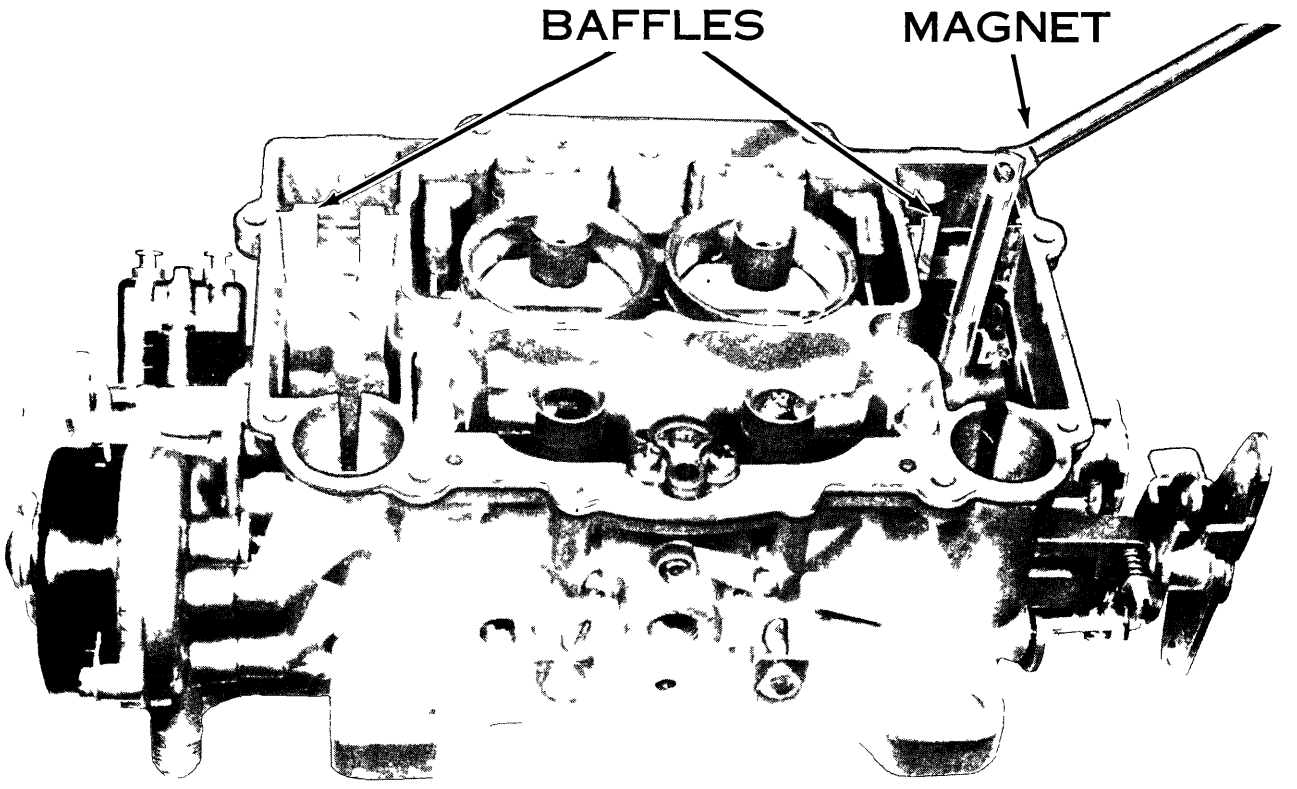


Figure 13

(Fig. 13):

Check to be sur that auxiliary throttle shaft weights move freely and are free from dirt and gum (Fig. 13).

Flooding, stumbl on acceleration and other performance complaints are, in many instances, caused by the presence of dirt, wat r or th r foreign matter in the carbureter. To aid in diagnosing the cause of the complaint, the carbureter should b car fully removed from the engine without draining the fuel from the bowl. The contents of the fuel bowl may th n be xamin d f r contamination as the carbureter is disassembled.

Ch ck th fu l in the bowl for contamination by dirt, water, gum or other foreign matter. A magnet moved through the fuel in th b wl will pick up and identify any iron oxide dust that may have caused intake needle and seat leakage.

Insp ct gask t d surfaces between body and air horn. Small nicks or burrs should be smoothed down to eliminate air or fu l l akag . B specially particular when inspecting the top surface of the inner wall of the bowl around the vacuum pist n passag . A poor seal at this location may contribute to a "cutting-out" on turns complaint.

Install fu l baffles as shown (Fig. 13) to prevent damage to floats.

Fill th carburet r bowl with clean fuel before installing on the manifold. This will help prevent dirt trapped in the fuel syst m from b ing dislodg d by th fr fl w f fu l as th carbur t r is primed. Th op rati n f th fl ats and intake n dl and s ats may be ch ck d und r pr ssur if a fuel pump is used at th b nch to fill th carbureter b wl. Op rat th throttl s v ral tim s and visually ch ck th discharg from th pump j ts.

Bef r installing th carbur t r, h ld chok valv p n and turn th idle spe d scr w until it just contacts th thr ttl lev r, th n 1/2 a turn m re t pen th throttl valv s n ugh to k ep th ngin running until th idl mixture and final R.P.M. adjustment can b mad .

BUICK "V-8"

SPECIAL

MODEL 40

1957

(2529S) SYNCROMESH TRANSMISSION

(2536S) DYNAFLOW TRANSMISSION

WGD Dual Down-Draft Climatic® Control **Carbureters Nos. 2529S-2536S**

CARBURETER SPECIFICATIONS

For Buick 8 Cylinder Engine: 4.125 Inch Bore, 3.4 Inch Stroke

Dimensions: Flange size 1¼ inch dual, 4 bolt type
Primary venturi 11/32 inch I. D
Main venturi 1-3/16 inch I D

Vents: Outside, bowl cover—one, flange—two

Gasoline Intake: Size No 38 (1015 inch) drill in needle seat

Low Speed Jet Tube: Jet, size (2529S) 0292 inch, (2536S) 025 inch diameter By-pass in air horn, size 057 inch diameter Economizer in air horn, size 061 inch diameter Idle bleed in air horn size No 50 (070 inch) drill

Idle Port: Upper, slot type length 150 inch; width 030 inch.

Idle Port Opening: 087 to 093 inch above top edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw): Size No 53 (0595 inch) drill

Main Nozzle: Nozzle is installed permanently DO NOT REMOVE Anti percolating well bleed, in plug size No 70 (028 inch) drill

Metering Rod (Vacumeter Type): See parts list for size

Metering Rod Jet. Size 090 inch diameter

Accelerating Pump. Discharge jet (twin) size (2529S) No 68 (031 inch) (2536S) No 69 (0292 inch) drill
Intake check seat size 115 to 120 inch diameter
Discharge (needle seat) size No 50 (070 inch) drill
Pump jet air bleed passage to outside ⅛ inch drill

Choke: Carter Climatic® Control—(2529S) set 1 point lean, (2536S) set on index Butterfly type offset valve Choke heat suction hole plug between air horn and piston housing size (2529S) No 42 (0935 inch) (2536S) No 48 (076 inch) drill

Vacuum Spark Port: Horizontal slot type 130 by 040 inch Bottom of port to be 010 to 016 inch above upper edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .030"-.035"	Breaker Point Setting .0125"-.0175"	Ignition Timing Breaker Points to Open 5° B. T. D. C. At Vibration Damper	Float Setting 17/64 Inch (Use Gauge T109-238)	Idle Adjustment Screw Setting 1/2 to 1½ Turns Open Idle Engine at 450 r.p.m.

NOTE: These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT.

CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3643

Float Level: 17/64" (Gauge T109 238) between top of float (at center) and bowl cover
To adjust bend float lever

Float Alignment: Side of float parallel to edge of casting Minimum clearance between lever and air horn lugs without binding
To adjust bend float lever

Pump: With pump connector link in outer hole (long stroke) flat on pump arm should parallel straight edge on dust cover boss
To adjust bend throttle connector rod

Metering Rod: Metering rod should bottom with throttle valves seated

Choke Lever Clearance: With choke valve tightly closed there should be 020" (Gauge T109-29) between lug on outer choke shaft lever and stop on inner choke shaft lever Optional Adjustment (late prod) with slight clearance between tang on fast idle cam and stop on flange casting and inner choke shaft lever contacting lug on outer choke shaft lever align index mark on cam with adjusting screw To adjust bend lug on outer choke shaft lever

Fast Idle Throttle Valve Clearance: 026" (Gauge T109-189) between lower edge of valve and bore with adjusting screw on high step of cam

Unloader: (2529S) 9/64" (Gauge T109-34), (2536S) 11/64" (Gauge T109-166) between top edge of valve and inner wall of air horn
To adjust bend unloader arm on throttle lever

Car Starter Switch: Should contact between 31/64" and 11/16" travel of top edge of throttle lever stop lug and idle speed screw (Idle speed screw just touching stop lug with valve seating)
To adjust add or remove shims from switch

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Buick "V-8"—1957—Carbureters Nos. 2529S-2536S

WHEN SERVICING, USE GASKET ASSORTMENT No 305 REPAIR PACKAGE No 1867A (2529S), No 1868 (2536S)

PART NAMES IN CAPITAL LETTERS, LISTED BELOW INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1 1431S	Body flange assembly (2529S)	
1-1477S	Body flange assembly (2536S)	
1A-95	FLANGE GASKET	
2-101	Throttle valve	(2)
3-1087S	Throttle shaft and lever assembly (2529S)	
3-1126S	Throttle shaft and lever assembly (2536S)	
6-1202S	Air horn assembly (2536S)	
6-1262S	Air horn assembly (2529S)	
7-219	Choke valve (2536S)	
7-223	Choke valve (2529S)	
11-245S	LOW SPEED JET ASSEMBLY (2529S)	(2)
11-304S	LOW SPEED JET ASSEMBLY (2536S)	(2)
11B-12	Rivet plug	
11B-35	Rivet plug	(3)
11B-41	R vet plug	(2)
11B-42	Spark port rivet plug	
11B-79	Rivet plug	(3)
11B-223	Nozzle passage rivet plug	(2)
11B-292	Fuel passage rivet plug	
11B-294	Idle port rivet plug	(2)
14-512	Choke shaft lever	
14-514S	Choke piston lever link and shaft assembly	
14-525	Choke lever	
15-35S	Bowl nut assembly (early prod)	
17-70	PUMP CHECK NEEDLE	
20-35	Bowl nut gasket (early prod)	
20-126	Needle seat gasket	
21-172S	Float and lever assembly	
24-24	Float lever pin	
25-280S	NEEDLE AND SEAT ASSEMBLY	
25-325S	Needle and seat assembly (Sup by 25 280S)	
30-61	SWITCH STRAINER	
30-75	Bowl strainer (early prod)	
30A-76	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
47-30	Welsh plug	
48-252	Pump jet housing (2536S)	
48-266	Pump jet housing (2529S)	
49-128	Switch plunger	
53A-391S	Pump operating lever and countershaft assembly	
61-84	Idle adjustment screw spring	(2)
61-134	VACUUM PISTON SPRING	
61-150	Lower pump spring	
61-243S	Contact spring and washer assembly	
61-291	Throttle lever adjusting screw spring	
61-382	METERING ROD SPRING	
61-388	Switch return spring	
61-558	Pump operating lever spring	
63-45	Pump check ball retainer ring	
63-58	Coil housing retainer	(3)
63-118	Throttle shaft retaining ring	
64-188S	PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY (2536S)	
64-200S	Pump plunger rod spring and retainer assembly (2529S) (Sup by 64 208S)	
64-208S	PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY (2529S)	
75-1346	METERING ROD—STANDARD 0625" x 0495" x 041" (2536S)	(2)
75-1348	METERING ROD 061" x 04675" x 0405" 1 size lean (2529S) 1 size rich (2536S)	(2)
75-1367	Metering rod 0625" x 0495" x 045" 2 sizes lean (2529S)	(2)
75 1368	Metering rod 0635" x 052" x 044" 1 size lean (2536S)	(2)
75-1369	Metering rod 065" x 0542" x 047" 2 sizes lean (2536S)	(2)
75-1371	METERING ROD—STANDARD 058" x 043" x 041" (2529S)	(2)
75-1383U *	Unitized package (Consists of 1—61 601 and 2—75 1371) (2529S)	
101-33	Metering rod arm clamp screw	
101-65	Choke lever screw	
101-74	Throttle shaft arm attaching screw	
101-81	Fast idle cam attaching screw	
101-84	Fast idle adjusting screw	
101-136	Coil housing and pump arm attaching screw	(4)
101-149S	Body flange attaching screw and washer assembly	(2)
101-152S	Body flange attaching screw and washer assembly	(2)
101-155S	Pump jet housing attaching screw	(2)
101-272S	Air horn attaching screw and washer assembly	(2)
101-273S	Body flange attaching screw and washer assembly (Sup by 101 149S)	(2)
101-284	Piston housing attaching screw	(3)
101-293	Metering rod arm clamp screw (Sup by 101-33)	
101-297S	Dust cover attaching screw and washer assembly	(2)
101-307S	Air horn attaching screw and washer assembly	(6)
101-325S	Switch attaching screw and washer assembly	(2)
101-353S	Body flange attaching screw and washer assembly (Sup by 101 152S)	(2)
101-406	Throttle lever adjustment screw	
101-412S	Dust cover attaching screw and washer assembly (Sup by 101 297S)	(2)
101-427	Throttle valve attaching screw	(4)
111-53S	Metering rod arm and screw assembly (Sup by 111 60S)	
111-60S	Metering rod arm and screw assembly	
111-73S	Pump arm and screw assembly	
114-135	Throttle shaft arm	
115-255	THROTTLE CONNECTOR ROD	
115-266	Choke connector rod	
116-13	Pump intake check ball	
116-19	Switch ball	
117-133	Vacumeter piston link	
117-165	Pump connector link	
118-120	Dust cover	
120-203	METERING ROD JET	(2)
121-78	COIL HOUSING GASKET	
121-270	AIR HORN GASKET	
121-271	BODY FLANGE GASKET	
121-272	PUMP JET GASKET	
121-300	AIR CLEANER GASKET	
136-34	Choke shaft washer	
136-38	Throttle shaft washer	
150-190	Choke piston pin	
150A-10	PIN SPRING	(2)
153-11	Switch contact spring shim (018)	(3)
153-12	Switch contact spring shim (006)	(2)
156-114	Gas line nipple	
160-67S	Vacuum piston and pin assembly	
160-122	Choke piston (2529S)	
160-157	Choke piston (2536S)	
170-418S	Piston housing and plug assembly	
170AA-374S	Thermostatic coil and housing assembly (2536S)	
170AD-374S	Thermostatic coil and housing assembly (2529S)	
172-22	Throttle connector rod retainer (lower)	
172-24	Throttle connector rod retainer (upper)	
172-27	Cable clip	
181-87	Switch guide block	
181-220	Fast idle cam (2529S)	
181-239	Fast idle cam (2536S)	
184-86	Terminal cap	
186-51S	Choke baffle plate assembly (2536S)	
186-56S	Choke baffle plate assembly (2529S)	
192-38U	Carter starter switch unit	

*75 1383U used to correct stumble complaint on 2529S

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.

BUICK "V-8"

"SUPER" – MODEL 50
"CENTURY" – MODEL 60
"ROADMASTER" – MODEL 70
1956

WCFB Four-Bore Down-Draft Climatic® Control Carbureter **No. 2347S**

CARBURETER SPECIFICATIONS

For Buick 8 Cylinder Engine: 4.00 Inch Bore, 3.20 Inch Stroke

Dimensions Flange size, 1 1/8 inch four bore 4 bolt type
Primary venturi size 11/32 inch I D
Main venturi size 1-3/16 inch I D

Vents In air horn (6) combination inside and outside
In dust cover (1) outside
In flange bore to atmosphere (4)

Gasoline Intake· Size No 34 (111 inch) drill in needle seat

Low Speed Jet Tube Jet size No 66 (033 inch) drill, by pass in body size 057 inch diameter Economizer, in body, size (0453 inch) drill Idle bleed in body size No 46 (081 inch) drill

Idle Port: Upper, slot type primary, length 140 inch width 030 inch Secondary length 103 inch, width 030 inch

Idle Port Opening Primary 092 to 098 inch, secondary 065 to 071 inch above top edge of valve with valve tightly closed

Lower Port. Primary (for idle adjustment screw), size No 55 (052 inch) drill

Secondary (no idle adjustment screw) size No 57 (.043 inch) drill

Set Idle Adjustment Screw 3/4 to 1 3/4 turns open For richer mixture turn screw out Do not idle engine below 450 r p m transmission in neutral

Main Nozzle: Installed permanently Do not remove Anti-percolating bleed (4) size No 70 (028 inch) drill

Metering Rod: Primary Economy step 0715 inch diameter Middl step tapers to 046 inch diameter Power step 046 inch diameter. Secondary None

Metering Rod Jet. Primary size 0995 inch diameter
Secondary size 086 inch diameter

Accelerating Pump: Discharge jet (twin) primary side only, siz No 70 (028 inch) drill Intake ball check seat size 115 to 120 inch diameter Discharge needle seat, size No 50 (070) inch) drill Relief passage (vent) to fuel chamber size No 42 (0935 inch) drill

Choke: Carter Climatic® Control, set one point lean Butterfly type offset choke valve, primary side only Choke heat suction hole, restriction in piston housing, size No 45 (082 inch) drill.

Vacuum Spark Port Horizontal slot (round end) 040 x 130 inch. Bottom of port 008 to 014 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .030"-.035"	Breaker Point Setting .015"	Ignition Timing Breaker Points to Open: 5° B.T.C. At Vibration Damper	Float Setting See Adjustments	Idle Adjustment Screw Setting 3/4 to 1 3/4 Turns Open Idle engine at 450 R.P.M. in neutral

NOTE· These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT.

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CARBURETER
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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENTS: Two separate float adjustments must be made—lateral and vertical. LATERAL ADJUSTMENT: With bowl cover assembly inverted, bowl cover gasket removed and float resting on seated needle, place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting. Side of floats should just clear the vertical uprights of float gauge. Adjustment should be made by bending arms of floats. VERTICAL ADJUSTMENT: With float gauge in same position, floats should just clear the horizontal portion of gauge. Vertical distance between top of float and machined surface of casting must be 3/16 inch (gauge T109-222) for both primary and secondary floats. Adjust by bending float arms.

FLOAT DROP ADJUSTMENT: With bowl cover held in upright position and measuring from center of floats, the distance between top of floats and bowl cover should be 11/16 inch for both primary and secondary floats. Adjust by bending stop tabs on float bracket.

PUMP ADJUSTMENT: Install pump connector link in outer hole (long stroke) of pump arm, with ends extending toward countershaft arm. Back out throttle lever set screw until throttle valves seat in bores of carbureter. Hold straight edge across top of dust cover boss at pump arm. The flat on top of pump arm should be parallel to straight edge. Adjust by bending throttle connector rod (early) at upper angle, (late) at lower angle. (Use tool T109-213).

METERING ROD ADJUSTMENT: Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows: 1. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw. 2. With metering rods in place, press down on vacumeter link until metering rods bottom in carbureter body casting. 3. Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link. Hold in place and carefully tighten clamp screw.

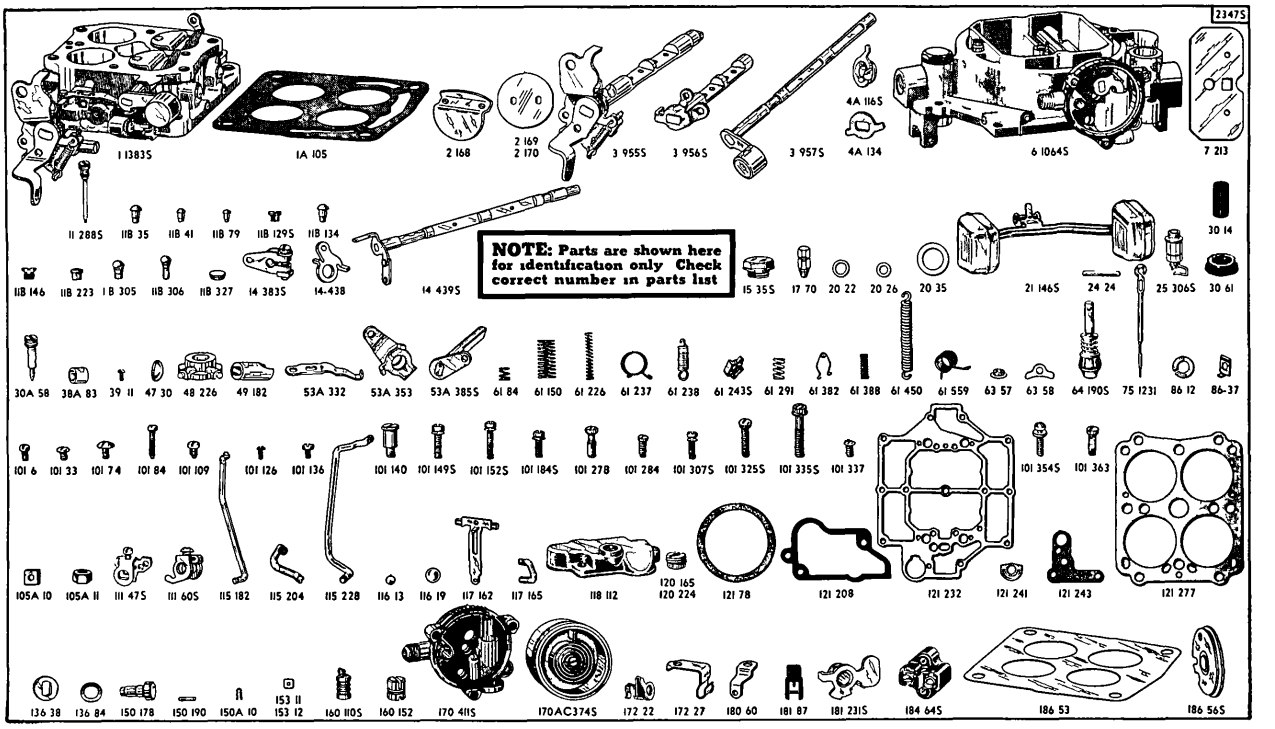
FAST IDLE ADJUSTMENT: (A) Loosen choke lever clamp screw on choke shaft. Insert .020 inch feeler gauge (T109-29) between lip of fast idle cam and boss of flange casting. Hold choke valve tightly closed and take slack out of linkage by pressing lever towards closed position—hold in place and tighten clamp screw. (B) With choke valve tightly closed, tighten fast idle adjusting screw until there is .020 inch (gauge T109-29) opening between throttle valve and bore of carbureter (side opposite idle port). Be sure fast idle adjusting screw is on high step of cam while making this adjustment.

UNLOADER ADJUSTMENT: With throttle wide open there should be 5/32 inch clearance (gauge T109-154) between upper edge of choke valve and inner wall of air horn. Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41).

SECONDARY THROTTLE LEVER ADJUSTMENT: The stop lug on both primary and secondary throttle levers should contact boss on flange at the same time. To adjust bend secondary throttle operating rod at angle (use bending tool T109-213). NOTE: Secondary throttle valves will be a few degrees from wide open position.

AUXILIARY THROTTLE LOCK-OUT ADJUSTMENT: This adjustment should be made after completing fast idle adjustment. 1. With choke valve closed, edge of hook on lock-out arm should contact auxiliary throttle lever, making maximum contact of locking step on lever. 2. Open choke valve. Auxiliary throttle valve should become unlocked a few degrees before the choke reaches wide open position. Adjust by bending lock-out arm.

CHECKING AND ADJUSTING STARTER SWITCH: (CAUTION): If carbureter is installed on engine, make certain that the transmission is in neutral and parking brake is applied. 1. If carbureter is installed on Dynaflow car, make certain that throttle linkage and dash pot are correctly adjusted. If carbureter is removed from engine, connect a 6-volt battery and test lamp across switch terminal, so that lamp will light when switch makes contact. 2. Back off throttle stop screw, remove throttle connector rod and choke connector rod, rotate fast idle cam to slow idle position, and fully close the throttle valves. 3. While holding throttle valves fully closed, place a scale against choke unloader arm of throttle lever and make an index mark on carbureter body at the 1/2 inch division of scale. 4. With ignition switch turned on (or test lamp connected) hold end of scale against unloader arm and slowly open throttle until the drive pinion just engages flywheel ring gear (or test lamp lights). 5. If switch is correctly timed, the scale will then read between 1 1/4 inch and 1-9/16 inch at mark on carbureter body (3/4 inch to 1-1/16 inch travel of arm). 6. If necessary, make switch adjustment by reducing or increasing the total thickness of brass shims. If switch timing was found to be too early, reduce the total thickness of the shims. If timing was too late, increase total thickness of shims. Two sizes shims are available: 153-11, .018 inch; 153-12, .006 inch. After adjustment is completed, set engine idle at specified R.P.M.



Buick "V-8"—1956—Carbureter No. 2347S

WHEN SERVICING, USE GASKET ASSORTMENT No. 273A; REPAIR PACKAGE No 1822A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1383S	Body flange and switch assembly	
1A-105	FLANGE GASKET	
2-168	Auxiliary throttle valve	(2)
2-169	Secondary throttle valve	(2)
2-170	Primary throttle valve	(2)
3-955S	Primary throttle shaft and lever assembly	
3-956S	Secondary throttle shaft and lever assembly	
3-957S	Auxiliary throttle shaft lever and weight assembly	
4A-116S	Throttle shaft dog and collar assembly	
4A-134	Primary throttle shaft dog	
6-1064S	Air horn assembly (Identify by casting No 6 1062) (Sup by 6 1142S)	
6-1142S	Air horn assembly (Identify by casting No 6 1120)	
7-213	Choke valve	
11-288S	LOW SPEED JET ASSEMBLY	(4)
11B-35	Rivet plug	(6)
11B-41	Rivet plug (6 1064S (2), (6 1142S (1)	
11B-79	Rivet plug	(5)
11B-129S	Pump discharge passage plug assembly	
11B-134	Rivet plug	
11B-146	Level sight plug	(2)
11B-223	Nozzle passage and idle port rivet plug	(8)
11B-305	Rivet plug	(2)
11B-306	Rivet plug	
11B-327	Secondary throttle shaft rivet plug	

Part No.	PART NAME	
14-383S	Choke lever and screw assembly	
14-438	Cam trip lever	
14-439S	Choke piston lever link and shaft assembly	
15-35S	Strainer nut assembly	
17-70	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	(2)
20-26	Pump discharge passage plug gasket	
20-35	BOWL STRAINER GASKET	
21-146S	Float and lever assembly	(2)
24-24	Float lever pin	(2)
25-251S	Secondary needle and seat assembly (Sup by 25 306S)	
25-263S	Primary needle and seat assembly (Sup by 25 306S)	
25-306S	NEEDLE AND SEAT ASSEMBLY	(2)
30-14	BOWL COVER STRAINER	
30-61	SWITCH STRAINER	
30A-58	Idle adjustment screw	(2)
38A-83	Countershaft bushing	
39-11	Choke and primary throttle valve attaching screw	(6)
47-30	Expansion plug	
48-226	Pump jet housing	
49-182	Switch plunger	
53A-332	Lockout arm	
53A-353	Primary operating lever	
53A-385S	Pump operating lever and countershaft assembly	

Part No.	PART NAME	
61-84	Idle adjustment screw lock spring	(2)
61-150	PUMP SPRING (LOWER)	
61-226	VACUUM PISTON SPRING	
61-237	Fast idle cam spring	
61-238	Throttle flex spring	
61-243S	Contact spring and washer assembly	
61-291	Throttle lever adjusting screw spring	
61-382	METERING ROD SPRING	
61-388	Switch return spring	
61-450	SECONDARY THROTTLE RETURN SPRING	
61-559	Pump operating lever spring	
63-57	PUMP INTAKE CHECK BALL RETAINER	
63-58	Coil housing retainer	(3)
64-190S	PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
75 1231	METERING ROD—STANDARD	(2)
75-1235	Metering rod—1 size lean	(2)
75-1236	Metering rod—2 sizes lean	(2)
86-12	Flange stud lock washer	(4)
86-37	Terminal lock washer	(2)
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	
101-84	Fast idle adjustment screw	
101-109	Terminal screw	(2)
101-126	Auxiliary throttle valve attaching screw	(4)
101 136	Coil housing attaching screw	(3)
101-140	Fast idle cam screw	
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-275	Piston housing attaching screw (Use with 6 1142S)	
101-278	Pump jet housing attaching screw	
101-284	Piston housing attaching screw (6-1064S)	(2)
101-307S	Air horn attaching screw and washer assembly	(8)
101-325S	Switch attaching screw and washer assembly	(2)
101-332	Throttle lever adjusting screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-354S	Choke lever clamp screw assembly	
101-363	Piston housing attaching screw (Use with 6 1064S (1) (6 1142S (2)	
101-385	Throttle lever adjusting screw (Sup by 101 332)	

Part No.	PART NAME	
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
115-182	Choke connector rod	
115-204	Throttle operating rod	
115-228	THROTTLE CONNECTOR ROD	
116-13	PUMP INTAKE CHECK BALL	
116-19	Switch ball	
117-162	Vacumeter piston link	
117-165	Pump connector link	
118-112	Dust cover	
120-165	SECONDARY METERING JET	(2)
120-224	PRIMARY METERING ROD JET	(2)
121-78	COIL HOUSING GASKET	
121-208	DUST COVER GASKET	
121-232	AIR HORN GASKET	
121-241	PUMP JET HOUSING GASKET	
121-243	PISTON HOUSING GASKET (USE WITH 6 1064S)	
121-277	BODY FLANGE GASKET	
121-283	PISTON HOUSING GASKET (USE WITH 6 1142S)	
136-38	Throttle shaft washer	
136-84	Spring washer	
150-178	Auxiliary valve lockout arm pin	
150-190	Choke piston pin	
150A-10	PIN SPRING	(5)
153-11	Contact spring shim (.018)	(3)
153-12	Contact spring shim (.006)	(2)
160-110S	Vacuum piston and pin assembly	
160-152	Choke piston	
170 411S	Piston housing and plug assembly (Use with 6-1064S)	
170-429S	Piston housing assembly (Use with 6 1142S)	
170AC374S	Thermostatic coil and housing assembly	
172-22	Throttle connector rod retainer	
172-27	Cable clip	
180-60	Secondary throttle return spring bracket	
181-87	Switch guide block	
181-231S	Fast idle cam assembly	
184-64S	Terminal cap assembly	
186-53	FLANGE BAFFLE PLATE	
186 56S	Choke baffle plate assembly	
192-21U	Carter starter switch unit	

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

BUICK "V-8"

SPECIAL

(2378S) SYNCROMESH TRANSMISSION

MODEL 40

1956

(2400S) DYNAFLOW TRANSMISSION

WGD Dual Down-Draft Climatic® Control **Carbureters Nos. 2378S-2400S**

CARBURETER SPECIFICATIONS

For Buick 8 Cylinder Engine: 4.00 Inch Bore, 3.20 Inch Stroke

Dimensions: Flange size 1¼ inch dual, 4 bolt type.
Primary venturi, 11/32 inch I. D
Secondary venturi, 21/32 inch I. D
Main venturi, 1-3/16 inch I. D

Vents: Outside bowl cover—one, flange—two

Gasoline Intake: Size No 38 (1015 inch) drill in needle seat

Low Speed Jet Tube: Jet, size 028 inch diameter By-pass, in air horn, size No 55 (052 inch) drill Economizer, in air horn size 051 inch diameter Idle bleed in air horn, size No 50 (070 inch) drill.

Idle Port: Upper, slot type, length 130 inch, width 030 inch

Idle Port Opening: 077 to 083 inch above top edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw): Size 0615 to 0655 inch diameter

Main Nozzle: Nozzle is installed permanently DO NOT REMOVE Anti percolating well bleed, in plug, size No 71 (026 inch) drill.

Metering Rod (Vacumeter Type): (2378S) 061 x 048 x 043. (2400S) 062 x 050 x .043.

Metering Rod Jet: Size 086 inch diameter

Accelerating Pump Discharge jet (twin) size No 70 (028 inch) drill Intake check seat size 115 to 120 inch diameter Discharge (needle seat) size No 50 (070 inch) drill Pump jet air bleed passage to outside ⅛ inch drill

Choke: Carter Climatic® Control—set on index Butterfly type, offset valve Choke heat suction hole in air horn, size (2378S) No 45 (082 inch) (2400S) No 48 (076 inch) drill

Vacuum Spark Port· Horizontal slot type 130 by 040 inch Bottom of port to be 010 to 016 inch above upper edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION· **Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.**

Spark Plug Gap .030"-.035"	Breaker Point Setting .015"	Ignition Timing Breaker Points to Open: 5° B. T. C. At Vibration Damper	Float Setting ¼ Inch (Use Gauge T109-31)	Idle Adjustment Screw Setting (2378S) ¼ to 1¼ (2400S) ½ to 1½ Turns Open Idle Engine at 450 r.p.m.

NOTE: **These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT.**

CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3643

Float Level: ¼" (Gauge T109-31) between top of float (at center) and bowl cover
To adjust bend float lever

Float Alignment. Side of float parallel to edge of casting Minimum clearance between lever and air horn lugs without binding
To adjust bend float lever

Pump: With pump connector link in outer hole (long stroke) flat on pump arm should parallel straight edge on dust cover boss
To adjust bend connector rod

Metering Rod: Metering rod should bottom with throttle valves seated

Choke Lever Clearance: 020" (Gauge T109-29) between lug on outer choke shaft lever and stop on inner choke shaft lever.
To adjust bend lug on outer choke shaft lever

Fast Idle Throttle Valve Clearance: 015" (Gauge T109-44) between lower edge of valve and bore with adjusting screw on high step of cam

Unloader: 5/32" (Gauge T109-154) between top edge of valve and inner wall of air horn.
To adjust bend unloader arm on throttle lever

Car Starter Switch· Should contact between 31/64" and 11/16" travel of top edge of throttle lever stop lug and idle speed screw (Idle speed screw just touching stop lug with valve seating)
To adjust add or remove shims from switch

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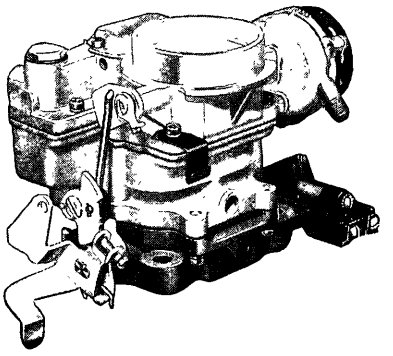
Buick "V-8"—1956—Carbureters Nos. 2378S-2400S

WHEN SERVICING, USE GASKET ASSORTMENT No. 274; REPAIR PACKAGE No. 1823 (2378S) No 1824 (2400S)

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-1317S	Body flange assembly	
1A-95	FLANGE GASKET	
2-101	Throttle valve	(2)
3-1005S	Throttle shaft and lever assembly	
6 1105S	Air horn assembly (2378S)	
6 1106S	Air horn assembly (2400S)	
7-185	Choke valve	
11-181S	LOW SPEED JET ASSEMBLY	(2)
11B-12	Rivet plug	
11B-35	Rivet plug	(3)
11B-41	Rivet plug	(2)
11B-42	Spark port rivet plug	
11B-79	Rivet plug	(3)
11B 223	Nozzle passage rivet plug	(2)
11B-294	Idle port rivet plug	(2)
14-512	Choke shaft lever	
14-514S	Choke piston lever link and shaft assembly	
14-525	Choke lever	
15-35S	Strainer nut assembly	
17-70	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	
20-35	BOWL STRAINER GASKET	
21-113S	Float and lever assembly (Sup by 21-172S)	
21-172S	Float and lever assembly	
24-24	Float lever pin	
25-263S	Needle and seat assembly (Sup by 25 310S)	
25-310S	NEEDLE AND SEAT ASSEMBLY	
30-61	SWITCH STRAINER	
30 75	BOWL COVER STRAINER	
30A-63	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
47-30	Welsh plug	
48-236	Pump jet housing (Sup by 48 249)	
48 249	Pump jet housing	
49-128	Switch plunger	
53A-391S	Pump operating lever and countershaft assembly	
61-84	Idle adjustment screw spring	(2)
61-134	VACUUM PISTON SPRING	
61-150	Lower pump spring	
61-243S	Contact spring and washer assembly	
61-291	Throttle lever adjusting screw spring	
61-382	METERING ROD SPRING	
61-388	Switch return spring	
61-558	Pump operating lever spring	
63-45	Pump check ball retainer ring	
63-58	Coil housing retainer	(3)
63-118	Throttle shaft retaining ring	
64-188S	PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
75 1234	Metering rod—2 sizes lean (2400S)	(2)
75-1238	METERING ROD—STANDARD (2400S)	(2)
75-1239	METERING ROD—STANDARD (2378S)	(2)
75-1245	Metering rod—1 size lean (2378S)	(2)
75-1246	Metering rod—1 size lean (2400S) 2 sizes lean (2378S)	(2)
86 37	Terminal lock washer	(2)
101-33	Metering rod arm clamp screw	
101-65	Choke lever screw	
101-74	Throttle shaft arm attaching screw	
101-81	Fast idle cam attaching screw	
101-84	Fast idle adjusting screw	
101-109	Switch terminal screw	(2)
101-126	Throttle valve attaching screw	(4)
101-136	Coil housing and pump arm attaching screw	(4)
101-149S	Body flange attaching screw and washer assembly	(2)
101-152S	Body flange attaching screw and washer assembly	(2)
101-155S	Pump jet housing attaching screw	(2)
101-272S	Air horn attaching screw and washer assembly	(2)
101-273S	Body flange attaching screw and washer assembly (Sup by 101 149S)	(2)
101-274	Coil housing attaching screw (Sup by 101 136)	(3)
101-284	Piston housing attaching screw	(3)
101-293	Metering rod arm clamp screw (Sup by 101 33)	
101-297S	Dust cover attaching screw and washer assembly	(2)
101 307S	Air horn attaching screw and washer assembly	(6)
101-325S	Switch attaching screw and washer assembly	(2)
101-353S	Body flange attaching screw and washer assembly (Sup by 101 152S)	(2)
101-406	Throttle lever adjustment screw	
101-412S	Dust cover attaching screw and washer assembly (Sup by 101 297S)	(2)
111-53S	Metering rod arm and screw assembly (Sup by 111 60S)	
111-60S	Metering rod arm and screw assembly	
111-73S	Pump arm and screw assembly	
114-135	Throttle shaft arm	
115-255	THROTTLE CONNECTOR ROD	
115-266	Choke connector rod	
116-13	Pump intake check ball	
116-19	Switch ball	
117-133	Vacumeter piston link	
117-165	Pump connector link	
118 120	Dust cover	
120 165	METERING ROD JET	(2)
121-78	COIL HOUSING GASKET	
121-270	AIR HORN GASKET	
121-271	BODY FLANGE GASKET	
121-272	PUMP JET GASKET	
136-34	Choke shaft washer	
136-38	Throttle shaft washer	
150-190	Choke piston pin	
150A-10	Pin spring	(2)
153-11	Switch contact spring shim (.018)	(3)
153-12	Switch contact spring shim (.006)	(2)
160-67S	Vacuum piston and pin assembly	
160-117	Choke piston	
170 413S	Piston housing and plug assembly (2400S)	
170 418S	Piston housing and plug assembly (2378S)	
170AA 374S	Thermostatic coil and housing assembly	
172-22	Throttle connector rod retainer (lower)	
172-24	Throttle connector rod retainer (upper)	
172-27	Cable clip	
181 87	Switch guide block	
181-232	Fast idle cam	
184 64S	Terminal cap assembly	
186-51S	Choke baffle plate assembly	
192-37U	Carter starter switch unit	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used



BUICK "V-8" SPECIAL MODEL 40 1955

WGD DUAL DOWN-DRAFT CLIMATIC® CONTROL **CARBURETER No. 2292S**

CARBURETER SPECIFICATIONS

° **For Buick 8 Cylinder Engine: 3.625 Inch Bore, 3.20 Inch Stroke**

Dimensions: Flange size 1¼ inch dual, 4 bolt type.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 21/32 inch I. D.
Main venturi, 1-3/16 inch I. D.

Vents: Outside, bowl cover—one, flange—two.

Gasoline Intake: Size No. 38 (.1015 inch) drill in needle seat.

Low Speed Jet Tube: Jet, size .028 inch diameter. By-pass, in air horn, size No. 55 (.052 inch) drill. Economizer, in air horn, size .051 inch diameter. Idle Bleed, in air horn, size No. 50 (.070 inch) drill.

Idle Port: Upper, slot type, length .130 inch; width .030 inch.

Idle Port Opening: .077 to .083 inch above top edge of valve with valve tightly closed.

Lower Port (For Idle Adjustment Screw): Size .0615 to .0655 inch diameter.

Main Nozzle: Nozzle is installed permanently. DO NOT REMOVE. Anti-percolating well jet, size No. 71 (.026 inch) drill.

Metering Rod (Vacumeter Type): Economy step .061 inch diameter. Middle step tapers to .048 inch diameter. Power step .043 inch diameter.

Metering Rod Jet: Size .086 inch diameter.

Accelerating Pump: Discharge jet (twin) size No. 72 (.025 inch) drill. Intake check seat size .115 to .120 inch diameter. Discharge (needle seat) size No. 50 (.070 inch) drill. Pump jet air bleed passage to outside ⅛ inch drill.

Choke: Carter Climatic® Control—set on index. Butterfly type, offset valve. Choke heat suction hole in piston housing, size No. 48 (.076 inch) drill.

Vacuum Spark Port: Horizontal slot type .130 by .040 inch. Bottom of port to be .010 to .016 inch above upper edge of valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open:	Float Setting	Idle Adjustment Screw Setting
.030"-.035"	.0125"-.0175"	5° B. T. C. At Vibration Damper	¼ Inch (Use Gauge T109-31)	¼ to 1¼ Turns Open Idle Engine at 450 r.p.m.

NOTE: These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT.

CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3643

Float Level: ¼" (Gauge T109-31) between top of float (at center) and bowl cover.
To adjust: bend float lever.

Float Alignment: Side of float parallel to edge of casting. Minimum clearance between lever and air horn lugs without binding.
To adjust: bend float lever.

Pump: Flat on pump arm should parallel straight edge on dust cover boss.
To adjust: bend connector rod.

Metering Rod: Metering rod should bottom with throttle valves seated.

Choke Lever Clearance: .020" (Gauge T109-29) between lug on outer choke shaft lever and stop on inner choke shaft lever.
To adjust: bend lug on outer choke shaft lever.

Fast Idle Throttle Valve Clearance: .015" (Gauge T109-44) between lower edge of valve and bore with adjusting screw on high step of cam.

Fast Idle on Car: 1300 R.P.M. hot engine with speed screw on high step of cam.

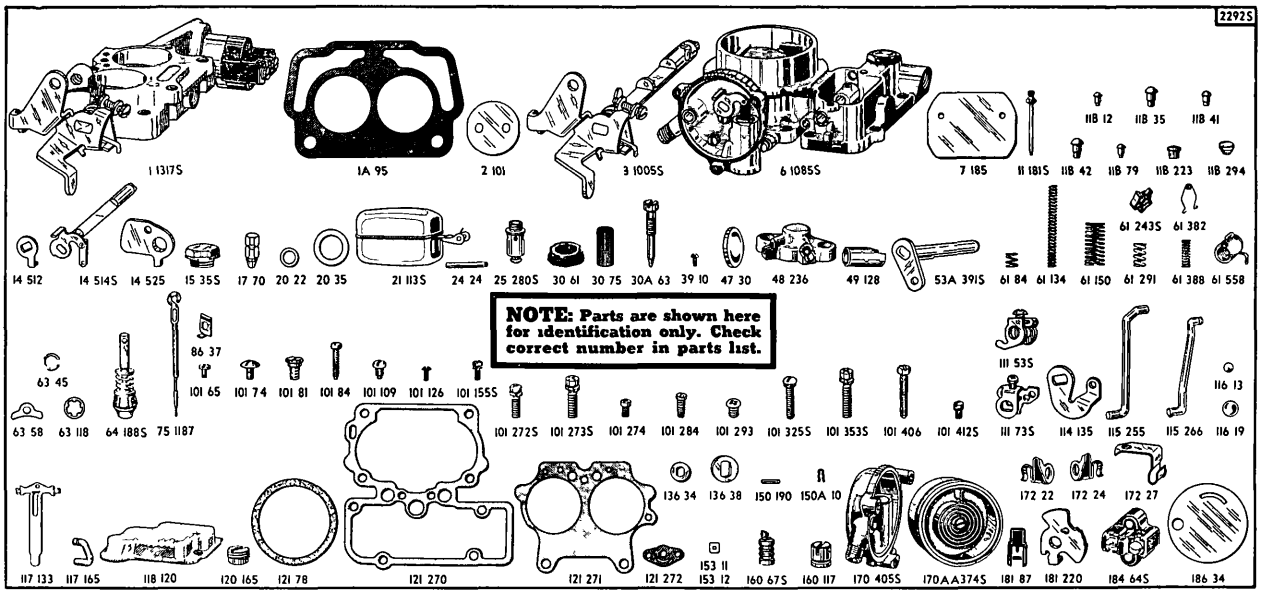
Unloader: 3/16" (Gauge T109-28) between top edge of valve and inner wall of air horn.
To adjust: bend unloader arm on throttle lever.

Car Starter Switch: Should contact between 31/64" and 11/16" travel of top edge of throttle lever stop lug and idle speed screw. (Idle speed screw just touching stop lug with valve seating.)
To adjust: add or remove shims from switch.

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Buick "V-8"—1955—Carbureter No. 2292S

WHEN SERVICING USE GASKET ASSORTMENT No. 274, REPAIR PACKAGE No 1823

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1 1317S	Body flange assembly	
1A 95	FLANGE GASKET	
2-101	Throttle valve	(2)
3 1005S	Throttle shaft and lever assembly	
6-1085S	Air horn assembly	
7 185	Choke valve	
11-181S	LOW SPEED JET ASSEMBLY	(2)
11B-12	Rivet plug	
11B-35	Rivet plug	(3)
11B-41	Rivet plug	(2)
11B-42	Spark port rivet plug	
11B-79	Rivet plug	(3)
11B-223	Nozzle passage rivet plug	(2)
11B-294	Idle port rivet plug	(2)
14 512	Choke shaft lever	
14-514S	Choke piston lever link and shaft assembly	
14-525	Choke lever	
15-35S	Strainer nut assembly	
17-70	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	
20-35	BOWL STRAINER GASKET	
21-113S	Float and lever assembly (Sup by 21 172S)	
21-172S	Float and lever assembly	
24-24	Float lever pin	
25-280S	NEEDLE AND NEEDLE SEAT ASSEMBLY (Sup by 25 310S)	
25 310S	NEEDLE AND SEAT ASSEMBLY	
30-61	SWITCH STRAINER	
30-75	BOWL COVER STRAINER	
30A-63	Idle adjustment screw	(2)
39-10	Choke valve attacning screw	(2)
47-30	Welsh plug	
48 236	Pump jet housing	
49-128	Switch plunger	
53A 391S	Pump operating lever and countershaft assembly	
61-84	Idle adjustment screw spring	(2)
61-134	VACUUM PISTON SPRING	
61-150	Lower pump spring	
61-243S	Contact spring and washer assembly	
61-291	Throttle lever adjusting screw spring	
61 382	METERING ROD SPRING	
61 388	Switch return spring	
61 558	Pump operating lever spring	
63-45	Pump check ball retainer ring	
63 58	Coil housing retainer	(3)
63-118	Throttle shaft retaining ring	
64 188S	PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
75-1187	Metering rod—standard (Sup by 75 1239)	(2)
75-1239	METERING ROD—STANDARD	(2)
75 1245	Metering rod—1 size lean	(2)
75 1246	Metering rod—2 sizes lean	(2)

Part No	PART NAME	
86-37	Terminal lock washer	(2)
101-65	Choke lever screw	
101-74	Throttle shaft arm attaching screw	
101-81	Fast idle cam attaching screw	
101-84	Fast idle adjusting screw	
101-109	Switch terminal screw	(2)
101-126	Throttle valve attaching screw	(4)
101-136	Pump arm attaching screw	
101-155S	Pump jet housing attaching screw	(2)
101-272S	Air horn attaching screw and washer assembly	(8)
101-273S	Body flange attaching screw and washer assy	(2)
101-274	Coil housing attaching screw	(3)
101-284	Piston housing attaching screw	(3)
101-293	Metering rod arm clamp screw	
101-325S	Switch attaching screw and washer assembly	(2)
101-353S	Body flange attaching screw and washer assy	(2)
101-406	Throttle lever adjustment screw	
101-412S	Dust cover attaching screw and washer assy	(2)
111-53S	Metering rod arm and screw assembly	
111-73S	Pump arm and screw assembly	
114-135	Tnrottle shaft arm	
115-255	THROTTLE CONNECTOR ROD	
115-266	Choke connector rod	
116-13	Pump intake check ball	
116-19	Switch ball	
117-133	Vacumeter piston link	
117-165	Pump connector link	
118 120	Dust cover	
120-165	METERING ROD JET	(2)
121-78	COIL HOUSING GASKET	
121 270	AIR HORN GASKET	
121 271	BODY FLANGE GASKET	
121-272	PUMP JET GASKET	
136-34	Choke shaft washer	
136-38	Throttle shaft washer	
150-190	Choke piston pin	
150A-10	Pin spring	(2)
153-11	Switch contact spring shim (018)	(3)
153-12	Switch contact spring shim (006)	(2)
160-67S	Vacuum piston and pin assembly	
160 117	Choke piston	
170 405S	Piston housing and plug assembly	
170AA 374S	Thermostatic coil and housing assembly	
172-22	Throttle connector rod retainer (lower)	
172-24	Throttle connector rod retainer (upper)	
172-27	Cable clip	
181-87	Switch guide block	
181-220	Fast idle cam	
184-64S	Terminal cap assembly	
186-34	Choke baffle plate	
192-37U	Carter starter switch unit	

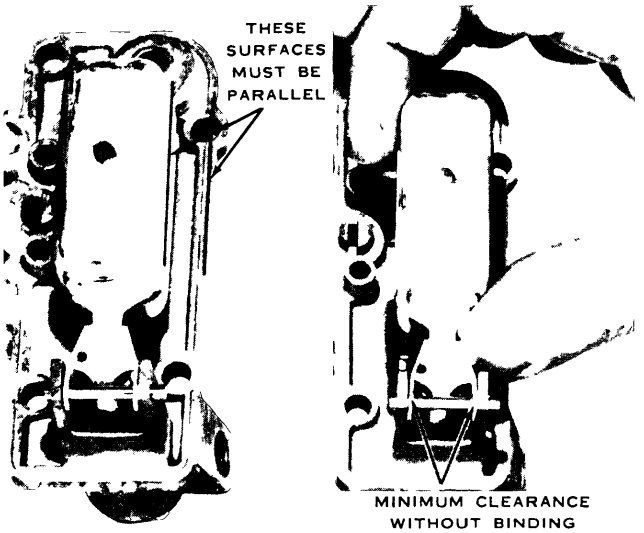
NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, nly ne is used.

Form 3643
August, 1955

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

CARTER MODEL WGD CARBURETER FOR BUICK
(SERVICE ADJUSTMENT PROCEDURE)

NOTE: The parts and specification pages referred to are catalog pages. These pages can be obtained from Carter Carburetor, Catalog Department, St. Louis (7), Missouri. Specify the carbureter number found on the brass identification tag, when requesting specification pages.



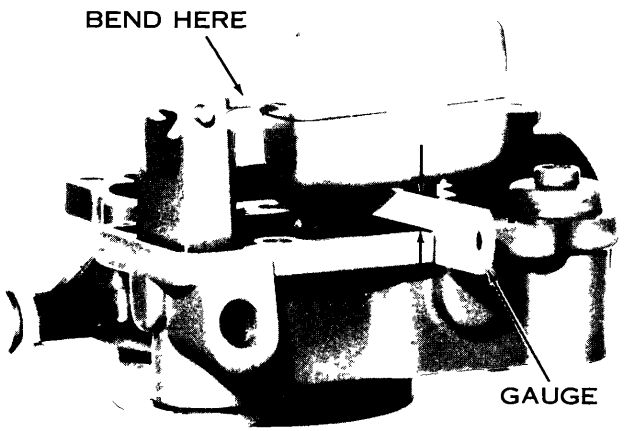
FLOAT ALIGNMENT ADJUSTMENT (Fig. 1)

1. Sight down the side of the float shell to determine if the side of the float is parallel to the outer edge of the air h rn casting. TO ADJUST: Bend float lever by applying pressure to the end of the float shell with the fingers while supporting the float lever with the thumb.

   CAUTION: To avoid damaging the float, apply only enough pressure to bend float lever.

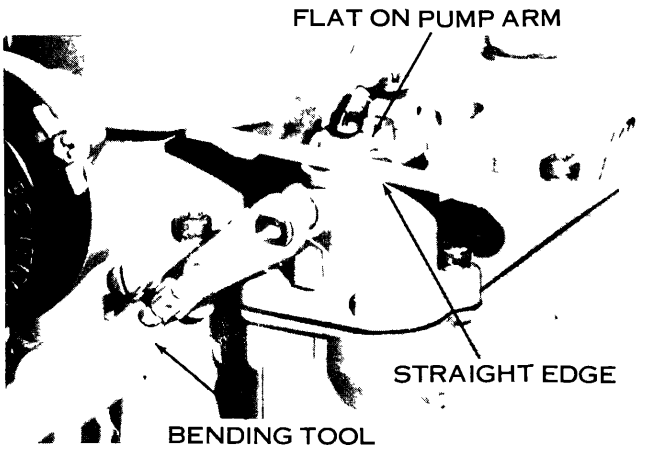
2. After aligning float, remove as much clearance as possibl between arms of float lever and lugs on air horn by bending the float lever. Arms of float lever should be as parallel to the inner surfaces of lugs on air horn as possible.

   Float must operate freely without excess clearance on its hinge pin.



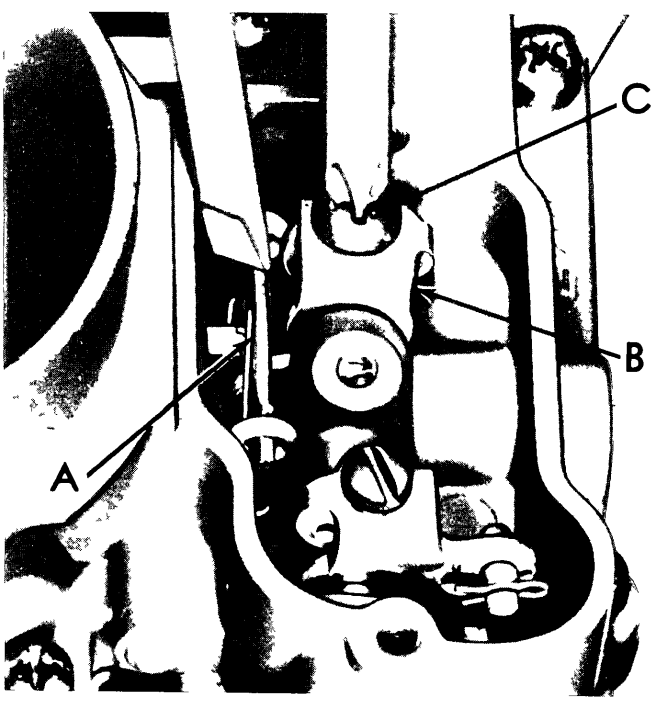
FLOAT LEVEL ADJUSTMENT (Fig. 2)

With air horn inv rt d and n dle s at d, adjust float arm to cl aranc b tw n top c nt r of float and air horn is as sted on carbur t r sp cification page. R ch ck float gnm nt.



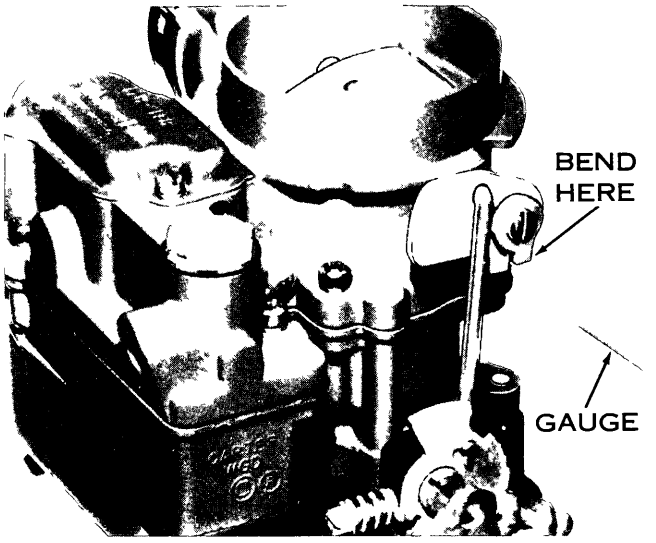
PUMP ADJUSTMENT (Fig. 3)

1. Back out idle speed screw until throttl valv s s at in bores of carburetor. NOTE: Be sure ch k is wide open so fast idle cam does not hold valv open.
2. Hold straight edge across top of dust cov r boss at pump arm. Bend rod at upper angle until flat of pump arm is parallel with straight edge while throttl valv s ar seated. (Use bending tool T109-213).



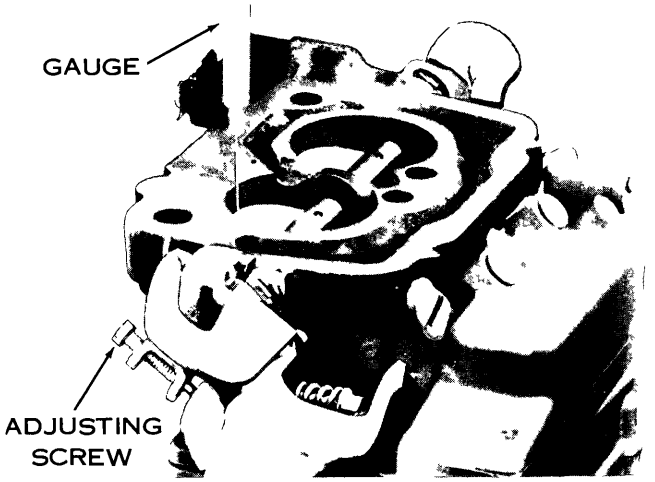
METERING ROD ADJUSTMENT (Fig. 4)

1. Back out idle sp d scr w until throttl valv s s at. NOTE: Be sur chok is wide op n so fast idle cam does not hold valv op n.
2. Pr ss down on vacumeter piston link (A) until m t ring rods bottom in carbur t r body.
3. Holding rods in this downward position and with throttle valves seated, r volv met ring rod arm (B) until finger on arm c ntacts lip of vacumeter link. Hold in plac and carefully tight n clamp scr w (C).



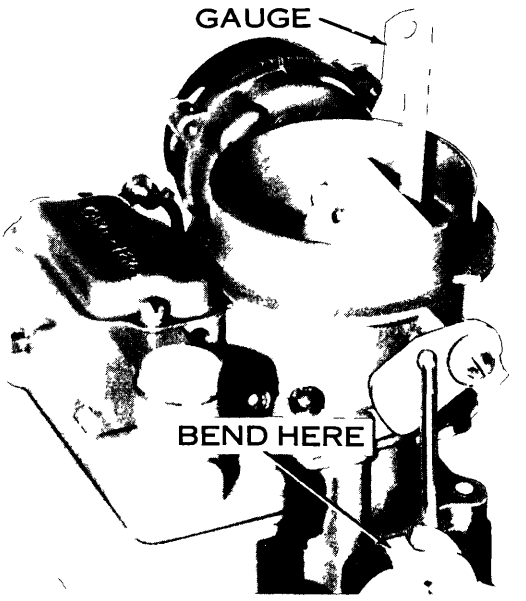
CHOKE SHAFT LEVER CLEARANCE ADJUSTMENT (Fig. 5)

1. Hold choke valve tightly closed.
2. H ld fast idl cam against stop on casting.
3. Th cl aranc between lug on outer choke shaft lever and stop n inner choke shaft lever should be as listed n carbur ter specification page. TO ADJUST: Bend lug n ut r choke shaft lever. (Use bending tool T109-214).



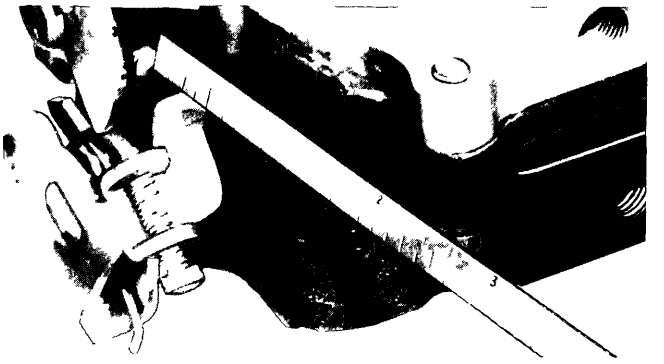
FAST IDLE THROTTLE VALVE CLEARANCE ADJUSTMENT (Fig. 6)

1. Be sur ch k valve is closed.
2. Adjust fast idle adjusting screw against high st p of cam until th clearance b twe n thr ttle valv (sid opp site port) and b re is as list d n carbur ter specificati n pag .



UNLOADER ADJUSTMENT (Fig. 7)

1. Hold throttle valves wide open.
2. Close choke valve as far as possible without forcing.
3. Clearance between top edge of choke valve and inn r wall of air horn should be as listed on carbureter sp cification page.
4. Adjust by bending choke unloader arm on throttle l v r. (Use bending tool T109-41).



CAR STARTER SWITCH ADJUSTMENT (Fig. 8)

1. Connect a test lamp across the starter switch terminal.
2. Hold choke valve wide open and adjust idle speed scr w until it just contacts stop lug on throttle lever wh n throttle is fully closed.
3. Holding a scale between center of idle speed screw and top edge of throttle lever stop lug; open throttle until test light indicates starter switch contact. Switch sh uld make contact when the distance from top edge of st p lug and center of idle speed screw is between 31/64" and 11/16". TO ADJUST: If switch makes contact t early, d cr as th number of shims in th switch guid block. If th switch mak s contact t late, increase th numb r of shims in the switch guid bl ck. Tw siz s of shims ar availabl , Cart r parts 153-11(.018") and 153-12 (.006").

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CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST LOUIS, MO, U S A

BUICK 2358S
August, 1955
Revised March 1957

BUICK "V-8"

"SUPER" – MODEL 50
"CENTURY" – MODEL 60
"ROADMASTER" – MODEL 70
1955

WCFB Four-Bore Down-Draft Climatic® Control Carbureter **No. 2358S**

CARBURETER SPECIFICATIONS

For Buick 8 Cylinder Engine: 4.00 Inch Bore, 3.20 Inch Stroke

Dimensions: Flange size, 1 1/8 inch Four bore, 4 bolt type
Primary venturi size, 11/32 inch I D
Main Venturi size, 1-3/16 inch I D

Vents: Combination inside and outside (6)
In flange, bore to atmosphere (4)

Gasoline Intake: Primary, size No 38 (1015 inch) drill, secondary, size No 42 (0935 inch) drill in needle seat

Low Speed Jet Tube: Jet, size 031 inch diameter By pass in body size 057 inch diameter Economizer in body size 0453 inch diameter Idle bleed in body size No 44 (086 inch) drill

Idle Port: Upper, slot type, primary length 125 inch width 030 inch Secondary, length 103 inch, width 030 inch

Idle Port Opening: Primary 074 to 080 inch secondary 065 to 071 inch above top edge of valve with valve tightly closed.

Lower Port: Primary (for idle adjustment screw) size No 55 (052 inch) drill
Secondary (no idle adjustment screw) size No 57 (043 inch) drill

Set Idle Adjustment Screw: 3/4 to 1 3/4 turns open For richer mixture turn screw out. Do not idle engine below 450 R P M

Main Nozzle: Installed permanently Do not remove Anti percolating jet (4) size No 70 (028 inch) drill

Metering Rod: Primary Economy step 067 inch diameter Middle step tapers to 043 inch diameter Power step 043 inch diameter
Secondary None

Metering Rod Jet: Primary size 096 inch diameter
Secondary size 082 inch diameter

Metering Rod Setting. See adjustments

Accelerating Pump Discharge jet (twin) primary side only size No 70 (028 inch) drill Intake ball check seat size 115 to 120 inch Discharge needle seat, size No 50 (070 inch) drill Relief passage (vent) to fuel chamber size No 42 (0935 inch) drill

Pump Adjustment: See adjustments

Choke: Carter Climatic® Control, set on index Butterfly type offset choke valve, primary side only Choke heat suction hole restriction in piston housing size No 48 (076 inch) drill

Vacuum Spark Port Horizontal slot (round end) 040 x 130 inch Bottom of port 008 to 014 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION. Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open 5° B. T. D C. At Vibration Damper	Float Setting (See Adjustments)	Idle Adjustment Screw Setting 3/4 to 1 3/4 Turns Open Idle Engine at 450 R.P.M
.025"-.031"	.0125"-.0175"			

NOTE: These cars equipped with Hydraulic Valve Lifters—NO ADJUSTMENT

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: Two separate float adjustments must be made—lateral and vertical **LATERAL ADJUSTMENT:** With bowl cover assembly inverted, bowl cover gasket removed and float resting on seated needle, place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting Side of floats should just clear the vertical uprights of float gauge Adjustment should be made by bending arms of floats
VERTICAL ADJUSTMENT: With float gauge in same position, floats should just clear the horizontal portion of gauge Vertical distance between top of float and machined surface of casting must be 3/32 inch (gauge T109-233) for primary floats, and 3/16 inch (gauge T109-222) for secondary floats Adjust by bending float arms
FLOAT DROP ADJUSTMENT: With bowl cover held in upright position and measuring from center of floats, the distance between top of floats and bowl cover should be 19/32 inch for primary floats and 11/16 inch for secondary floats Adjust by bending stop tabs on float bracket
PUMP ADJUSTMENT: Install pump connector link in outer hole (long stroke) of pump arm, with ends extending toward countershaft arm Back out throttle lever set screw until throttle valves seat in bores of carbureter Hold straight edge across top of dust cover boss at pump arm The flat on top of pump arm should be parallel to straight edge Adjust by bending throttle connector rod (early) at upper angle (late) at lower angle (Use tool T109-213)
METERING ROD ADJUSTMENT: Metering rod adjustment is important and must be made after completing the pump adjustment No metering rod gauges are necessary Procedure is as follows 1 Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and

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loosen metering rod arm clamp screw 2 With metering rods in place, press down on vacumeter link until metering rods bottom in carbureter body casting 3 Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link. Hold in place and carefully tighten clamp screw

FAST IDLE ADJUSTMENT. (a) Loosen choke lever clamp screw on choke shaft Insert 025 inch wire gauge (T109-189 may be used) between lip of fast idle cam and boss of flange casting Hold choke valve tightly closed and take slack out of linkage by pressing lever towards closed position—hold in place and tighten clamp screw (b) With choke valve tightly closed tighten fast idle adjusting screw until there is 016 inch (gauge T109-44) opening between throttle valve and bore of carbureter (side opposite idle port) Be sure fast idle adjusting screw is on high step of cam while making this adjustment

UNLOADER ADJUSTMENT With throttle wide open there should be 3/16 inch clearance (gauge T109-28) between upper edge of choke valve and inner wall of air horn Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41)

SECONDARY THROTTLE LEVER ADJUSTMENT The stop lug on both primary and secondary levers should contact boss on flange at the same time To adjust bend secondary throttle operating rod at angle (use bending tool T109-213) NOTE Secondary throttle valves will be a few degrees from wide open position

AUXILIARY THROTTLE LOCK-OUT ADJUSTMENT· This adjustment should be made after completing fast idle adjustment 1 With choke valve closed, edge of hook on lockout arm should contact auxiliary throttle lever, making maximum contact of locking step on lever 2 Open choke valve Auxiliary throttle valve should become unlocked a few degrees before the choke reaches wide open position Adjust by bending lock-out arm

CHECKING AND ADJUSTING STARTER SWITCH

(CAUTION): If carbureter is installed on engine, make certain that the transmission is in neutral and parking brake is applied 1 If carbureter is installed on Dynaflow car, make certain that throttle linkage and dash pot are correctly adjusted If carbureter is removed from engine, connect a 6-volt battery and test lamp across switch terminal, so that lamp will light when switch makes contact 2 Back off throttle stop screw, remove throttle connector rod and choke connector rod, rotate fast idle cam to slow idle position, and fully close the throttle valves 3 While holding throttle valves fully closed, place a scale against choke unloader arm of throttle lever and make an index mark on carbureter body at the ½ inch division of scale 4 With ignition switch turned on (or test lamp connected) hold end of scale against unloader arm and slowly open throttle until the drive pinion just engages flywheel ring gear (or test lamp lights) 5 If switch is correctly timed the scale will then read between 1¼ inch and 1-9/16 inch at mark on carbureter body (¾ inch to 1-1/16 inch travel of arm) 6 If necessary, make switch adjustment by reducing or increasing the total thickness of brass shims If switch timing was found to be too early reduce the total thickness of the shims If timing was too late, increase total thickness of shims Two sizes shims are available 153-11, 018 inch 153-12, 006 inch After adjustment is completed, set engine idle at specified R P M

Buick "V-8"—1955—Carbureter No. 2358S

WHEN SERVICING, USE GASKET ASSORTMENT No 273A, REPAIR PACKAGE No 1813

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-1325S	Body flange and switch assembly	
1A-105	FLANGE GASKET	
2-168	Auxiliary throttle valve	(2)
2-169	Secondary throttle valve	(2)
2-170	Primary throttle valve	(2)
3-955S	Primary throttle shaft and lever assembly	
3-956S	Secondary throttle shaft and lever assembly	
3 957S	Auxiliary throttle shaft, lever and weight assy	
4A-116S	Throttle shaft dog and collar assembly	
4A-134	Primary throttle shaft dog	
6-1078S	Air horn assembly	
7 173	Choke valve	
11-280S	LOW SPEED JET ASSEMBLY	(4)
11B-35	Rivet plug	(6)
11B-41	Rivet plug	(2)
11B-79	Rivet plug	(5)
11B-129S	Pump discharge passage plug assembly	
11B-134	Rivet plug	
11B 146	Level sight plug	(2)
11B-223	Nozzle passage and idle port rivet plug	(8)
11B 305	Rivet plug	
11B 306	Rivet plug	(2)
11B-327	Secondary throttle shaft rivet plug	
14-383S	Choke lever and screw assembly	
14-438	Cam trip lever	
14 439S	Choke piston lever link and shaft assembly	
15 35S	Strainer nut assembly	
17 70	PUMP CHECK NEEDLE	
20 22	Needle seat gasket	(2)
20 26	Pump discharge passage plug gasket	
20 35	BOWL STRAINER GASKET	
21 143S	Primary float and lever assembly	
21 146S	Secondary float and lever assembly	
24 24	Float lever pin	(2)
25-251S	SECONDARY NEEDLE AND SEAT ASSEMBLY	
25 253S	Secondary needle and seat assembly (Sup by 25 251S)	
25-292S	PRIMARY NEEDLE AND SEAT ASSEMBLY	
30 14	BOWL COVER STRAINER	
30-61	SWITCH STRAINER	
30A-58	Idle adjustment screw	(2)
38A 83	Countershaft bushing	
39 11	Choke and primary throttle valve attaching screw	(6)
47-14	Expansion plug	
48 226	Pump jet housing	
49 182	Switch plunger	
53A-332	Lockout arm	
53A 353	Primary operating lever	
53A 385S	Pump operating lever and countershaft assy	
61 84	Idle adjustment screw lock spring	(2)
61 150	PUMP SPRING (LOWER)	
61 237	Fast idle cam spring	
61-238	Throttle flex spring	
61-243S	Contact spring and washer assembly	
61-246	VACUUM PISTON SPRING	
61-291	Throttle lever adjusting screw spring	
61-382	METERING ROD SPRING	
61 388	Switch return spring	
61 450	SECONDARY THROTTLE RETURN SPRING	
61-559	Pump operating lever spring	
63-57	PUMP INTAKE CHECK BALL RETAINER	
63 58	Coil housing retainer	(3)
64-180S	PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY	

Part No	PART NAME	
75 1147	METERING ROD—STANDARD	(2)
75-1148	Metering rod—1 size lean	(2)
75 1150U	Metering rod and jet unit—2 sizes lean	
86 12	Flange stud lock washer	(4)
86 37	Terminal lock washer	(2)
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	
101-84	Fast idle adjustment screw	
101-109	Terminal screw	(2)
101-126	Auxiliary throttle valve attaching screw	(4)
101-136	Coil housing attaching screw	(3)
101-140	Fast idle cam screw	
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assy	(2)
101-278	Pump jet housing attaching screw	
101-284	Piston housing attaching screw	(2)
101 307S	Air horn attaching screw and washer assy	(8)
101-325S	Switch attaching screw and washer assy	(2)
101 335S	Air horn attaching screw and washer assy	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-354S	Choke lever clamp screw assembly	
101-363	Piston housing attaching screw	
101-385	Throttle lever adjusting screw	
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
115 182	Choke connector rod	
115 204	Throttle operating rod	
115-228	THROTTLE CONNECTOR ROD	
116-13	PUMP INTAKE CHECK BALL	
116-19	Switch ball	
117-162	Vacumeter piston link	
117 170	Pump connector link	
118-112	Dust cover	
120 158	SECONDARY METERING JET	(2)
120-160	PRIMARY METERING ROD JET	(2)
121-78	COIL HOUSING GASKET	
121-208	DUST COVER GASKET	
121 232	AIR HORN GASKET	
121-241	PUMP JET HOUSING GASKET	
121-243	PISTON HOUSING GASKET	
121-277	BODY FLANGE GASKET	
136-38	Throttle shaft washer	
150-62	Choke piston pin	
150-178	Auxiliary valve lockout arm pin	
150A 10	PIN SPRING	(5)
153-11	Contact spring shim (018)	(3)
153-12	Contact spring shim (006)	(2)
160-110S	Vacuum piston and pin assembly	
160 139	Choke piston	
170-401S	Piston housing and plug assembly	
170AD 374S	Thermostatic coil and housing assembly	
172 22	Throttle connector rod retainer	
172 27	Cable clip	
180 60	Secondary throttle return spring bracket	
181-87	Switch guide block	
181 222S	Fast idle cam assembly	
184-64S	Terminal cap assembly	
186-34	Choke baffle plate	
186-53	FLANGE BAFFLE PLATE	
192 21U	Carter starter switch unit	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

BUICK "V-8"

"SUPER" – MODEL 50
"CENTURY" – MODEL 60
"ROADMASTER" – MODEL 70
1955

(2358S can also be used)

WCFB Four-Bore Down-Draft Climatic® Control Carbureter **No. 2197S**

CARBURETER SPECIFICATIONS

For Buick 8 Cylinder Engine 4 00 Inch Bore 3 20 Inch Stroke

Dimensions Flange size 1 1/8 inch Four bore 4 bolt type
Primary venturi size 11/32 inch I D
Main Venturi size 1 3/16 inch I D

Float Level See adjustments

Vents Inside (vertical) Bowl chamber to top of air horn (primary side) (2) size No 44 (086 inch) drill (1) size No 12 (189 inch) drill, (secondary side) (2) size No 26 (147 inch) drill (1) size No 12 (189 inch) drill
Outside (horizontal) Bowl chamber to atmosphere (5) No 42 (0935 inch) drill In dust cover size No 36 (1065 inch) drill
In flange bore to atmosphere (4) size No 36 (1065 inch) drill

Gasoline Intake Primary size No 38 (1015 inch) drill, sec ondary size No 42 (0935 inch) drill in needle seat

Low Speed Jet Tube Jet size No 69 (0293 inch) drill by pass in body size 057 inch diameter Economizer in body size (0453 inch) drill Idle bleed in body size No 44 (086 inch) drill

Idle Port Upper slot type primary length 110 inch width 030 inch Secondary length 103 inch width 030 inch

Idle Port Opening Primary 057 to 063 inch secondary 059 to 065 inch above top edge of valve with valve tightly closed

Lower Port Primary (for idle adjustment screw) size No 55 (052 inch) drill
Secondary (no idle adjustment screw) size No 57 (043 inch) drill

Set Idle Adjustment Screw 3/4 to 1 3/4 turns open For richer mixture turn screw out Do not idle engine below 450 R P M

Main Nozzle Installed permanently Do not remove Anti percolating jet (4) size No 70 (028 inch) drill

Metering Rod Primary Economy step 067 inch diameter Middle step tapers to 043 inch diameter Power step 043 inch diameter
Secondary None

Metering Rod Jet Primary size 096 inch diameter
Secondary size 082 inch diameter

Metering Rod Setting See adjustments

Accelerating Pump Discharge jet (twin) primary side only size No 70 (028 inch) drill Intake ball check seat size 115 to 120 inch diameter Discharge needle seat size No 50 (070 inch) drill Relief passage (vent) to fuel chamber size No 42 (0935 inch) drill

Pump Adjustment See adjustments

Choke Carter Climatic® Control set on index Butterfly type offset choke valve primary side only Choke heat suction hole restriction in piston housing size No 42 (0935 inch) drill

Vacuum Spark Port Horizontal slot (round end) 040 x 130 inch Bottom of port 013 to 017 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open	Float Setting	Idle Adjustment Screw Setting
030"- 035"	0125"- 0175"	5° B T. D C. At Vibration Damper	(See Adjustments)	3/4 to 1 3/4 Turns Open

NOTE These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT Two separate float adjustments must be made—lateral and vertical **LATERAL ADJUSTMENT** With bowl cover assembly inverted, bowl cover gasket removed and float resting on seated needle, place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting Side of floats should just clear the vertical uprights of float gauge Adjustment should be made by bending arms of floats
VERTICAL ADJUSTMENT. With float gauge in same position, floats should just clear the horizontal portion of gauge Vertical distance between top of float and machined surface of casting must be 3/32 inch (gauge T109 233) for primary floats, and 3/16 inch (gauge T109-222) for secondary floats Adjust by bending float arms
FLOAT DROP ADJUSTMENT With bowl cover held in upright position and measuring from center of floats the distance between top of floats and bowl cover should be 19/32 inch for primary floats and 11/16 inch for secondary floats Adjust by bending stop tabs on float bracket
PUMP ADJUSTMENT Install pump connector link in outer hole (long stroke) of pump arm with ends extending toward countershaft arm Back out throttle lever set screw until throttle valves seat in bores of carbureter Hold straight edge across top of dust cover boss at pump arm The flat on top of pump arm should be parallel to straight edge Adjust by bending throttle connector rod (early) at upper angle (late) at lower angle (Use tool T109-213)
METERING ROD ADJUSTMENT Metering rod adjustment is important and must be made after completing the pump adjustment No metering rod gauges are necessary Procedure is as follows 1 Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and

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loosen metering rod arm clamp screw 2 With metering rods in place, press down on vacumeter link until metering rods bottom in carbureter body casting 3 Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link Hold in place and carefully tighten clamp screw

FAST IDLE ADJUSTMENT (a) Loosen choke lever clamp screw on choke shaft Insert 021 inch feeler gauge (T109-29 may be used) between lip of fast idle cam and boss of flange casting Hold choke valve tightly closed and take slack out of linkage by pressing lever towards closed position—hold in place and tighten clamp screw (b) With choke valve tightly closed, tighten fast idle adjusting screw until there is .018 inch (gauge T109-44) opening between throttle valve and bore of carbureter (side opposite idle port) Be sure fast idle adjusting screw is on high step of cam while making this adjustment

UNLOADER ADJUSTMENT. With throttle wide open there should be 11/64 inch clearance (gauge T109-166) between upper edge of choke valve and inner wall of air horn Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41)

SECONDARY THROTTLE LEVER ADJUSTMENT· The stop lug on both primary and secondary throttle levers should contact boss on flange at the same time To adjust bend secondary throttle operating rod at angle (use bending tool T109-213) NOTE Secondary throttle valves will be a few degrees from wide open position

AUXILIARY THROTTLE LOCK-OUT ADJUSTMENT: This adjustment should be made after completing fast idle adjustment 1 With choke valve closed, edge of hook on lock-out arm should contact auxiliary throttle lever, making maximum contact of locking step on lever 2 Open choke valve Auxiliary throttle valve should become unlocked a few degrees before the choke reaches wide open position Adjust by bending lock-out arm

CHECKING AND ADJUSTING STARTER SWITCH: **(CAUTION)** If carbureter is installed on engine, make certain that the transmission is in neutral and parking brake is applied 1 If carbureter is installed on Dynaflow car, make certain that throttle linkage and dash pot are correctly adjusted If carbureter is removed from engine, connect a 6-volt battery and test lamp across switch terminal, so that lamp will light when switch makes contact 2 Back off throttle stop screw, remove throttle connector rod and choke connector rod, rotate fast idle cam to slow idle position, and fully close the throttle valves 3 While holding throttle valves fully closed, place a scale against choke unloader arm of throttle lever and make an index mark on carbureter body at the ½ inch division of scale 4 With ignition switch turned on (or test lamp connected) hold end of scale against unloader arm and slowly open throttle until the drive pinion just engages flywheel ring gear (or test lamp lights) 5 If switch is correctly timed, the scale will then read between 1¼ inch and 1-9/16 inch at mark on carbureter body (¾ inch to 1-1/16 inch travel of arm) 6 If necessary, make switch adjustment by reducing or increasing the total thickness of brass shims If switch timing was found to be too early reduce the total thickness of the shims If timing was too late increase total thickness of shims Two sizes shims are available 153-11 018 inch 153-12, 006 inch After adjustment is completed, set engine idle at specified R P M

Buick "V-8"—1955—Carbureter No. 2197S

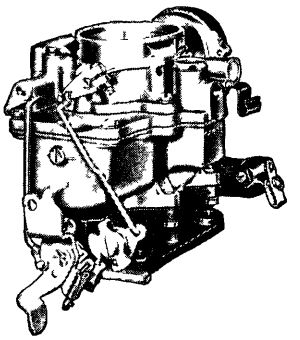
WHEN SERVICING, USE GASKET ASSORTMENT No. 257, REPAIR PACKAGE No 1781

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-1228S	Body flange and switch assembly	
1A-77	FLANGE GASKET	
2-168	Auxiliary throttle valve	(2)
2-169	Secondary throttle valve	(2)
2-170	Primary throttle valve	(2)
3 955S	Primary throttle shaft and lever assembly	
3 956S	Secondary throttle shaft and lever assembly	
3 957S	Auxiliary throttle shaft lever and weight assy	
4A-116S	Throttle shaft dog and collar assembly	
4A-134	Primary throttle shaft dog	
6 1011S	Air horn assembly (Sup by 6-1044S)	
6-1044S	Air horn assembly	
7-173	Choke valve	
11-247S	LOW SPEED JET ASSEMBLY	(4)
11B-35	Rivet plug	(6)
11B-41	Rivet plug	(2)
11B-79	Rivet plug	(5)
11B-129S	Pump discharge passage plug assembly	
11B-134	Rivet plug	
11B-146	Level sight plug	(2)
11B-223	Nozzle passage and idle port rivet plug	(8)
11B-305	Rivet plug	
11B 306	Rivet plug	(2)
11B 327	Secondary throttle shaft rivet plug	
14 383S	Choke lever and screw assembly	
14-438	Cam trip lever	
14 439S	Choke piston lever link and shaft assembly	
15-35S	Strainer nut assembly	
17-70	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	(2)
20-26	Pump discharge passage plug gasket	
20-35	BOWL STRAINER GASKET	
21-143S	Primary float and lever assembly	
21-146S	Secondary float and lever assembly	
24-24	Float lever pin	(2)
25-251S	SECONDARY NEEDLE AND SEAT ASSEMBLY	
25-263S	PRIMARY NEEDLE AND SEAT ASSEMBLY	
30-14	BOWL COVER STRAINER	
30-61	SWITCH STRAINER	
30A-58	Idle adjustment screw	(2)
38A-83	Countershaft bushing	
39-11	Choke and primary throttle valve attaching screw	(6)
47-14	Expansion plug	
48-226	Pump jet housing	
49-182	Switch plunger	
53A-332	Lockout arm	
53A-353	Primary operating lever	
53A-385S	Pump operating lever and countershaft assembly	
61-84	Idle adjustment screw lock spring	(2)
61-150	PUMP SPRING (LOWER)	
61-237	Fast idle cam spring	
61-238	Throttle flex spring	
61-243S	Contact spring and washer assembly	
61-246	VACUUM PISTON SPRING	
61-291	Throttle lever adjusting screw spring	
61-382	METERING ROD SPRING	
61-388	Switch return spring	
61-450	SECONDARY THROTTLE RETURN SPRING	
63-57	PUMP INTAKE CHECK BALL RETAINER	
63-58	Coil housing retainer	(3)
64-166S	Pump plunger rod spring and retainer assembly (Sup by 64-180S)	
64 180S	PUMP PLUNGER, ROD SPRING AND RETAINER ASSEMBLY	
75 1147	METERING ROD—STANDARD	(2)
75-1148	Metering rod—1 size lean	(2)
75-1150U	Metering rod and jet unit—2 sizes lean	
86-12	Flange stud lock washer	(4)
86-37	Terminal lock washer	(2)
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	
101-84	Fast idle adjustment screw	
101-109	Terminal screw	(2)
101-126	Auxiliary throttle valve attaching screw	(4)
101-136	Coil housing attaching screw	(3)
101-140	Fast idle cam screw	
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assy	(2)
101-278	Pump jet housing attaching screw	
101-284	Piston housing attaching screw	(2)
101 307S	Air horn attaching screw and washer assy	(8)
101-325S	Switch attaching screw and washer assembly	(2)
101-335S	Air horn attaching screw and washer assy	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-354S	Choke lever clamp screw assembly	
101-363	Piston housing attaching screw	
101-385	Throttle lever adjusting screw	
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
115-182	Choke connector rod	
115-204	Throttle operating rod	
115-228	THROTTLE CONNECTOR ROD	
116-13	PUMP INTAKE CHECK BALL	
116-19	Switch ball	
117-162	Vacumeter piston link	
117-165	Pump connector link	
118-112	Dust cover	
120-158	SECONDARY METERING JET	(2)
120-160	PRIMARY METERING ROD JET	(2)
121-78	COIL HOUSING GASKET	
121-208	DUST COVER GASKET	
121-232	AIR HORN GASKET	
121-241	PUMP JET HOUSING GASKET	
121-243	PISTON HOUSING GASKET	
121-256	BODY FLANGE GASKET (Sup by 121-277)	
121-277	Body flange gasket	
136-38	Throttle shaft washer	
150-62	Choke piston pin	
150-178	Auxiliary valve lockout arm pin	
150A-10	PIN SPRING	(5)
153-11	Contact spring shim (018)	(3)
153-12	Contact spring shim (006)	(2)
160-91	Choke piston (Sup by 160-139)	
160-110S	Vacuum piston and pin assembly	
160-139	Choke piston	
160-140U	†Unitized package (Consists of 2—39-11 1—107-47 1—121-78 and 1—160-139)	
170-258S	Piston housing and plug assembly (Sup by 170-376S)	
170-376S	Piston housing and plug assembly	
170AC238S	Thermostatic coil and housing assembly	
172-22	Throttle connector rod retainer	
172-27	Cable clip	
180-60	Secondary throttle return spring bracket	
181-87	Switch guide block	
181-147S	Fast idle cam assembly	
184-64S	Terminal cap assembly	
186-34	Choke baffle plate	
192-21U	Carter starter switch unit	

†Use with Piston Housing Casting No 170-225 to correct loading condition

NOTE· Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.



Casting No. 1165 on Face of Flange

BUICK "V8" SPECIAL MODEL 40 1955

WCD Dual Down-Draft Climatic® Control **Carbureter No. 2179S**

CARBURETER SPECIFICATIONS

For Buick 8 Cylinder Engine: 3.625 Inch Bore, 3.20 Inch Stroke

Dimensions: Flange size, 1¼ inch dual 4 bolt type.
Primary venturi, size 11/32 inch I. D.
Secondary venturi, size 21/32 inch I. D.
Main venturi, size 1-3/16 inch I. D.

Float Level: See adjustments.

Vents: Inside none. Outside, in air horn 2—size No. 12 (.189 inch) drill. Outside, in body flange to bore, 2—size .065 inch diameter.

Gasoline Intake: Size No 38 (.1015 inch) drill in needle seat.

Low Speed Jet Tube: Jet, size No. 66 (.033 inch) drill. By-pass, in bowl cover, size .059 inch diameter.
Economizer, in bowl cover, size .057 inch diameter.
Idle bleed, in bowl cover, No. 47 (.0785 inch) drill.

Idle Port: Upper port, slot type, length .115 inch; width .030 inch.

Idle Port Opening: Top of port to be .057 to .063 inch above top edge of valve with valve tightly closed.

Lower Port (For Idle Adjustment Screw): Size .0615 to .0655 inch diameter.

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture turn screw out. Do not idle engine below 450 r.p.m. (trans. in neutral).

Main Nozzle: Nozzle is installed permanently. DO NOT REMOVE. Upper bleed hole in nozzle, size No. 70 (.028 inch) drill.

Metering Rod (Vacumeter Type): Economy step .0695 inch diameter. Middle step tapers to .062 inch diameter. Power step .054 inch diameter.

Metering Rod Jet: Size No. 43 (.089 inch) drill.

Metering Rod Setting: See adjustments.

Accelerating Pump: Discharge jet (twin) size No. 70 (.028 inch) drill. Intake ball check seat, size No. 32 (.113 inch) drill. Discharge needle seat, size No. 50 (.070 inch) drill.

Pump Adjustment: See adjustments.

Choke: Carter Climatic® control, set on index. Butterfly type, offset valve. Choke heat suction hole, in bowl cover, size No. 42 (.0935 inch) drill.

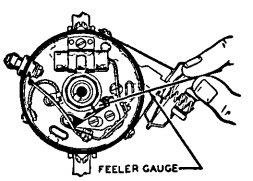
Vacuum Spark Port: Horizontal slot type .040 by .130 inch. Bottom of port to be .010 to .014 inch above top edge of valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

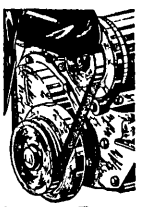
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



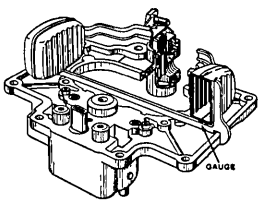
Spark Plug Gap .030"-.035"



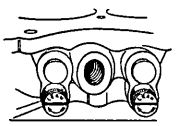
Breaker Point Setting .015"



Ignition Timing Breaker Points to Open: 5° B. T. C.



Float Setting See Adjustments



Idle Adjustment Screw Setting ½ to 1½ Turns Open

NOTE: These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: Two separate float adjustments must be made—lateral and vertical. **LATERAL ADJUSTMENT:** With bowl cover assembly inverted, bowl cover gasket removed and **float lip resting on seated needle, place float gauge T109-162** directly under float with notched portions of gauge fitted over edges of casting. Sides of floats should barely touch the vertical uprights of float gauge. Adjustment should be made by bending arms of floats.

VERTICAL ADJUSTMENT: With float gauge in same position, floats should just clear the horizontal portion of gauge. Vertical distance between top of float and machined surface of casting must be 3/16 inch. Adjust by bending float arms. Remove float, install bowl cover gasket and then reinstall float.

PUMP ADJUSTMENT: Install pump connector link in outer hole (long stroke) of pump arm with ends extending away from countershaft arm. Back out throttle lever set screw until throttle valves seat in bores of carbuerter. Be sure fast idle adjusting screw does not hold throttle open. Place universal pump travel gauge T109-117S, inverted on edge of dust cover boss of bowl cover. Turn knurled nut of gauge until finger just touches upper nd of plunger shaft. Number indicated on gauge should be "29". Hold the gauge vertical to insure correct reading. Adjust by bending the throttle connector rod at upper angle, use tool T109-213. Optional Adjustment: With throttle valves seated in bores of carbureter, the distance from the top of the plunger shaft to the top of the dust cover boss should be 17/64 inch. Adjust as mentioned above.

METERING ROD ADJUSTMENT: The metering rods must be adjusted after the pump adjustment. No metering rod gauges are necessary. Procedure is as follows: With the throttle lever set screw backed out and throttle valves seated in bores of carbureter, press down on vacumeter link until metering rods bottom. With rods held in this position, revolve metering rod arm until lip contacts vacumeter link. Hold in place and carefully tighten metering rod arm set screw.

FAST IDLE ADJUSTMENT: A. Loosen choke lever clamp screw on choke shaft. Insert .020 inch feeler gauge (T109-29) between lip of fast idle cam and boss of flange casting. Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position. Hold in place and tighten clamp screw. B. With choke valve tightly closed, tighten fast idle adjusting screw until there is .025 inch opening (gauge T109-189 may be used) between throttle valve and bore of carbureter (side opposite idle port). Be sure fast idle adjusting screw is on high step of cam while making this adjustment.

UNLOADER ADJUSTMENT: With throttle wide open there **should be 1/4 inch (gauge T109-31) clearance between upper** edge of choke valve and inner wall of air horn. Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41).

CHECKING AND ADJUSTING STARTER SWITCH: CAUTION: If carbureter is installed on engine, make certain that transmission is in neutral and parking brake is applied.

1. If carbureter is installed on Dynaflow car, make certain that throttle linkage and dash pot are correctly adjusted. If carbureter is removed from engine, connect a 6-volt battery and test lamp across switch terminal, so that lamp will light when switch makes contact.

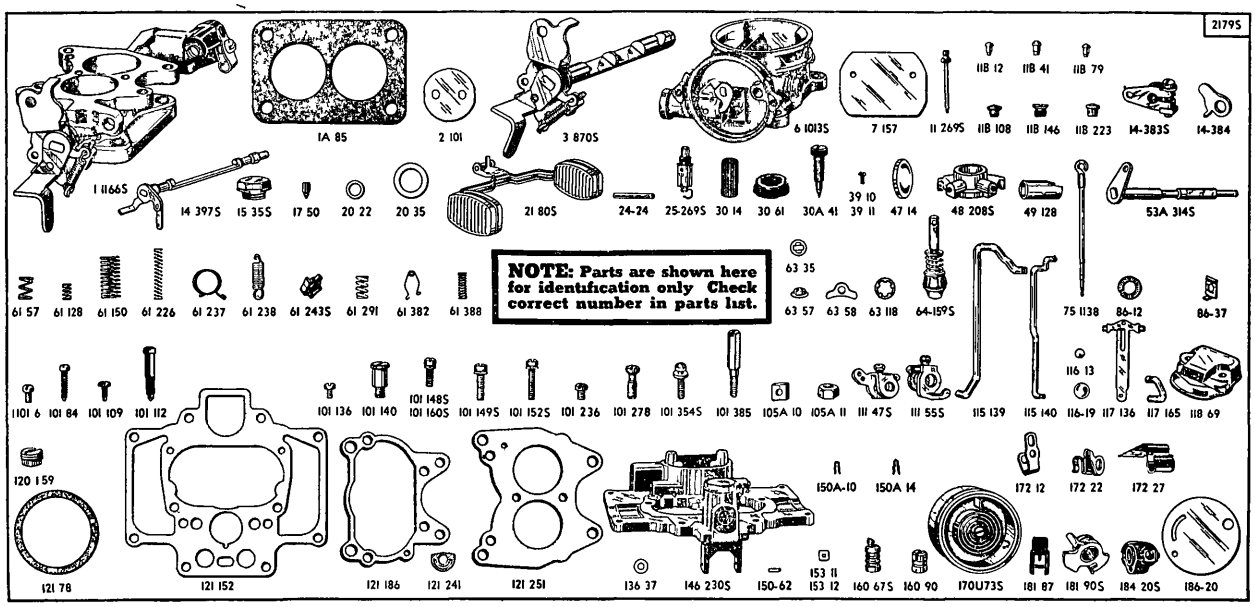
2. Back off throttle stop screw, remove throttle connector rod, rotate fast idle cam to slow idle position, and fully close the throttle valves.

3. While holding throttle valves fully closed, place a scale against choke unloader arm of throttle lever and make an index mark on carbureter body at the one inch division on scale.

4. With ignition switch turned on (or test lamp connected) hold end of scale against unloader arm and slowly open throttle until the drive pinion just engages flywheel ring gear (or test lamp lights).

5. If switch is correctly timed, the scale will then read between 1-15/16 inch and 2-5/16 inch at mark on carbureter body (15/16 inch to 1-5/16 inch travel of arm).

6. If necessary, make switch adjustment by reducing or increasing the total thickness of the brass shims. If switch timing was found to be too early, reduce the total thickness of the shims. If timing was too late, increase total thickness of shims. Two sizes of shims are available: 153-11 .018 inch — 153-12 .006 inch. After adjustment is completed, set engine idle at specified r.p.m.



Buick "V-8"—1955—Carbureter No. 2179S

WHEN SERVICING, USE GASKET ASSORTMENT No 256, REPAIR PACKAGE No 1780

PART NAMES IN CAPITAL LETTERS LISTED BELOW INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1166S	Body flange and switch assembly	
1A-85	FLANGE GASKET	
2-101	Throttle valve	(2)
3-870S	Throttle shaft and lever assembly	
6 1013S	Air horn assembly (Sup by 6 1059S)	
6 1059S	Air horn assembly	
7-157	Choke valve	
11 269S	LOW SPEED JET ASSEMBLY	(2)
11B-12	Rivet plug	
11B-41	Rivet plug	(2)
11B-79	Rivet plug	(6)
11B-108	Idle port rivet plug	(2)
11B-146	Level sight plug	
11B-223	Nozzle passage rivet plug	(2)
14-383S	Choke lever and screw assembly	
14-384	Cam trip lever	
14-397S	Choke piston lever link and shaft assembly	
15-35S	Strainer nut assembly	
17-50	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	
20-35	BOWL STRAINER GASKET	
21-80S	Float and lever assembly	
24-24	Float lever pin	
25-269S	NEEDLE AND SEAT ASSEMBLY	
30-14	BOWL COVER STRAINER	
30-61	SWITCH STRAINER	
30A-41	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
39-11	Throttle valve attaching screw	(4)
47-14	Welsh plug	
48-208S	Pump jet and housing assembly	

Part No	PART NAME	
49-128	Switch plunger	
53A-314S	Pump operating lever and countershaft assembly	
61-57	Idle adjustment screw spring	(2)
61-128	Connector rod spring	
61-150	PUMP SPRING (LOWER)	
61-226	VACUUM PISTON SPRING	
61-237	Fast idle cam spring	
61-238	Throttle flex spring	
61-243S	Contact spring and washer assembly	
61-291	Throttle lever adjusting screw spring	
61-382	METERING ROD SPRING	
61-388	Switch return spring	
63-35	Spring retainer	
63-57	INTAKE BALL CHECK RETAINER	
63-58	Coil housing retainer	(2)
63-118	Throttle shaft retaining ring	
64-159S	PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
64-191S	*Pump plunger rod spring and retainer assembly	
75-1138	METERING ROD—STANDARD	(2)
75 1152	Metering rod—1 size lean	(2)
75 1153	Metering rod—2 sizes lean	(2)
86-12	Flange stud lock washer	(4)
86-37	Terminal lock washer	(2)
101-6	Pump arm clamp screw	
101-84	Fast idle adjustment screw	
101-109	Switch terminal screw	(2)
101-112	Terminal cap attaching screw	
101-136	Coil housing attaching screw	(2)
101-140	Fast idle cam attaching screw	
101-148S	Dust cover attaching screw and washer assembly	(2)

Part No.	PART NAME	
101-149S	Body flange attaching screw and washer assembly	(4)
101 152S	Air horn attaching screw and washer assembly	(4)
101-160S	Bowl cover attaching screw and washer assembly	(6)
101-236	Metering rod arm clamp screw	
101-278	Pump jet housing attaching screw	
101-354S	Choke lever clamp screw assembly	
101 385	Throttle lever adjusting screw	
105A-10	Choke lever clamp screw nut	
105A 11	Flange stud nut	(4)
111-47S	Pump arm and screw assembly	
111-55S	Metering rod arm and screw assembly	
115-139	THROTTLE CONNECTOR ROD	
115-140	Choke connector rod	
116-13	PUMP INTAKE CHECK BALL	
116-19	Switch ball	
117-136	Vacumeter piston link	
117-165	Pump connector link	
118-69	Dust cover	
120-159	METERING ROD JET	(2)
121-78	COIL HOUSING GASKET	
121-152	BOWL COVER GASKET	

Part No.	PART NAME	
121-186	AIR HORN GASKET	
121-241	PUMP JET HOUSING GASKET	
121 251	BODY FLANGE GASKET	
136-37	Connector rod washer	
146-230S	Bowl cover assembly	
150-62	Choke piston pin	
150A-10	PIN SPRING	(2)
150A-14	Pin spring	
153-11	Contact spring shim (.018)	(3)
153-12	Contact spring shim (.006)	(2)
160-35	Choke piston	
160-67S	Vacuum piston and pin assembly	
160-90	Choke piston (Sup by 160 35)	
170U73S	Thermostatic coil and housing assembly	
172-12	Terminal cap hold down clip	
172-22	Throttle connector rod retainer	
172-27	Cable clip	
181-87	Switch guide block	
181-90S	Fast idle cam assembly	
184-20S	Terminal cap assembly	
186-20	Choke baffle plate	
192-11U	Carter starter switch unit	
195-60U	†Unitized package	

*To correct acceleration complaint

†Unitized package to correct loading condition in Canada

NOTE **Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used**

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BUICK "V-8"

"CENTURY" – MODEL 60
"ROADMASTER" – MODEL 70
"SKYLARK" – MODEL 100
1954

WCFB Four-Bore Down-Draft Climatic® Control Carbureter **No. 2082S**

CARBURETER SPECIFICATIONS

For Buick 8 Cylinder Engine 4 00 Inch Bore 3 20 Inch Stroke

Dimensions Flange size 1 1/8 inch Four bore—4 bolt type
Primary venturi size 11/32 inch I D
Main venturi size 1 1/16 inch I D

Float Level See adjustments

Vents Inside (vertical) Bowl chamber to top of air horn (primary side) (2) size No 44 (086 inch) drill (secondary side) (2) size No 26 (147 inch) drill
Outside (horizontal) Bowl chamber to atmosphere (5) No 42 (0935 inch) drill In dust cover size No 36 (1065 inch) drill
In flange bore to atmosphere (4) size No 36 (1065 inch) drill

Gasoline Intake Primary size No 38 (1015 inch) drill sec ondary size No 42 (0935 inch) drill in needle seat

Low Speed Jet Tube Jet size No 69 (0293 inch) drill By pass in body size 057 inch diameter Economizer in body (early prod) size No 57 (043 inch) drill (late prod) size 0459 inch diameter Idle bleed in body size No 44 (086 inch) drill

Idle Port Upper slot type primary length 110 inch width 030 inch Secondary length 103 inch width 030 inch

Idle Port Opening Primary 057 to 063 inch secondary 059 to 065 inch above top edge of valve with valve tightly closed

Lower Port Primary (for idle adjustment screw) size No 55 (052 inch) drill
Secondary (no idle adjustment screw), size No 57 (043 inch) drill

Set Idle Adjustment Screw 1/2 to 1 1/2 turns open For richer mixture turn screw out Do not idle engine below 450 r p m

Main Nozzle Installed permanently Do not remove Anti percolating jet (4) size No 70 (028 inch) drill

Metering Rod Primary Economy step 0715 inch diameter Middle step tapers to 0645 inch diameter Power step 053 inch diameter
Secondary None

Metering Rod Jet Primary size 0935 inch diameter
Secondary size 0635 inch diameter

Metering Rod Setting See adjustments

Accelerating Pump Discharge jet (twin) primary side only size No 70 (028 inch) drill Intake ball check seat size 115 to 120 inch diameter Discharge needle seat size No 50 (070 inch) drill Relief passage (vent) to fuel chamber size No 42 (0935 inch) drill

Pump Adjustment See adjustments

Choke Carter Climatic® Control set on index Butterfly type offset choke valve primary side only Choke heat suction hole restriction in piston housing size No 42 (0935 inch) drill

Vacuum Spark Port Horizontal slot (round end) 040 x 130 inch Bottom of port 013 to 017 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open 5° B T. D C At Vibration Damper	Float Setting (See Adjustments)	Idle Adjustment Screw Setting 1/2 to 1 1/2 Turns Open
030"- 035"	0125"- 0175"			

NOTE These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT Two separate float adjustments must be made—lateral and vertical **LATERAL ADJUSTMENT** With bowl cover assembly inverted, bowl cover gasket removed and float resting on seated needle, place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting Side of floats should just clear the vertical uprights of float gauge Adjustment should be made by bending arms of floats
VERTICAL ADJUSTMENT With float gauge in same position floats should just clear the horizontal portion of gauge Vertical distance between top of float and machined surface of casting must be 1/8 inch (gauge T109-232) for primary floats, and 3/16 inch (gauge T109-222) for secondary floats Adjust by bending float arms
FLOAT DROP ADJUSTMENT With bowl cover held in upright position and measuring from center of floats the distance between top of floats and bowl cover should be 5/8 inch for primary floats and 11/16 inch for secondary floats Adjust by bending stop tabs on float bracket
PUMP ADJUSTMENT Install pump connector link in outer hole (long stroke) of pump arm, with ends extending toward countershaft arm Back out throttle lever set screw until throttle valves seat in bores of carbureter Hold straight edge across top of dust cover boss at pump arm The flat on top of pump arm should be parallel to straight edge Adjust by bending throttle connector rod (early) at upper angle (late) at lower angle (Use tool T109-213)
METERING ROD ADJUSTMENT Metering rod adjustment is important and must be made after completing the pump adjustment No metering rod gauges are necessary Procedure is as follows 1 Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw 2 With metering rods in place press down on vacuumeter link until metering rods bottom in carbureter body casting 3 Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacuumeter link Hold in place and carefully tighten clamp screw
FAST IDLE ADJUSTMENT (a) Loosen choke lever clamp screw on choke shaft Insert 021 inch feeler gauge (T109-29 may be used) between lip of fast idle cam and boss of flange casting Hold choke valve tightly closed and take slack out

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of linkage by pressing lever towards closed position—hold in place and tighten clamp screw (b) With choke valve tightly closed tighten fast idle adjusting screw until there is 018 inch (gauge T109-44) opening between throttle valve and bore of carbureter (side opposite idle port) Be sure fast idle adjusting screw is on high step of cam while making this adjustment

UNLOADER ADJUSTMENT With throttle wide open there should be 11/64 inch clearance (gauge T109-166) between upper edge of choke valve and inner wall of air horn Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41)

AUXILIARY THROTTLE VALVE ADJUSTMENT (a) Disconnect secondary throttle operating rod (b) Adjust stop lug on secondary throttle lever (use bending tool T109-214) until there is 27/64 inch clearance (gauge T109-242) between lower edge of auxiliary throttle valve and bore, when lug is against stop on flange

SECONDARY THROTTLE LEVER ADJUSTMENT The stop lug on both primary and secondary throttle levers should contact boss on flange at the same time To adjust bend secondary throttle operating rod at angle (use bending tool T109 213) NOTE Secondary throttle valves will be a few degrees from wide open position

AUXILIARY THROTTLE LOCK OUT ADJUSTMENT This adjustment should be made after completing fast idle adjustment 1 With choke valve closed edge of hook on lock out arm should contact auxiliary throttle lever making maximum contact of locking step on lever 2 Open choke valve Auxiliary throttle valve should become unlocked a few degrees before the choke reaches wide open position Adjust by bending lock out arm

CHECKING AND ADJUSTING STARTER SWITCH

(CAUTION) If carbureter is installed on engine make certain that the transmission is in neutral and parking brake is applied 1 If carbureter is installed on Dynaflow car make certain that throttle linkage and dash pot are correctly adjusted If carbureter is removed from engine, connect a 6 volt battery and test lamp across switch terminal, so that lamp will light when switch makes contact 2 Back off throttle stop screw remove throttle connector rod and choke connector rod rotate fast idle cam to slow idle position, and fully close the throttle valves 3 While holding throttle valves fully closed, place a scale against choke unloader arm of throttle lever and make an index mark on carbureter body at the ½ inch division of scale 4 With ignition switch turned on (or test lamp connected) hold end of scale against unloader arm and slowly open throttle until the drive pinion just engages flywheel ring gear (or test lamp lights) 5 If switch is correctly timed the scale will then read between 1¼ inch and 1 9/16 inch at mark on carbureter body (¾ inch to 1 1/16 inch travel of arm) 6 If necessary make switch adjustment by reducing or increasing the total thickness of the brass shims If switch timing was found to be too early, reduce the total thickness of the shims If timing was too late increase total thickness of shims Two sizes shims are available 153 11 018 inch 153 12 006 inch After adjustment is completed set engine idle at specified R P M

Buick "V-8"—1954—Carbureter No. 2082S

WHEN SERVICING, USE GASKET ASSORTMENT No 234A, REPAIR PACKAGE No 1751

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

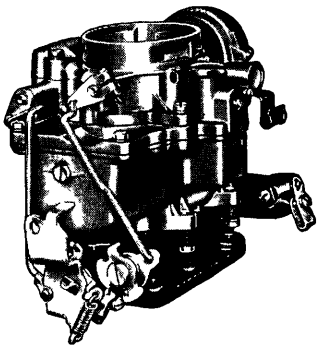
Part No	PART NAME	
1 1169S	Body flange and switch assembly	
1A 77	FLANGE GASKET	
2 92	Primary throttle valve	(2)
2 148	Primary throttle valve (Sup by 2 92)	(2)
2 155	Auxiliary throttle valve	(2)
2 157	Secondary throttle valve	(2)
3 815S	Secondary throttle shaft and lever assembly	
3 820S	Auxiliary throttle shaft lever and weight assy	
3 867S	Primary throttle shaft and lever assembly	
4A 116S	Throttle shaft dog and collar assembly	
4A 134	Primary throttle shaft dog	
6 965S	Air horn assembly	
6 966S	Air horn and Climatic® control assembly	
7 173	Choke valve	
11 247S	LOW SPEED JET ASSEMBLY	(4)
11B-35	Rivet plug (early prod (3) (late prod	(4)
11B-41	Rivet plug	(2)
11B-79	Rivet plug	(5)
11B 129S	Pump discharge passage plug assembly	
11B-134	Rivet plug	
11B-146	Level sight plug	(2)
11B-223	Nozzle passage and idle port rivet plug	(8)
11B 272	Rivet plug (early prod)	
11B 273	Secondary throttle shaft rivet plug	
11B 305	Rivet plug	
11B 306	Rivet plug	(2)
14 383S	Choke lever and screw assembly	
14 438	Cam trip lever	
14 439S	Choke piston lever link and shaft assembly	
15 35S	Strainer nut assembly	
17 51	PUMP CHECK NEEDLE	
20 22	Needle seat gasket	(2)
20 26	Pump discharge passage plug gasket	
20 35	BOWL STRAINER GASKET	
21 143S	Primary float and lever assembly	
21 146S	Secondary float and lever assembly	
24 24	Float lever pin	(2)
25 251S	SECONDARY NEEDLE AND SEAT ASSEMBLY	
25-263S	PRIMARY NEEDLE AND SEAT ASSEMBLY	
30 14	BOWL COVER STRAINER	
30 61	SWITCH STRAINER	
30A 58	Idle adjustment screw	(2)
38A 83	Countershaft bushing	
39 10	Primary throttle valve attaching screw	(4)
39 11	Choke valve attaching screw	(2)
47 14	Welsh plug	
48 221S	Pump jet and housing assembly	
49 182	Switch plunger	
53A-332	Lockout arm	
53A 353	Primary operating lever	
53A-375S	Pump operating lever and countershaft assembly (Sup by 53A-385S)	
53A-385S	Pump operating lever and countershaft assembly	
61-84	Idle adjustment screw spring	(2)
61 150	PUMP SPRING (LOWER)	
61-237	Fast idle cam spring	
61 238	Throttle flex spring	
61-243S	Contact spring and washer assembly	
61 246	VACUUM PISTON SPRING	
61-291	Throttle lever adjusting screw spring	
61-382	METERING ROD SPRING	
61 388	Switch return spring	
61-450	SECONDARY THROTTLE RETURN SPRING	
63-57	PUMP INTAKE CHECK BALL RETAINER	
63-58	Coil housing retainer	(3)
64-166S	PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
75 971	Metering rod—1 size lean	(2)
75-973U	Metering rod and jet unit—2 sizes lean	
75 995	Metering rod—standard (Sup by 75-1108)	(2)
75-1108	METERING ROD—STANDARD	(2)
75-1123	Metering rod—1 size rich	(2)

Part No	PART NAME	
86-12	Flange stud lock washer	(4)
86 37	Terminal lock washer	(2)
101 6	Pump arm clamp screw	
101 33	Metering rod arm clamp screw	
101 74	Throttle shaft screw	
101 84	Fast idle adjustment screw	
101 109	Terminal screw	(2)
101 126	Auxiliary throttle valve attaching screw	(4)
101 136	Coil housing attaching screw	(3)
101 140	Fast idle cam screw	
101 149S	Body flange attaching screw and washer assembly	(4)
101 152S	Air horn attaching screw and washer assembly	
101 160S	Air horn attaching screw and washer assembly (early prod)	(7)
101 184S	Dust cover attaching screw and washer assembly	(2)
101 278	Pump jet housing attaching screw	
101 284	Piston housing attaching screw	(2)
101 288	Throttle lever adjusting screw (Sup by 101 339)	
101 307S	Air horn and bracket attaching screw and washer assembly (early prod (1) (late prod	(8)
101 325S	Switch attaching screw and washer assembly	(2)
101 335S	Air horn attaching screw and washer assembly	(7)
101 337	Secondary throttle valve attaching screw	(4)
101 339	Throttle lever adjusting screw	
101 354S	Choke lever clamp screw assembly	
101 363	Piston housing attaching screw	
105A 10	Choke lever clamp screw nut	
105A 11	Flange stud nut	(4)
111-47S	Pump arm and screw assembly	
111 60S	Metering rod arm and screw assembly	
115 182	Choke connector rod	
115 204	Throttle operating rod	
115 228	THROTTLE CONNECTOR ROD	
116-13	PUMP INTAKE CHECK BALL	
116 19	Switch ball	
117 155	Vacumeter piston link	
117-165	Pump connector link	
118 93	Dust cover	
120 166	PRIMARY METERING ROD JET	(2)
120-176	SECONDARY METERING JET	(2)
121 78	COIL HOUSING GASKET	
121 208	DUST COVER GASKET	
121 232	AIR HORN GASKET	
121 241	PUMP JET HOUSING GASKET	
121 242	BODY FLANGE GASKET	
121 243	PISTON HOUSING GASKET	
136 38	Throttle shaft washer	
150 62	Choke piston pin	
150 178	Auxiliary valve lockout arm pin	
150A-10	PIN SPRING	(5)
153-11	Contact spring shim (018)	(3)
153-12	Contact spring shim (006)	(2)
160 91	Choke piston	
160 110S	Vacuum piston and pin assembly	
170-258S	Piston housing and plug assembly	
170AC238S	Thermostatic coil and housing assembly	
172-22	THROTTLE CONNECTOR ROD RETAINER	
172 27	Cable clip	
180 60	Lever return spring bracket	
181 87	Switch guide block	
181-147S	Fast idle cam assembly	
184 64S	Terminal cap assembly	
186 34	Choke baffle plate	
192-21U	Carter starter switch unit	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

2017S
Super—Model "50" 1953

2081S-2081SA
Special—Model "40" 1954
Super—Model "50" 1954



Cut shows 2017S carbureter

BUICK "V-8"
1953-1954

(2179S can also be used)

WCD Dual Down-Draft Climatic® Control **Carbureters Nos. 2017S-2081S-2081SA**

CARBURETER SPECIFICATIONS

For Buick 8 Cylinder Engine 3 625 Inch Bore 3 20 Inch Stroke (Series 40), 4 00 Inch Bore 3 20 Inch Stroke (Series 50)

Dimensions Flange size 1¼ inch dual 4 bolt type
Primary venturi size 11/32 inch I D
Secondary venturi size 21/32 inch I D
Main venturi size 1 3/16 inch I D

Float Level See adjustments

Vents Inside none Outside in air horn 2—size No 12 (189 inch) drill Outside in body flange to bore 2—size 065 inch diameter

Gasoline Intake Size No 38 (1015 inch) drill in needle seat

Low Speed Jet Tube Jet size No 69 (0292 inch) drill By pass bowl cover size 059 inch diameter
Economizer bowl cover size (2017S) 0492 inch diameter (2081S early prod) No 55 (052 inch) drill (2081S late prod —2081SA) 057 inch diameter
Idle bleed bowl cover No 47 (0785 inch) drill

Idle Port Upper port slot type length 115 inch width 030 inch

Idle Port Opening Top of port to be (2017S) 047 to 053 inch (2081S SA) 057 to 063 inch above top edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw) Size 0615 to 0655 inch diameter

Set Idle Adjustment Screw (2017S) ½ to 1½ (2081S SA) ¾ to 1¾ turns open For richer mixture turn screw out Do not idle engine below 450 r p m (trans in neutral)

Main Nozzle Nozzle is installed permanently **Do not remove**

Metering Rod (Vacumeter Type) Economy step (2017S) 0645 inch (2081S SA) 0665 inch diameter Middle step tapers to (2017S) 050 inch (2081S SA) 0565 inch diameter Power step (2017S) 048 inch (2081S SA) 045 inch diameter

Metering Rod Jet Size (2017S) No 44 (086 inch) (2081S SA) No 43 (089 inch) drill

Metering Rod Setting See adjustments

Accelerating Pump Discharge jet (twin) size No 70 (028 inch) drill Intake ball check seat size No 32 (113 inch) drill Discharge needle seat size No 50 (070 inch) drill

Pump Adjustment See adjustments

Choke Carter Climatic® control set on index Butterfly type offset valve Choke heat suction hole in bowl cover size (2017S 2081SA) No 42 (0935 inch) (2081S) No 38 (1015 inch) drill

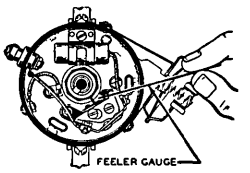
Vacuum Spark Port (2017S early prod) round type 040 inch diameter (2017S late prod) round type 081 inch diameter (2081S SA) horizontal slot type 040 by 130 inch Bottom of port to be (2017S early prod) 033 to 037 inch (2017S late prod) 013 to 017 inch (2081S SA) 010 to 014 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter

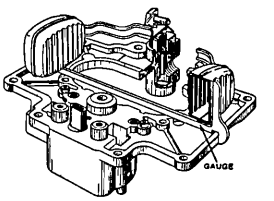


Spark Plug Gap 030" 035"

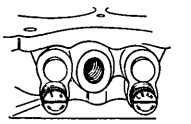


Breaker Point Setting 0125"- 0175"

Ignition Timing
Breaker Points to Open
5° B T D C
Timing mark located
1953—on Flywheel
(Visible left side of engine)
1954—on Fan Pulley
(Visible right side of engine)



Float Setting (See Adjustments)



Idle Adjustment Screw Setting ½ to 1½ Turns Open

NOTE These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: Two separate float adjustments must be made—lateral and vertical **LATERAL ADJUSTMENT:** With bowl cover assembly inverted bowl cover gasket removed and float lip resting on seated needle place float gauge T109 240 directly under float with notched portions of gauge fitted over edges of casting Sides of floats should barely touch the verti cal uprights of float gauge Adjustment should be made by bending arms of floats

VERTICAL ADJUSTMENT: With float gauge in same position floats should just clear the horizontal portion of gauge (Verti cal distance between top of float and machined surface of casting must be 15/64 inch) Adjust by bending float arms Remove float install bowl cover gasket and then reinstall float

PUMP ADJUSTMENT: Install pump connector link in outer hole (long stroke) of pump arm with ends extending away from countershaft arm Back out throttle lever set screw until throttle valves seat in bores of carbureter Be sure fast idle adjusting screw does not hold throttle open Place universal pump travol gauge T109-117S inverted on edge of dust cover boss of bowl cover Turn knurled nut of gauge until finger just touches upper end of plunger shaft Number indicated on gauge should be '29" Hold the gauge vertical to insure correct reading Ad just by bending the throttle connector rod at upper angle use tool T109 213 Optional Adjustment With throttle valves seated in bores of carbureter the distance from the top of the plunger shaft to the top of the dust cover boss should be 17/64 inch Adjust as mentioned above

METERING ROD ADJUSTMENT: The metering rods must be adjusted after the pump adjustment No metering rod gauges are necessary Procedure is as follows With the throttle lever set screw backed out and throttle valves seated in bores of carbureter press down on vacumeter link until metering rods bottom With rods held in this position revolve metering rod arm until lip contacts vacumeter link Hold in place and care fully tighten metering rod arm set screw

FAST IDLE ADJUSTMENT: A Loosen choke lever clamp screw on choke shaft Insert 020 inch feeler gauge (T109-29) be tween lip of fast idle cam and boss of flange casting Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position Hold in place and tighten clamp screw B With choke valve tightly closed tighten fast idle adjusting screw until there is (2017S) 015 inch opening (gauge T109 44) (2081S SA) 028 inch opening (gauge T109 189 may be used) between throttle valve and bore of carbureter (side opposite idle port) Be sure fast idle adjust ing screw is on high step of cam while making this adjustment

UNLOADER ADJUSTMENT: With throttle wide open there should be 3/16 inch (gauge T109 28) clearance between upper edge of choke valve and inner wall of air horn Adjust by bending unloader lip on throttle shaft lever (use bending tool T109 41)

CHECKING AND ADJUSTING STARTER SWITCH·

CAUTION· If carbureter is installed on engine make certain that transmission is in neutral and parking brake is applied

1 If carbureter is installed on Dynaflow car make certain that throttle linkage and dash pot are correctly adjusted If car bureter is removed from engine connect a 6 volt battery and test lamp across switch terminal so that lamp will light when switch makes contact

2 Back off throttle stop screw remove throttle connector rod rotate fast idle cam to slow idle position and fully close the throttle valves

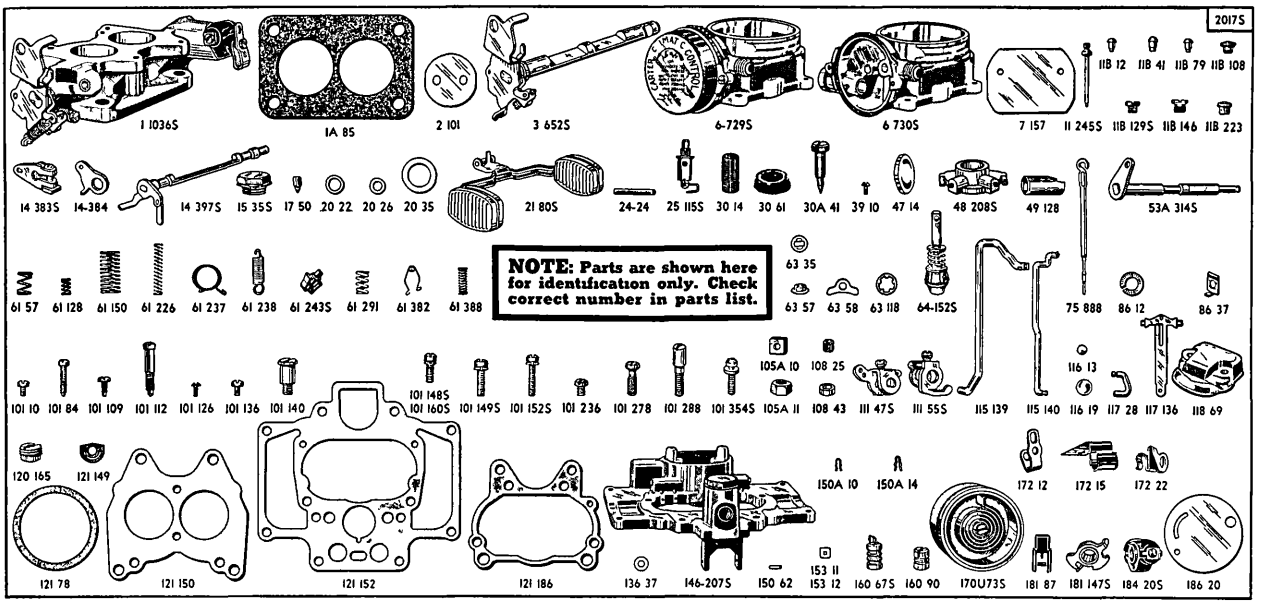
3 While holding throttle valves fully closed place a scale against choke unloader arm of throttle lever and make an index mark on carbureter body at the one inch division on scale

4 With ignition switch turned on (or test lamp connected) hold end of scale against unloader arm and slowly open throttle until the drive pinion just engages flywheel ring gear (or test lamp lights)

5 If switch is correctly timed, the scale will then read be- tween 1 15/16 inch and 2 5/16 inch at mark on carbureter body (15/16 inch to 1 5/16 inch travel of arm)

6 If necessary make switch adjustment by reducing or in- creasing the total thickness of the brass shims If switch timing was found to be too early, reduce the total thickness of the shims If timing was too late, increase total thickness of shims Two sizes of shims are available 153-11 018 inch—153-12 006 inch After adjustment is completed set engine idle at speci- fied r p m

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Buick "V-8"—1953-1954—Carbureters Nos. 2017S-2081S-2081SA

WHEN SERVICING, USE GASKET ASSORTMENT No 195A; REPAIR PACKAGE No 1735 (2017S), No 1747 (2081S-SA)

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1036S	Body flange and switch assembly (2017S)	
1-1166S	Body flange assembly (2081S-SA)	
1A-85	FLANGE GASKET	
2-101	Throttle valve	(2)
3-652S	Throttle shaft, lever and dog assembly (2017S)	
3-870S	Throttle shaft and lever assembly (2081S-SA)	
6-729S	Air horn and Climatic® control assembly (2017S)	
6-730S	Air horn assembly (2017S)	
6-961S	Air horn and Climatic® control assembly (2081S) (Sup by 6 1013S)	
6-990S	Air horn and Climatic® control assembly (2081SA) (Sup by 6-1013S)	
6-1013S	Air horn and choke shaft assembly (2081S-SA)	
7-157	Choke valve	
11-245S	LOW SPEED JET ASSEMBLY	(2)
11B-12	Rivet plug	
11B-41	Rivet plug	(2)
11B-79	Rivet plug	(7)
11B-108	IDLE PORT RIVET PASSAGE PLUG	(2)
11B-129S	PUMP DISCHARGE PASSAGE PLUG ASSEMBLY	
11B-146	Level sight plug	
11B-223	Nozzle passage rivet plug	(2)
14-383S	Choke lever and screw assembly	
14-384	Cam trip lever	
14-397S	Choke piston lever, link and shaft assembly	
15-35S	Strainer nut assembly	
17-50	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	
20-26	Pump discharge passage plug gasket	
20-35	BOWL STRAINER GASKET	
21-80S	Float and lever assembly	
24-24	Float lever pin	
25-115S	NEEDLE AND SEAT ASSEMBLY (2017S)	
25-269S	NEEDLE AND SEAT ASSEMBLY (2081S-SA)	
30-14	BOWL COVER STRAINER	
30-61	SWITCH STRAINER	
30A-41	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
39-11	THROTTLE VALVE ATTACHING SCREW (2081S-SA)	(4)
47-14	Welsh plug	
48 208S	Pump jet and housing assembly	
49-128	Switch plunger	
53A-314S	Pump operating lever and countershaft assembly	
61-57	Idle adjustment screw spring	(2)
61-128	CONNECTOR ROD SPRING	
61-150	PUMP SPRING (LOWER)	
61-226	VACUUM PISTON SPRING	

Part No	PART NAME	
61-237	Fast idle cam spring	
61-238	Throttle flex spring	
61-243S	Contact spring and washer assembly	
61-291	Throttle lever adjusting screw spring	
61-382	METERING ROD SPRING	
61-388	Switch return spring	
63-35	SPRING RETAINER	
63-57	INTAKE BALL CHECK RETAINER	
63-58	Coil housing retainer	(2)
63-118	Throttle shaft retaining ring	
64-152S	PUMP PLUNGER, ROD, SPRING AND RETAINER ASSEMBLY (2017S) (Sup by 64-167S on 2081S)	
64-167S	PUMP PLUNGER, ROD, SPRING AND RETAINER ASSEMBLY (2081S-SA)	
75-888	METERING ROD (STANDARD) (2017S)	(2)
75-924	Metering rod (1 size lean) (2017S)	(2)
75-925	Metering rod (2 sizes lean) (2017S)	(2)
75-968	Metering rod—1 size lean (2081S-SA)	
75-969	Metering rod—2 sizes lean (2081S-SA)	
75-994	Metering rod—standard (2081S) (Sup by 75-1107)	(2)
75-1107	METERING ROD—STANDARD (2081S-SA)	
75-1122	Metering rod—1 size rich (2081S-SA)	(2)
86-12	Flange stud lock washer	(4)
86-37	Terminal lock washer	(2)
101-6	Pump arm clamp screw	
101-10	Pump arm clamp screw (2017S) (Sup by 101-6)	
101-19	Choke lever clamp screw (2017S) (Sup by 101-354S)	
101-84	Fast idle adjustment screw	
101-109	Switch terminal screw	(2)
101-112	Terminal cap attaching screw	
101-126	THROTTLE VALVE ATTACHING SCREW (2017S)	(4)
101-136	Coil housing attaching screw	(2)
101-140	Fast idle cam attaching screw	
101-148S	Dust cover attaching screw and washer assembly	(2)
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	(4)
101-160S	Bowl cover attaching screw and washer assembly	(6)
101-236	Metering rod arm clamp screw	
101-278	Pump jet housing attaching screw	
101-288	Throttle lever adjusting screw (Sup by 101-385)	
101-354S	Choke lever clamp screw assembly	

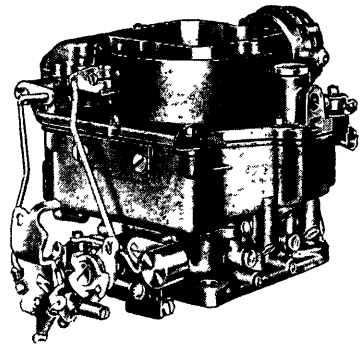
Part No.	PART NAME
101-385	Throttle lever adjusting screw
105A-10	Choke lever clamp screw nut
105A-11	Flange stud nut (4)
111-47S	Pump arm and screw assembly
111-55S	Metering rod arm and screw assembly
115-139	THROTTLE CONNECTOR ROD
115-140	Choke connector rod
116-13	PUMP INTAKE CHECK BALL
116-19	Switch ball
117-28	Pump connector link (2017S)
117-136	Vacumeter piston link
117-165	Pump connector link (2081S-SA)
118-69	Dust cover
120-159	METERING ROD JET (2081S-SA) (2)
120-165	METERING ROD JET (2017S) (2)
121-78	COIL HOUSING GASKET
121-149	Pump jet housing gasket (Sup. by 121-241)
121-150	BODY FLANGE GASKET
121-152	BOWL COVER GASKET
121-186	AIR HORN GASKET
121-241	PUMP JET HOUSING GASKET
136-37	Connector rod washer
146-207S	Bowl cover assembly (2017S)
146-227S	Bowl cover assembly (2081S) (Sup. by 146-230S)
146-230S	Bowl cover assembly (2081S-SA)
150-62	Choke piston pin
150A-10	PIN SPRING (2)
153-11	Contact spring shim (.018) (3)
153-12	Contact spring shim (.006) (2)
160-67S	Vacuum piston and pin assembly
160-90	Choke piston
170-353U	Unitized Package (consists of 1—107-25, 1—121-78, 1—121-186, 1—158-73, 1—170U-73S) (2081S)
170AJ-73S	Thermostatic coil and housing assembly (2081S) (Sup. by 170-353U)
170U-73S	Thermostatic coil and housing assembly (2017S-2081SA)
172-12	Terminal cap hold down clip
172-15	Cable clip (2017S)
172-22	THROTTLE CONNECTOR ROD RETAINER
172-27	Cable clip (2081S-SA)
181-87	Switch guide block
181-147S	Fast idle cam assembly
184-20S	Terminal cap assembly
186-20	Choke baffle plate
192-11U	Carter starter switch unit
195-60U	*Unitized Package (2081SA)

*Unitized package to correct loading condition in Canada.

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

CARBURETER

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BUICK "V8" ROADMASTER

MODEL 70

1953

(2082S can also be used)

WCFB Four-Bore Down-Draft Climatic® Control **Carbureter Nos. 996S-2053S**

CARBURETER SPECIFICATIONS

For Buick 8 Cylinder Engine: 4.00 Inch Bore, 3.20 Inch Stroke

Dimensions: Flange size, 1 1/8 inch Four bore—4 bolt type.
Primary venturi size, 11/32 inch I. D.
Main venturi size, 1-1/16 inch I. D.

Float Level: See adjustments.

Vents: Inside, (Vertical). Bowl chamber to top of air horn (2) size No. 44 (.086 inch) drill; (996S) 2 size No. 22 (.157 inch) drill; (2053S) 2 size No. 26 (.147 inch) drill.
Outside (horizontal). Bowl chamber to atmosphere (5) No. 42 (.0935 inch) drill. In dust cover, No. 36 (.1065 inch) drill. In flange, bore to atmosphere (4) No. 36 (.1065 inch) drill.

Gasoline Intake: Size No. 42 (.0935 inch) drill hole in needle seat.

Low Speed Jet Tube: Jet, size No. 69 (.0295 inch) drill. By pass, size (996S) .059 inch drill; (2053S) .057 inch drill.
Economizer, size (996S) No. 56 (.0465 inch) drill; (2053S) No. 57 (.043 inch) drill.
Idle bleed, size No. 44 (.086 inch) drill.
Anti percolating jet (idle well), size No. 70 (.028 inch) drill.

Idle Port: Upper port, slot type, primary, length .110 inch; width .030 inch. Secondary, length .103 inch; width .030 inch.

Idle Port Opening: Primary (996S) .074 to .080 inch: (2053S) .057 to .063 inch. Secondary (996S) .047 to .053 inch; (2053S) .052 to .058 inch above top edge of valve with valve tightly closed.

Lower Port: Primary (for idle adjustment screw), size No. 55 (.052 inch) drill.
Secondary (no idle adjustment screw), (996S) size No. 55 (.052 inch) drill. (2053S early prod.), size .045 inch diameter; (2053S late prod.), size No. 58 (.042 inch) drill.

Set Idle Adjustment Screw: 3/4 to 1 3/4 turns open. For richer mixture turn screw out. Do not idle engine below 450 r.p.m.

Main Nozzle: Installed permanently. **Do Not Remove.** Anti percolating jet primary side (996S) No. 65 (.035 inch), secondary side No. 70 (.028 inch) drill; (2053S) primary and secondary No. 70 (.028 inch) drill.

Metering Rod: Primary: (996S) Economy step .077 inch diameter. Middle step tapers to .059 inch diameter. Power step .046 inch diameter.
(2053S) Economy step .0715 inch diameter. Middle step tapers to .058 inch diameter. Power step .053 inch diameter. (These rods designed with stabilizing flats on economy step.)
Secondary: None.

Metering Rod Jet: Primary: size (996S) .0935 inch diameter; (2053S) .089 inch diameter (for metering rod).
Secondary: size .061 inch diameter (no metering rod).

Metering Rod Setting: See adjustments.

Accelerating Pump: Discharge jet (twin) primary side only, size No. 74 (.0225 inch) drill. Intake ball check seat, size .115 to .120 inch diameter. Discharge needle seat, size .070 inch diameter. Relief ball check, size No. 55 (.052 inch) drill. Relief passage (vent) to fuel chamber, size No. 42 (.0935 inch) drill.

Pump Adjustment: See adjustments.

Choke: Carter Climatic ® Control, set on index. Butterfly type offset choke valve, primary side only. Choke heat suction hole, restriction in piston housing, size No. 42 (.0935 inch) drill.

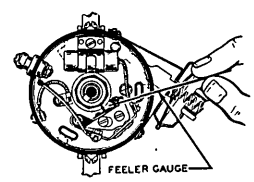
Vacuum Spark Port: 996S and (2053S early prod.), size .039 to .041 inch diameter. (2053S late production) size .080 to .082 inch diameter. Bottom of port 996S—.042 to .046 inch; 2053S early prod.—.028 to .032 inch; 2053S late prod.—.008 to .012 inch above top edge of valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

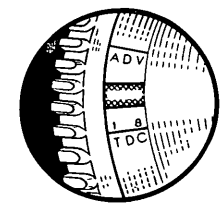
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



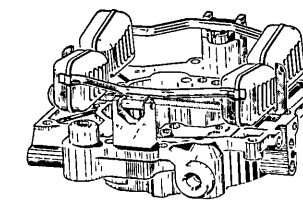
Spark Plug Gap .030"-.035"



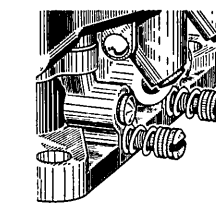
Breaker Point Setting .0125"-.0175"



Ignition Timing Breaker Points to Open: 5° B. T. D. C.



Float Setting
Primary 3/32 Inch
(Use Gauge T109-233)
Secondary 3/16 Inch
(Use Gauge T109-222)



Idle Adjustment Screw Setting 3/4 to 1 3/4 Turns Open

NOTE: These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

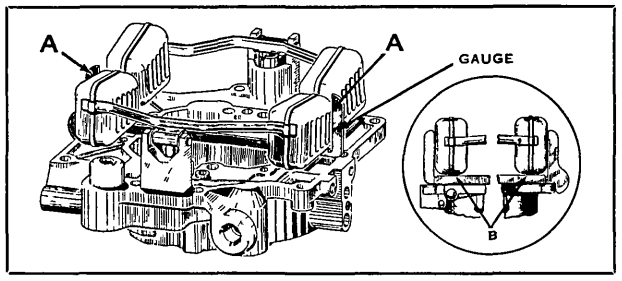


Figure 1
Float Adjustment

FLOAT ADJUSTMENT (Fig. 1):

Two separate float adjustments must be made—lateral and vertical

Lateral Adjustment: With bowl cover assembly inverted bowl cover gasket removed and float resting on seated needle, place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting Side of floats should just clear the vertical uprights of float gauge (A) Adjustment should be made by bending arms of floats

Vertical Adjustment: With float gauge in same position floats should just clear the horizontal portion of gauge Vertical distance (B) between top of float and machined surface of casting must be 3/32" (gauge T109-233) for primary floats; and 3/16" (gauge T109 222) for secondary floats Adjust by bending float arms

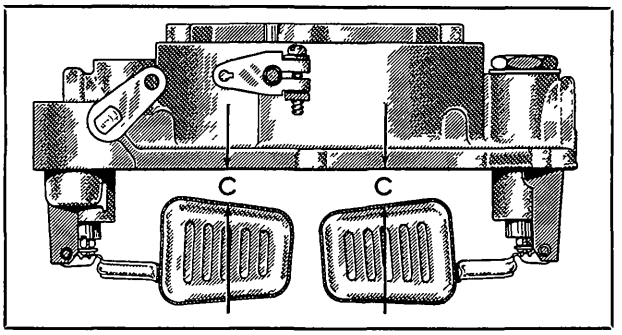


Figure 2
Float Drop Adjustment

FLOAT DROP ADJUSTMENT (Fig. 2):

With bowl cover held in upright position and measuring from center of floats, the distance (C) between top of floats and bowl cover should be 5/8" for primary floats and 11/16" for secondary floats Adjust by bending stop tabs on float bracket.

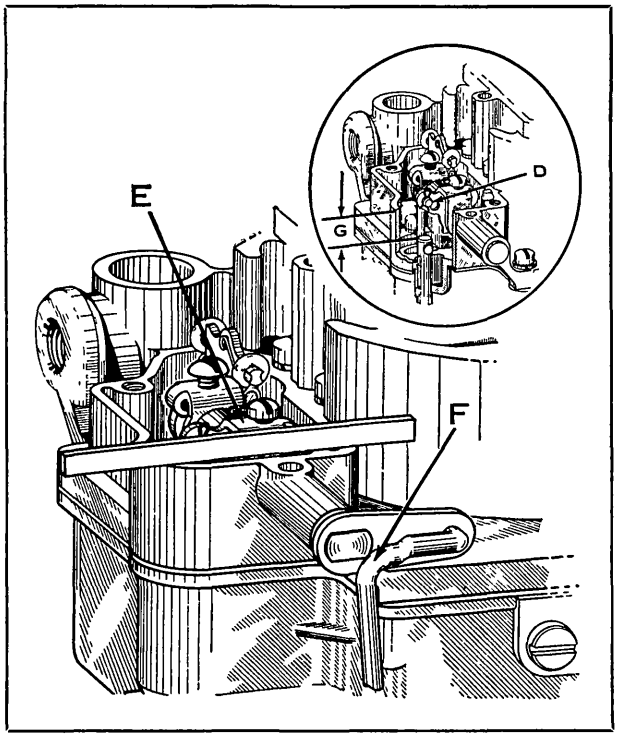


Figure 3
Pump Adjustment

PUMP ADJUSTMENT (Fig. 3):

Install pump connector link in outer hole (D) (long stroke) of pump arm, with ends extending toward countershaft arm Back out throttle lever set screw until throttle valves seat in bores of carbureter. Hold straight edge across top of dust cover boss at pump arm The flat on top of pump arm (E) should be parallel to straight edge Adjust by bending throttle connector rod at upper angle (F) (Use tool T109 213) OPTIONAL ADJUSTMENT With throttle valves seated in bores of carbureter, the distance from the top of the plunger shaft to the top of the dust cover boss should be 18/64" (G). Adjust as mentioned above

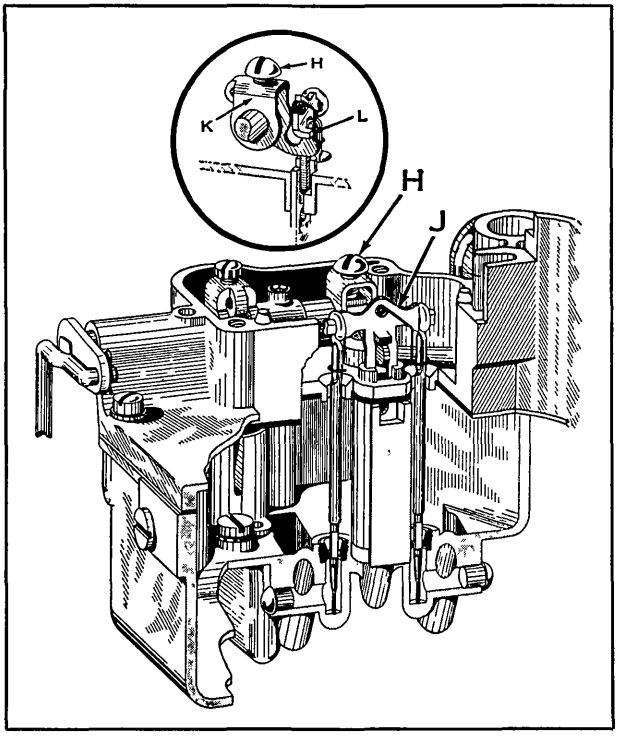


Figure 4
Metering Rod Adjustment

METERING ROD ADJUSTMENT (Fig. 4):

Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows: 1. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw (H) 2. With metering rods in place, press down on vacumeter link (J) until metering rods bottom in carbureter body casting. 3. Holding rods in downward position and throttle valves seated, revolve metering rod arm (K) until finger on arm contacts lip of vacumeter link (L). Hold in place and carefully tighten clamp screw (H).

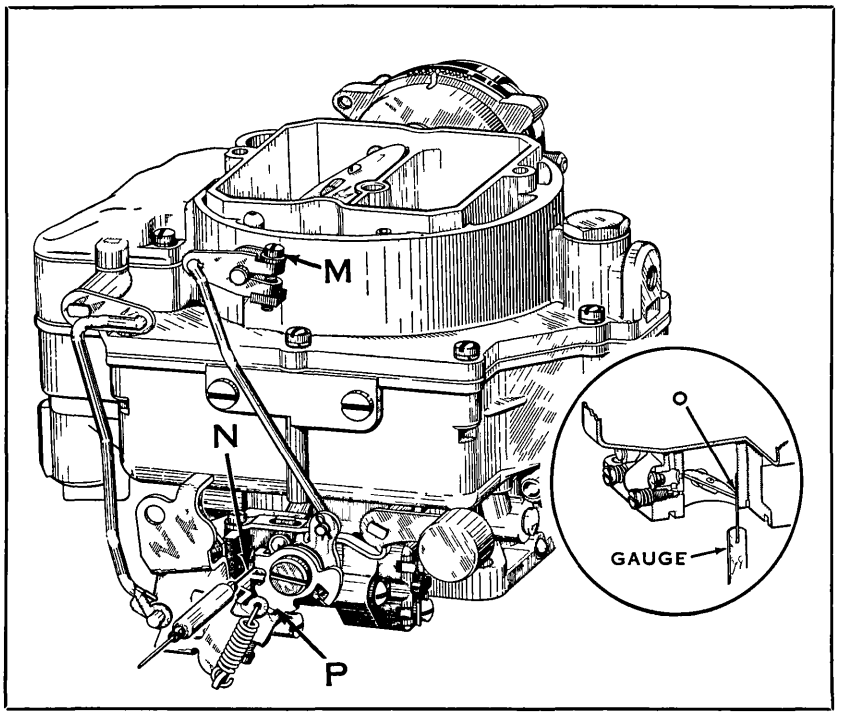


Figure 5
Fast Idle Adjustment

FAST IDLE ADJUSTMENT (Fig 5)

(a) Loosen choke lever clamp screw (M) on choke shaft Insert 020" feel er gauge (T109 29) (N) between lip of fast idle cam and boss of flange casting Hold choke valve tightly closed and take slack out of linkage by pressing lever towards closed position —hold in place and tighten clamp screw (M)

(b) With choke valve tightly closed tighten fast idle adjusting screw until there is 020" (gauge T109 29) open ing (O) between throttle valve and bore of carbureter (side opposite idle port) Be sure fast idle adjusting screw is on high step of cam (P) while mak ing this adjustment

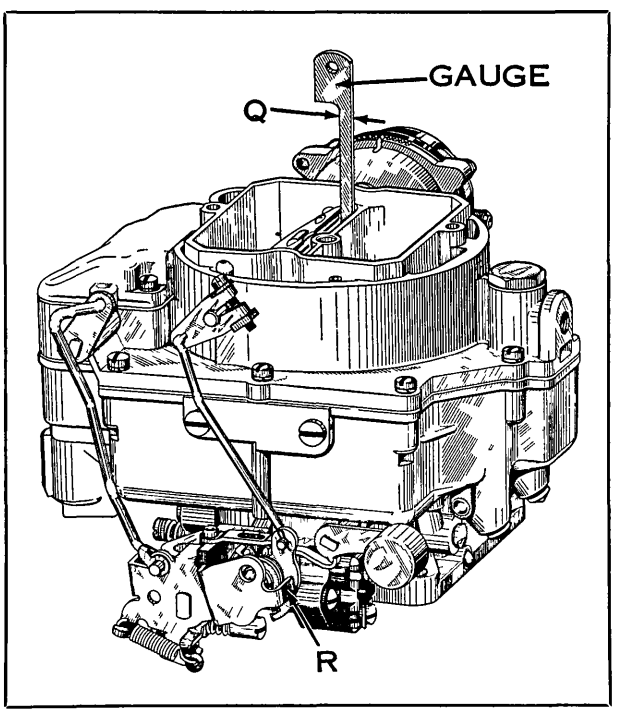


Figure 6
Unloader Adjustment

UNLOADER ADJUSTMENT (Fig 6)

With throttle wide open there should be 3/16" clearance (Q) between upper edge of choke valve and inner wall of air horn (gauge T109 28) Adjust by bending unloader lip (R) on throttle shaft lever (use bending tool T109 41)

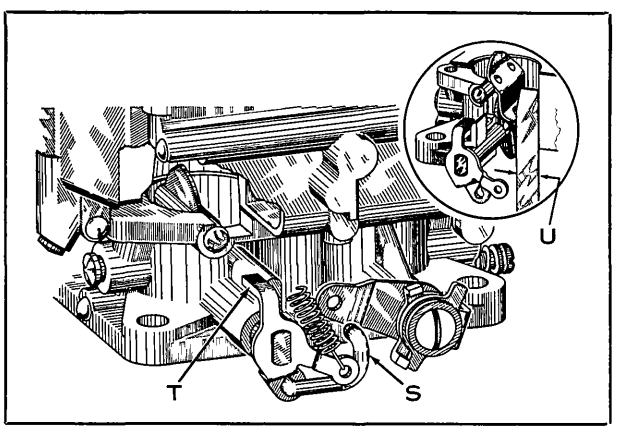


Figure 7
Auxiliary Throttle Valve Adjustment

AUXILIARY THROTTLE VALVE ADJUSTMENT (Fig 7)

(a) Disconnect secondary throttle operating rod (S)

(b) Adjust stop lug (T) on secondary throttle lever (use bending tool T109 214) until there is 27/64" clearance (U) (gauge T109 242) between lower edge of auxiliary throttle valve and bore when lug (T) is against stop on flange

Part No.	PART NAME	
30A-58	Idle adjustment screw	(2)
38A-83	Countershaft bushing	
39-10	Primary throttle valve attaching screw	(4)
39-11	Choke valve attaching screw	(2)
47-14	Welsh plug	
48-185	Pump jet housing	
49-182	Switch plunger	
53A-332	Lockout arm	
53A-333S	Pump operating lever and countershaft assembly (Sup by 53A 389S)	
53A-353	Primary operating lever	
53A-389S	Pump operating lever and countershaft assembly	
61-84	Idle adjustment screw	(2)
61-171	PUMP SPRING (LOWER)	
61-237	Fast idle cam spring	
61-238	Throttle flex spring	
61-243S	Contact spring and washer assembly	
61-246	VACUUM PISTON SPRING	
61-291	Throttle lever adjusting screw spring	
61-382	METERING ROD SPRING	
61-388	Switch return spring	
61-450	SECONDARY THROTTLE RETURN SPRING	
61-467	Idle adjustment screw spring (996S) (Sup by 61-84)	(2)
63-57	INTAKE BALL CHECK RETAINER	
63-58	Coil housing retainer	(3)
64-139S	PUMP PLUNGER, ROD SPRING AND RETAINER ASSEMBLY	
75-877	METERING ROD—STANDARD (996S)	(2)
75-903	*METERING ROD—STANDARD (2053S)	(2)
75-926	Metering rod—1 size lean (996S)	(2)
75-928U	Metering rod and jet unit—2 sizes lean (996S)	
75-929	Metering rod—1 size lean (2053S)	(2)
75-931U	Metering rod and jet unit—2 sizes lean (2053S)	
86-12	Flange stud lock washer	(4)
86-37	Terminal lock washer	(2)
101-10	Pump arm clamp screw	
101-19	Choke lever clamp screw (996S) (Sup by 101-354S)	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	
101-84	Fast idle adjustment screw	
101-109	Terminal screw	(2)
101-126	Auxiliary throttle valve attaching screw	(4)
101-136	Coil housing attaching screw	(3)
101-140	Fast idle screw	
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly (2053S)	
101-160S	Air horn attaching screw and washer assembly (996S (8)—(2053S (7)	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-278	Pump jet housing attaching screw	
101-284	Piston housing attaching screw	(2)
101-288	Throttle lever adjustment screw (Sup by 101 339)	
101-307S	Bracket attaching screw and washer assembly	
101-325S	Switch attaching screw and washer assembly	(2)
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-339	Throttle lever adjusting screw	
101-354S	Choke lever clamp screw assembly	
101-363	Piston housing attaching screw	
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
115-182	Choke connector rod	
115-183	THROTTLE CONNECTOR ROD	
115-204	Throttle operating rod	
116-13	PUMP INTAKE CHECK BALL	
116-19	Switch ball	
117-28	Pump connector link	
117-155	Vacumeter piston link	
118-93	Dust cover	
120-159	PRIMARY METERING ROD JET (2053S)	(2)
120-166	PRIMARY METERING ROD JET (996S)	(2)
120-186	SECONDARY METERING JET	(2)
120-192	*Primary metering rod jet (2053S) (Sup by 120-159)	(2)
121-78	COIL HOUSING GASKET	
121-149	Pump jet housing gasket (996S) (Sup by 121-241)	
121-208	DUST COVER GASKET	
121-210	Body flange gasket (Sup by 121-242)	
121-232	AIR HORN GASKET	
121-241	PUMP JET HOUSING GASKET	
121-242	BODY FLANGE GASKET	
121-243	PISTON HOUSING GASKET (2053S)	
122-75S	RELIEF VALVE PLUG ASSEMBLY	
136-38	Throttle shaft washer	
150 62	Choke piston pin	
150-178	Auxiliary valve lockout arm pin	
150A-10	PIN SPRING	(4)
153-11	Contact spring shim (018)	
153-12	Contact spring shim (006)	
160-91	Choke piston	
160-110S	Vacuum piston and pin assembly	
170-258S	Piston housing and plug assembly	
170AC238S	Thermostatic coil and housing assembly	
172-15	Cable clip	
172 22	THROTTLE CONNECTOR ROD RETAINER	
180-60	Lever return spring bracket	
181-87	Switch guide block	
181-147S	Fast idle cam assembly	
184-64S	Terminal cap assembly	
186-34	Baffle plate	
192-21U	Carter starter switch unit	

*Early production 2053S carbureters used 75 903 metering rod (identified by one trade mark) and 120 192 For service use 75 903 (identified by two trade marks) and 120 159

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used

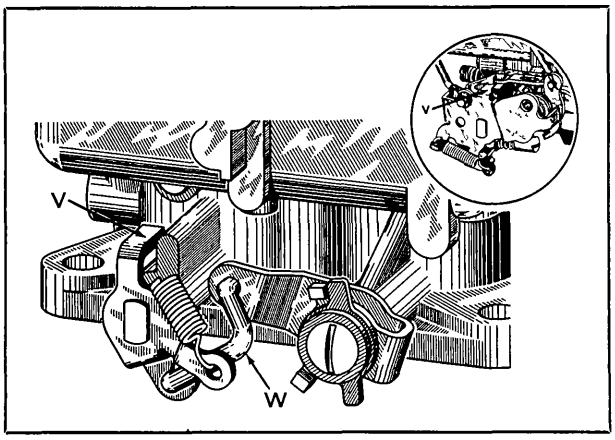


Figure 8
Secondary Throttle Lever Adjustment

SECONDARY THROTTLE LEVER ADJUSTMENT (Fig. 8):
The stop lug (V) on both primary and secondary throttle levers should contact boss on flange at the same time. To adjust bend secondary throttle operating rod at angle (W) (use bending tool T109-213). NOTE: Secondary throttle valves will be a few degrees from wide open position.

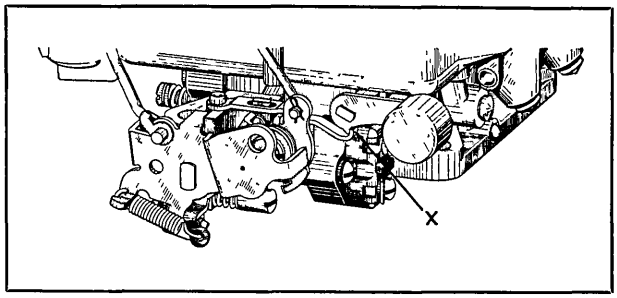


Figure 9
Auxiliary Throttle Lock-Out Adjustment

AUXILIARY THROTTLE LOCK-OUT ADJUSTMENT (Fig. 9):
This adjustment should be made after completing fast idle adjustment. 1. With choke valve closed, edge of hook (X) on lock-out arm should contact auxiliary throttle lever, making maximum contact of locking step on lever. 2. Open choke valve. Auxiliary throttle valve should become unlocked a few degrees before the choke reaches wide open position. Adjust by bending lock-out arm.

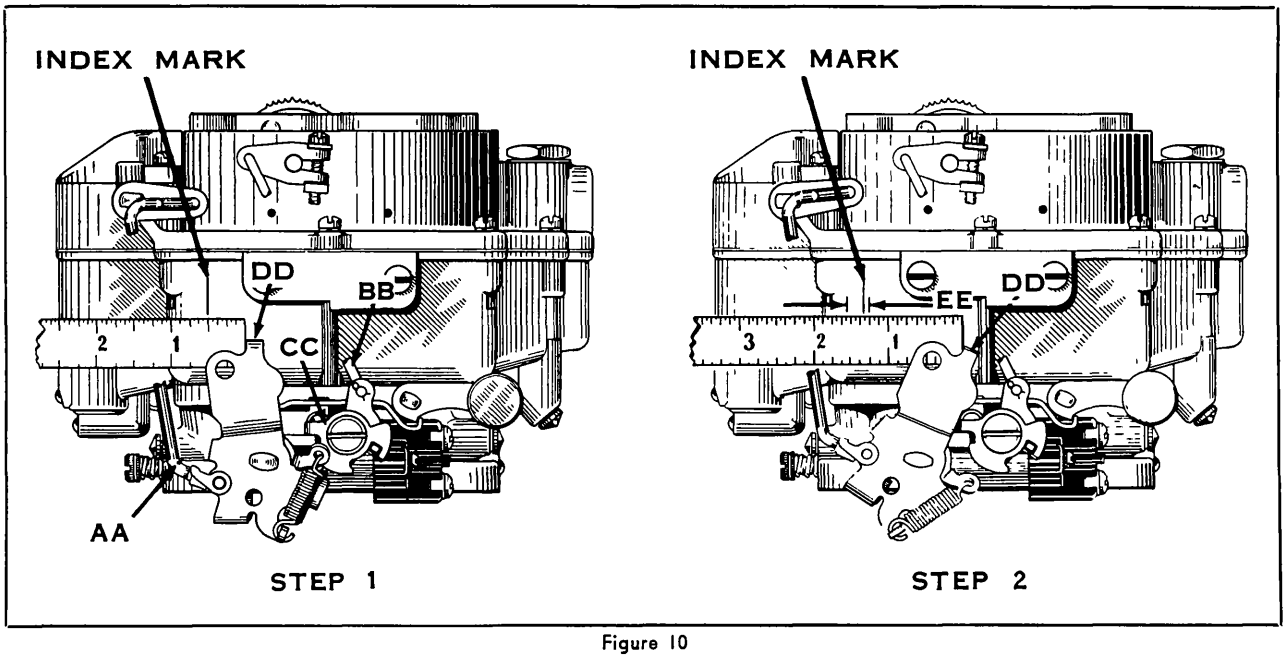
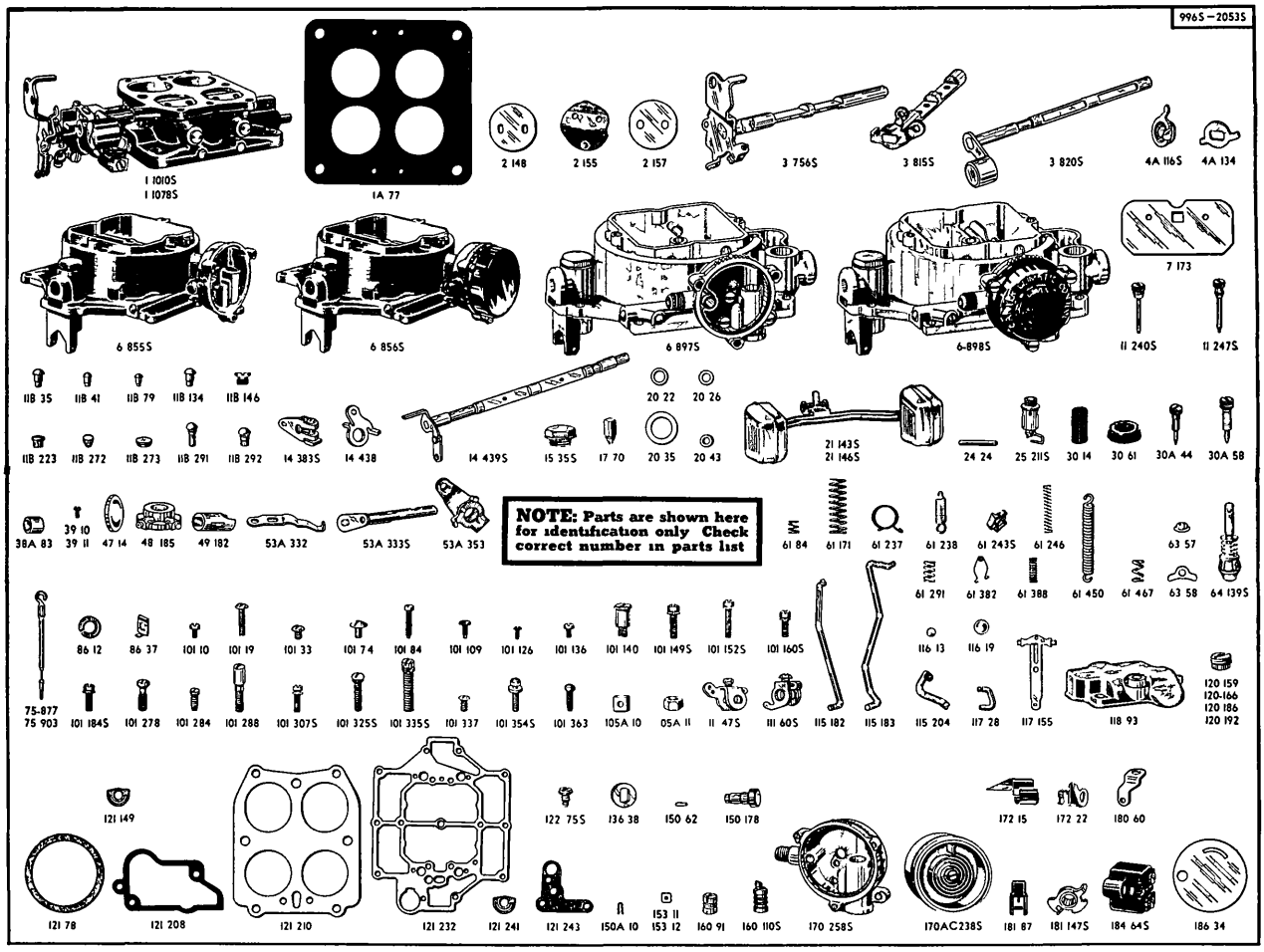


Figure 10
Checking and Adjusting Starter Switch

CHECKING AND ADJUSTING STARTER SWITCH (Fig. 10):

(CAUTION): If carbureter is installed on engine, make certain that the transmission is in neutral and parking brake is applied. 1. If carbureter is installed on Dynaflow car, make certain that throttle linkage and dash pot are correctly adjusted. If carbureter is removed from engine, connect a 6-volt battery and test lamp across switch terminal, so that lamp will light when switch makes contact. 2. Back off throttle stop screw, remove throttle connector rod (AA) and choke connector rod (BB), rotate fast idle cam (CC) to slow idle position, and fully close the throttle valves. 3. While holding throttle valves fully closed, place a scale against choke unloader arm of throttle lever and make an index mark on carbureter body at the 1/2" division of scale. 4. With ignition switch turned on (or test lamp connected) hold end of scale against unloader arm (DD) and slowly open throttle until the drive pinion just engages flywheel ring gear (or test lamp lights). 5. If switch is correctly timed, the scale will then read between 1 1/4" and 1-9/16" at mark on carbureter body (EE) (3/4" to 1-1/16" travel of arm). 6. If necessary, make switch adjustment by reducing or increasing the total thickness of the brass shims. If switch timing was found to be too early, reduce the total thickness of the shims. If timing was too late, increase total thickness of shims. Two sizes shims are available: 153-11, .018"; 153-12, .006". After adjustment is completed, set engine idle at specified R.P.M.



BUICK "V8"—1953—CARBURETERS Nos. 996S-2053S

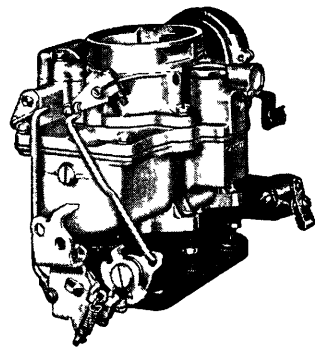
WHEN SERVICING, USE GASKET ASSORTMENT No 234A (BOTH), REPAIR PACKAGE No 1734 (996S) No 1744 (2053S)

PART NAMES IN CAPITAL LETTERS LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-1010S	Body flange and switch assembly (996S)	
1-1078S	Body flange and switch assembly (2053S)	
1A-77	FLANGE GASKET	
2-148	Primary throttle valve	(2)
2-155	Auxiliary throttle valve	(2)
2-157	Secondary throttle valve	(2)
3-756S	Primary throttle shaft and lever assembly	
3-815S	Secondary throttle shaft and lever assembly	
3 820S	Auxiliary throttle shaft lever and weight assembly	
4A-116S	Throttle shaft dog and collar assembly	
4A-134	Primary throttle shaft dog	
6 855S	Air horn assembly (996S)	
6-856S	Air horn and Climatic® control assembly (996S)	
6-897S	Air horn assembly (2053S)	
6-898S	Air horn and Climatic® control assembly (2053S)	
7-173	Choke valve	
11-240S	LOW SPEED JET ASSEMBLY (996S)	(4)
11-247S	LOW SPEED JET ASSEMBLY (2053S)	(4)
11B-35	Rivet plug	(7)
11B-41	Rivet plug	(2)
11B-79	Rivet plug	(5)
11B-134	Rivet plug	

Part No	PART NAME	
11B-146	Level sight plug	(2)
11B-223	Nozzle passage and idle port rivet plug	(8)
11B-272	Rivet plug	
11B-273	Secondary throttle shaft rivet plug	
11B-291	Rivet plug (2053S)	(2)
11B-292	Rivet plug (2053S)	
14-383S	Choke lever and screw assembly	
14-438	Cam trip lever	
14-439S	Choke piston lever link and shaft assembly	
15-35S	Strainer nut assembly	
17-70	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	(2)
20-26	Relief valve gasket	
20-35	BOWL STRAINER GASKET	
20-43	PISTON HOUSING GASKET (996S)	
21-143S	Primary float and lever assembly	
21-146S	Secondary float and lever assembly	
24-24	Float lever pin	(2)
25-211S	NEEDLE AND SEAT ASSEMBLY	(2)
30-14	BOWL COVER STRAINER	
30-61	SWITCH STRAINER	
30A-44	Idle adjustment screw (996S) (Sup by 30A 58)	(2)

SPECIAL—Model "40"
SUPER—Model "50"
725S-SA—1950 and 1951
(Early Production)
882S—1951 (Late Production)
882SA—"40" "50", 1952;
"40", 1953
ROADMASTER—Model "70"
726S-SA—1950 and 1951
(Early Production)
883S—1951 (Late Production)



BUICK MODELS
"40" 1950-1953
"50" 1950-1952
"70" 1950-1951

882SA can be used in place of 725S-SA-882S
883S can be used in place of 726S-SA

Casting No. 624 on Face of Flange (725S-SA-882S-882SA)
Casting No. 626 on Face of Flange (726S-SA-883S)

WCD DUAL DOWN-DRAFT CLIMATIC® CONTROL CARBURETERS—
Nos. 725S-725SA-726S-726SA-882S-882SA-883S

CARBURETER SPECIFICATIONS

(725S-SA) For Buick 8 Cylinder Engine: 3-3/32 Inch Bore, 4⅛ Inch Stroke—Model "40" (1950)
(725S-SA) For Buick 8 Cylinder Engine: 3-3/16 Inch Bore, 4⅛ Inch Stroke—Model "40" (1951)
(725S-SA) For Buick 8 Cylinder Engine: 3-3/16 Inch Bore, 4⅛ Inch Stroke—Model "50" (1950-51)
(726S-SA) For Buick 8 Cylinder Engine: 3-7/16 Inch Bore, 4-5/16 Inch Stroke—Model "70" (1950-51)
(882S-882SA) For Buick 8 Cylinder Engine: 3-3/16 Inch Bore, 4⅛ Inch Stroke—Model "40"-"50" (1951-1952); "40" (1953)
(883S) For Buick 8 Cylinder Engine: 3-7/16 Inch Bore, 4-5/16 Inch Stroke—Model "70" (1951)

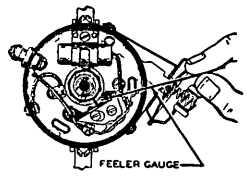
Dimensions: Flange size, 1¼ inch S. A. E. dual, 4 bolt type
Primary venturi, 11/32 inch (8.73 mm) I. D.
Secondary venturi, 21/32 inch (16.67 mm) I. D.
(725S-SA-882S-882SA) Main venturi, 1-1/16 inch (26.99 mm) I. D.
(726S-SA-883S) Main venturi, 1-3/16 inch (30.16 mm) I. D.
Float Level: See illustration.
Float Drop: See adjustments, page 2.
Vents: Outside, in air horn, No. 12 (4.80 mm) drill—2 holes Inside none.
Gasoline Intake: (725S-SA-882S-882SA) Size No. 42 (2.38 mm), (726S-SA-883S) Size No. 38 (2.58 mm) drill hole in needle seat.
Low Speed Jet Tube: Jet size: (725S-SA) No. 65 (.89 mm) drill, (726S-SA) No. 68 (.79 mm) drill; (882S-882SA) No. 62 (.97 mm) drill; (883S) No. 64 (.91 mm) drill.
By-pass size: (725S-SA-726S-SA) 1.35 mm (.0531") drill; (882S-882SA-883S 1.50 mm (.059") drill.
Economizer size: (725S-SA) No. 65 (.89 mm) drill; (726S-SA) No 60 (1.02 mm) drill; (882S-882SA) No. 54 (1.40 mm) drill, (883S) 1.25 mm (.0492") drill.
Idle bleed size: (725S-SA-726S-SA) 1.35 mm (.0531") drill; (882S-882SA) No. 38 (2.58 mm) drill; (883S) No. 47 (1.99 mm) drill.
Idle Ports: (725S-SA-882S-882SA) Upper port, slot type, length, 103 inch (2.62 mm), (726S-SA-883S) .115 inch (2.92 mm); width, .030 inch (.76 mm).
Idle Port Opening: (725S-SA) .062-.068 inch (1.58-1.73 mm), (726S-SA-883S) .072 to .078 inch (1.83 to 1.98 mm), (882S-882SA) .052 to .058 inch (1.32 to 1.47 mm) above upper edge of valve with valve tightly closed.
Lower Port (For Idle Adjustment Screw): Size .0615 to .0655 inch (1 56 to 1 66 mm) diameter.
Set Idle Adjustment Screw: See illustration.
Vacuum Spark Port: .039 to .041 inch (.99 to 1.04 mm) diameter. (725S-SA-882S-882SA) Bottom of port .046 to .050 inch (1.17 to 1.27 mm) above valve, (726S-SA-883S) .060 to .064 inch (1.52 to 1.62 mm) above valve.
Main Nozzle: Installed permanently. **DO NOT REMOVE.**
Metering Rod: (725S-SA-882S-882SA) Economy step, .06425 inch (1.63 mm) diameter. Middle step tapers to .059 inch (1.50 mm) diameter Power step 049 inch (1 25 mm) diameter.
(726S-SA-883S) Economy step, .061 inch (1 55 mm) diameter. Middle step tapers to 054 inch (1.37 mm) diameter., Power step 040 inch (1.02 mm) diameter.
(These rods designed with idle stabilizing flat on economy step)
Metering Rod Jet: .082 inch (2.08 mm) diameter.
Metering Rod Setting: See adjustments, page 2.
Accelerating Pump: Adjustable stroke.
Discharge jet (twin) size, No. 74 (.57 mm) drill.
Intake ball check size, No. 32 (2.95 mm) drill
Discharge (needle seat) size, No 50 (1.78 mm) drill.
Relief ball check size, No. 55 (1.32 mm) drill.
Pump Adjustment: See adjustments, page 2
Choke: Carter Climatic ® Control, set one point rich. Butterfly type, offset valve. Choke heat suction hole, in bowl cover, size No. 42 (2.38 mm) drill.

Motor Tune-Up—Be Accurate!

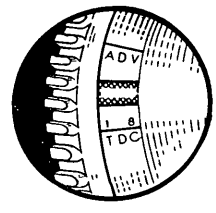
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



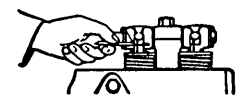
Spark Plug
Gap
.025"



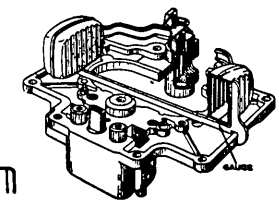
Breaker Point
Setting
.015"



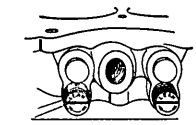
Ignition Timing
Breaker Points to Open
"40" & "50" (1950) 4° to 5° B.T.D.C.
"40" & "50" (1951-52) "40" (1953)
4° B.T.D.C.
("70") 6° B.T.D.C.



Valve Setting
("40" & "50") Hot
Int. & Exh. .015"
("70") None
Hydraulic



Float Setting
Both sides at top center
5/32"
(Use Gauge T109-196)
Fuel level to be at bottom
of fuel level sight hole



Idle Adjustment
Screw Setting
(725S-SA)
⅞ to 1⅜ Turns Open
(726S-SA)
¾ to 1¼ Turns Open
(882S-882SA)
1¼ to 1¾ Turns Open
(883S)
1 to 1½ Turns Open
Do not idle engine
below 450 r.p.m.

NOTE: Cars equipped with Dynaflow Transmission have hydraulic valve lifters—No adjustment.

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CARBURETER
TRADE MARK REG. U. S. PAT. OFF.
MARCA REGISTRADA

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT:

Three separate float adjustments must be made—lateral, vertical and float drop.

Lateral Adjustment: With bowl cover assembly inverted, bowl cover gasket removed and float lip resting on seated needle, place float gauge T109-196 directly under float with notched portions of gauge fitted over edges of casting. Sides of floats should barely touch the vertical uprights of float gauge. Adjustment should be made by bending arms of floats.

Vertical Adjustments: With float gauge in same position, floats should just clear the horizontal portion of gauge. (Vertical distance between top of float and machined surface of casting must be 5/32"). Adjust by bending float arms. Remove float, install bowl cover gasket and then reinstall float.

PUMP ADJUSTMENT: (Fig. 1)

The total distance the plunger head (not shaft) moves from closed to wide open throttle position controls the amount of fuel discharged. Correct pump plunger travel is important and should be checked each time the carbureter is disassembled or when leaner than standard metering rods are installed Procedure is as follows:

Install pump connector link in lower hole (short stroke) of pump arm (A), with ends extending away from countershaft arm. Back out **throttle lever set screw** until throttle valves seat in bores of carbureter. Be sure fast idle adjusting screw does not hold throttle open. Place universal pump travel gauge T109-117S, inverted on edge of dust cover boss of bowl cover Turn knurled nut of gauge until finger (B) just touches upper end of plunger shaft. Number indicated on gauge should be "33". Hold the gauge vertical to insure correct reading Adjust by bending the throttle connector rod at upper angle (C). Optional Adjustment: With throttle valves seated in bores of carbureter, the distance from the top of the plunger shaft to the top of the dust cover boss should be 20/64 inches Adjust as mentioned above.

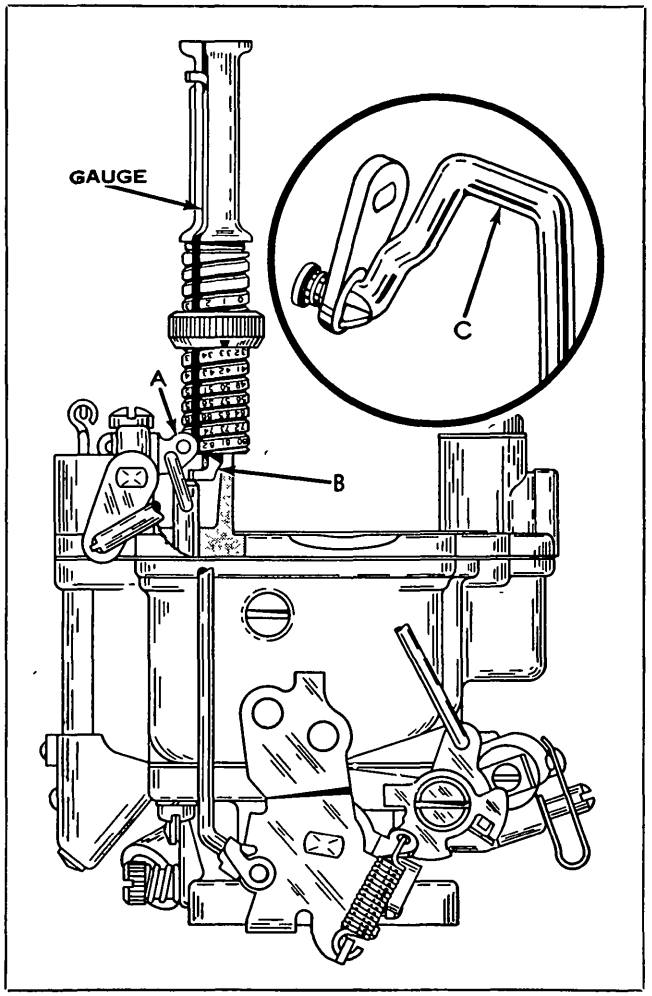


Figure 1

METERING ROD ADJUSTMENT: (Fig. 2)

Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows:

1. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw (D).
2. With metering rods in place, press down on vacumeter link (E) until metering rods bottom in carbureter body casting (F).
3. Holding rods in downward position and throttle valves seated revolve metering rod arm (G) until finger on arm contacts lip (H) of vacumeter link. Hold in place and carefully tighten clamp screw (D).

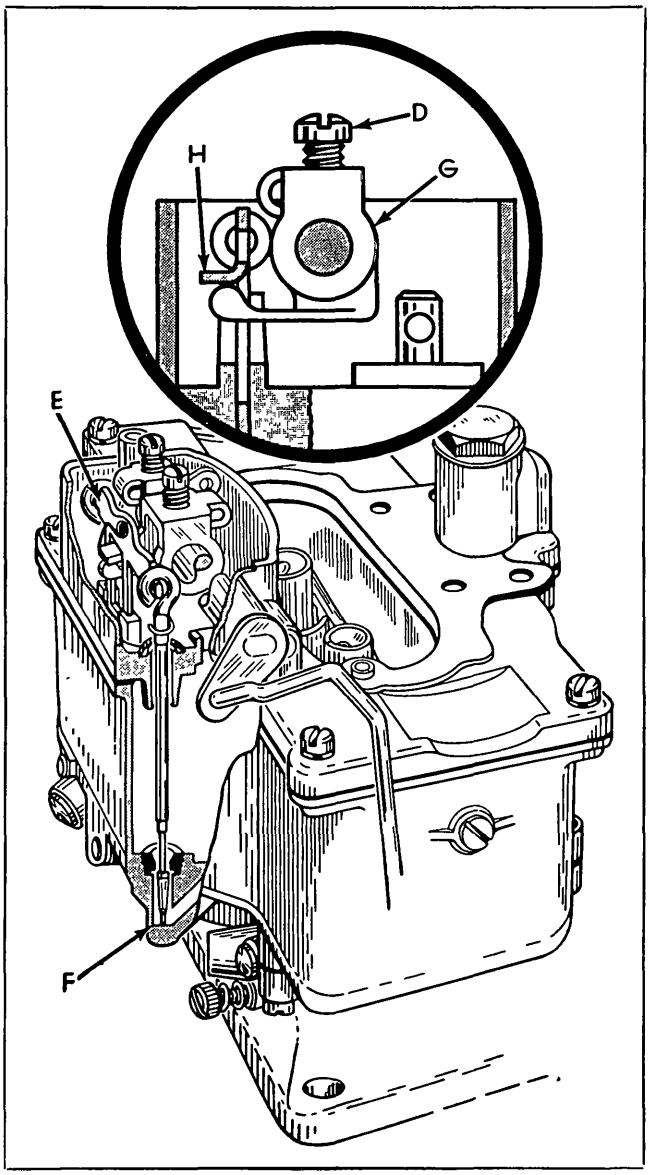


Figure 2

FAST IDLE ADJUSTMENT (Fig 3)

A. Loosen choke lever clamp screw (J) on choke shaft Insert 020" feeler gauge T109-29 between lip of fast idle cam and boss of flange casting (K) Hold choke valve tightly closed and take slack out of linkage by pressing choke lever (L) towards closed position—hold in place and tighten clamp screw (J) B. With choke valve tightly closed tighten fast idle adjusting screw (M) until there is 015" opening (N) (725S-SA 883S) 018" (726S SA) (use gauge T109 44) 012" (882S-882SA) (use gauge T109 200) between throttle valve and bore of carbureter (side opposite idle port) Be sure fast idle adjust ng screw is on high step of cam (P) while making this adjustment

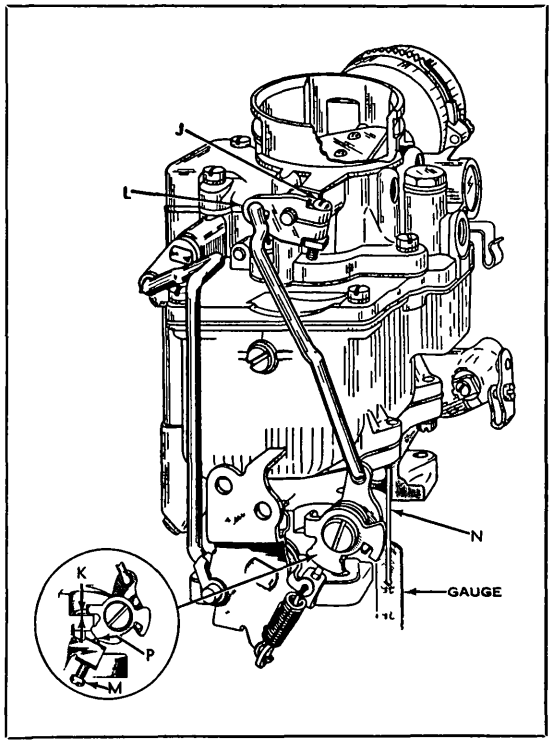


Figure 3

STARTER SWITCH (Fig 5)

The Carter Car Starter is incorporated as an integral part of the carbureter A steel ball (1) rests in a milled groove in the throttle shaft When the throttle is opened with the engine stopped the ball is forced against the plunger (2) which moves bakelite guide (3) and switch contactor spring assembly (5) (shaped like the letter W) upward until it makes an electrical contact between two brass inserts molded in the bakelite terminal cap (7) This is the switch in the solenoid circuit which operates the cranking motor

When the engine starts, the manifold vacuum acts on the steel ball and as soon as the foot throttle is released the ball is forced upward and away from the shaft spring (6) pushes the contact spring downward, thus breaking the circuit The ball is forced upward to its seat in the casting and remains in the upper position as long as the engine is in operation Any additional operation of the throttle does not cause switch to again make contact until the engine is stopped which will allow the ball to again drop to its starting position

The W shaped contactor spring assembly (5) rests on two or more square brass shims (4) These are very important because they determine the degree of throttle opening at which the switch contact is made Contact should be made when throttle valve is opened between 30° and 45° from fully closed position If not enough of these shims are in place contact will not be made soon enough If there are too many shims used the switch will make contact too soon (before 30°) and in that case there is danger that the switch circuit may be closed during fast idle operation Qualification of the switch must not require less than one 153 11 (4) (018" shim) nor more than three 153 11 (4) and two 153 12 (4) (006" shims)

The W shaped contactor spring assembly (5) consists of the W spring and a round washer with a square hole Do not confuse with shims CAUTION THE CONTACTOR SPRING ASSEMBLY AND CYLINDRICAL SPRING (6) MUST NEVER BE STRETCHED OR ALTERED IN ANY WAY AS OPERATION OF THE SWITCH WILL BE AFFECTED

To remove the throttle shaft from the carbureter it is necessary to first remove the starting switch complete Never oil or grease any switch part as it will collect dust and eventually stick

UNLOADER ADJUSTMENT (Fig 4)

With throttle wide open there should be 3/16" clearance (R) between upper edge of choke valve and inner wall of air horn (gauge T109 28) Adjust by bending unloader lip (S) on throttle shaft lever (use bending tool T109 41)

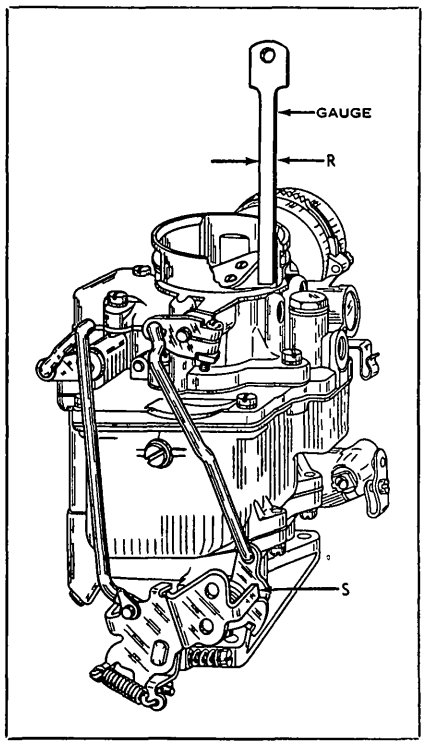


Figure 4

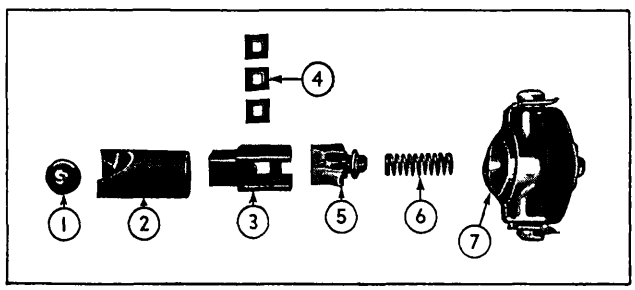


Figure 5

BOWL VENT CHANGES — 725S AND 726S CARBURETERS

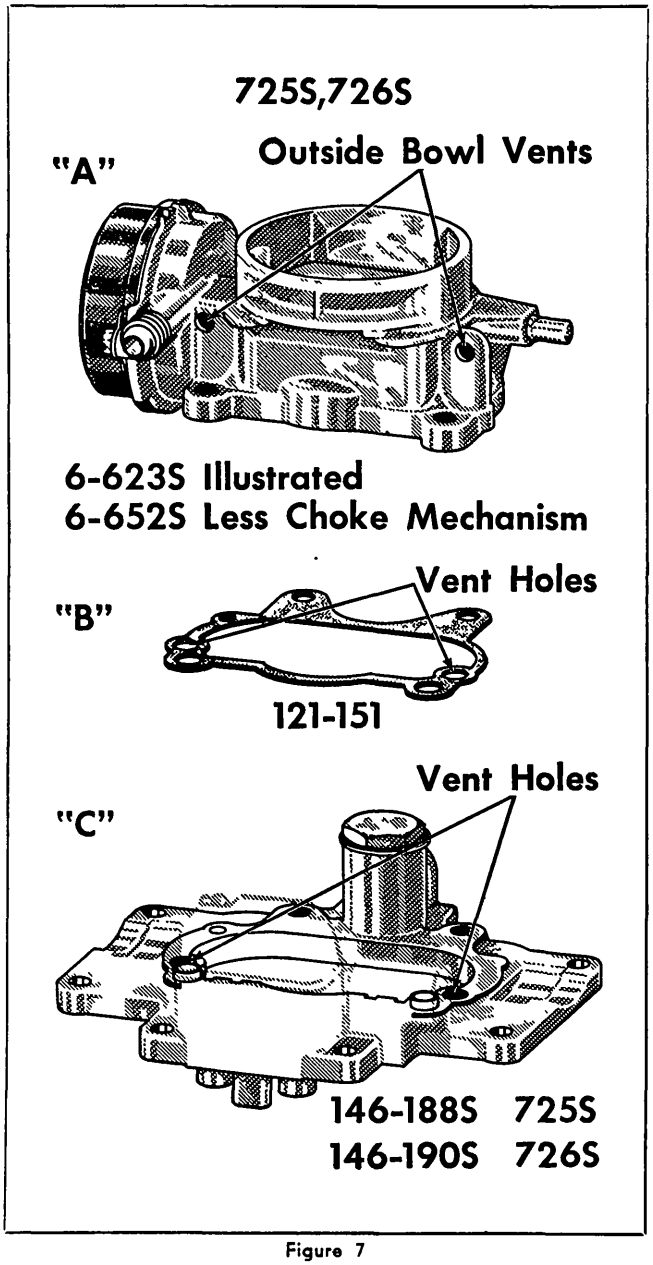


Figure 7

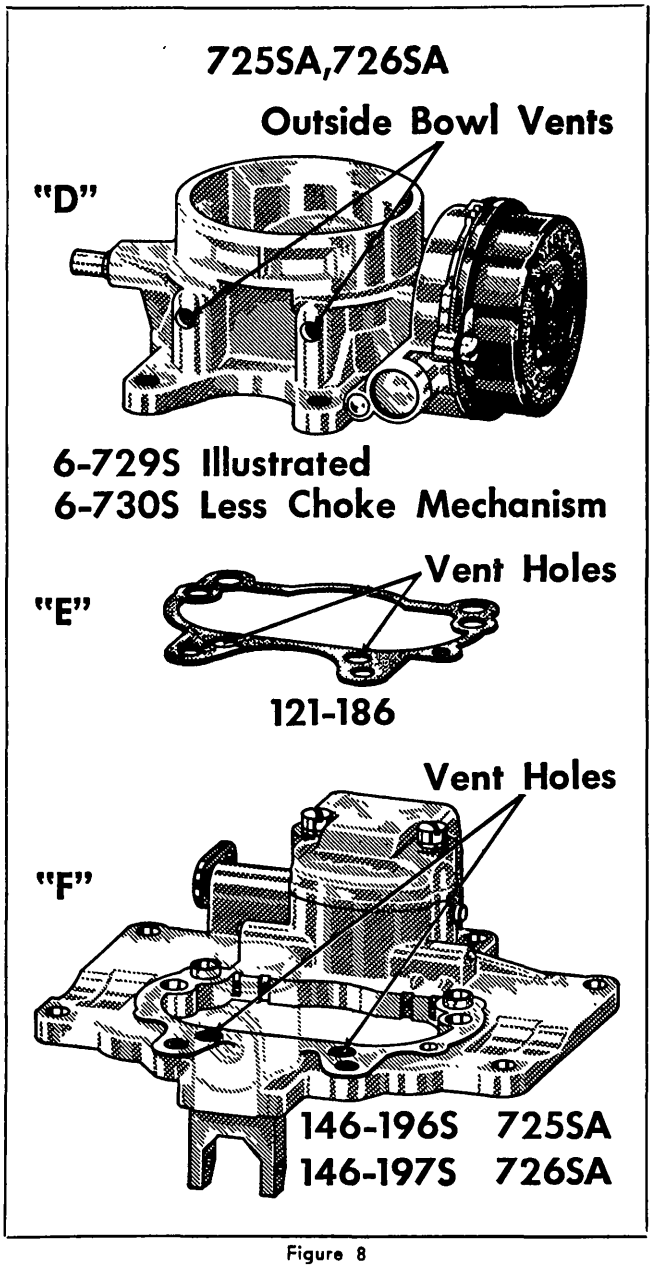


Figure 8

725S and 726S have outside bowl vents (A) (Figure 7) located in the air horn **on the side opposite the fuel inlet** of the carbureter. When the carbureters were changed to 725SA and 726SA the outside bowl vents (D) (Figure 8) were located **on the gasoline inlet side** of the carbureter.

It is important that the correct air horn, air horn gasket and bowl cover combinations be used so that the fuel bowl is vented to atmosphere, otherwise a poor performance complaint at speeds above 10 MPH will result.

The new style air horn (D) (Figure 8), air horn gasket (E) and bowl cover (F) supersede the older types (A, B and C). When installing air horn assembly "D" on 725S or 726S carbureters, two (2) 1/4 inch vent holes are to be drilled in the bowl cover, using the new gasket 121-186 (E) as a template.

The early type air horn (A), air horn gasket (B) and bowl cover (C) are satisfactory for use on 725S and 726S carbureters.

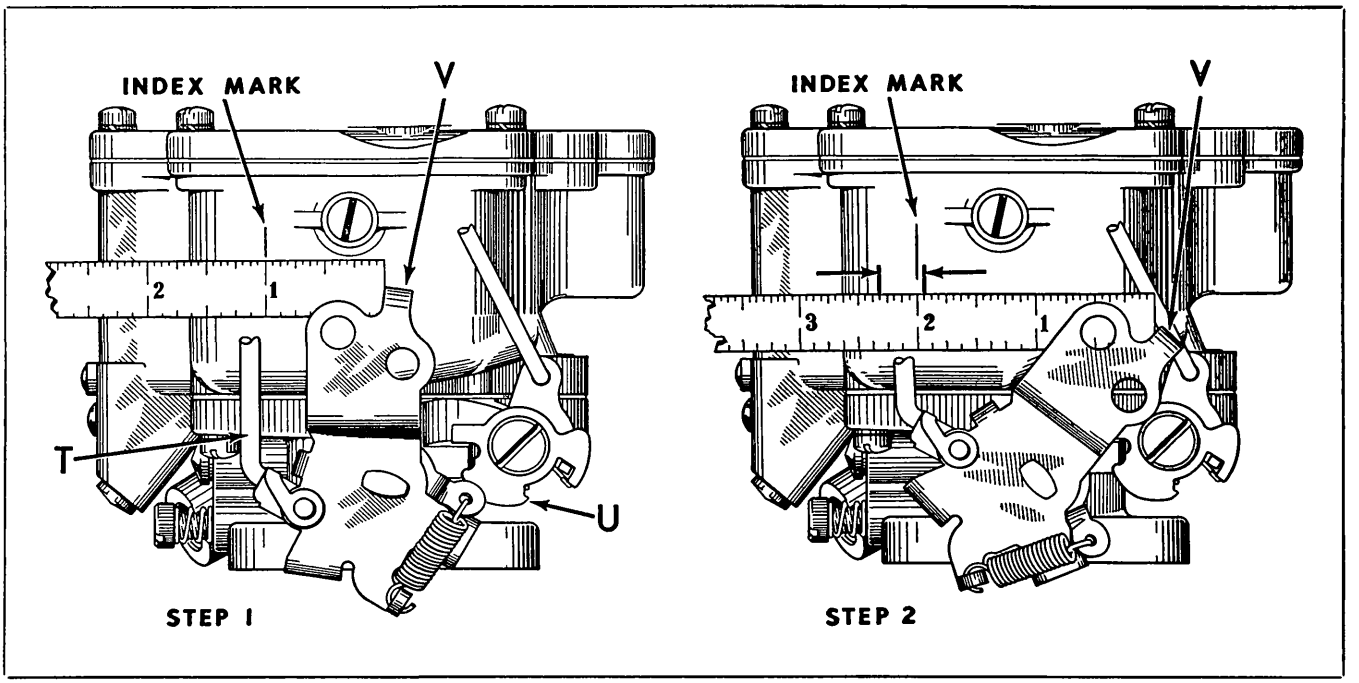


Figure 6

CHECKING AND ADJUSTING STARTER SWITCH (Fig 6)

CAUTION: If carbureter is installed on engine make certain that the transmission is in neutral and parking brake is applied

1 If carbureter is installed on Dynaflow car make certain that throttle linkage and dash pot are correctly adjusted (See Buick Shop Manual)

If carbureter is removed from engine connect a 6 volt battery and test lamp across switch terminal, so that lamp will light when switch makes contact

2 Back off **throttle stop screw,** remove throttle connector rod (T) rotate fast idle cam (U) to slow idle position if necessary and fully close the throttle valves

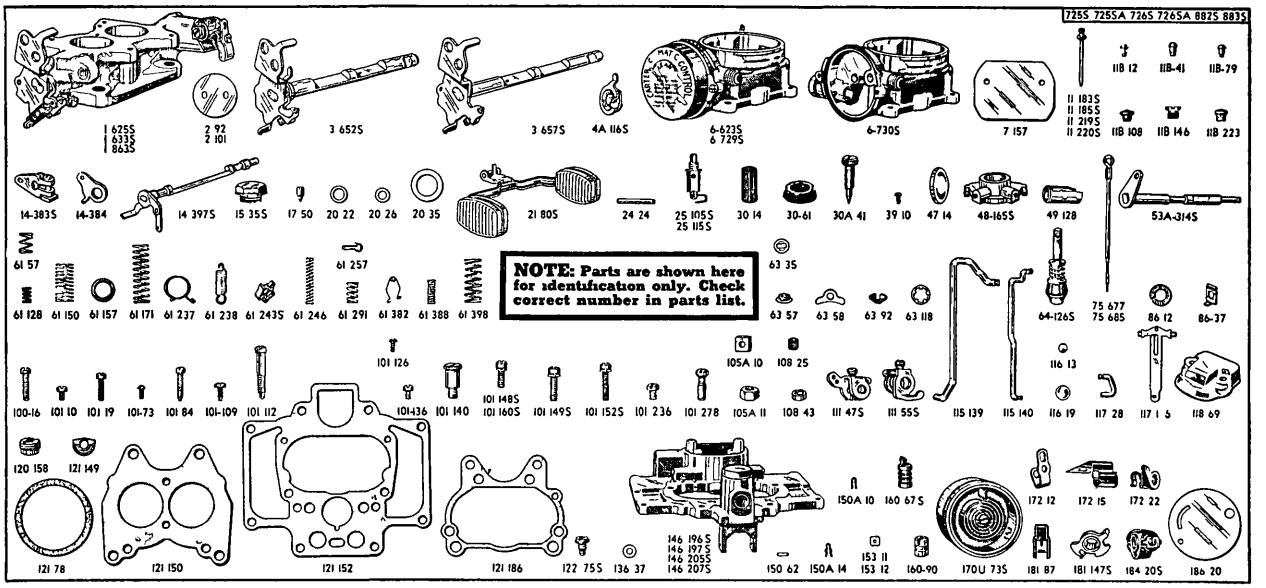
3 While holding throttle valves fully closed, place a scale against choke unloader arm (V) of throttle lever and make an index mark on carbureter body at the one inch division on scale See Figure 6 Step 1

4 With ignition switch turned on (or test lamp connected) hold end of scale against unloader arm (V) and slowly open throttle until the drive pinion just engages flywheel ring gear (or test lamp lights)

5 If switch is correctly timed, the scale will then read between 1-15/16" and 2 5/16" at mark on carbureter body (15/16" to 1 5/16" travel of arm) See Figure 6 Step 2

6 If necessary, make switch adjustment by reducing or increasing the total thickness of the brass shims No 4 in Figure 5

If switch timing was found to be too early reduce the total thickness of the shims If timing was too late increase total thickness of shims Two sizes of shims are available 153 11 018" — 153 12 006" After adjustment is completed set engine idle at RPM noted under carbureter specifications



PARTS LIST

Buick Carbureters Nos. 725S-725SA-726S-726SA-882S-882SA-883S

WHEN SERVICING, USE GASKET ASSORTMENT No 195A, REPAIR PKG. No. 1515D (725S-SA)

No 1532C (726S-SA), No 1595 (882S 882SA), No 1596 (883S)

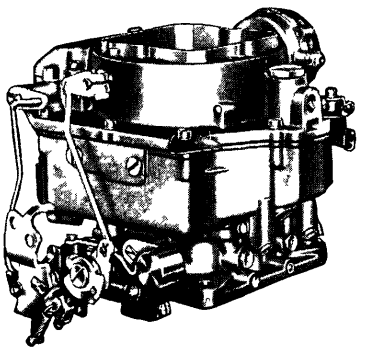
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-625S	Body flange and switch assy (Sup by 1-902S) (725S SA)	
1-633S	Body flange and switch assembly (726S SA 883S)	
1-863S	Body flange and switch assy (Sup by 1 902S) (882S)	
1-902S	Body flange and switch assy (725S SA 882S SA)	
1A-84	Flange gasket (725S SA 882S SA)	
2-92	Throttle valve (725S SA 882S SA)	(2)
2-101	Throttle valve (726S SA 883S)	(2)
3-652S	Throttle shaft lever and dog assy (726S SA 883S)	
3-657S	Throttle shaft and lever assy (725S SA 882S SA)	
4A-116S	Throttle shaft dog and collar assy	
6-623S	†Air horn assembly (Sup by 6 729S) (725S 726S)	
6-652S	†Air horn assembly (Sup by 6 730S) (725S 726S)	
6-729S	†Air horn and Climatic® control assembly	
6-730S	†Air horn assembly	
7-157	Choke valve	
11-183S	LOW SPEED JET ASSEMBLY (726S SA)	(2)
11-185S	LOW SPEED JET ASSEMBLY (725S SA)	(2)
11-219S	LOW SPEED JET ASSEMBLY (882S SA)	(2)
11-220S	LOW SPEED JET ASSEMBLY (883S)	(2)
11B-12	Rivet plug	
11B-41	Rivet plug	(2)
11B-79	Rivet plug	(7)
11B-108	IDLE PORT RIVET PLUG	(2)
11B-146	Level sight plug	
11B-223	NOZZLE PASSAGE PLUG	(2)
14-383S	Choke lever and screw assembly	
14-384	Cam trip lever	
14-397S	Choke piston lever link and shaft assembly	
15-35S	Strainer nut assembly	
17-50	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	
20-26	Gasket	
20-35	Bowl strainer gasket	
21-80S	Float and lever assembly	
24-24	Float lever pin	
25-105S	NEEDLE AND SEAT ASSEMBLY (725S SA 882S SA)	
25-115S	NEEDLE AND SEAT ASSEMBLY (726S SA 883S)	
30-14	BOWL COVER STRAINER	
30-61	SWITCH STRAINER	
30A-41	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
47-14	Expansion plug	
48-165S	Pump jet and housing assembly	
49-128	Switch plunger	
53A-314S	Pump operating lever and countershaft assembly	
61-57	Adjustment screw lock spring	(2)
61-128	CONNECTOR ROD SPRING	
61-150	LOWER PUMP SPRING	
61-157	Plunger spring	
61-171	Pump spring (lower) (Sup by 61 150) (725S SA)	
61-237	Fast idle cam spring	
61-238	Throttle flex spring	
61-243S	Contact spring and washer assembly	
61-246	VACUUM PISTON SPRING	
61-257	Needle pull clip	
61-291	Throttle lever adjusting screw spring	
61-382	METERING ROD SPRING	
61-388	Switch return spring	
61-398	Pump spring (upper)	
61-400	Vacuum piston spring (Sup by 61 246) (725S SA 726S SA)	
63-35	CONNECTOR ROD SPRING RETAINER (UPPER)	
63-57	INTAKE BALL CHECK RETAINER	
63-58	Coil housing retainer	(2)
63-92	Pump spring retainer	
63-118	Throttle shaft retaining ring	
64-126S	PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
75-677	METERING ROD—STANDARD (726S SA 883S)	(2)

Part No.	PART NAME	
75-685	METERING ROD—STANDARD (725S SA 882S SA)	(2)
75-702	Metering rod—1 size lean (725S SA 882S SA)	(2)
75-703	Metering rod—for altitude only (725S SA 882S SA)	(2)
75 717	Metering rod—1 size lean (726S SA 883S)	(2)
75-718	Metering rod—for altitude only (726S SA 883S)	(2)
86-12	Flange stud lock washer	(4)
86 37	Terminal lock washer	(2)
100-16	Throttle lever adjustment screw	
101-10	Pump arm clamp screw	
101-19	Choke lever clamp screw (Sup by 101 354S)	
101-73	Tnrottle valve attaching screw (725S SA-882S SA)	(4)
101 84	Fast idle adjustment screw	
101-109	Switch terminal screw	(2)
101-112	Terminal cap attaching screw	
101-126	Throttle valve attaching screw (726S SA 883S)	(4)
101-136	Coil housing attaching screw	(2)
101-140	Fast idle screw	
101-148S	Dust cover attaching screw and washer assy	(2)
101-149S	Body flange attaching screw and washer assy	(4)
101-152S	Air horn attaching screw and washer assy	(4)
101-160S	Bowl cover attaching screw and washer assy	(6)
101-236	Metering rod arm clamp screw	
101-278	Pump jet housing attaching screw	
101-354S	Choke lever clamp screw assembly	
105A-10	Choke lever nut	
105A 11	Flange stud nut	(4)
111-47S	Pump arm and screw assembly	
111-55S	Metering rod arm and screw assembly	
115-139	THROTTLE CONNECTOR ROD	
115-140	Choke connector rod	
116-13	PUMP INTAKE CHECK BALL	
116 19	Switch ball	
117 28	Pump arm link (Sup by 117 170)	
117-136	Vacumeter piston link	
117-170	Pump connector link	
118-69	Dust cover	
120-158	METERING ROD JET	(2)
121-78	COIL HOUSING GASKET	
121-149	Pump jet housing gasket (Sup by 121 241)	
121-150	BODY FLANGE GASKET	
121-151	†Air horn gasket (Sup by 121 186)	
121-152	BOWL COVER GASKET	
121-186	†AIR HORN GASKET	
121-241	PUMP JET HOUSING GASKET	
122 75S	PUMP RELIEF PLUG ASSEMBLY	
136-37	Connector rod washer	
146-188S	†Bowl cover and strainer assembly (Sup by 146 196S) (725S)	
146-190S	†Bowl cover assembly (Sup by 146 197S) (726S)	
146-196S	†Bowl cover assembly (725S SA)	
146-197S	†Bowl cover assembly (726S SA)	
146-205S	Bowl cover assembly (882S SA)	
146-207S	Bowl cover assembly (883S)	
150-62	Choke piston pin	
150A-10	PIN SPRING	(2)
153-11	Contact spring shim (.018")	(3)
153-12	Contact spring shim (.006")	(2)
160-67S	Vacuum piston and pin assembly	
160-90	Choke piston	
170U-73S	Thermostatic housing and coil assembly	
172-12	Terminal cap hold down clip	
172-15	Cable clip	
172-22	THROTTLE CONNECTOR ROD RETAINER	
181-87	Switch guide block	
181-147S	Fast idle cam assembly	
184-20S	Terminal cap assembly	
186-20	Baffle plate	
192-11U	Carter starter switch unit	

†See Page 6 Figures 7 and 8

NOTE: Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.



BUICK ROADMASTER MODEL "70" 1952

WCFB Four-Bore Down-Draft Climatic® Control **Carbs. Nos. 894S-894SA-894SC**

CARBURETER SPECIFICATIONS

For Buick 8 Cylinder Engine 3 7/16 Inch Bore, 4 5/16 Inch Stroke

Dimensions Flange size 1 1/8 inch Four Bore—4 bolt type
Primary venturi size 11/32 inch I D
Main venturi size 1 1/16 inch I D

Float Level See adjustments

Vents (894S and 894SA Early Production) Outside bowl chamber to atmosphere (3) No 42 (0935 inch) drill Inside to bowl chamber (2) No 42 (0935 inch) drill and (2) 3/16 inch diameter (894SA Late Production) Outside bowl chamber to atmosphere (5) No 42 (0935 inch) drill (1) No 36 (1065 inch) drill Inside to bowl chamber (2) No 42 (0935 inch) drill and (2) 3/16 inch diameter In dust cover (1) No 36 (1065 inch) drill In flange bore to atmosphere (4) No 36 (1065 inch) drill

Gasoline Intake Size No 42 (0935 inch) drill hole in needle seat

Low Speed Jet Tube Jet size No 69 (02925 inch) drill
By pass size 0591 inch drill
Economizer size 04895 inch drill
Idle bleed size No 43 (89 inch) drill

Idle Port (Upper) Slot type Primary length 156 inch width 030 inch Secondary length 103 inch width 030 inch

Idle Port Opening Primary 067 to 073 inch secondary 046 to 053 rch above upper edge of valve with valve tightly closed

Lower Port Primary (For Idle Adjustment Screw) Size No 55 (052 inch) drill
Secondary (No Idle Adjustment Screw) Size No 55 (052 inch) drill

Set Idle Adjustment Screw 1/4 to 1 1/4 turns open For richer mixture turn screw out Do not idle engine below 450 R P M

Main Nozzle Installed permanently **Do not remove**

Metering Rod Primary economy step 068 inch diameter Middle step tapers to 055 inch diameter Power step 053 inch diameter (These rods designed with stabilizing flats on economy step)
Secondary None

Metering Rod Jet Primary size 086 inch diameter (for metering rod) Secondary size 0635 inch diameter (no metering rod)

Metering Rod Setting See adjustments

Accelerating Pump Discharge jet (twin) primary side only size No 74 (0225 inch) drill Intake ball check seat size 115 to 120 inch diameter Discharge needle seat size 070 inch diameter Relief ball check size No 55 (052 inch) drill Relief passage (vent) to fuel chamber No 42 (0935 inch drill

Pump Adjustment See adjustments

Choke Carter Climatic® Control set on index Butterfly type offset choke valve primary side only Choke heat suction hole restriction in piston housing size No 42 (0935 inch) drill

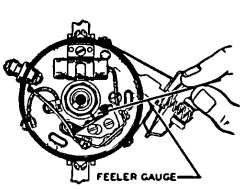
Vacuum Spark Port 039 to 041 inch diameter Bottom of port 046 to 050 inch above valve with valve tightly closed

MOTOR TUNE-UP—BE ACCURATE!

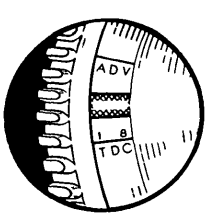
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



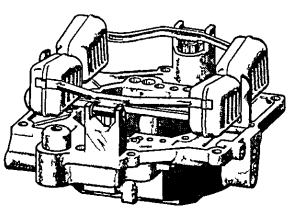
Spark Plug Gap 025"



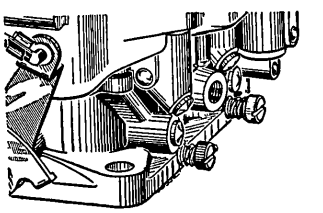
Breaker Point Setting 015"



Ignition Timing Breaker Points to Open 6° B T D C



Float Setting See Adjustments



Idle Adjustment Screw Setting 1/4 to 1 1/4 Turns Open

NOTE These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT

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CARBURETER
TRADE MARK REG U S PAT OFF.
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CARBURETER ADJUSTMENTS

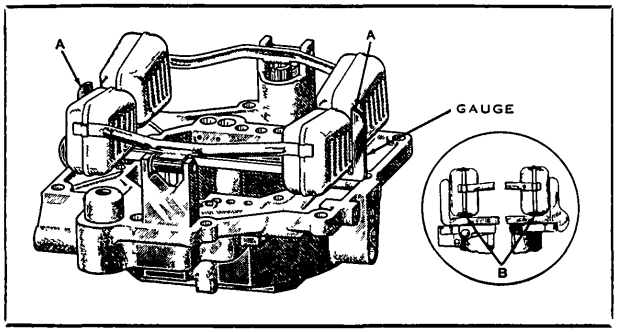


Figure 1
Float Adjustment

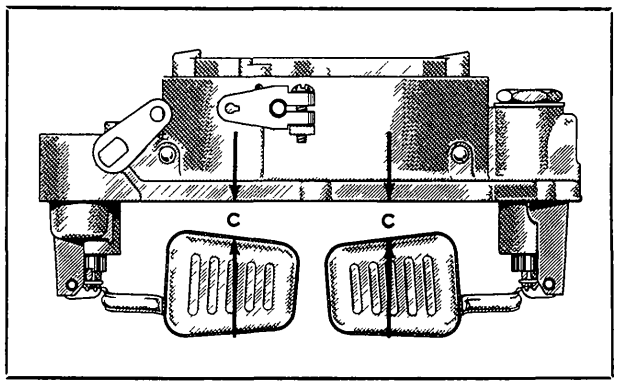


Figure 2
Float Drop Adjustment

FLOAT ADJUSTMENT (Fig 1)

Two separate float adjustments must be made—lateral and vertical

Lateral Adjustment With bowl cover assembly inverted bowl cover gasket removed and float resting on seated needle place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting Sides of floats should just clear the vertical uprights of float gauge (A) Adjustment should be made by bending arms of floats

Vertical Adjustment (Early Production—floats without vertical ribs) With float gauge in same position floats should just clear the horizontal portion of gauge The vertical distance (B) between top of float and machined surface of casting must be 1/4" for primary floats (gauge T109 223) and 3/8" for secondary floats (gauge T109 224) (Late Production—floats with vertical ribs) The vertical distance between top of float and machined surface of casting must be 3/32" (gauge T109 233) for primary floats and 1/4" (gauge T109 223) for secondary floats Adjust by bending float arms

FLOAT DROP ADJUSTMENT (Fig 2)

With bowl cover held in upright position and measuring at center of float the distance (C) between top of floats and bowl cover should be 3/4" for primary floats early production (without vertical ribs) 5/8" late production (with vertical ribs) and 7/8" for secondary floats early production 3/4" for late production Adjust by bending stop tabs on float brackets

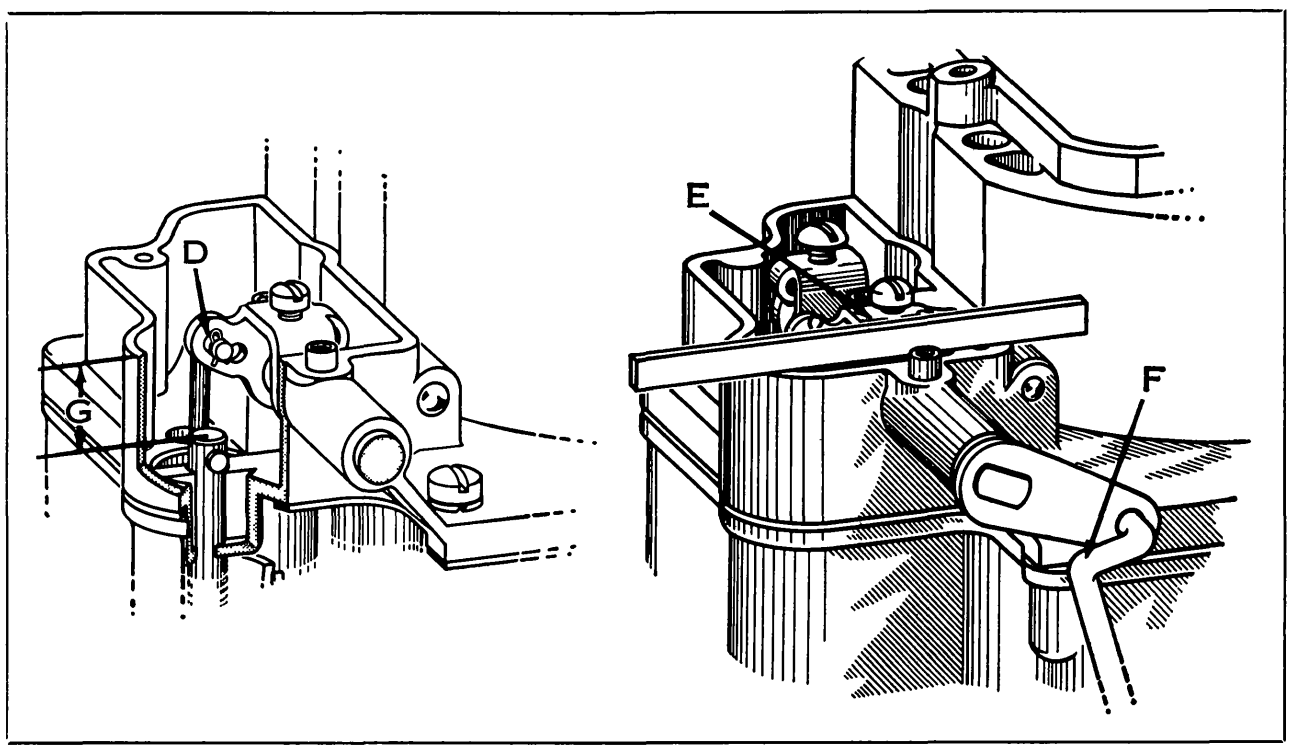


Figure 3
Pump Adjustment

PUMP ADJUSTMENT (Fig 3)

Install pump connector link in outer hole (D) (long stroke) of pump arm with ends extending toward countershaft arm Back out throttle lever set screw until throttle valves seat in bores of carbureter Hold straight edge across top of dust cover boss at pump arm The flat on top of pump arm (E) should be parallel to straight edge Adjust by bending throttle connector rod at upper angle (F) (Use tool T109 213) OPTIONAL ADJUSTMENT With throttle valves seated in bores of carbureter the distance from the top of the plunger shaft to the top of the dust cover boss should be 9/32" (G) Adjust as mentioned above

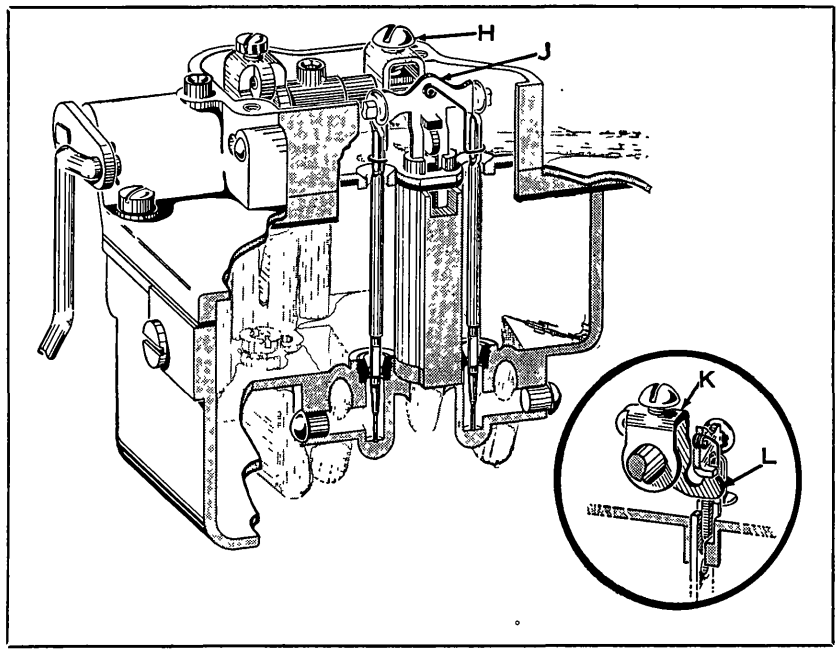


Figure 4
Metering Rod Adjustment

METERING ROD ADJUSTMENT (Fig. 4):

Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows: 1. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw (H). 2. With metering rods in place, press down on vacumeter link (J) until metering rods bottom in carbureter body casting. 3. Holding rods in downward position and throttle valves seated, revolve metering rod arm (K) until finger on arm contacts lip of vacumeter link (L). Hold in place and carefully tighten clamp screw (H).

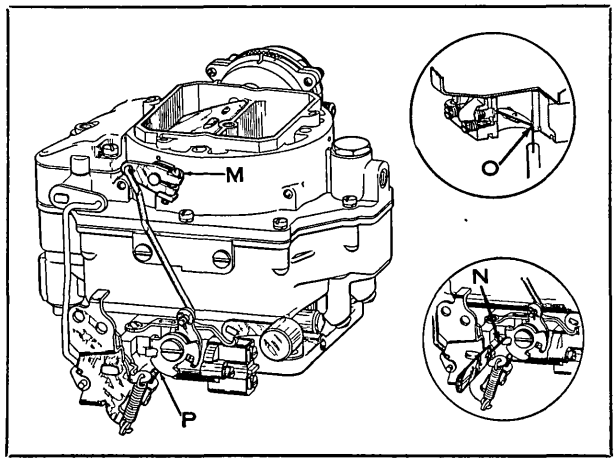


Figure 5
Fast Idle Adjustment

FAST IDLE ADJUSTMENT (Fig. 5):

(a) Loosen choke lever clamp screw (M) on choke shaft. Insert .020" feeler gauge T109-29 (N) between lip of fast idle cam and boss of flange casting. Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw (M).

(b) With choke valve tightly closed, tighten fast idle adjusting screw until there is .020" opening (O) between throttle valve and bore of carbureter (side opposite idle port). Be sure fast idle adjusting screw is on high step of cam (P) while making this adjustment.

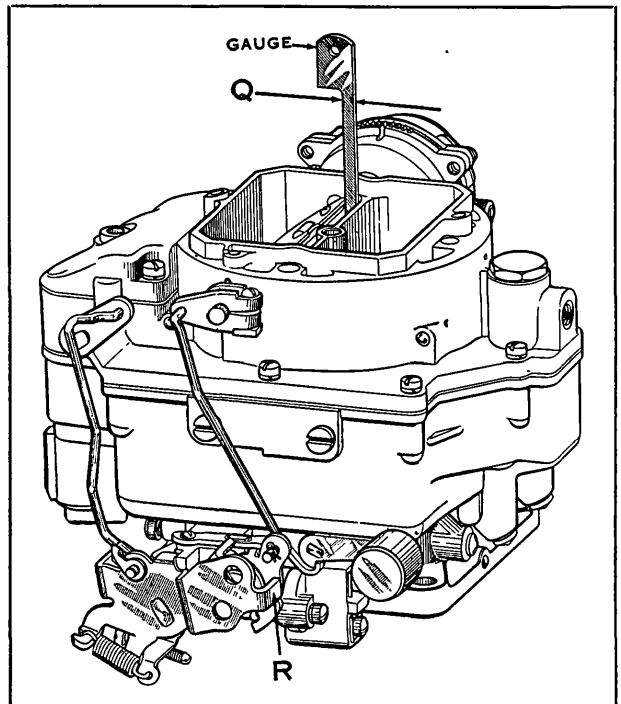


Figure 6
Unloader Adjustment

UNLOADER ADJUSTMENT (Fig. 6):

With throttle wide open there should be 3/16" clearance (Q) between upper edge of choke valve and inner wall of air horn (gauge T109-28). Adjust by bending unloader lip (R) on throttle shaft lever (use bending tool T109-41).

BOWL VAPOR VENT ADJUSTMENT (Early Production 894S Only):

Place .020" feeler gauge T109-29 between the lower edge of throttle valve and bore of carbureter. Vapor relief arm should just contact ball. If necessary, adjust by bending vapor vent arm.

Part No	PART NAME	
53A-389S	Pump operating lever and countershaft assembly	
61-157	Plunger spring	
61 171	PUMP SPRING (LOWER)	
61 199	Vacuum piston spring (894S) (Sup by 75 847U)	
61-226	Vacuum piston spring (894SA)	
61 237	Fast idle cam spring	
61 238	Throttle flex spring	
61-243S	Contact spring and washer assembly	
61-257	Needle pull clip	(2)
61-291	Throttle lever adjusting screw spring	
61-382	METERING ROD SPRING	
61-388	Switch return spring	
61-398	Upper pump spring	
61-450	SECONDARY THROTTLE RETURN SPRING	
61-457	Bowl vent spring (894S Early production)	
61-467	Idle adjustment screw spring	(2)
63-57	INTAKE BALL CHECK RETAINER	
63-58	Coil housing retainer	(3)
63-149	Pump spring retainer	
64 139S	PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
75 818	Metering rod—Standard (894S) (Sup by 75 847U)	(2)
75-828	Metering rod—1 size lean (894S)	
75-844U	Metering rod and jet unit—2 sizes lean (894S)	
75-846	Metering rod—Standard (894SA)	(2)
75 847U	*UNITIZED PACKAGE (Consists of (1) 61 226 (2) 75 846 (1) 107 42 (1) T109 227 (4) 103 13 (2) 120 176 1 No 70 Drill)	
75 853	Metering rod—1 size lean (894SA)	
75-860U	Metering rod and jet unit—2 sizes lean (894SA)	
86-12	Flange stud lock washer	(4)
86-37	Terminal lock washer	(2)
100-16	Throttle lever adjustment screw	
101-10	Pump arm clamp screw	
101 19	Choke lever clamp screw (Sup by 101 354S)	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	
101-84	Fast idle adjustment screw	
101-109	Switch terminal screw	(2)
101-126	Auxiliary throttle valve attaching screw	(4)
101-136	Coil housing attaching screw	(3)
101-140	Fast idle screw	
101-149S	Body flange attaching screw and washer assembly	(4)
101-160S	Air horn attaching screw and washer assembly (894S SA)	(8)
101-164	Operating lever clamp screw	
101-184S	Dust cover attaching screw and washer assembly	(2)
101 277S	Vent arm attaching screw and washer assembly (894S Early production)	
101-278	Pump jet housing attaching screw	
101-284	Piston housing attaching screw	(2)
101 307S	Air horn and bracket attaching screw and washer assembly (894SC)	(9)
101-325S	Switch attaching screw and washer assembly	(2)
101-331	Secondary throttle valve attaching screw	(4)
101 335S	Air horn attaching screw and washer assembly	(7)
101-354S	Choke lever clamp screw assembly	
101-363	Piston housing attaching screw	
105A-10	Choke lever nut	
105A-11	Flange stud nut	(4)
105A-28	Operating lever clamp nut	
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
115-181	THROTTLE OPERATING ROD	
115-182	Choke connector rod	
115-183	THROTTLE CONNECTOR ROD	
116-13	PUMP INTAKE CHECK BALL	
116-19	Switch ball	
116-28	Bowl vent ball (894S Early production)	
117-28	Pump arm link	
117-155	Vacumeter piston link	
118-93	Dust cover	
120-165	◦ PRIMARY METERING ROD JET	(2)
120-174	Secondary metering jet (894S) (Sup by 75 847U)	(2)
120-176	Secondary metering jet (894SA)	(2)
121-78	COIL HOUSING GASKET	
121-149	Pump jet housing gasket (Sup by 121 241)	
121-208	DUST COVER GASKET	
121-210	Body flange gasket (Sup by 121 242)	
121-211	Air horn gasket	
121-241	PUMP JET HOUSING GASKET	
121-242	BODY FLANGE GASKET	
121-243	PISTON HOUSING GASKET	
122-75S	PUMP RELIEF PLUG ASSEMBLY	
136-38	Throttle shaft washer	
150-62	Choke piston pin	
150-178	Auxiliary valve lockout arm pin	
150A-10	PIN SPRING	(3)
153-11	Contact spring shim (.018)	(3)
153-12	Contact spring shim (.006)	(2)
160-91	Choke piston	
160-110S	Vacuum piston and pin assembly	
170-258S	Piston housing and plug assembly	
170AC-238S	Thermostatic housing and coil assembly	
172-15	Cable clip	
172-22	THROTTLE CONNECTOR ROD RETAINER	
172-24	THROTTLE OPERATING ROD RETAINER	
180-60	Lever return spring bracket	
181-87	Switch guide block	
181-147S	Fast idle cam assembly	
184-64S	Terminal cap assembly	
186-34	Baffle plate	
192-21U	Carter starter switch unit	

*For modification of 894S carbureter to 894SA Complete instructions for this modification contained in each unitized package

★Use with flange 1 881S (Identify by casting No 1 870 on side of flange)

†Use with flange 1 1090S (Identify by casting No 1 990 on side of flange)

NOTE **Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used**

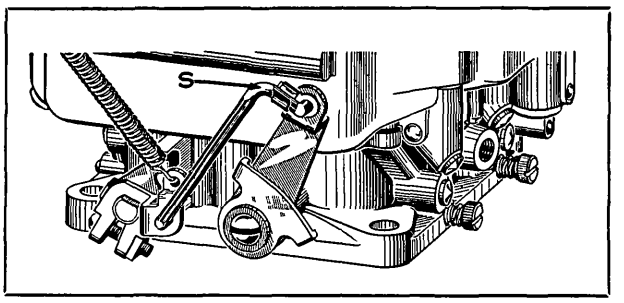


Figure 7
Secondary Throttle Lever Adjustment

SECONDARY THROTTLE LEVER ADJUSTMENT (Fig 7)

Primary and secondary throttle valves should reach wide open position at the same time To adjust Bend throttle operating rod at upper angle (S) (Use bending tool T109 213)

AUXILIARY THROTTLE LOCK OUT ADJUSTMENT (Fig 8)

This adjustment should be made after completing fast idle adjustment 1 With choke valve closed end of hook (T) on lock out arm should contact auxiliary throttle lever mak ng maximum contact of locking step on lever 2 Open choke valve Auxiliary throttle valve should become unlocked a few degrees before the choke reaches w de open position Adjust by bending lock out arm

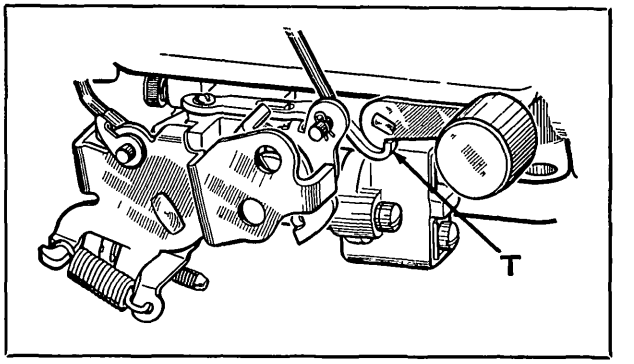


Figure 8
Auxiliary Throttle Lock Out Adjustment

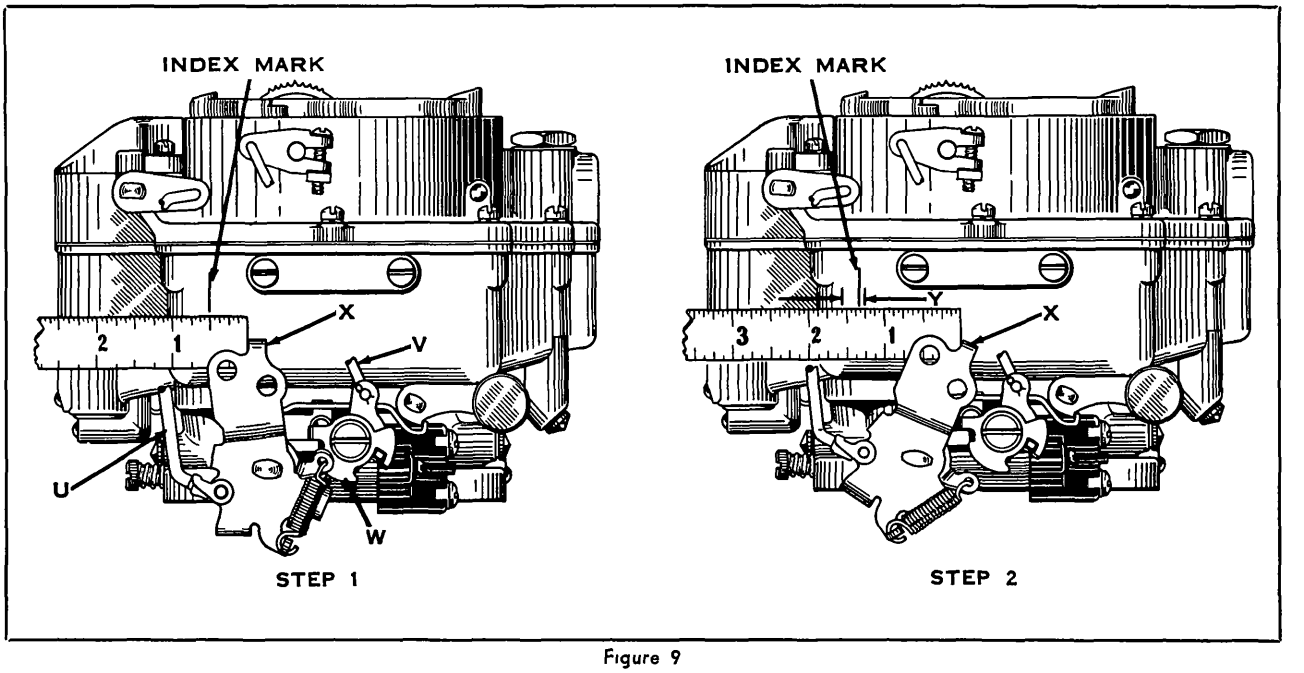
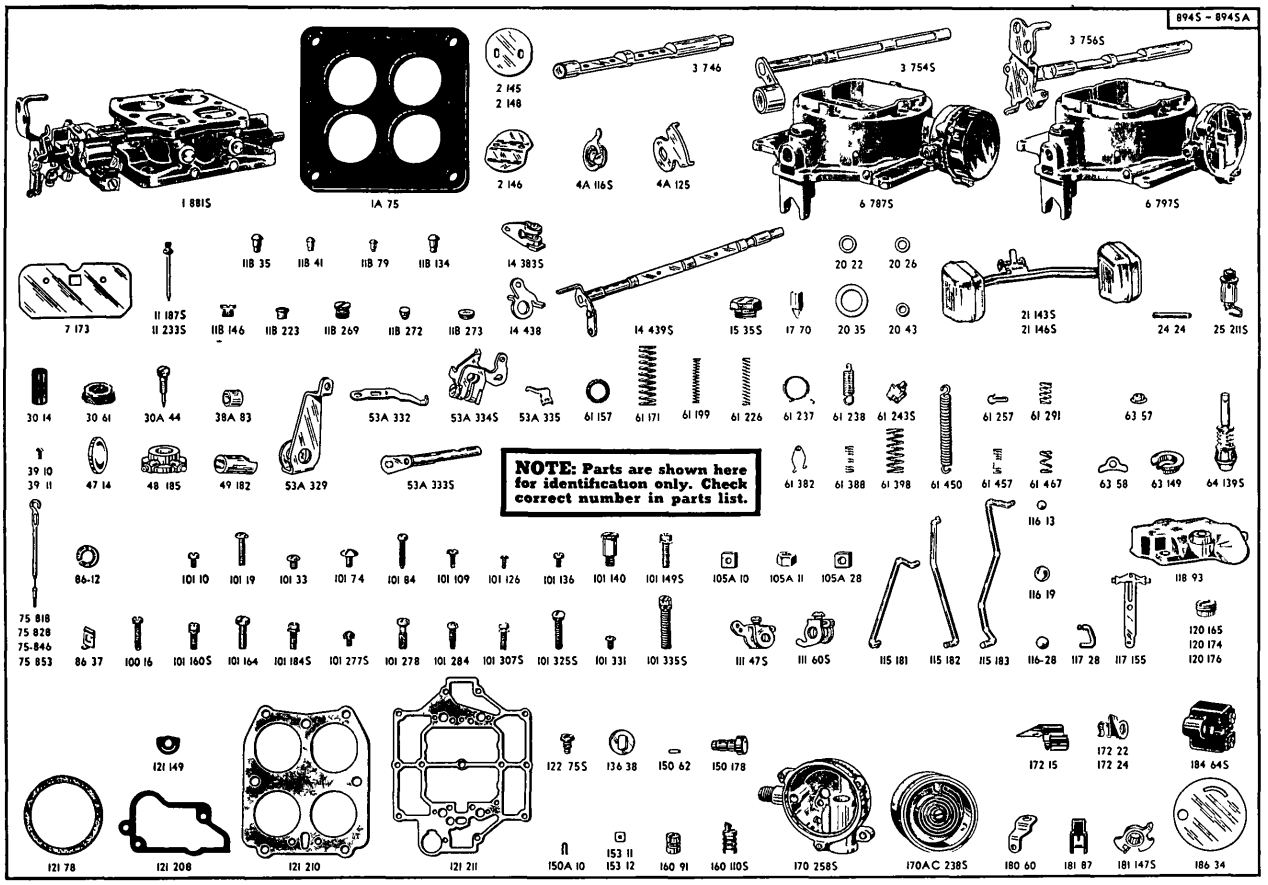


Figure 9
Checking and Adjusting Starter Switch

CHECKING AND ADJUSTING STARTER SWITCH (Fig 9)

CAUTION If carbureter is installed on engine make certain that the transmission is in neutral and parking brake is applied 1 If carbureter is installed on Dynaflow car make certain that throttle linkage and dash pot are correctly adjusted If carbureter is removed from engine connect a 6 volt battery and test lamp across switch terminal so that lamp will light when switch makes contact 2 Back off throttle stop screw remove throttle connector rod (U) and choke connector rod (V) rotate fast idle cam (W) to slow idle position and fully close the throttle valves 3 While holding throttle valves fully closed place a scale against choke unloader arm of throttle lever and make an index mark on carbureter body at the 1/2 inch division of scale 4 With ignition switch turned on (or test lamp connected) hold end of scale against unloader arm (X) and slowly open throttle until the drive pinion just engages flywheel ring gear (or test lamp lights) 5 If switch is correctly timed the scale will then read between 1¼" and 1 9/16" at mark on carbureter body (Y) (¾" to 1 1/16" travel of arm) 6 If necessary make switch adjustment by reducing or increasing the total thickness of the brass shims If switch tim ng was found to be too early reduce the total thickness of the shims If timing was too late increase total thickness of shims Two sizes of shims are available 153 11 018" — 153 12 006" After adjustment is completed set engine idle at specified RPM



BUICK—1952—CARBURETERS Nos. 894S-894SA-894SC

WHEN SERVICING, USE GASKET ASSORTMENT No. 219A; REPAIR PACKAGE No. 1599C

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-881S	Body flange and switch assembly (894S SA) (Sup by 1 1090S)	
1-1090S	Body flange and switch assembly	
1A-75	FLANGE GASKET	
2-145	Secondary throttle valve (Sup by 2-157)	(2)
2-146	★Auxiliary throttle valve (894S SA)	(2)
2-148	Primary throttle valve	(2)
2-155	†Auxiliary throttle valve (894SC)	
2-157	Secondary throttle valve	(2)
3-746	Secondary throttle shaft	
3-754S	★Throttle shaft, lever and weight assembly (894S SA)	
3-756S	Throttle shaft and lever assembly	
3-820S	†Throttle shaft and weight assembly	
4A-116S	Throttle shaft dog and collar assembly	
4A-125	Primary throttle shaft dog	
6-787S	Air horn and Climatic® control assembly	
6-797S	Air horn assembly	
7-173	Choke valve	
11-187S	Low speed jet assembly (Sup by 11-233S)	(4)
11-233S	LOW SPEED JET ASSEMBLY	(4)
11B-35	Rivet plug (894S SA (8) (894SC (9)	
11B-41	Rivet plug	(2)
11B-79	Rivet plug	(9)
11B-134	Rivet plug	
11B-146	Level sight plug	(2)
11B-223	NOZZLE PASSAGE RIVET PLUG	(8)
11B-269	Bowl vent plug (Early production 894S)	
11B-272	Rivet plug (894S SA)	
11B-273	Secondary throttle shaft rivet plug	
14-383S	Choke lever and screw assembly	

Part No.	PART NAME	
14-438	Cam trip lever	
14-439S	Choke piston lever link and shaft assembly	
15-35S	Strainer nut assembly	
17-70	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	(2)
20-26	Relief valve gasket	
20-35	BOWL STRAINER GASKET	
20-43	Piston housing gasket (Sup by 121 243)	
21-132S	Float and lever assembly (Sup by 21 143S and 21-146S)	(2)
21-143S	Float and lever assembly (Primary side)	
21-146S	Float and lever assembly (Secondary side)	
24-24	FLOAT LEVER PIN	(2)
25-211S	NEEDLE AND SEAT ASSEMBLY	(2)
30-14	BOWL COVER STRAINER	
30-61	SWITCH STRAINER	
30A-44	Idle adjustment screw	(2)
38A-83	Countershaft bushing	
39-10	Throttle valve attaching screw	(4)
39-11	Choke valve attaching screw	(2)
47-14	WELSH PLUG	
48-185	Pump jet housing	
49-182	Switch plunger	
53A-329	Primary operating lever	
53A-332	Lockout arm	
53A-333S	Pump operating lever and countershaft assembly (Sup by 53A 389S)	
53A-334S	Secondary operating lever assembly	
53A-335	Vent arm (894S Early production) (Sup by 38A 83)	

Form 4919B

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

Replacing Forms 4674, 4684, 4737, 4738

BUICK, 1946-49
September, 1951
Revised October, 1952

BUICK MODELS "40"-"50"-"70" 1946-1949

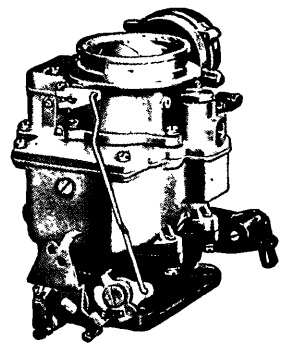
CARBURETER INDEX

WCD Dual Downdraft Climatic® Control Carbureters

Year	Carburetor No.	Models	Casting No. on Face of Flange
1946-47	608S	"40"-"50"	324
1946-47	608SA	"40"-"50"	546
1946-47	609S	"70"	402
1946-47	609SA	"70"	548
1948-49	608SC	"40"-"50"	546
1948-49	663S	"40"-"50"	546
1948-49	609SC	"70"	573
1948-49	664S	"70"	573

663S can be used in place of 608S, 608SA, 608SC

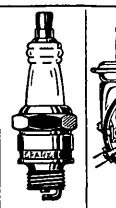
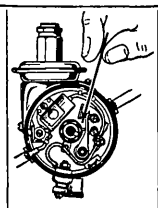
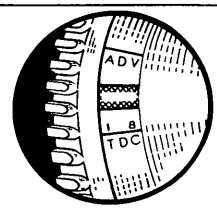
664S can be used in place of 609S, 609SA, 609SC

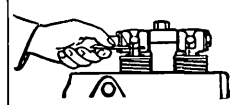
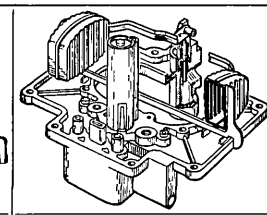
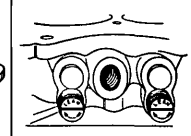


Cut shows 664S Carbureter

MOTOR TUNE-UP—BE ACCURATE!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

CARBURETER NUMBER	SPARK PLUG GAP	BREAKER POINTS	IGNITION TIMING Breaker Points to Open	SET VALVES With Motor at Operating Temperature Intake	SET VALVES With Motor at Operating Temperature Exhaust	FLOAT LEVEL (Use Gauge)	SET IDLE ADJUSTMENT SCREW (Turns Open)
608S-608SA...	.025"	.015"	4° B.T.D.C.	.015"	.015"	3/16"	½ to 1
609S-609SA...	.025"	.015"	6° B.T.D.C.	.015" (1948 "40"-"50" 1949 "40")	.015"	3/16"	¾ to 1¾
608SC-663S..	.025"	.015"	4° B.T.D.C.	.015" (1949 "50")	.015" None (1948)	5/32"	¾ to 1¼
609SC-664S...	.025"	.015"	6° B.T.D.C.	.015" (1949)	.015" None	5/32"	¾ to 1¼

NOTE: 1949 Models "50" and "70" are equipped with hydraulic valve lifters. No adjustment.

BRIEF CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENTS: Two separate float adjustments must be made—lateral and vertical. On 608S-608SA-609S-609SA use gauge T109-162 (3/16 inch). On 608SC-609SC-663S-664S use gauge T109-196 (5/32 inch).

Lateral Adjustment: With bowl cover gasket removed, bowl cover inverted and float lip resting on seated needle, place float gauge directly under float with notched portions of gauge fitted over edges of casting. Floats should barely touch the vertical uprights of float gauge. Adjustment should be made by bending arm of float.

Vertical Adjustment: With float gauge in position mentioned above, floats should just clear the horizontal portion of gauge. Adjust by bending arm of float. Carefully remove float, install bowl cover gasket and then reinstall float.

A fast check of the fuel level can be made on the car by removing the inspection hole plug in the side of the carbureter body. Fuel level should be even with the bottom of the hole with engine idling.

PUMP ADJUSTMENT: Correct pump plunger travel is important and should be checked each time the carbureter is disassembled. The total distance the plunger (not shaft) moves from closed to wide open throttle controls the amount of fuel discharged. Procedure is as follows: With pump connector link in place (outer hole-long stroke on 608SC-609SC-663S-664S) back out throttle lever set screw to allow throttle valves to seat in bores of carbureter. Support carbureter so throttle can be opened without throttle lever dragging on bench top (wooden block will suffice). Place pump travel gauge T109-117S inverted on edge of dust cover boss of bowl cover. Turn knurled nut of gauge until finger just touches upper end of plunger shaft. Read figure indicated on gauge at notch of knurled nut. Open throttle slowly until plunger bottoms in pump cylinder (at approximately half throttle). This can be determined by the additional force necessary to continue to move throttle lever. Relocate pump travel gauge and turn knurled nut until finger again touches top of plunger shaft. Hold gauge vertical to insure correct pump stroke readings. Observe number indicated on gauge. The difference in the two readings obtained should be "21" (21/64" plunger travel). Adjust by bending throttle connector rod at angle.

PUMP JET ADJUSTMENT: Good acceleration performance at low speeds depends primarily on the gasoline dis-

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charged from the pump jets Each of the two streams must be directed to its proper section of the dual venturi system In order to obtain maximum efficiency, each stream should strike within 3/16' diameter circle, the center of which is 11/64" from the opposite wall of the bore and (609S-SA-SC-664S, ¼") (608S-SA-SC-663S, 9/64") inward from the primary venturi

Some carbureters have these targets marked, and on these it will not be necessary to measure Do not scratch venturi, a pencil mark will suffice Only a slight bend will be necessary to aim the pump jets properly

METERING ROD ADJUSTMENT Metering rod gauging is important and should be done each time the carbureter is disassembled It must be done after completing the pump adjustment Procedure is as follows (608S-SA-609S-SA) Back out throttle adjusting screw until throttle valves seat in bores of carbureter Insert one metering rod gauge in place of either metering rod Use gauge T109-152 for 608S-SA and T109-163 for 609S-SA Press down lightly on vacuum piston link until lug of piston link contacts lip of metering rod arm There should now be less than 005" clearance between metering rod bearing and shoulder in notch of metering rod gauge Adjust by bending lip of metering rod arm Use bending tool T109-105

(608SC-609SC-663S-664S) No metering rod gauges are necessary on these carbureters 1 Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw 2 With metering rods in place, press down on vacuum link until metering rods bottom in carbureter body casting 3 Holding rods in downward position with throttle valves tightly closed revolve metering rod arm until finger on arm contacts vacuum link Then carefully tighten clamp screw

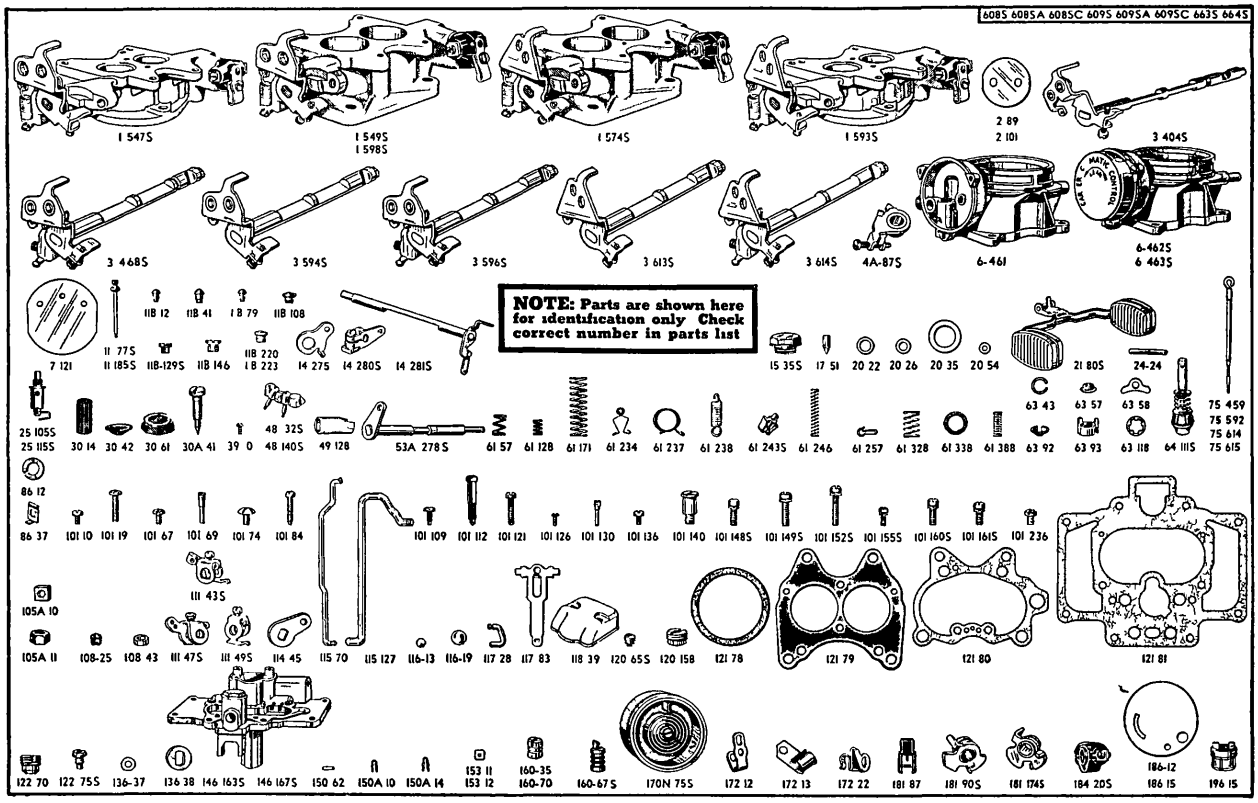
UNLOADER ADJUSTMENT Two adjustments are necessary

A Loosen choke lever clamp screw on choke shaft Insert 020" feeler gauge (T109-29) between lip of fast idle cam and boss on flange casting Hold choke valve tightly closed and take all slack out of linkage by pressing choke lever toward closed position Hold in place and tighten clamp screw

B Adjust unloader lip on throttle shaft lever until there is 3/16' clearance between upper edge of choke valve and inner wall of air horn with throttle held in wide open position (use gauge T109-28)

FAST IDLE ADJUSTMENT With choke valve tightly closed adjust fast idle adjusting screw to give the following clearance between throttle valve and bore of carbureter (side opposite idle port) 608S-SA, 012", 609S-SA, 018", 608SC-663S, 015", 609SC-664S, 018" Be sure fast idle adjusting screw is on high step of cam when making this adjustment

STARTER SWITCH ADJUSTMENT. Switch should make contact within 30° and 45° throttle opening from fully closed position Use gauge T109-155S to qualify switch Qualification of the switch must not require less than one 153-11 (.018" shim) nor more than three 153-11 and two 153-12 (.006"shims)



PART NUMBERS IN BOLD TYPE LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

BUICK—1946-49—PARTS LIST PART NAME	608S-608SA	609S-609SA	608SC	609SC	663S	664S
REPAIR PACKAGE	1364D		1391B		1391B	
REPAIR PACKAGE		1365D		1392B		1392B
GASKET ASSORTMENT	189	189	189	189	189	189
Body Flange and Starter Switch Assembly	†1 547S *†(1-333S)*	†1 549S *†(1-414S)*	1 547S	1 574S	1 593S	1-598S
Throttle Valve	22-89	22-101	22 89	22 101	22 89	22 101
Throttle Shaft and Lever Assembly	{†3 594S {†3 404S		3 594S		3 613S	
Throttle Shaft and Lever Assembly		{†3 596S {†3 468S		3 596S		3 614S
Throttle Shaft Dog, Collar and Screw Assembly	4A 87S		4A 87S		4A 87S	
Air Horn	6-461	6 461	6 461	6 461	6-461	6 461
Air Horn and Climatic® Control Assembly	6 463S	6 462S	6 463S	6 462S	6 463S	6-462S
Choke Valve	7 121	7 121	7 121	7 121	7 121	7-121
Low Speed Jet Assembly	211-177S	211-185S	211-177S	211-185S	211-177S	211-185S
Rivet Plug	11B 12	11B 12	11B 12	11B 12	11B 12	11B-12
Rivet Plug			211B 41	211B 41	211B 41	211B-41
Rivet Plug	311B 79	311B 79	311B 79	311B 79	311B 79	311B-79
Idle Port Rivet Plug	211B-108	211B-108	211B-108	211B-108	211B-108	211B-108
Pump Discharge Passage Plug Assembly	11B 129S		11B 129S		11B 129S	
Fuel Level Sight Plug	11B 146	11B 146	11B 146	11B 146	11B 146	11B-146
Nozzle Passage Rivet Plug	211B-220 *(11B 103)*	211B-220 *(11B 103)*	11B 223	11B 223	11B 223	11B-223

NOTE. Parts in parentheses (in small italic type) are superseded by the part number shown above them
Small figures preceding part numbers indicate number of pieces used in one carbureter

PART NAME	608S-608SA	609S-609SA	608SC	609SC	663S	664S
Cam Trip Lever	14-275	14 275	14-275	14-275	14-275	14 275
Choke Lever and Screw Assembly	14-280S	14-280S	14 280S	14-280S	14-280S	14 280S
Choke Piston Lever, Link and Shaft Assembly	14-281S	14-281S	14-281S	14-281S	14-281S	14 281S
Strainer Nut Assembly	15-35S	15-35S	15-35S	15-35S	15-35S	15-35S
Pump Check Needle	**17-51**	**17-51**	**17-51**	**17-51**	**17-51**	**17-51**
Needle Seat Gasket	20-22	20-22	20-22	20-22	20 22	20-22
Pump Discharge Passage or Relief Plug Gasket	20-26	20-26	20 26	20 26	20 26	20-26
Bowl Strainer Gasket	20-35	20-35	20-35	20-35	20-35	20 35
Metering Rod Jet Gasket	220-54	220-54				
Float and Lever Assembly	21-80S	21-80S	21-80S	21-80S	21-80S	21 80S
Float Lever Pin	24-24	24-24	24-24	24-24	24-24	24-24
Needle and Seat Assembly	**25-105S**	**25-115S**	**25-105S**	**25-115S**	**25-105S**	**25-115S**
Bowl Cover Strainer	**30-14**	**30-14**	**30-14**	**30-14**	**30-14**	**30-14**
Pump Strainer	**30-42**	**30-42**	**30-42**	**30-42**	**30-42**	**30-42**
Switch Strainer	**30-61** *(30-36)*	**30-61** *(30-36)*	**30-61** *(30-36)*	**30-61** *(30-36)*	**30-61** *(30-36)*	**30-61** *(30-36)*
Idle Adjustment Screw	230A-41	230A-41	230A-41	230A-41	230A-41	230A-41
Choke Valve Attaching Screw	239-10	239-10	239-10	239-10	239-10	239 10
Throttle Valve Attaching Screw	439-10	4101-126	439-10	4101-126	439-10	4101-126
Pump Jet and Housing Assembly	48-132S	48-140S	48-132S	48-140S	48-132S	48-140S
Switch Plunger	49-128	49-128	49-128	49-128	49-128	49-128
Pump Operating Lever and Countershaft Ass'y	53A-278S	53A-278S	53A-278S	53A-278S	53A-278S	53A 278S
Idle Adjustment Screw Spring	261-57	261-57	261-57	261-57	261-57	261-57
Connector Rod Spring (Use with 115-67)	61-128	61-128	61-128	61-128	61-128	61-128
Lower Pump Spring	**61-171**	**61-171**	**61-171**	**61-171**	**61-171**	**61-171**
Metering Rod Spring	**61-234**	**61-234**	**61-234**	**61-234**	**61-234**	**61-234**
Fast Idle Cam Spring	61-237	61-237	61-237	61-237	61-237	61 237
Throttle Flex Spring	61-238	61-238	61-238	61-238	61-238	61-238
Switch Contact Spring and Washer Assembly	61-243S	61-243S	61-243S	61-243S	61-243S	61-243S
Vacuum Piston Spring	**61-246**	**61-246**	**61-246**	**61-246**	**61-246**	**61-246**
Needle Pull Clip	61-257	61-257	61-257	61-257	61-257	61-257
Upper Pump Spring (Part of 64-111S)	61-328	61-328	61-328	61-328	61-328	61-328
Plunger Spring	61-338	61-338	61-338	61-338	61-338	61-338
Switch Return Spring	61-388 *(61-209)*	61-388 *(61-209)*	61-388 *(61-209)*	61-388 *(61-209)*	61-388 *(61-209)*	61-388 *(61-209)*
Switch Strainer Retainer Ring (Use with 30-36)	63-43	63-43	63-43	63-43	63-43	63-43
Intake Ball Check Retainer	**63-57**	**63-57**	**63-57**	**63-57**	**63-57**	**63-57**
Coil Housing Retainer	363-58	363-58	363-58	363 58	363 58	363 58
Pump Spring Retainer (Part of 64-111S)	63-92	63-92	63-92	63-92	63-92	63 92
Connector Rod Spring Retainer (Use with 115-67)	63-93 *(63-35)*	63-93 *(63-35)*	63-93	63-93	63-93	63-93
Throttle Shaft Retaining Ring	†63-118	†63-118	63-118	63-118	63-118	63-118
Pump Plunger, Rod, Spring and Retainer Ass'y	**64-111S** *(64-98S)*	**64-111S** *(64-98S)*	**64-111S**	**64-111S**	**64-111S**	**64-111S**
Metering Rod—Standard	**275-459**	**275-592**	**275-614**	**275-615**	**275-614**	**275-615**
Metering Rod—1 Size Lean	275-488	275-557	275-633	275 635	275-633	275 635
Metering Rod—For Altitude Only	275-489	275-558	275-634	275-636	275-634	275-636
Flange Stud Lock Washer	386-12	486-12	386-12	486-12	386-12	486-12
Terminal Lock Washer	286-37	286-37	286-37	286 37	286 37	286 37
Metering Rod and Pump Arm Clamp Screw			2101-10	2101-10	2101-10	2101-10
Choke Lever Clamp Screw	101-19	101-19	101-19	101-19	101-19	101-19
Pump Guide Retainer Screw	101-67	101-67	101-67	101 67	101 67	101 67
Throttle Centering Screw	†101-69					
Throttle Shaft Arm Attaching Screw	101-74	101-74	101-74	101-74	101-74	101-74
Fast Idle Adjustment Screw	101-84	101-84	101-84	101-84	101-84	101 84
Switch Terminal Screw	2101-109	2101-109	2101-109	2101-109	2101-109	2101-109
Terminal Cap Attaching Screw	101-112	101-112	101-112	101-112	101-112	101-112
Throttle Lever Adjustment Screw	101-121	101-121	101-121	101 121	101-121	101-121
Throttle Centering Screw		†101-130				
Coil Housing Attaching Screw	3101-136	3101-136	3101-136	3101-136	3101-136	3101-136
Fast Idle Cam Attaching Screw	101-140	101-140	101-140	101-140	101-140	101-140
Body Flange Attaching Screw and Washer Ass'y	4101-149S	4101-149S	4101-149S	4101-149S	4101-149S	4101-149S
Air Horn Attaching Screw and Washer Ass'y	4101-152S	4101-152S	4101-152S	4101-152S	4101-152S	4101-152S
Pump Jet Attaching Screw and Washer Ass'y	2101-155S	2101-155S	2101-155S	2101-155S	2101-155S	2101-155S
Bowl Cover Attaching Screw and Washer Ass'y	6101-160S	6101-160S	6101-160S	6101 160S	6101-160S	6101-160S
Dust Cover Attaching Screw and Washer Ass'y	2101-161S	2101-161S	2101-148S *(101-161S)*	2101 148S *(101-161S)*	2101-148S *(101-161S)*	2101-148S *(101-161S)*
Metering Rod Arm Clamp Screw	101 236	101-236				
Choke Lever Clamp Nut	105A-10	105A-10	105A-10	105A 10	105A 10	105A 10
Flange Stud Nut	3105A 11	4105A-11	3105A 11	4105A 11	3105A 11	4105A 11
Throttle Lever Bushing					‡108-25	‡108 25
Throttle Lever Spacer					‡108 43	‡108 43
Metering Rod Arm and Screw Assembly	111-43S	111-43S	111-49S	111-49S	111 49S	111-49S
Pump Arm and Screw Assembly			111-47S	111-47S	111 47S	111 47S

†**FLANGE ASSEMBLY**—The difference between 608S and 608SA and between 609S and 609SA is in the flange assembly The throttle centering screw 101 69 has been removed from flange 1-547S used on 608SA and centering screw 101-130 has been removed from flange 1 549S used on 609SA Throttle shaft and lever assemblies 3-594S (608SA) and 3 596S (609SA) must be used with these flanges as shaft is not grooved for throttle centering screw but has additional length to accommodate throttle shaft retaining ring 63-118

To assemble flanges with throttle centering screw install throttle shaft and lever assembly and centering screw, then install throttle valves with © toward idle port and toward the manifold Center valves tapping lightly and hold in place with fingers before tightening screws

To assemble flanges without centering screw install throttle shaft and turn to closed throttle position Push retaining ring with prongs extending outward, over end of throttle shaft until it is against casting (no end play in shaft) Throttle valves should then be installed centering them as mentioned above with throttle lever in closed position and throttle lever set screw backed out

‡These parts are packed with 663S and 664S carbureters Use part No 108-25 when replacing 440S or 448S

PART NAME	608S-608SA	609S-609SA	608SC	609SC	663S	664S
Throttle Shaft Arm	114-45	114-45	114-45	114-45	114-45	114-45
Fast Idle Connector Rod	115-70	115-70	115-70	115-70	115-70	115-70
★Throttle Connector Rod	115-127 *(115-67)*	115-127 *(115-67)*	115-127 *(115-67)*	115-127 *(115-67)*	115-127 *(115-67)*	115-127 *(115-67)*
Pump Intake Check Ball	116-13	116-13	116-13	116-13	116-13	116-13
Switch Ball	116-19	116-19	116-19	116-19	116-19	116-19
Pump Connector Link	117-28	117-28	117-28	117-28	117-28	117-28
Vacumeter Piston Link	117-83	117-83	117-83	117-83	117-83	117-83
Dust Cover	118-39	118-39	118-39	118-39	118-39	118-39
Metering Rod Jet			2120-158	2120-158	2120-158	2120-158
Metering Rod Jet Assembly	2120-65S	2120-65S				
Coil Housing Gasket	121-78	121-78	121-78	121-78	121-78	121-78
Body Flange Gasket	121-79	121-79	121-79	121-79	121-79	121-79
Air Horn Gasket	121-80	121-80	121-80	121-80	121-80	121-80
Bowl Cover Gasket	121-81	121-81	121-81	121-81	121-81	121-81
Pump Discharge Check Seat Plug	122-70	122-70	122-70	122-70	122-70	122-70
Pump Discharge Relief Check Assembly		122-75S		122-75S		122-75S
Throttle Connector Rod Washer	136-37	136-37	136-37	136-37	136-37	136-37
Throttle Shaft Washer	136-38	136-38	136-38	136-38	136-38	136-38
Bowl Cover and Strainer Assembly	146-163S		146-163S		146-163S	
Bowl Cover and Strainer Assembly		146-167S		146-167S		146-167S
Choke Piston Pin	150-62	150-62	150-62	150-62	150-62	150-62
Pin Spring	3150A-10	3150A-10	3150A-10	3150A-10	3150A-10	3150A-10
Countershaft Pin Spring	150A-14	150A-14	150A-14	150A-14	150A-14	150A-14
Switch Contact Spring Shim (.018")	153-11	153-11	153-11	153-11	153-11	153-11
Switch Contact Spring Shim (.006")	153-12	153-12	153-12	153-12	153-12	153-12
Choke Piston		160-35		160-35		160-35
Choke Piston	160-70		160-70		160-70	
Vacuum Piston and Pin Assembly	160-67S	160-67S	160-67S	160-67S	160-67S	160-67S
Thermostatic Coil and Housing Assembly	170N-75S	170N-75S	170N-75S	170N-75S	170N-75S	170N-75S
Terminal Cap Hold Down Clip	172-12	172-12	172-12	172-12	172-12	172-12
Starter Switch Cable Clip	172-13	172-13	172-13	172-13	172-13	172-13
Connector Rod Retainer (Use with 115-127)	172-22	172-22	172-22	172-22	172-22	172-22
Switch Guide Block	181-87	181-87	181-87	181-87	181-87	181-87
Fast Idle Cam Assembly	181-90S	181-90S	181-147S	181-147S	181-147S	181-147S
Switch Terminal Cap Assembly	184-20S	184-20S	184-20S	184-20S	184-20S	184-20S
Coil Housing Baffle Plate	186-12	186-12	186-15	186-15	186-15	186-15
Carter Starter Switch Unit	192-11U	192-11U	192-11U	192-11U	192-11U	192-11U
Pump Plunger Guide	196-15	196-15	196-15	196-15	196-15	196-15

CARBURETER SPECIFICATIONS

	608S-608SA	609S-609SA	608SC	609SC	663S	664S
DIMENSIONS:						
Flange Size, Dual	1"	1¼"	1"	1¼"	1"	1¼"
Primary Venturi, I. D.	11/32"	11/32"	11/32"	11/32"	11/32"	11/32"
Secondary Venturi, I. D.	21/32"	19/32"	21/32"	19/32"	21/32"	19/32"
Main Venturi, I. D.	1 1/16"	1 3/16"	1 1/16"	1 3/16"	1 1/16"	1 3/16"
FLOAT LEVEL: (See Adjustments)	3/16"	3/16"	5/32"	5/32"	5/32"	5/32"
VENTS: Outside, 2 Holes. Inside, None	*12 Dr.	12 Dr.	12 Dr.	12 Dr.	12 Dr.	12 Dr.
GASOLINE INTAKE	42 Dr.	38 Dr.	42 Dr.	38 Dr.	42 Dr.	38 Dr.
LOW SPEED JET TUBE: Size	65 Dr.	65 Dr.	65 Dr.	65 Dr.	65 Dr.	65 Dr.
By-Pass, Size	.0492"	.0512"	.0492"	.0512"	.0492"	.0512"
Economizer, Size	65 Dr.	60 Dr.	65 Dr.	60 Dr.	65 Dr.	60 Dr.
Idle Bleed, Size	.0492"	.0512"	.0492"	.0512"	.0492"	.0512"
IDLE PORTS: Slot Type	.100" x .030"	.125" x .030"	.100" x .030"	.125" x .030"	.100" x .030"	.125" x .030"
IDLE PORT OPENING: Valves Tightly Closed	.067"-.073"	.082"-.088"	.067"-.073"	.082"-.088"	.067"-.073"	.082"-.088"
IDLE SCREW SEATS	.0615"-.0655"	.0615"-.0655"	.0615"-.0655"	.0615"-.0655"	.0615"-.0655"	.0615"-.0655"
IDLE ADJUSTMENT SCREW: Turns Open	½ to 1	¾ to 1¾	¾ to 1¼	¾ to 1¼	¾ to 1¼	¾ to 1¼
MAIN NOZZLES: Installed Permanently. DO NOT REMOVE.	—	—	—	—	—	—
†METERING RODS—STANDARD:						
Economy Step	.0655"	.0625"	.0645"	.063"	.0645"	.063"
Middle Step Tapers to	.060"	.054"	.060"	.0565"	.060"	.0565"
Power Step	.057"	.054"	.057"	.050"	.057"	.050"
METERING ROD JETS: Size	.082"	.082"	.082"	.082"	.082"	.082"
METERING ROD GAUGE: (See Adjustments)	T109-152	T109-163	No gauge	No gauge	No gauge	No gauge
ACCELERATING PUMP:						
Discharge Jet (Twin), Size	71 Dr.	72 Dr.	71 Dr.	72 Dr.	71 Dr.	72 Dr.
Intake Ball Check Seat Size	32 Dr.	32 Dr.	32 Dr.	32 Dr.	32 Dr.	32 Dr.
Discharge Needle Seat Size	50 Dr.	50 Dr.	50 Dr.	50 Dr.	50 Dr.	50 Dr.
Relief Valve Check—Jet Size		55 Dr.		55 Dr.		55 Dr.
PUMP ADJUSTMENT: (See Adjustments)	21/64"	21/64"	21/64"	21/64"	21/64"	21/64"
CLIMATIC® CONTROL: Set Pointer at	Center	Center	Center	Center	Center	Center
CHOKE HEAT SUCTION HOLE—in Bowl Cover	45 Dr.	36 Dr.	45 Dr.	36 Dr.	45 Dr.	36 Dr.
VACUUM SPARK PORT: Diameter	.039"-.041"	.039"-.041"	.039"-.041"	.039"-.041"	.039"-.041"	.039"-.041"
Top of Port Above Valve		.060"-.064"		.060"-.064"		.060"-.064"
Bottom of Port Above Valve	.046"-.050"		.046"-.050"		.046"-.050"	

★Connector rods must be installed with pin spring groove at top, spring and retainer or clevis clip at bottom.

NOTE: Parts in parentheses (in small italic type) are superseded by the part number shown above them
Small figures preceding part numbers indicate number of pieces used in one carbureter.

*Early production 608S—2 outside ¼" vents on left side, No. 47 drill on right side.

†These rods are designed with idle stabilizing flats on economy step.

CADILLAC

1959

All Single Carbureter Installations

AFB Four Bore Down-Draft Climatic® Control Carbureters

Nos. 2814S-2815S

CARBURETER SPECIFICATIONS

For Cadillac 8 Cylinder 390 Cu. In. Engine

Dimensions: Flange, four-bore—4 bolt type

Throttle bore primary, 1-7/16 inch secondary 1 11/16 inch I D

Primary venturi size primary side 11/32 inch secondary side, 11/32 inch I D

Main venturi size primary side 1 3/16 inch secondary side, 1-9/16 inch I D

Vents: Inside (4) in air horn, Outside (4) in body

Low Speed Circuit: (Primary side only)
Jet size No 67 (.032 inch) drill
By-pass, size No 56 (.0465 inch) drill
Economizer, size No 56 (.0465 inch) drill
Idle bleed size No 55 (.052 inch) drill
Idle port, slot type length .180 inch, width .030 inch

Idle Port Opening: .123 to .129 inch above top edge of valve with valve tightly closed

Set Idle Adjustment Screw: 1¼ to 2¾ turns open For richer mixture turn screw out Do not idle engine below 450 R P M (Transmission in Drive Range) For cars with air conditioning set idle at 450 R P M with air condition on (Transmission in Drive Range)

Main Nozzle: Installed permanently DO NOT REMOVE Anti percolator bleed primary (tube in venturi assembly) size No 70 (.028 inch) drill Secondary (drilled hole in venturi assembly) size No 68 (.031 inch) drill

Main Vent Tube: (In venturi assembly) Side holes primary side 11—size No 70 (.028 inch) drill; secondary 3—size No 70 (.028 inch) drill Air bleed to vent tube secondary side size No 57 (.043 inch) drill Under STRUT bleed primary side only size No 42 (.0935 inch) drill

Secondary Initial Discharge: (In venturi assembly, secondary side only) Air bleed size No 55 (.052 inch) drill Discharge port size No 52 (.0635 inch) drill

Accelerating Pump: Discharge jet (twin) primary side only size No 70 (.028 inch) drill Intake ball check assembly installed from inside of bowl, .115 to .120 inch diameter Discharge needle seat size No 50 (.070 inch) drill

Choke: Carter Climatic® Control set on index Butterfly type —offset valve primary side only Choke heat suction hole bushing between body and piston housing size No 43 (.089 inch) drill

Vacuum Spark Port: Horizontal slot length .130 inch, width .040 inch Top of port to be .010 to .016 inch above upper edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .0125"-.0175" 28° to 32° Dwell	Ignition Timing Breaker Points to Open: 5° B. T. C. At Vibration Damper	Float Setting 5/16 Inch (Use Gauge T109-107) Idle Adjustment	Screw Setting 1¼ t 2¾ Turns Open Idle Engine at 450 R.P.M. In Drive Range

NOTE: These cars are equipped with Hydraulic Valve Lifters — NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3729

FLOAT ALIGNMENT: Side of floats parallel to edge of casting. Minimum clearance between lever and air horn lugs without binding. To adjust, bend float lever.

FLOAT LEVEL: 5/16 inch (gauge T109-107) plus or minus 1/64 inch between top of floats (at outer end) and air horn gasket. To adjust, bend float lever.

FLOAT DROP: 23/32 inch plus or minus 1/16 inch between top of floats (at outer end) and air horn gasket. To adjust, bend stop tabs on float brackets.

PUMP: 15/32 inch from the top of the bowl cover to the top of the plunger shaft, with throttle connector rod in inner hole (long stroke) of pump arm. To adjust, bend throttle connector rod.

CHOKE PISTON LEVER ADJUSTMENT: .040 inch (Gauge T109-193) between choke lever and stop in piston housing with choke valve closed. To adjust, bend choke connector rod. NOTE: Choke valve should be held closed by applying pressure to piston lever in piston housing.

FAST IDLE LINKAGE ADJUSTMENT: With choke valve tightly closed and lug on outer choke shaft lever contacting stop on inner choke shaft lever align center of fast idle screw with index mark on cam. To adjust, bend fast idle connector rod.

FAST IDLE THROTTLE VALVE CLEARANCE: .023 inch (Gauge T109-189) between lower edge of valve and bore with adjusting screw on index mark of cam.

FAST IDLE ON CAR: 1700 to 1750 R.P.M. hot engine with fast idle screw on index mark of cam.

UNLOADER: 9/32 inch (Gauge T109-126) between upper edge of choke valve and inner wall of air horn. To adjust, bend unloader lip on throttle lever.

SECONDARY THROTTLE LEVER ADJUSTMENT: 1. Block choke valve wide open. 2. With 23/64 inch between lower edge of primary valve and bore (opposite idle port) secondary valves should just start to open. To adjust, bend throttle operating rod. NOTE: At wide open throttle secondary valves will be a few degrees from wide open. 3. With primary and secondary valves in tightly closed position there should be .010" to .030" (Gauge T109-29) between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on secondary lever.

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: 1. Crack throttle valves and manually open and close the choke valve. Tang on secondary throttle lever should freely engage in notch of lock-out dog. To adjust, bend tang on secondary throttle lever. 2. With lock-out dog held tight against stop on flange casting and secondary throttle valves partially open there should be .020 inch (Gauge T109-29) between tang on secondary throttle lever and lock-out arm. To adjust, bend arm at slot on lock-out dog. NOTE: Fast idle cam may be removed to facilitate gauging and adjusting.

IDLE SPEED AND MIXTURE ADJUSTMENT (Normal Engine Temp.): In making the idle adjustment on the engine, the air adjustment screw is used to adjust idle speed in a similar manner as the throttle speed screw used previously. Turning the air adjustment screw outward increases engine speeds, but also leans the mixture supplied to the manifold which must be compensated for by adjustment of the idle mixture adjusting screws.

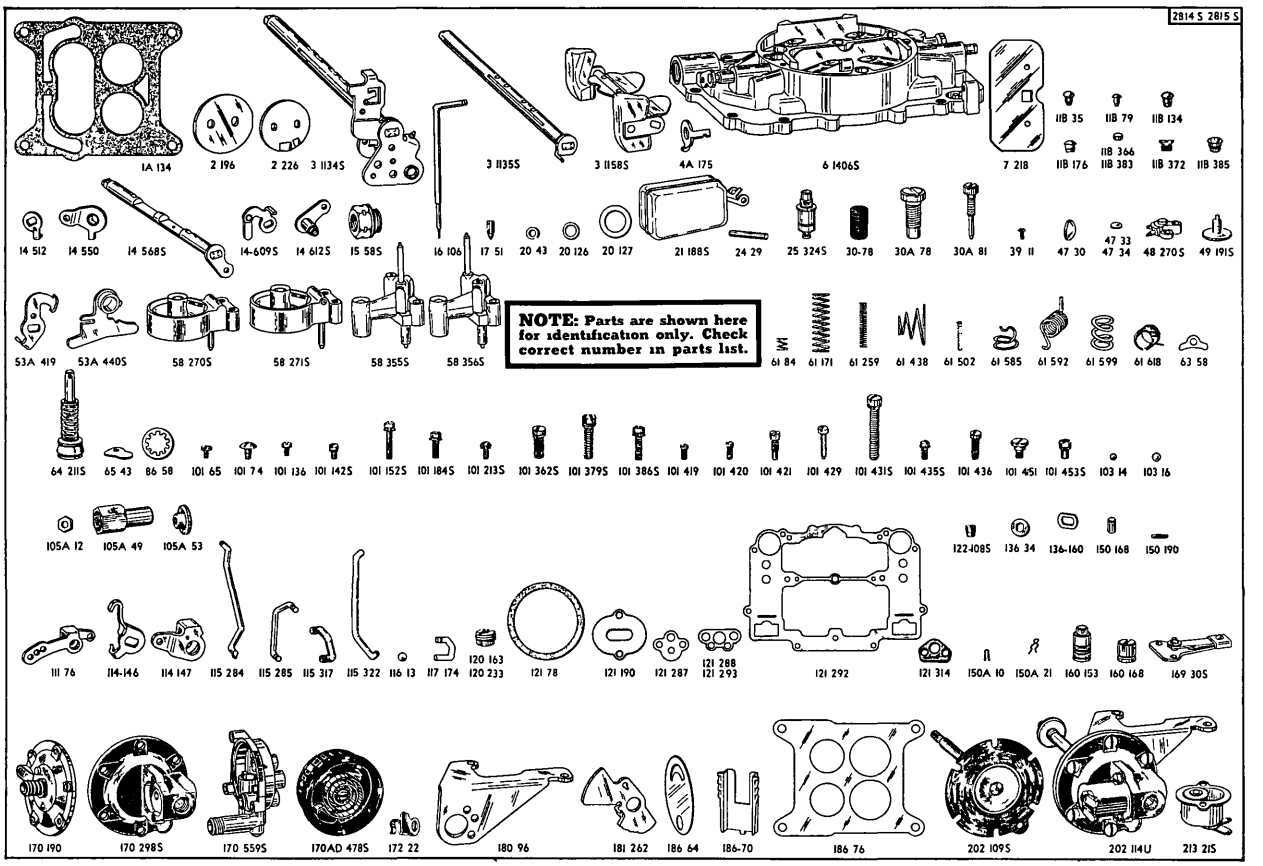
AIR CONDITIONER FAST IDLE DEVICE ADJUSTMENT: This adjustment must be made after carbureter is installed on car, engine at normal operating temperature and slow idle adjustment is completed. With shift lever in neutral and air conditioner turned on, engine should idle 900 to 950 R.P.M. To adjust, loosen lock nut on diaphragm shaft and adjust knurled nut to obtain specified R.P.M. then tighten lock nut.

TOOLS REQUIRED FOR SERVICING CARBURETERS:

T109-29	.020"-.030" Wire gauge	T109-126	9/32" Unloader gauge
T109-41	Bending tool	T109-189	.023" Wire gauge
T109-107	5/16" Float gauge	T109-193	.040" Wire gauge

T109-213 Bending tool

CAUTION: Secondary venturi (two) must be installed in correct locations. Check part numbers on venturi against part numbers on parts list for locations.



Cadillac 8—1959—Carbureters Nos. 2814S-2815S

WHEN SERVICING, USE GASKET ASSORTMENT No. 315, RE-CARBURETION KIT No. 1977N

PART NAMES, IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF RE-CARBURETION KIT

Part No.	PART NAME	
1A-134	—FLANGE GASKET	
2-196	Secondary throttle valve	(2)
2-226	—Primary throttle valve	(2)
3-1134S	Primary throttle shaft and lever assembly	
3-1135S	Secondary throttle shaft and dog assembly	
3-1158S	Auxiliary throttle shaft, valve and weight assembly	
4A-175	Primary throttle shaft dog	
6-1406S	—Air horn assembly	
7-218	Choke valve	
11B-35	Rivet plug	
11B-79	Rivet plug	(2)
11B-134	Rivet plug (2815S)	
11B-176	Idle port rivet plug	(2)
11B-366	Lead plug	(2)
11B-372	Level sight plug	(2)
11B-383	Lead plug	(2)
11B-385	Fuel inlet plug	
14-512	Outside choke shaft lever	
14-550	Inside choke shaft lever	
14-568S	Choke lever and shaft assembly	
14-609S	Choke piston lever link and pin assembly	
14-612S	Choke shaft and lever assembly (piston housing)	
15-58S	Fuel inlet fitting assembly	
16-106	—STEP UP ROD (.069" x .055")	(2)

Part No.	PART NAME	
17-51	Pump discharge check needle	
20-43	Piston housing gasket	
20-126	Needle seat gasket	(2)
20-127	Fuel inlet fitting gasket	
21-188S	Float and lever assembly	(2)
24-29	Float lever pin	(2)
25-324S	NEEDLE AND SEAT ASSEMBLY (.1015")	(2)
30-78	Fuel inlet strainer	
30A-78	Idle air adjustment screw	
30A-81	Idle adjustment screw	(2)
39-11	Choke valve attaching screw	(2)
47-30	Piston housing welsh plug	
47-33	Venturi welsh plug	(2)
47-34	Spark port welsh plug	
48-270S	Pump jet and housing assembly	
49-191S	Electro magnet plunger assembly (2815S)	
53A-419	Secondary throttle operating lever	
53A-440S	Lockout arm and collar assembly	
58-270S	Secondary venturi assembly (choke side)	
58-271S	Secondary venturi assembly (pump side)	
58-355S	—Primary venturi assembly (pump side)	
58-356S	—Primary venturi assembly (choke side)	
61-84	Idle and fast idle adjusting screw spring	(3)
61-171	Pump spring (lower)	

Part No.	PART NAME	
61-259	VACUUM PISTON SPRING	(2)
61-438	Diaphragm return spring (2815S)	
61-502	Electro magnet plunger spring (2815S)	
61-585	Step up rod retaining spring	(2)
61-592	Throttle flex spring	
61-599	Idle air adjustment screw spring	
61-618	Secondary throttle return spring	
63-58	Coil housing retainer	(3)
64-211S	PUMP PLUNGER ROD AND SPRING ASSEMBLY	
65-43	Step up piston cover plate	(2)
86-58	Air conditioning unit lock washer (2815S)	
101-65	Choke shaft lever attaching screw	(2)
101-74	Throttle shaft lever attaching screw	(2)
101-136	Coil housing attaching screw	(3)
101-142S	Electro magnet housing attaching screw and washer assembly (2815S)	(2)
101-152S	Air horn attaching screw and washer assembly	
101-184S	Pump jet housing attaching screw and washer assembly	(2)
101-213S	Diaphragm cover attaching screw and washer assembly (2815S)	(6)
101-362S	Air horn attaching screw and washer assembly (2814S (8) (2815S (6)	
101-379S	Primary and secondary venturi attaching screw and washer assembly	(8)
101-386S	Air horn attaching screw and washer assembly (2815S)	(2)
101-419	Secondary throttle valve attaching screw	(4)
101-420	Primary throttle valve attaching screw	(4)
101-421	Pump arm attaching screw	
101-429	Fast idle adjustment screw	
101-431S	Air horn attaching screw and washer assembly	
101-435S	Step up piston cover plate attaching screw and washer assembly	(2)
101-436	Piston housing attaching screw	(3)
101-451	Fast idle cam attaching screw	
101-453S	Thermostatic valve attaching screw and washer assembly	(2)
103-14	Lead shot (180")	
103-16	Lead shot (200")	(2)
105A-12	Air conditioning diaphragm unit lock nut (2815S)	
105A-49	Air conditioning unit to bracket attaching nut (2815S)	
105A-53	Air conditioning unit adjusting nut (2815S)	
111-76	Pump arm	

Part No	PART NAME	
114-146	Primary throttle shaft arm (center)	
114-147	Primary throttle shaft arm (inner)	
115-284	Fast idle connector rod	
115-285	Choke connector rod	
115-317	—Throttle operating rod	
115-322	—Throttle connector rod	
116-13	Air conditioning unit check ball (2815S)	
117-174	Pump connector link	
120-163	PRIMARY METERING JET (098")	(2)
120-165	—Secondary metering jet (086")	(2)
121-78	COIL HOUSING GASKET	
121-190	Electro magnet housing gasket (2815S)	
121-287	PUMP JET HOUSING GASKET	
121-288	PRIMARY VENTURI CLUSTER GASKET	(2)
121-292	AIR HORN GASKET	
121-293	SECONDARY VENTURI CLUSTER GASKET	(2)
121-314	Thermostatic valve gasket	
122-108S	Pump intake ball check assembly	
136-34	Choke piston lever retaining washer	
136-160	Secondary throttle shaft washer	
150-168	Air conditioning unit diaphragm air bleed pin (2815S)	
150-190	Choke piston pin	
150A-10	Pin spring	(6)
150A-21	Pin spring	
160-153	Step up piston	(2)
160-168	Choke piston	
169-30S	Thermostatic valve assembly	
170-190	Inner diaphragm housing (2815S)	
170-298S	Outer diaphragm housing and plug assembly (2815S)	
170 559S	Piston housing and plug assembly	
170AD-478S	Thermostatic coil and housing assembly	
172-22	Throttle connector rod retainer	
180-96	Air conditioning unit bracket (2815S)	
181-262	Fast idle cam	
186-64	Choke baffle plate	
186-70	Fuel bowl baffle	(2)
186-76	FLANGE BAFFLE PLATE	
202-109S	Air conditioning unit diaphragm and shaft assembly (2815S)	
202-114U	Unitized package (Consists of 2—101 386S and 1—202 110S (2815S)	
213-21S	Electro magnet and housing assembly (2815S)	

—Parts so marked are new and listed for the first time

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

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Form 5309C

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST LOUIS, MO, U S A

CADILLAC 2696S-2697S-2802S-2862S-2863S
November 1957
Revised June, 1958

CADILLAC

(Use 2696S with 202-114U to replace 2697S)

(Use 2696S with 202-114U and 76-101S to replace 2802S)

All Single Carbureter Installations

When replacing another make carbureter with (2696S or 2862S), (1) Throttle lever adaptor Carter part 4 856 (1) Carter 202 114U (with air conditioning), (1) 5/16" fuel line 12" long one end cut at 45° angle, (1) 3/16" vacuum spark line 28" long is required Re use old choke tube cover

(Use 2862S with 202-114U and 76-101S to replace 2863S)

1958

AFB Four-Bore Down-Draft Climatic® Control Carbureters Nos. 2696S-2862S (Cars Without Air Conditioning), 2697S-2802S-2863S (Cars With Air Conditioning)

CARBURETER SPECIFICATIONS

For Cadillac 8 Cylinder 365 Cu In Engine

Dimensions Flange four bore—4 bolt type
Throttle bore primary 1 7/16 inch secondary 1 11/16 inch I D
Primary venturi size primary side 11/32 inch secondary side 11/32 inch I D
Main venturi size primary side 1 3/16 inch secondary side 1 9/16 inch I D

Vents Inside (4) in air horn Outside (4) in body

Low Speed Circuit (Primary side only)
Jet size (2696S 2697S 2802S) No 67 (.032 inch) (2862S 2863S) No 66 (.033 inch) drill
By pass size (2696S 2697S 2802S) No 55 (.052 inch) (2862S 2863S) No 56 (.0465 inch) drill
Economizer size No 56 (.0465 inch) drill
Idle bleed size No 55 (.052 inch) drill
Idle port slot type length (2696S 2697S 2802S) 144 inch (2862S 2863S) 180 inch width 030 inch

Idle Port Opening (2696S 2697S 2802S) 082 to 088 inch (2862S 2863S) 123 to 129 inch above top edge of valve with valve tightly closed

Set Idle Adjustment Screw 3/4 to 2 1/4 turns open For richer mixture turn screw out Do not idle engine below 450 R P M (Transmission in Drive Range) For cars with air conditioning see Air Conditioner Fast Idle Device Adjustment —page two

Main Nozzle Installed permanently DO NOT REMOVE Anti-percolator bleed primary (tube in venturi assembly) size No 70 (.028 inch) drill Secondary (drilled hole in venturi assembly) size No 68 (.031 inch) drill

Main Vent Tube: (In venturi assembly) Side holes primary side 11—Size No 70 (.028 inch) drill secondary 3—size No 70 (.028 inch) drill Air bleed to vent tube secondary side size No 57 (.043 inch) drill

Secondary Initial Discharge (In venturi assembly secondary side only) Air bleed size No 55 (.052 inch) drill Discharge port size (2696S 2697S 2802S early prod No 52 (.0635 inch) (2696S 2697S 2802S late prod and 2862S 2863S) No 48 (.076 inch) drill

Accelerating Pump Discharge jet (twin) primary side only size No 72 (.025 inch) drill Intake ball check seat (2696S 2697S 2808S early prod) screw plug installed from lower side of flange size 115 to 120 inch (2696S 2697S 2802S late prod and 2862S 2863S) ball check assembly installed from inside of bowl size 125 to 130 inch diameter Discharge needle seat size No 50 (.070 inch) drill

Choke Carter Climatic® Control set on index Butterfly type —offset valve primary side only Choke heat suction hole bushing between body and piston housing size (early prod) No 45 (.082 inch) (late prod) No 43 (.089 inch) drill

Vacuum Spark Port Half round port length 180 inch width 081 inch Bottom of port 002 to 008 inch above lower edge of valve with valve tightly closed

Motor Tune-Up — Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open	Float Setting	Idle Adjustment Screw Setting
.035"	.0125" .0175" 28° to 32° Dwell	5° B T C (at "A" Mark) At Vibration Damper	5/16 Inch (Use Gauge T109-107)	3/4 to 2 1/4 Turns Open Idle Engine at 450 R P M In Drive Range

NOTE These cars are equipped with Hydraulic Valve Lifters — NO ADJUSTMENT

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CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3729

FLOAT ALIGNMENT: Side of floats parallel to edge of casting. Minimum clearance between lever and air horn lugs without binding. To adjust, bend float lever.

FLOAT LEVEL: 5/16 inch (Gauge T109-107) between top of floats (at outer end) and air horn gasket. To adjust, bend float lever.

FLOAT DROP: 23/32 inch between top of floats (at outer end) and air horn gasket. To adjust, bend stop tabs on float brackets.

PUMP: 15/32 inch from the top of the bowl cover to the top of the plunger shaft, with throttle connector rod in inner hole (long stroke) of pump arm. To adjust, bend throttle connector rod.

CHOKE PISTON LEVER ADJUSTMENT: .040 inch (Gauge T109-193) between choke lever and stop in piston housing with choke valve closed. To adjust, bend choke connector rod.

FAST IDLE LINKAGE ADJUSTMENT: With choke valve tightly closed and lug on outer choke shaft lever contacting stop on inner choke shaft lever align center of fast idle screw with index mark on cam. To adjust, bend fast idle connector rod.

FAST IDLE THROTTLE VALVE CLEARANCE: .023 inch (Gauge T109-189) between lower edge of valve and bore with adjusting screw on index mark of cam.

FAST IDLE ON CAR: 1750 R. P. M. hot engine with fast idle screw on index mark of cam.

UNLOADER: 9/32 inch (Gauge T109-126) between upper edge of choke valve and inner wall of air horn. To adjust, bend unloader lip on throttle lever.

SECONDARY THROTTLE LEVER ADJUSTMENT: 1. Block choke valve wide open. 2. With 23/64 inch between lower edge of primary valve and bore (opposite idle port) secondary valves should just start to open. To adjust, bend throttle operating rod. NOTE: At wide open throttle secondary valves will be a few degrees from wide open. 3. With primary and secondary valves in tightly closed position there should be .010" to .030" (Gauge T109-29) between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on secondary lever.

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: 1. Crack throttle valves and manually open and close the choke valve. Tang on secondary throttle lever should freely engage in notch of lock-out dog. To adjust, bend tang on secondary throttle lever. 2. With lock-out dog held tight against stop on flange casting and secondary throttle valves partially open there should be .020 inch (Gauge T109-29) between tang on secondary throttle lever and lock-out arm. To adjust, bend arm at slot on lock-out dog. NOTE: Fast idle cam may be removed to facilitate gauging and adjusting.

CHOKE MODIFIER ADJUSTMENT: 1. Set Climatic® Control on index. 2. Loosen clamp screw. 3. Remove lower end of connector rod. 4. Rotate metal pointer until it is in line with raised pointer on coil housing. 5. Align scribed line on lever so that it is in a horizontal position. Hold in place and tighten clamp screw. 6. Seat throttle valves (hold choke valve wide open). 7. Hold pointer as indicated in No. 4. Lower end of rod must slide freely into hole in throttle arm. To adjust, bend rod at upper angle.

IDLE SPEED AND MIXTURE ADJUSTMENT (Normal Engine Temp.): In making the idle adjustment on the engine, the air adjustment screw is used to adjust idle speed in a similar manner as the throttle speed screw used previously. Turning the air adjustment screw outward increases engine speeds, but also leans the mixture supplied to the manifold which must be compensated for by adjustment of the idle mixture adjusting screws.

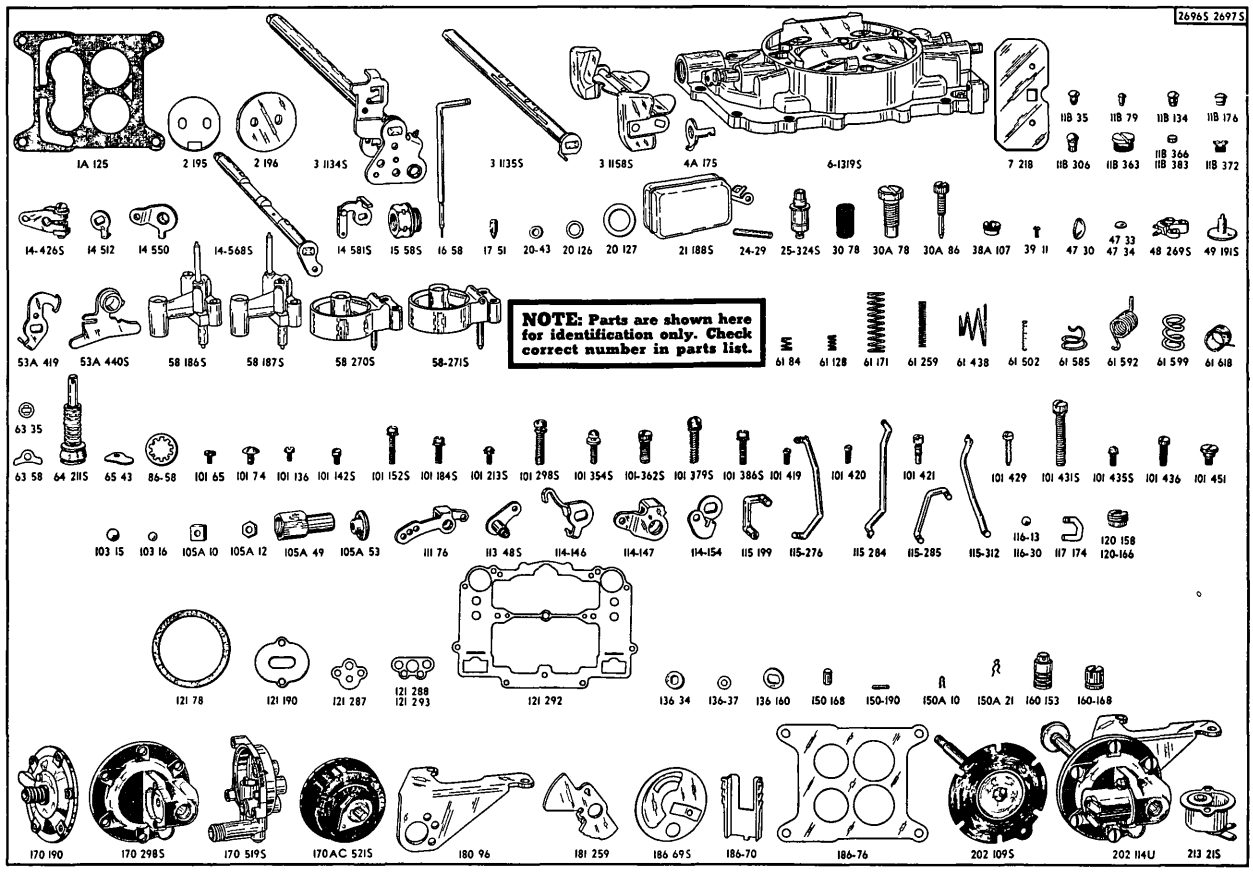
AIR CONDITIONER FAST IDLE DEVICE ADJUSTMENT: This adjustment must be made after carbureter is installed on car, engine at normal operating temperature and slow idle adjustment is completed. Procedure is as follows:

1. Shift lever in drive range.
2. Disconnect short wire from terminal at front of refrigeration compressor to stop compressor.
3. Turn air conditioner on and turn temperature control switch toward cooler position.
4. Loosen fast idle device lock nut on diaphragm shaft and adjust knurled nut to idle engine at 525 R. P. M., then tighten lock nut.
5. Connect short wire to terminal on compressor.

TOOLS REQUIRED FOR SERVICING CARBURETERS:

T109-29	.020"-.030" Wire gauge	T109-126	9/32" Unloader gauge
T109-41	Bending tool	T109-189	.023" Wire gauge
T109-107	5/16" Float gauge	T109-193	.040" Wire gauge

T109-213 Bending tool



Cadillac—1958—Carbureters Nos. 2696S-2697S-2802S-2862S-2863S

WHEN SERVICING, USE GASKET ASSORTMENT No. 315; RE-CARBURETION KIT No. 1945N (2696S-2697S-2802S), No. 1970N (2862S-2863S)

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF RE-CARBURETION KIT

Part No.	PART NAME	
1A-125	FLANGE GASKET	
2-195	Primary throttle valve	(2)
2-196	Secondary throttle valve	(2)
3-1134S	Primary throttle shaft and lever assembly	
3-1135S	Secondary throttle shaft and dog assembly	
3-1158S	Auxiliary throttle shaft, valve and weight assembly	
4A-175	Primary throttle shaft dog	
6-1319S	Air horn assembly	
7-218	Choke valve	
11B-35	Rivet plug	
11B-79	Rivet plug	(2)
11B-134	Rivet plug (2697S 2802S 2863S)	
11B-176	Idle port rivet plug	(2)
11B-306	Fuel inlet plug (Sup by 11B-385) (2696S 2697S)	
11B-363	Pump intake screw plug (2696S 2697S 2802S early prod)	
11B-366	Lead plug	(2)
11B-372	Level sight plug	(2)
11B-383	Lead plug	(2)
11B-385	Fuel inlet plug	
14-426S	Coil shaft lever and screw assembly	
14-512	Outside choke shaft lever	
14-550	Inside choke shaft lever	
14-568S	Choke lever and shaft assembly	
14-581S	Choke piston lever, link and pin assembly (use with 170-159S) (2696S 2697S)	
14-609S	Choke piston lever link and pin assembly (use with 170-559S)	
14-612S	Choke shaft and lever assembly (piston housing) (use with 170 559S)	
15-58S	Fuel inlet fitting assembly	
16-58	Step-up rod 071" x 062" x .040" (Sup. by 16-59) (2696S-2697S)	(2)
16-59	Step-up rod 071" x 062" x 040" (2696S-2697S-2802S) (Sup by 16-73)	(2)
16-73	—STEP-UP ROD 069" x 062" x 043" (2696S-2697S-2802S)	(2)
16-77	—STEP UP ROD 069" x 060" (2862S 2863S)	(2)

Part No.	PART NAME	
17-51	Pump discharge check needle	
20-43	Piston housing gasket	
20-126	Needle seat gasket	(2)
20-127	Fuel inlet fitting gasket	
21-188S	Float and lever assembly	(2)
24-29	Float lever pin	(2)
25-324S	NEEDLE AND SEAT ASSEMBLY (1015")	(2)
30-78	Fuel inlet strainer	
30A-78	Idle air adjustment screw	
30A-81	Idle adjustment screw	(2)
30A-86	Idle adjustment screw (Sup by 30A 81) (2696S-2697S)	(2)
38A-107	Pump intake ball check (2696S 2697S 2802S (early prod)	
39-11	Choke valve attaching screw	(2)
47-30	Piston housing welsh plug	
47-33	Venturi welsh plug	(4)
47-34	Spark port welsh plug	
48-269S	Pump jet and housing assembly	
49-191S	Electro magnet plunger assembly (2697S 2802S 2863S)	
53A-419	Secondary throttle operating lever	
53A-440S	Lockout arm and collar assembly	
58-186S	Primary venturi assembly (choke side) (2696S-2697S 2802S)	
58-187S	Primary venturi assembly (pump side) (2696S-2697S-2802S)	
58-270S	Secondary venturi assembly (choke side) (2696S-2697S 2802S) (Sup by 58-314S)	
58-271S	Secondary venturi assembly (pump side) (2696S 2697S-2802S) (Sup by 58-315S)	
58-314S	Secondary venturi assembly (choke side)	
58-315S	Secondary venturi assembly (pump side)	
58-343S	Primary venturi assembly (pump side) (2862S 2863S)	
58-344S	Primary venturi assembly (choke side) (2862S 2863S)	
61-84	Idle and fast idle adjusting screw spring	(3)

Part No.	PART NAME
61-128	Throttle connector rod spring (2696S-2697S 2802S used with 115-199 and 115-276) (2)
61-171	Pump spring (lower)
61-259	VACUUM PISTON SPRING (2696S 2697S-2802S) (2)
61-438	Diaphragm return spring (2697S-2802S-2863S)
61-478	VACUUM PISTON SPRING (2862S-2863S) (2)
61-502	Electro magnet plunger spring (2697S 2802S-2863S)
61-585	Step up rod retaining spring (2)
61-592	Throttle flex spring
61-599	Idle air adjustment screw spring
61-618	Secondary throttle return spring
63-35	Connector rod retainer (2696S-2697S-2802S used with 115 199 and 115-276) (2)
63-58	Coil housing retainer (3)
64-211S	PUMP PLUNGER, ROD AND SPRING ASSEMBLY
65-43	Step-up piston cover plate (2)
76-101S	Ground wire assembly (2802S-2863S)
86-58	Air conditioning unit lock washer (2697S 2802S 2863S)
101-65	Choke shaft lever attaching screw (2)
101-74	Throttle shaft lever attaching screw (2)
101-136	Coil housing attaching screw (3)
101-142S	Electro magnet housing attaching screw and washer assembly (2697S-2802S-2863S) (2)
101-152S	Air horn attaching screw and washer assembly
101-184S	Pump jet housing attaching screw and washer assembly (2)
101-213S	Diaphragm cover attaching screw and washer assembly (2697S-2802S 2863S) (6)
101-298S	Primary Venturi attaching screw and washer assembly—(length 1⅛" (2696S-2697S-2802S early prod) (Sup by 101 379S) (2)
101-354S	Coil shaft clamp screw and washer assembly
101-362S	Air horn attaching screw and washer assembly (2696S 2862S (8), 2697S-2802S-2863S (6)
101-379S	Primary and secondary venturi attaching screw and washer assembly—length 1" (8)
101-386S	Air horn attaching screw and washer assembly (2697S 2802S-2863S) (2)
101-419	Secondary throttle valve attaching screw (4)
101-420	Primary throttle valve attaching screw (4)
101-421	Pump arm attaching screw
101-429	Fast idle adjustment screw
101-431S	Air horn attaching screw and washer assembly
101-435S	Step-up piston cover plate attaching screw and washer assembly (2)
101-436	Piston housing attaching screw (3)
101-451	Fast idle cam attaching screw
103-14	Lead shot (late prod) (180")
103-15	Lead shot (early prod.) (240") (2696S-2697S early prod)
103-16	Lead shot (200") (2)
105A-10	Choke lever clamp screw nut
105A-12	Air conditioning diaphragm unit lock nut (2697S 2802S-2863S)
105A-49	Air conditioning unit to bracket attaching nut (2697S-2802S-2863S)
105A-53	Air conditioning unit adjusting nut 2697S 2802S-2863S)
111-76	Pump arm
113-48S	Choke shaft and lever assembly (piston housing) (use with 170-519S) (2696S-2697S)
114-146	Primary throttle shaft arm (center)
114-147	Primary throttle shaft arm (inner)
114-154	Primary throttle shaft arm (outer)
115-199	Throttle operating rod (2696S 2697S 2802S) (Sup by 115 317)
115-276	Throttle connector rod (2696S-2697S 2802S) (Sup by 115-322 and 172 22)
115-284	Fast idle connector rod
115-285	Choke connector rod
115-312	Choke connector rod (Climatic® Control side)
115-317	—Throttle operating rod
115-322	—Throttle connector rod
116-13	Air conditioning unit check ball (2697S 2802S 2863S)
116-30	Pump intake check ball (2696S-2697S-2802S early prod)
117-174	Pump connector link
120-158	Secondary metering jet (082") (2)
120-163	PRIMARY METERING JET (098") (2)
121-78	COIL HOUSING GASKET
121-190	Electro magnet housing gasket (2697S 2802S-2863S)
121-287	PUMP JET HOUSING GASKET
121-288	PRIMARY VENTURI CLUSTER GASKET (2)
121-292	AIR HORN GASKET
121-293	SECONDARY VENTURI CLUSTER GASKET (2)
122-108S	—Pump intake ball check assembly (Install from inside of bowl)
136-34	Choke piston lever retaining washer (use (2) with 170 519S (1) with 170 559S)
136-37	Connector rod washer (2696S 2697S 2802S used with 115 199 and 115 276) (3)
136-160	Secondary throttle shaft washer
150-168	Air conditioning unit diaphragm air bleed pin (2697S 2802S 2863S)
150-190	Choke piston pin
150A-10	Pin spring (6)
150A-21	Pin spring
160-153	Step up piston (2)
160-168	Choke piston
170-190	Inner diaphragm housing (2697S-2802S 2863S)
170-298S	Outer diaphragm housing and plug assembly (2697S 2802S-2863S
170-519S	Piston housing and plug assembly (early prod casting No 170 427) (2696S 2697S)
170-559S	Piston housing and plug assembly (late prod) (Casting No 170 557)
170AC-521S	Thermostatic coil and housing assembly (Sup by 170AD 521S) (2696S 2697S-2802S)
170AD-521S	Thermostatic coil and housing assembly
172-22	Throttle connector rod retainer (use 115-322)
180-96	Air conditioning unit bracket (2697S 2802S-2863S)
181-259	Fast idle cam (Sup by 181 262) (2696S 2697S 2802S)
181-262	Fast idle cam
186-69S	Choke baffle plate assembly
186-70	Fuel bowl baffle (2)
186-76	FLANGE BAFFLE PLATE
202-109S	Air conditioning unit diaphragm and shaft assembly (2697S 2802S 2863S)
202-114U	Unitized package (Consists of 2—101-386S and 1—202-110S (2697S-2802S 2863S)
213-21S	Electro magnet and housing assembly (2697S 2802S 2863S)

—Parts so marked are new and listed for the first time.

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used

CARTER CARBURETOR

DIVISION OF acf INDUSTRIES
INCORPORATED
ST. LOUIS 7, MO., U.S.A.

GENERAL BULLETIN

BULLETIN NO. 8 Cadillac

ALL CARBURETER ACCOUNTS

DATE January 27, 1958

SUBJECT: 1957 and 1958 Cadillac AFB-2479S and 2696S (4 Bore) Carbureters

We have had requests for a listing of the additional material required to install an AFB-2479S carbureter on a 1957 Cadillac, or an AFB-2696S on a 1958 Cadillac not originally equipped with a Carter carbureter. The additional material is as follows:

1 Throttle lever adaptor, Carter part 4-856, list price $1.45.

1 Fuel line 5/16" tubing (1957 17" long) (1958 12" long).

1 Choke hot air line 1/4" tubing 28" long, one end cut at 45° angle. The original choke line insulating cover should be re-used.

1 Vacuum spark line 3/16" tubing 28" long.

If equipped with air conditioning, one (1) Carter air conditioning fast idle control 202-114U.

It is very important that the 186-76 flange baffle plate (included with carbureter) be installed next to the carbureter to prevent exhaust gas damage to the casting.

On either a replacement or original equipment installation, the accelerator linkage should be checked for possible binding between the linkage and the fast idle cam or air conditioning fast idle control.

An initial shipment is being made to Central Distributors of a limited quantity of the 4-856 adaptor.

V. F. Thompson, Manager
Distribution Sales

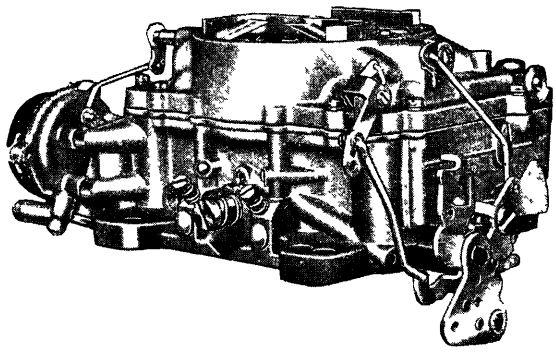
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cc: Personnel and Extra Copies - U.S.A. and Canada

IMPORTANT: THIS BULLETIN CONTAINS INFORMATI N OF VALUE TO YOU AND WAS PREPARED AT CONSIDERABLE EXPENSE TO BE OF SERVICE TO YOU. FAILURE TO USE THIS INFORMATION MAY COST YOU MONEY. WE SUGGEST THAT YOU ISSUE COPIES OF IT TO THOSE F YOUR STAFF INTERESTED, S THAT THEY CAN BE FILED IN REGULAR CARTER SALES AND SERVICE MANUAL.

FORM C-2914-D

PRINTED IN U. S. A.



CADILLAC

All Models Except Eldorado and Two Carbureter Installati ns

1957

(Use 2479S with 202-114U to replace 2480S)

AFB Four-Bore Down-Draft Climatic® Control **Carbureters Nos. 2479S** (Cars Without Air Conditioning), **2480S** (Cars With Air Conditioning)

CARBURETER SPECIFICATIONS

For Cadillac 8 Cylinder 365 Cu. In. Engine

Dimensions: Flange, four-bore—4 bolt type
Throttle bore, primary, 1-7/16 inch; secondary 1-11/16 inch I. D.
Primary venturi size, primary side, 11/32 inch, secondary side, 11/32 inch I. D.
Main venturi size, primary side, 1-3/16 inch, secondary side, 1-9/16 inch I. D.

Vents: Inside (4) in air horn; Outside (4) in body

Gasoline Intake: Size No. 38 (.1015 inch) drill hole in needle seat.

Low Speed Jet Tube: (In venturi assembly, primary side only.)
Jet, size No. 67 (.032 inch) drill.
By-pass, size No. 55 (.052 inch) drill.
Economizer, size No. 56 (.0465 inch) drill.
Idle bleed, size No. 55 (.052 inch) drill.

Idle Port: (Upper slot type. Primary, length .144 inch; width .030 inch. Secondary, none.

Idle Port Opening: Primary .082 to .088 inch above top edge of valve with valve tightly closed. Secondary, none.

Set Idle Adjustment Screw: 3/4 to 2 1/4 turns open. For richer mixture turn screw out. Do not idle engine below 450 R. P. M (Transmission in Drive Range). For cars with air conditioning set idle at 450 R P. M. with air conditioning on (Transmission in Drive Range).

Main Nozzle: Installed permanently. DO NOT REMOVE. Anti-percolator bleed, primary, (tube in venturi assembly) size No. 70 (.028 inch) drill. Secondary, (drilled hole in venturi asembly) size No. 68 (.031 inch) drill.

Main Vent Tube: (In venturi assembly). Side holes primary side 11—Size No. 70 (.028 inch) drill; secondary 3—size No. 70 (.028 inch) drill. Air bleed to vent tube, secondary side, size No. 57 (.043 inch) drill.

Secondary Initial Discharge: (In venturi assembly, secondary side only.) Air bleed, size No. 73 (.024 inch) drill. Discharge port size No. 52 (.0635 inch) drill.

Accelerating Pump: Discharge jet (twin) primary side only, size No. 72 (.025 inch drill. Intake ball check seat (screw plug), size .115 to .120 inch diameter. Discharge needle seat size No. 50 (.070 inch) drill.

Choke: Carter Climatic® Control set on index. Butterfly type—offset choke valve, primary side only. Choke heat suction hole, bushing between body and piston housing, size No. 45 (.082) inch drill.

Vacuum Spark Port: Half round port length. .180 inch, width .081 inch. Bottom of port .002 to .008 inch above lower edge of valve with valve tightly closed.

Motor Tune-Up — Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .0125"-.0175" 28° to 32° Dwell	Ignition Timing Breaker Points to Open: 5° B. T. C. (at "A" Mark) At Vibration Damper	Float Setting 5/16 Inch (Use Gauge T109-107)	Idle Adjustment Screw Setting 3/4 to 2 1/4 Turns Open Idle Engine at 450 R.P.M. In Drive Range

NOTE: These cars are equipped with Hydraulic Valve Lifters — NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3729

FLOAT ALIGNMENT: Side of floats parallel to edge of casting. Minimum clearance between lever and air horn lugs without binding. To adjust, bend float lever.

FLOAT LEVEL: 5/16 inch (gauge T109-107) between top of floats (at outer end) and air horn gasket. To adjust, bend float lever.

FLOAT DROP: 23/32 inch between top of floats (at outer end) and air horn gasket. To adjust, bend stop tabs on float brackets.

PUMP: 15/32 inch from the top of the bowl cover to the top of the plunger shaft, with throttle connector rod in inner hole (long stroke) of pump arm. To adjust, bend throttle connector rod.

CHOKE PISTON LEVER ADJUSTMENT: .040 inch (Gauge T109-193) between choke lever and stop in piston housing with choke valve closed. To adjust, bend choke connector rod.

FAST IDLE LINKAGE ADJUSTMENT: With choke valve tightly closed and lug on outer choke shaft lever contacting stop on inner choke shaft lever align center of fast idle screw with index mark on cam. To adjust, bend fast idle connector rod.

FAST IDLE THROTTLE VALVE CLEARANCE: .023 inch (Gauge T109-189) between lower edge of valve and bore with adjusting screw on index mark of cam.

FAST IDLE ON CAR: 1750 R.P.M. hot engine with fast idle screw on index mark of cam.

UNLOADER: 9/32 inch (Gauge T109-126) between upper edge of choke valve and inner wall of air horn. To adjust, bend unloader lip on throttle lever.

SECONDARY THROTTLE LEVER ADJUSTMENT: 1. Block choke valve wide open. 2. With 23/64 inch between lower edge of primary valve and bore (opposite idle port) secondary valves should just start to open. To adjust, bend throttle operating rod. NOTE: At wide open throttle secondary valves will be a few degrees from wide open. 3. With primary and secondary valves in tightly closed position there should be .017" to .022" (Gauge T109-29) between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on secondary lever.

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT. 1. Crack throttle valves and manually open and close the choke valve. Tang on secondary throttle lever should freely engage in notch of lock-out dog. To adjust, bend tang on secondary throttle lever. 2. With lock-out dog held tight against stop on flange casting and secondary throttle valves partially open there should be .020 inch (Gauge T109-29) between tang on secondary throttle lever and lock-out arm. To adjust, bend arm at slot on lock-out dog. NOTE: Fast idle cam may be removed to facilitate gauging and adjusting.

CHOKE MODIFIER ADJUSTMENT: 1. Set Climatic® Control on index. 2. Loosen clamp screw. 3. Remove lower end of connector rod. 4. Rotate metal pointer until it is in line with raised pointer on coil housing. 5. Align scribed line on lever so that it is in a horizontal position. Hold in place and tighten clamp screw. 6 Seat throttle valves (hold choke valve wide open). 7. Hold pointer as indicated in No. 4. Lower end of rod must slide freely into hole in throttle arm. To adjust, bend rod at upper angle.

IDLE SPEED AND MIXTURE ADJUSTMENT (Normal Engine Temp.): In making the idle adjustment on the engine, the air adjustment screw is used to adjust idle speed in a similar manner as the throttle speed screw used previously. Turning the air adjustment screw outward increases engine speeds, but also leans the mixture supplied to the manifold which must be compensated for by adjustment of the idle mixture adjusting screws.

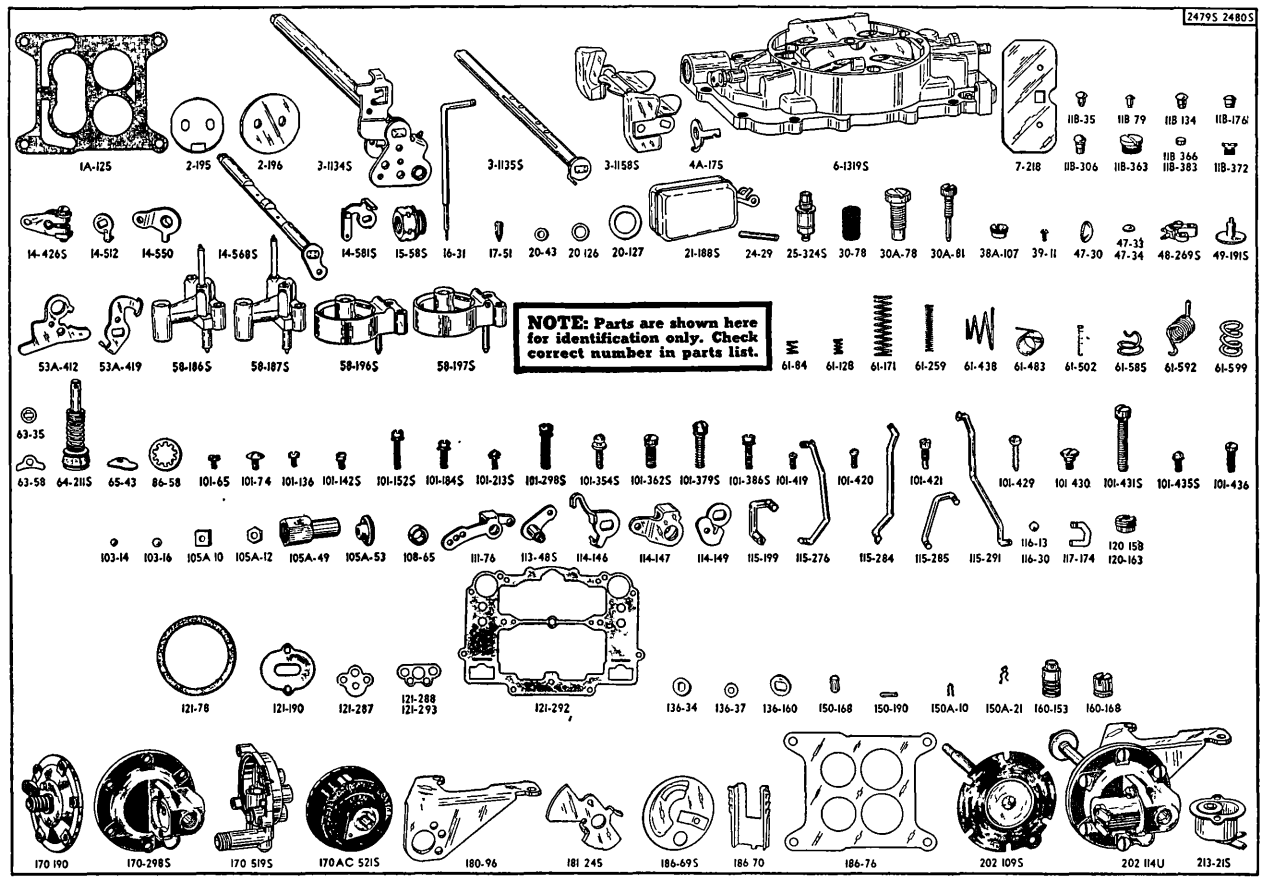
AIR CONDITIONER FAST IDLE DEVICE ADJUSTMENT: This adjustment must be made after carbureter is installed on car, engine at normal operating temperature and slow idle adjustment is completed. With shift lever in neutral and air conditioner turned on engine should idle 900 R.P.M. To adjust, loosen lock nut on diaphragm shaft and adjust knurled nut to obtain specified R.P.M., then tighten lock nut.

TOOLS REQUIRED FOR SERVICING CARBURETERS:

T109-29	.020"-.030" Wire gauge	T109-126	9/32" Unloader gauge
T109-41	Bending tool	T109-189	.023" Wire gauge
T109-107	5/16" Float gauge	T109-193	.040" Wire gauge

T109-213 Bending tool

CAUTION: Secondary venturi (two) must be installed in correct locations. Check part numbers on venturi against part numbers on parts list for locations.



Cadillac—1957—Carbureters Nos. 2479S-2480S

WHEN SERVICING, USE GASKET ASSORTMENT No. 315; RE-CARBURETION KIT No. 1902N

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF RE-CARBURETION KIT

Part No.	PART NAME	
1A-125	—FLANGE GASKET	
2-195	—Primary throttle valve	(2)
2-196	Secondary throttle valve	(2)
3-1134S	—Primary throttle shaft and lever assembly	
3-1135S	—Secondary throttle shaft and dog assembly	
3-1158S	—Auxiliary throttle shaft, valve and weight assembly	
4A-175	Primary throttle shaft dog	
6-1319S	—Air horn assembly	
7-218	Choke valve	
11B-35	Rivet plug	
11B-79	Rivet plug	(2)
11B-134	Rivet plug (2480S)	
11B-176	Idle port rivet plug	(2)
11B-306	Fuel inlet plug	
11B-363	Pump intake screw plug	
11B-366	Lead plug	(2)
11B-372	Level sight plug	(2)
11B-383	—Lead plug	(2)
14-426S	Coil shaft lever and screw assembly	
14-512	Outside choke shaft lever	
14-550	Inside choke shaft lever	
14-568S	—Choke lever and shaft assembly	
14-581S	Choke piston lever, link and pin assembly	
15-58S	Fuel inlet fitting assembly	
16-31	—STEP-UP ROD .07225" x .066" x .046"	(2)
17-51	Pump discharge check needle	
20-43	Piston housing gasket	
20-126	Needle seat gasket	(2)
20-127	Fuel inlet fitting gasket	
21-188S	—Float and lever assembly	(2)
24-29	Float lever pin	(2)
25-324S	NEEDLE AND SEAT ASSEMBLY	(2)
30-78	Fuel inlet strainer	
30A-78	—Idle air adjustment screw	
30A-81	—Idle adjustment screw	(2)
38A-107	Pump intake check ball seat	
39-11	Choke valve attaching screw	(2)
47-30	Piston housing welsh plug	
47-33	Venturi welsh plug	(4)
47-34	Spark port welsh plug	
48-269S	—Pump jet and housing assembly	
49-191S	Electro magnet plunger assembly (2480S)	
53A-412	Lockout dog (Sup. by 53A-440S)	
53A-419	—Secondary throttle operating lever	
53A-440S	—Lockout arm and collar assembly	
58-186S	—Primary venturi assembly (choke side)	
58-187S	—Primary venturi assembly (pump side)	
58-196S	—Secondary venturi assembly (choke side)	
58-197S	—Secondary venturi assembly (pump side)	
61-84	*Idle, fast idle and air conditioning unit adjusting screw spring (2479S (3), (2480S (4)	
61-128	Throttle connector rod spring	(2)
61-171	Pump spring (lower)	
61-259	VACUUM PISTON SPRING	(2)
61-438	Diaphragm return spring (2480S)	
61-483	Secondary throttle return spring	

Part No.	PART NAME	
61-502	Electro magnet plunger spring (2480S)	
61-585	Step-up rod retaining spring	(2)
61-592	Throttle flex spring	
61-599	—Idle air adjustment screw spring	
63-35	Throttle connector rod retainer	(2)
63-58	Coil housing retainer	(3)
64-211S	—PUMP PLUNGER, ROD AND SPRING ASSEMBLY	
65-43	Step-up piston cover plate	(2)
86-58	Air conditioning unit lock washer (2480S)	
101-65	Choke shaft lever attaching screw	(2)
101-74	Throttle shaft lever attaching screw	(2)
101-136	Coil housing attaching screw	(3)
101-142S	Electro magnet housing attaching screw and washer assembly (2480S)	(2)
101-152S	Air horn attaching screw and washer assembly	
101-184S	Pump jet housing attaching screw and washer assembly	(2)
101-213S	Diaphragm cover attaching screw and washer assembly (2480S)	(6)
101-298S	Primary venturi attaching screw and washer assembly	(4)
101-354S	Coil shaft clamp screw and washer assembly	
101-362S	Air horn attaching screw and washer assembly (2479S (8), (2480S (6)	
101-379S	Secondary venturi attaching screw and washer assembly	(4)
101-386S	Air horn attaching screw and washer assembly (2480S)	(2)
101-419	Secondary throttle valve attaching screw	(4)
101-420	Primary throttle valve attaching screw	(4)
101-421	Pump arm attaching screw	
101-429	Fast idle adjustment screw	
101-430	—Fast idle cam attaching screw	
101-431S	Air horn attaching screw and washer assembly	
101-435S	Step-up piston cover plate attaching screw and washer assembly	(2)
101-436	Piston housing attaching screw	(3)
103-14	Lead shot (early prod.)	
103-15	Lead shot (late prod.)	
103-16	Lead shot	
105A-10	Choke lever clamp screw nut	
105A-12	Air conditioning diaphragm unit lock nut (2480S)	
105A-49	Air conditioning unit to bracket attaching nut (2480S)	
105A-53	Air conditioning unit adjusting nut (2480S)	
108-65	Fast idle cam spacer (Sup. by 53A-440S)	

Part No.	PART NAME	
111-76	Pump arm	
113-48S	—Choke shaft and lever assembly (piston housing)	
114-146	—Primary throttle shaft arm (center)	
114-147	—Primary throttle shaft arm (inner)	
114-149	—Primary throttle shaft arm (outer)	
115-199	Throttle operating rod	
115-276	Throttle connector rod	
115-234	—Fast idle connector rod	
115-285	—Choke connector rod	
115-291	—Choke connector rod (Climatic® Control side)	
116-13	Air conditioning unit check ball (2480S)	
116-30	Pump intake check ball	
117-174	Pump connector link	
120-158	Secondary metering jet (.082")	(2)
120-163	PRIMARY METERING JET (.098")	(2)
121-78	COIL HOUSING GASKET	
121-190	Electro magnet housing gasket (2480S)	
121-287	PUMP JET HOUSING GASKET	
121-288	PRIMARY VENTURI CLUSTER GASKET	(2)
121-292	AIR HORN GASKET	
121-293	SECONDARY VENTURI CLUSTER GASKET	(2)
136-34	Choke piston lever retaining washer	(2)
136-37	Throttle operating rod washer	(5)
136-160	Secondary throttle shaft washer	
150-168	Air conditioning unit diaphragm air bleed pin (2480S)	
150-190	Choke piston pin	
150A-10	Pin spring	(6)
150A-21	Pin spring	
160-153	Step-up piston	(2)
160-168	Choke piston	
170-190	Inner diaphragm housing (2480S)	
170-298S	Outer diaphragm housing and plug assembly (2480S)	
170-519S	—Piston housing and plug assembly	
170AC-521S	—Thermostatic coil and housing assembly	
180-96	—Air conditioning unit bracket (2480S)	
181-245	—Fast idle cam	
186-69S	—Choke baffle plate assembly	
186-70	Fuel bowl baffle	(2)
186-76	—FLANGE BAFFLE PLATE	
202-109S	—Air conditioning unit diaphragm and shaft assembly (2480S)	
202-114U	—Unitized package (Consists of 2—101-386S and 1—202-110S (2480S)	
213-21S	Electro magnet and housing assembly (2480S)	

—Parts so marked are new and listed for the first time.

*Early prod. 2480S used (4), late prod. uses (3)

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

CARTER CARBURETOR
DIVISION OF ACF INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

CARTER MODEL AFB CARBURETER FOR CADILLAC
(SERVICE ADJUSTMENT PROCEDURE)

NOTE: The parts and specification pages referred to are catalog pages. These pages can be obtained from Carter Carburetor, Catalog Department, St. Louis (7), Missouri. Specify the carbureter number found on the base of the carbureter, when requesting specification pages.

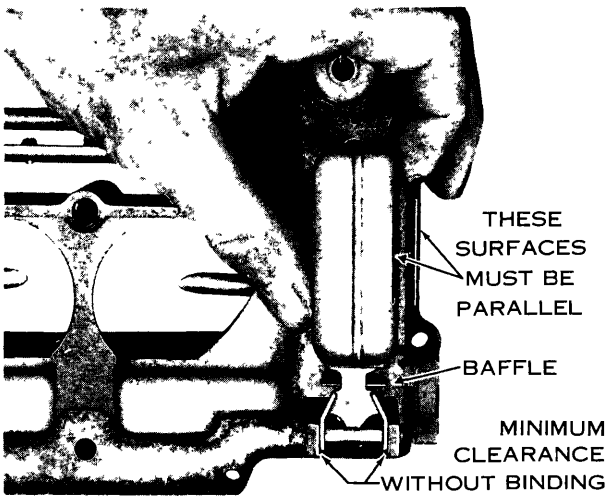


Figure 1

FLOAT ALIGNMENT ADJUSTMENT (Fig. 1):

1. Sight down the side of the float shell to determine if the side of the float is parallel to the outer edge of the air horn casting. TO ADJUST: Bend float lever by applying pressure to the end of the float shell with the fingers while supporting the float lever with thumb.

   CAUTION: To avoid damaging the float, apply only enough pressure to bend float lever.

2. After aligning float, remove as much clearance as possible between arms of float lever and lugs on air horn by bending the float lever. Arms of float lever should be as parallel to the inner surface of lugs on air horn as possible.

   Float must operate freely without excess clearance on its hinge pin.

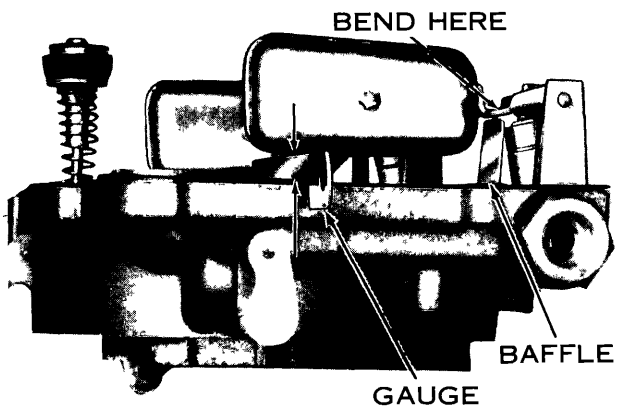


Figure 2

FLOAT LEVEL ADJUSTMENT (Fig. 2):

With air h rn inv rted, bowl cover gasket in place and needle seat d, the clearance between top of float (at outer end) and air horn gask t should be as listed on carbureter sp cification pag . To adjust, bend float arm. Adjust both fl ats. R ch ck float alignm nt.

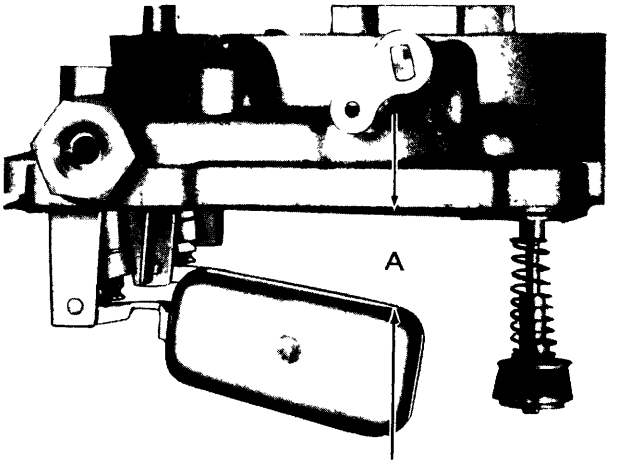


Figure 3

FLOAT DROP ADJUSTMENT (Fig. 3)

With bowl cover held in upright position and measuring from outer end of each float, the distance b tw n top of floats and bowl cover gasket should be as listed on carbureter specification page. To adjust, bend stop tabs on float brackets.

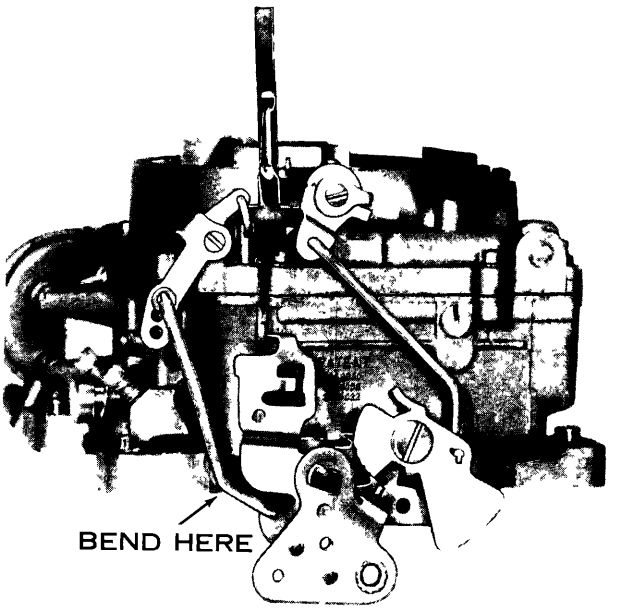


Figure 4

PUMP ADJUSTMENT (Fig. 4):

1. Seat throttle valves in bores of carbur ter. NOTE: Be sure choke is wide open so fast idle cam does not hold throttle valve open.
2. The distance from the top of the b wl cover to the t p of the plunger shaft should b as list d on carbur ter sp cification pag .
3. Adjust by bending thr ttl conn ctor r d at low r angle (use tool T109-213).

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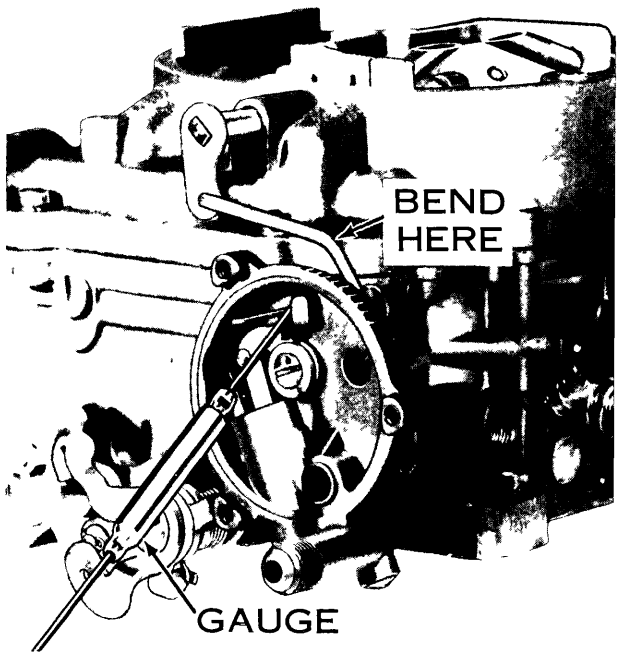


Figure 5

CHOKE PISTON LEVER ADJUSTMENT (Fig. 5):

With choke valve tightly closed, the clearance between choke lever and stop in piston housing should be as listed on carbur t r specification page. To adjust, bend choke connector rod (use tool T109-213).

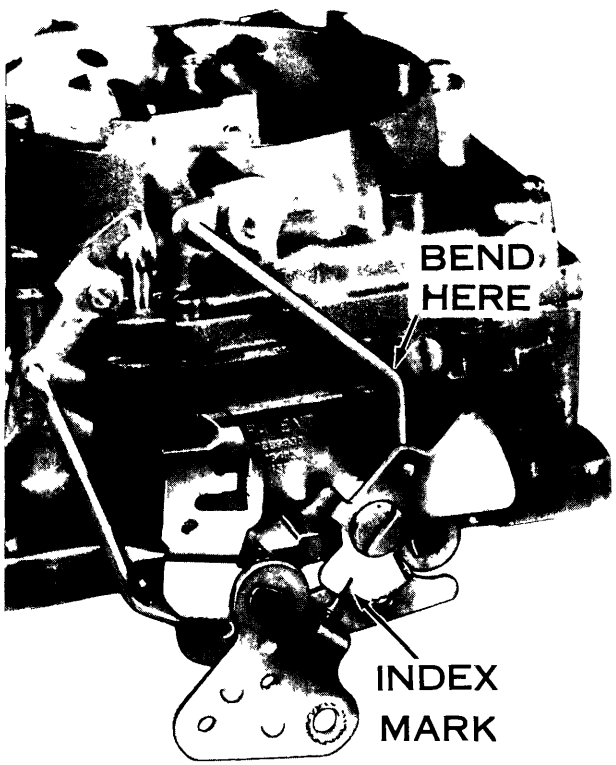


Figure 6

FAST IDLE LINKAGE ADJUSTMENT (Fig. 6):

With choke valve tightly clos d and lug on outer choke shaft l ver contacting stop on inn r chok shaft l v r align center of fast idle screw with index mark on cam. To adjust, bend fast idle conn ct r rod (use tool T109-213).

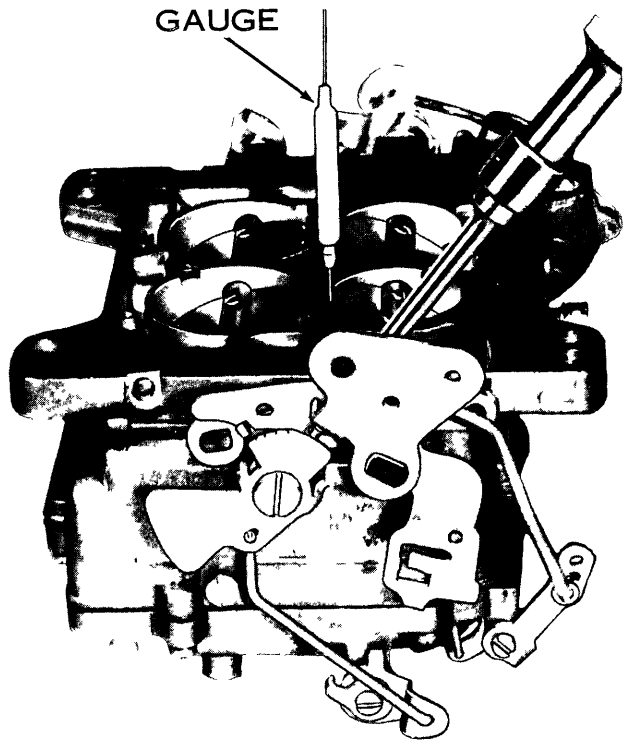


Figure 7

FAST IDLE THROTTLE VALVE CLEARANCE ADJUSTMENT (Fig. 7):

With choke valve tightly closed, tighten fast idle adjusting screw (on index mark of cam) until the clearance between throttle valve and bore of carbureter, side opposite idle port, is as listed on carbureter specification page.

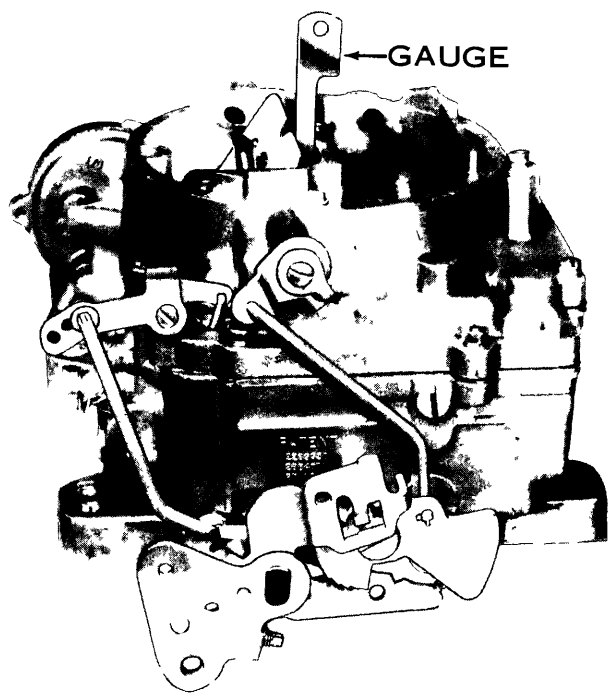
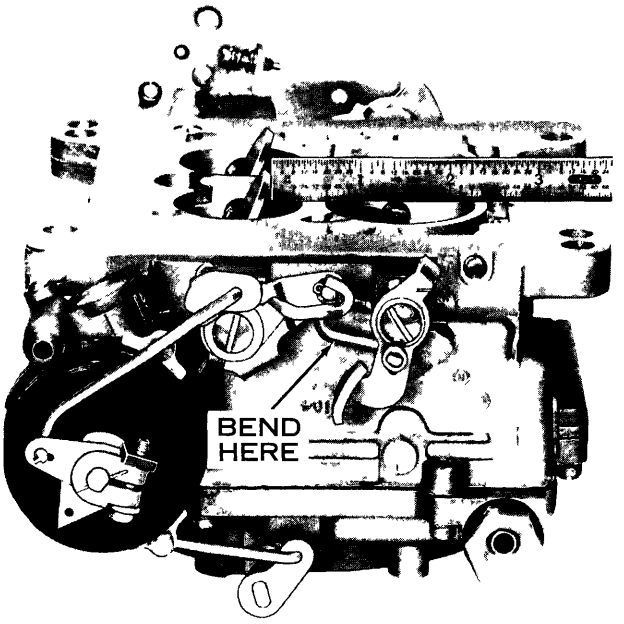


Figure 8

UNLOADER ADJUSTMENT (Fig. 8):

With thr ttle wide open, the clearance between upp r edge of choke valv and inner wall of air horn should be as listed on carbureter specification page. To adjust, bend unloader lip on throttle shaft lev r. (Use tool T109-41).



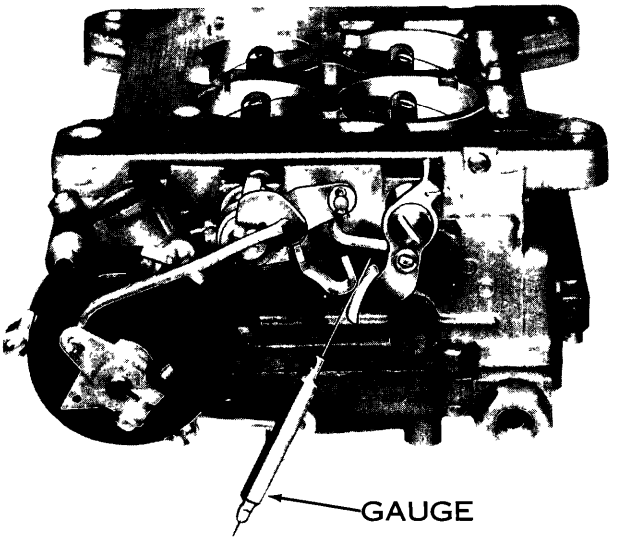


Figure 9

SECONDARY THROTTLE LEVER ADJUSTMENT (Fig. 9):

1. Block choke valve wide open.
2. Secondary throttle valves should just start to open when primary throttle valves are opened to the clearance as listed on specification page between lower edge of valve and bore (opposite idle port). To adjust, bend throttle operating rod. (Use bending tool T109-213). NOTE: Secondary throttle valves will be a few degrees from wide open position, when primary valves are wide open.
3. With primary and secondary throttle valves in tightly closed position, there should b the clearance as listed on specification page between positive closing shoes on primary and secondary throttle levers. To adjust, bend sho on secondary lever.

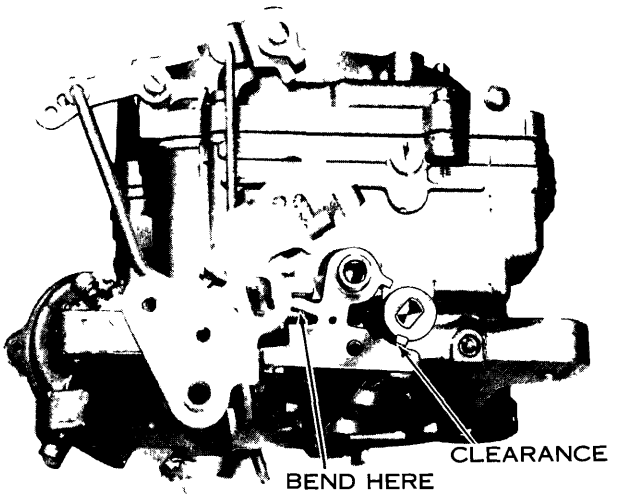


Figure 10

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT (Fig. 10):

1. Crack throttle valves and manually open and close the choke valve. Tang on secondary throttle lever should freely engage in notch of lock-out dog. To adjust, bend tang on secondary throttle lever.
2. With lock-out dog held tight against stop on flange casting and secondary throttle valves partially open the clearance between tang on secondary throttle lever and lock-out arm should be as listed n carbureter specification page. To adjust, bend arm at slot on lock-out dog. NOTE: Fast idle cam may b removed to facilitate gauging and adjusting.

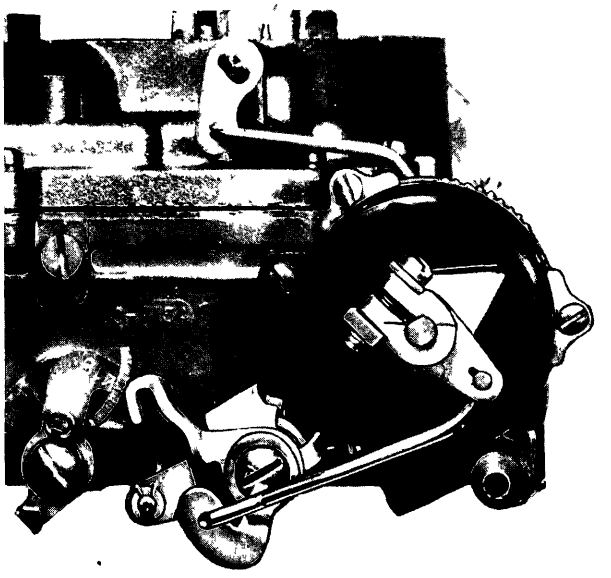


Figure 11

CHOKE MODIFIER ADJUSTMENT (Fig. 11):

1. Set Climatic (R) Control as listed on carbureter specification page. 2. Loosen clamp screw. 3. R move lower end of connector rod. 4. Rotate metal pointer until it is in line with raised pointer on coil housing. 5. Align scribed line on lever so that it is in a horizontal position. Hold in place and tighten clamp screw. 6. Seat throttle valves (hold ch ke valve wide open). 7. Hold pointer as indicated in No. 4. Lower end of rod must slid freely into hol in throttl arm. To adjust, bend rod at upp r angle.



Figure 12

(Fig. 12):

Pump intake check ball, seat and screw plug are removed by inverting carbureter and removing from lower side of flange.

(Fig. 13):

Check to be sure that auxiliary throttle shaft weights move freely and are free from dirt and gum. (Fig. 13).

Flooding, stumble on acceleration and other performance complaints are, in many instances, caused by the presence of dirt, water or other foreign matt r in the carbureter. To aid in diagnosing the cause of the c mplaint, the carbureter should be carefully removed from the engine without draining the fuel from the bowl. The contents of the fuel bowl may then be examined for contamination as the carbureter is disassembled.

Check th fu l in the bowl for contaminati n by dirt, water, gum or other for ign matter. A magnet mov d through the fuel in the bowl will pick up and identify any iron oxid dust that may have caused intake needle and seat leakage.

Insp ct gasketed surfaces between body and air horn. Small nicks or burrs should be smoothed down to eliminate air or fuel leakage. Be esp cially particular when inspecting the top surface of the inner wall of the bowl around the vacuum piston passage. A poor seal at this location may contribute to a "cutting-out" on turns complaint.

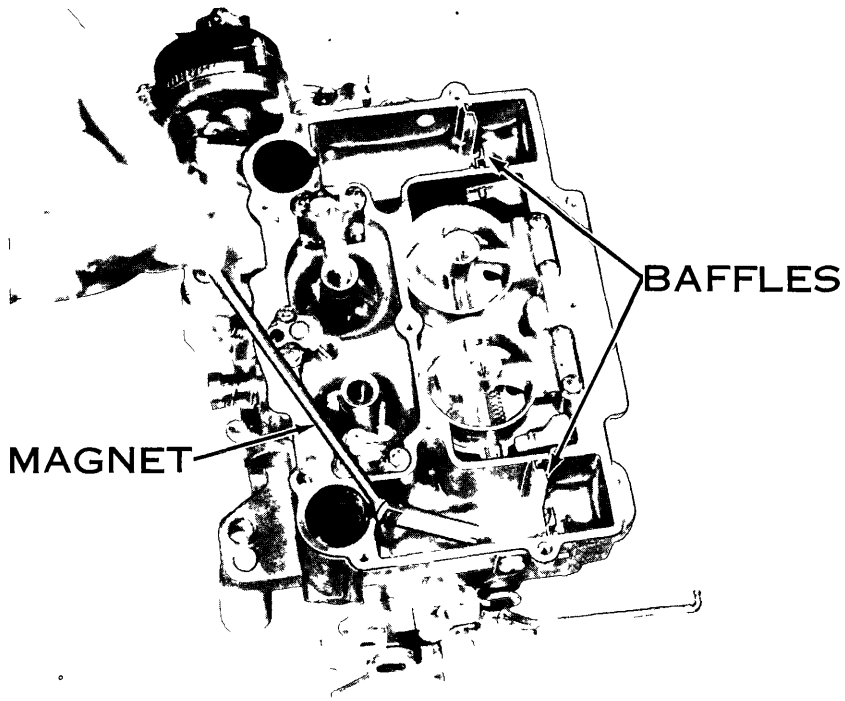


Figure 13

Install fu l baffles as shown (Fig. 13) to prevent damage to floats.

Fill th carbureter bowl with clean fuel before installing on the manifold. This will help prevent dirt trapped in the fuel syst m from b ing disoldged by the free flow of fuel as the carbureter is primed. The operation of the fl ats and intake needle and seats may be checked under pressure if a fuel pump is used at the bench to fill the carbureter bowl. Operate th throttle several times and visually check the discharge from the pump j ts.

B f re installing the carbureter, hold choke valve open and turn the idle speed screw until it just contacts th throttle lev r, then 1/2 a turn m re to open the throttl valves enough to keep th ngine running until the idle mixtur and final R.P.M. adjustment can be made.

2690S
Front Carbureter
Without Air Conditioning

2691S
Rear Carbureter

2692S
Front Carbureter
With Air Conditioning

CADILLAC
MODELS "ELDORADO" and TWO CARBURETER INSTALLATIONS
1957

(Use 2690S to replace 2691S)

(Use 2690S with 202-111U to replace 2692S)

WCFB Four-Bore Down-Draft Climatic® Control **Carbs. Nos. 2690S-2691S-2692S**

CARBURETER SPECIFICATIONS

For Cadillac 8 Cylinder Engine 4 Inch Bore, 3-5/8 Inch Stroke

Dimensions Flange Four Bore—4 bolt type size 1¼ inch
Primary venturi size 11/32 inch (1 D)
Main venturi (primary) size 1 1/16 inch
Main venturi (secondary) size 1¼ inch

Vent Inside (5)

Gasoline Intake Size No 38 (1015 inch) drill hole in needle seat

Low Speed Jet Tube Jet (primary only) size No 69 (0292 inch) drill By pass in body size 057 inch diameter
Economizer in body size No 54 (055 inch) drill
Idle bleed in body size No 44 (086 inch) drill

Idle Port (Upper) slot type Primary length 136 inch width 030 inch Secondary none

Idle Port Opening Primary 061 to 067 inch above upper edge of valve with valve tightly closed

Lower Port Primary (for idle adjustment screw) size No 53 (0595 inch) drill Secondary none

Set Idle Adjustment Screw ¾ to 1¾ turns open For richer mixture turn screw out Do not idle engine below 520 R P M (Transmission in Drive Range) For cars with air conditioning set idle at 520 R P M with air conditioning on (Transmission in Drive Range)

Idle Air Adjusting Screw Seat size 187 inch diameter
Constant air bleed restriction none

Main Nozzle Installed permanently DO NOT REMOVE Anti percolating bleed (Primary) size No 70 (028 inch) drill Anti percolating bleed (secondary) size No 70 (028 inch) drill

Metering Rod (Vacumeter Type) see parts list for size

Metering Rod Jet Primary size 096 inch diameter (for metering rod)
Secondary size 055 inch diameter (No metering rod)

Accelerating Pump Discharge jet (twin) primary only size No 69 (0292 inch) drill
Intake ball check seat size 115 to 120 inch diameter
Discharge needle seat size 070 inch diameter
Relief ball check size No 55 (052 inch) drill
Relief passage (vent) to fuel chamber No 42 (0935 inch) drill

Choke Carter Climatic® Control set on index Butterfly type offset choke valve primary side only Choke heat suction hole restriction in piston housing size No 44 (086 inch) drill

Vacuum Spart Port Horizontal slot round end type 064 x 120 inch Top of port 007 to 015 inch above top edge of valve with valve tightly closed

Motor Tune-Up — Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter

Spark Plug Gap .035"	Breaker Point Setting 0125"-0175" 28° to 32° Dwell	Ignition Timing Breaker Points to Open 5° B T C (at "A" Mark) At Vibration Damper	Float Setting Primary 1/8 Inch (Use Gauge T109-232) Secondary 1/4 Inch (Use Gauge T109 223)	Idle Adjustment Screw Setting ¾ to 1¾ Turns Open Idle Engine at 520 R P M In Drive Range

NOTE These cars are equipped with Hydraulic Valve Lifters — NO ADJUSTMENT

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CARBURETER
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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: Two separate float adjustments must be made—lateral and vertical.

LATERAL ADJUSTMENT: With bowl cover assembly inverted, bowl cover gasket removed and float resting on seated needle, place float gauge directly under center of floats with notched portions of gauge fitted over edges of casting. Sides of floats should just clear the vertical upright of float gauge. Adjustment should be made by bending arms of floats.

VERTICAL ADJUSTMENT: With float gauge in same position, floats should just clear the horizontal portion of gauge. The vertical distance between top of float and machined surface of casting must be 1/8 inch (gauge T109-232) for primary floats and 1/4 inch (gauge T109-223) for secondary floats. Adjust by bending float arms.

FLOAT DROP ADJUSTMENT: With bowl cover held in upright position and measuring from center of float, the distance between top of floats and bowl cover should be 5/8 inch for primary floats and 3/4 inch for secondary floats. Adjust by bending stop tabs on float bracket.

PUMP ADJUSTMENT: Install pump connector link in inner hole (short stroke) of pump arm, with ends extending toward countershaft arm. Seat throttle valves in bores of carbureter. Hold straight edge across top of dust cover boss at pump arm. The flat on top of pump arm should be parallel to straight edge. Adjust by bending throttle connector rod at lower angle. (Use tool T109-213.)

METERING ROD ADJUSTMENT: Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows: 1. Seat throttle valves in bores of carbureter and loosen metering rod arm clamp screw. 2. With metering rods in place, press down on vacumeter link until metering rods bottom in carbureter body casting. 3. Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link. Hold in place and carefully tighten clamp screw.

BOWL VAPOR VENT ADJUSTMENT: This adjustment should be made after completing pump and metering rod adjustments. Install dust cover gasket and dust cover. Seat throttle valves in bores of carbureter. There should be 1/16 inch (gauge T109-197) between lower edge of bowl vapor vent valve and dust cover. To adjust, remove dust cover and bend vapor vent arm.

CHOKE MODIFIER ADJUSTMENT: 1. Set Climatic® Control Assembly on index. 2. Loosen clamp screw. 3. Remove lower end of connector rod. 4. Rotate metal pointer until it is in line with raised pointer on coil housing. 5. Align scribed line on lever so that it is straight up and down. Hold in place and tighten clamp screw. 6. Seat throttle valves (hold choke valve wide open). 7. Hold pointer as indicated in No. 4. Lower end of rod must slide freely into hole in throttle arm. Bend rod at upper angle to adjust.

FAST IDLE AND SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: 1. Preliminary Adjustment: Loosen choke lever clamp screw on choke shaft. Lip of fast idle cam should lightly contact boss of flange casting. Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw. 2. Secondary Throttle Lock-Out Adjustment: (a) With choke valve tightly closed, tighten fast idle adjusting screw until there is .010 inch (gauge T109-200) opening between primary throttle valve and bore of carbureter (side opposite idle port). Lock pawl should now be in unlocked position; if not, adjust by bending tang on lock pawl (use bending tool T109-105). (b) Hold primary throttle valves half way open. Open choke valve fully, then open primary throttle valves all the way. Tang on secondary throttle arm should engage in notch on lock-out lever preventing secondary throttle shaft movement. Keep choke valve in wide open position. Close primary throttle valves so that lock pawl is unlocked, then open primary throttle valves all the way. Lock-out lever should fall free allowing secondary throttle valves to be open before primary throttle valves are fully open. If necessary, bend tang on secondary throttle lever to provide clearance for proper operation of lock-out lever.

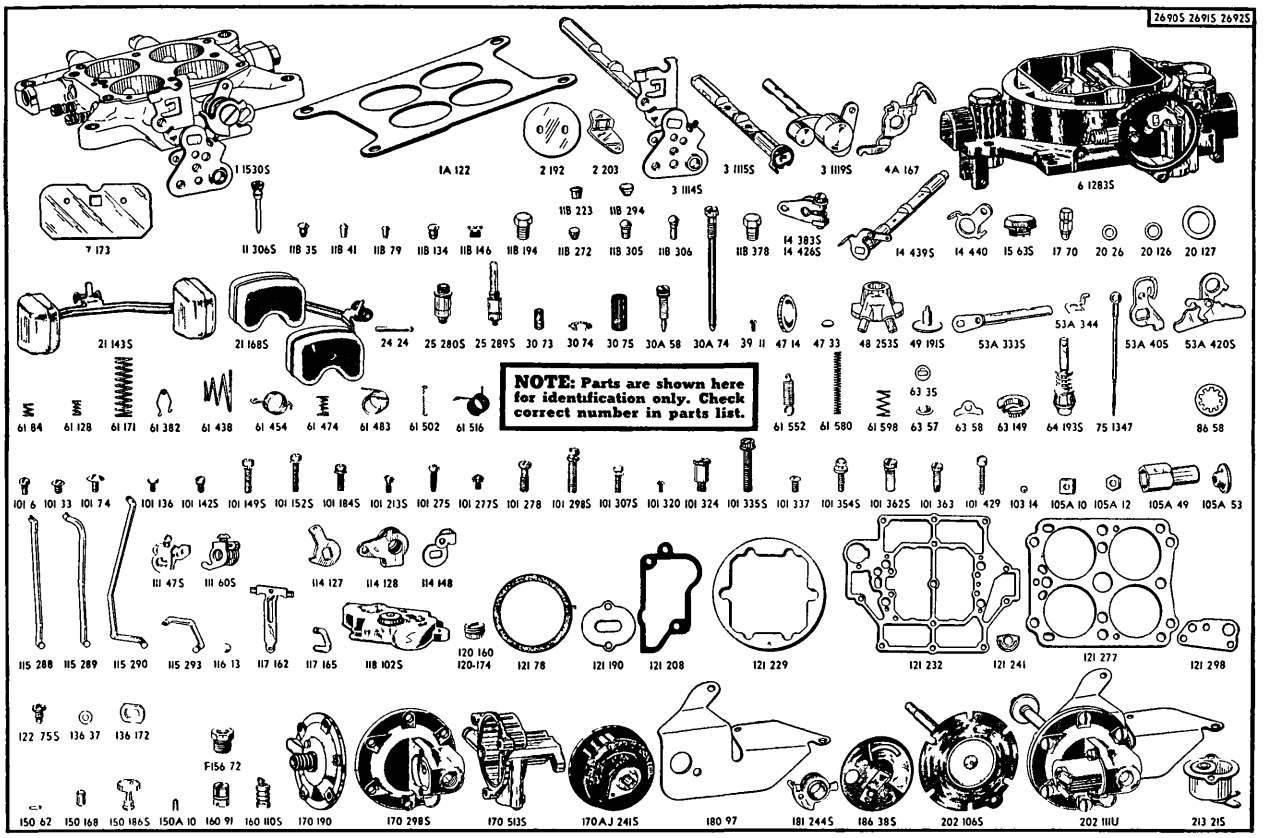
FAST IDLE ON CAR: 1750 R. P. M. hot engine, in neutral, with fast idle screw on high step of cam.

UNLOADER ADJUSTMENT: With throttle wide open there should be 13/64 inch (gauge T109-39) clearance between upper edge of choke valve and inner wall of air horn. Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41).

SECONDARY THROTTLE LEVER ADJUSTMENT: Primary and secondary throttle valves should reach wide open position at the same time. To adjust, bend throttle operating rod at upper angle (use bending tool T109-213). With primary and secondary throttle valves in tightly closed position there should be .017-.022 inch (gauge T109-29) clearance between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on secondary lever.

IDLE SPEED AND MIXTURE ADJUSTMENT (Normal Engine Temp.): In making the idle adjustment on the engine, the air adjustment screw is used to adjust idle speed in a similar manner as the throttle speed screw used previously. Turning the air adjustment screw outward increases engine speeds, but also leans the mixture supplied to the manifold which must be compensated for by adjustment of the idle mixture adjusting screws.

AIR CONDITIONER FAST IDLE DEVICE ADJUSTMENT: This adjustment must be made after carbureter is installed on car, engine at normal operating temperature and slow idle adjustment is completed. With shift lever in neutral and air conditioner turned on, engine should idle 900 R.P.M. To adjust, loosen lock nut on diaphragm shaft and adjust knurled nut tc obtain specified R.P.M., then tighten lock nut.



Cadillac "V-8"—1957—Carbureters Nos. 2690S-2691S-2692S

WHEN SERVICING, USE GASKET ASSORTMENT No. 295; REPAIR PACKAGE No. 1855

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1530S	—Body flange assembly	
1A-122	FLANGE GASKET	
2-192	Primary and secondary throttle valve	(4)
2-203	Auxiliary throttle valve	
3-1114S	Primary throttle shaft and lever assembly	
3-1115S	Secondary throttle shaft and dog assembly	
3-1119S	Auxiliary throttle shaft, lever and weight assembly	
4A-167	Throttle shaft dog	
6-1283S	Air horn assembly	
7-173	Choke valve	
11-306S	LOW SPEED JET ASSEMBLY	(2)
11B-35	Rivet plug	(4)
11B-41	Rivet plug	
11B-79	Rivet plug	
11B-134	Rivet plug (2690S-2691S (1), (2692S (2)	
11B-146	Level sight plug	(2)
11B-194	Pipe plug (spark port)	
11B-223	Nozzle passage rivet plug	(4)
11B-272	Rivet plug	(2)
11B-294	Idle port rivet plug	(2)
11B-305	Rivet plug	(2)
11B-306	Rivet plug	
11B-378	—Power brake vacuum passage plug (2691S)	
14-383S	Choke lever and screw assembly	
14-426S	Coil shaft lever and screw assembly	
14-439S	Choke piston lever, link and shaft assembly	
14-440	Cam trip lever	
15-63S	Strainer nut assembly	(2)
17-70	PUMP CHECK NEEDLE	
20-26	Relief valve gasket	
20-126	Needle seat gasket	(2)
20-127	BOWL STRAINER GASKET	(2)
21-143S	Primary float and lever assembly	
21-168S	Secondary float and lever assembly	
24-24	Float lever pin	(2)
25-280S	PRIMARY NEEDLE AND SEAT ASSEMBLY	
25-289S	SECONDARY NEEDLE AND SEAT ASSEMBLY	
30-73	PRIMARY NEEDLE SEAT STRAINER	
30-74	SECONDARY FUEL INLET STRAINER	
30-75	BOWL STRAINER	
30A-58	Idle adjustment screw	(2)
30A-74	Idle air adjustment screw	
39-11	Choke valve attaching screw	(2)
47-14	Welsh plug (piston housing)	
47-33	Welsh plug (spark port)	
48-253S	Pump jet and housing assembly	
49-191S	Electro magnet plunger assembly (2692S)	
53A-333S	Pump operating lever and countershaft assembly	
53A-344	VENT ARM	
53A-405	Secondary operating lever	
53A-420S	Lockout arm and pawl assembly	
61-84	Idle adjustment screw and air conditioning unit adjusting nut spring (2690S (3), (2691S (2), (2692S (4)	
61-128	CONNECTOR ROD SPRING	(2)
61-171	PUMP SPRING	
61-382	METERING ROD SPRING	
61-438	Diaphragm return spring (2692S)	
61-454	Fast idle cam spring	
61-474	Bowl vent spring	

Part No.	PART NAME	
61-483	SECONDARY THROTTLE RETURN SPRING	
61-502	Electro magnet plunger spring (2692S)	
61-516	Countershaft spring	
61-552	Throttle flex spring	
61-580	VACUUM PISTON SPRING	
61-598	Idle air adjustment screw spring	
63-35	Connector rod retainer	(2)
63-57	INTAKE CHECK BALL RETAINER	
63-58	Coil housing retainer	(3)
63-149	Bowl vent spring retainer	
64-193S	PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
75-1347	METERING ROD—STANDARD 071" x 06325" x 055"	(2)
86-58	Air conditioning unit lock washer (2692S)	
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	(2)
101-136	Coil housing attaching screw	(3)
101-142S	Electro magnet housing attaching screw and washer assembly (2692S)	(2)
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-213S	Diaphragm cover attaching screw and washer assembly (2692S)	(6)
101-275	Piston housing attaching screw	
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet housing attaching screw	
101-298S	Body flange attaching screw and washer assembly	(2)
101-307S	Air horn attaching screw and washer assembly (2690S-2691S (8), (2692S (5)	
101-320	Auxiliary throttle valve attaching screw	(4)
101-324	Fast idle cam screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Primary and secondary throttle valve attaching screw	(8)
101-354S	Coil shaft and choke lever clamp screw assembly	(2)
101-362S	Air horn attaching screw and washer assembly (2692S)	(3)
101-363	Piston housing attaching screw	(2)
101-429	Fast idle adjustment screw (2690S-2692S)	
103-14	Lead ball	(3)
105A-10	Choke lever clamp screw nut	(2)
105A-12	Air conditioning diaphragm unit lock nut (2692S)	
105A-49	Air conditioning unit to bracket attaching nut (2692S)	

Part No.	PART NAME	
105A-53	Air conditioning unit adjusting nut (2692S)	
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
114-127	Throttle shaft arm (outer)	
114-128	Throttle shaft arm (inner)	
114-148	Throttle shaft arm (outer)	
115-288	Choke connector rod	
115-289	Choke connector rod (Climatic® Control side)	
115-290	THROTTLE CONNECTOR ROD	
115-293	Throttle operating rod	
116-13	PUMP INTAKE AND AIR CONDITIONING UNIT CHECK BALL (2690S 2691S (1) (2692S (2)	
117-162	Vacumeter piston link	
117-165	PUMP ARM LINK	
118-102S	Dust cover assembly	
120-160	PRIMARY METERING ROD JET	(2)
120-174	SECONDARY METERING JET	(2)
121-78	COIL HOUSING GASKET	
121-190	Electro magnet housing gasket (2692S)	
121-208	DUST COVER GASKET	
121-229	AIR CLEANER GASKET	
121-232	AIR HORN GASKET	
121-241	PUMP JET HOUSING GASKET	
121-277	BODY FLANGE GASKET	
121-298	PISTON HOUSING GASKET	
122-75S	PUMP RELIEF VALVE ASSEMBLY	
136-37	Throttle operating rod washer	(2)
136-172	Secondary throttle shaft washer	
150-62	Choke piston pin	
150-168	Air conditioning unit diaphragm air bleed pin (2692S)	
150-186S	Pin and valve cap assembly	
150A-10	PIN SPRING	(5)
F156-72	—Reducer bushing	
160-91	Choke piston	
160-110S	Vacuum piston and pin assembly	
170-190	Inner diaphragm housing (2692S)	
170-298S	Outer diaphragm housing and plug assembly (2692S)	
170-513S	Piston housing and plug assembly	
170AJ-241S	Thermostatic coil and housing assembly	
180-97	Air conditioning unit bracket (2692S)	
181-244S	Fast idle cam assembly	
186-38S	Choke baffle plate and spring assembly	
202-106S	Air conditioning unit diaphragm and shaft assembly (2692S)	
202-111U	Unitized package (Consists of 3—101-362S and 1—202-107S) (2692S)	
213-21S	Electro magnet and housing assembly (2692S)	

—Parts so marked are new and listed for the first time

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

CARBURETER
TRADE MARK REG U S PAT OFF.
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2582S
Front Carbureter
Without Air Conditioning

2583S
Rear Carbureter

2584S
Front Carbureter
With Air Conditioning

CADILLAC

MODELS "ELDORADO" and TWO CARBURETER INSTALLATIONS

1957

(Use 2582S to replace 2583S)

(Use 2582S with 202-111U to replace 2584S)

WCFB Four-Bore Down-Draft Climatic® Control **Carbs. Nos. 2582S-2583S-2584S**

CARBURETER SPECIFICATIONS

For Cadillac 8 Cylinder Engine: 4 Inch Bore, 3⅝ Inch Stroke

Dimensions. Flange Four Bore—4 bolt type, size 1¼ inch
Primary venturi size 11/32 inch (1 D)
Main venturi (primary) size 1 1/16 inch
Main venturi (secondary) size, 1¼ inch

Vent: Inside (5)

Gasoline Intake: Size No 38 (1015 inch) drill hole in needle seat

Low Speed Jet Tube: Jet (primary only) size No 69 (0292 inch) drill By pass in body size 057 inch diameter
Economizer in body size No 54 (055 inch) drill
Idle bleed in body size No 44 (086 inch) drill

Idle Port: (Upper) slot type Primary length 136 inch width 030 inch Secondary none

Idle Port Opening: Primary 061 to 067 inch above upper edge of valve with valve tightly closed

Lower Port: Primary (for idle adjustment screw) size No 53 (0595 inch) drill Secondary none

Set Idle Adjustment Screw: ¾ to 1¾ turns open For richer mixture turn screw out Do not idle engine below 420 R P M (Transmission in Drive Range) For cars with air conditioning set idle at 420 R P M with air conditioning on (Transmission in Drive Range)

Idle Air Adjusting Screw: Seat size 187 inch diameter
Constant air bleed restriction none

Main Nozzle: Installed permanently DO NOT REMOVE Anti percolating bleed (Primary), size No 70 (028 inch) drill
Anti percolating bleed (secondary) size No 70 (028 inch) drill

Metering Rod: (Vacumeter Type) see parts list for size

Metering Rod Jet: Primary size 096 inch diameter (for meter ing rod)
Secondary size 055 inch diameter (No metering rod)

Accelerating Pump: Discharge jet (twin) primary only size No 69 (0292 inch) drill
Intake ball check seat, size 115 to 120 inch diameter
Discharge needle seat size 070 inch diameter
Relief ball check size No 55 (052 inch) drill
Relief passage (vent) to fuel chamber No 42 (0935 inch) drill

Choke: Carter Climatic® Control, set on index Butterfly type offset choke valve primary side only Choke heat suction hole restriction in piston housing size No 44 (086 inch) drill

Vacuum Spark Port: Horizontal slot round end type, 064 x 120 inch Top of port 007 to 015 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .0125"-.0175"	Ignition Timing Breaker Points to Open: 5° B. T. C. At Vibration Damper	Float Setting Primary 1/8 Inch (Use Gauge T109-232) Secondary 1/4 Inch (Use Gauge T109-223)	Idle Adjustment Screw Setting ¾ to 1¾ Turns Open Idle Engine at 420 R.P.M. In Drive Range

NOTE: These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT.

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CARBURETER
TRADE MARK REG U. S. PAT. OFF.
MARCA REGISTRADA

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT Two separate float adjustments must be made—lateral and vertical

LATERAL ADJUSTMENT With bowl cover assembly inverted bowl cover gasket removed and float resting on seated needle place float gauge directly under center of floats with notched portions of gauge fitted over edges of cast ng Sides of floats should just clear the vertical upright of float gauge Adjust ment should be made by bending arms of floats

VERTICAL ADJUSTMENT With float gauge in same position floats should just clear the horizontal portion of gauge The vertical distance between top of float and machined surface of casting must be 1/8 inch (gauge T109 232) for primary floats and 1/4 inch (gauge T109 223) for secondary floats Adjust by bending float arms

FLOAT DROP ADJUSTMENT With bowl cover held in upright position and measuring from center of float the distance be tween top of floats and bowl cover should be 5/8 inch for pri mary floats and 3/4 inch for secondary floats Adjust by bend ing stop tabs on float bracket

PUMP ADJUSTMENT Install pump connector link in inner hole (short stroke) of pump arm with ends extending toward coun tershaft arm Seat throttle valves in bores of carbureter Hold straight edge across top of dust cover boss at pump arm The flat on top of pump arm should be parallel to straight edge Adjust by bending throttle connector rod at lower angle (Use tool T109 213)

METERING ROD ADJUSTMENT Metering rod adjustment is important and must be made after completing the pump adjust ment No metering rod gauges are necessary Procedure is as follows 1 Seat throttle valves in bores of carbureter and loosen metering rod arm clamp screw 2 With metering rods in place press down on vacumeter link until metering rods bot tom in carbureter body casting 3 Holding rods in downward position and throttle valves seated revolve metering rod arm until finger on arm contacts lip of vacumeter link Hold in place and carefully tighten clamp screw

BOWL VAPOR VENT ADJUSTMENT This adjustment should be made after completing pump and metering rod adjustments Install dust cover gasket and dust cover Seat throttle valves in bores of carbureter There should be 1/16 inch (gauge T109 197) between lower edge of bowl vapor vent valve and dust cover To adjust remove dust cover and bend vapor vent arm

CHOKE MODIFIER ADJUSTMENT 1 Set Climatic® Control Assembly on index 2 Loosen clamp screw 3 Remove lower end of connector rod 4 Rotate metal pointer until it is in line with raised pointer on coil housing 5 Align scribed line on lever so that it is straight up and down Hold in place and tighten clamp screw 6 Seat throttle valves (hold choke valve wide open) 7 Hold pointer as indicated in No 4 Lower end of rod must slide freely into hole in throttle arm Bend rod at upper angle to adjust

FAST IDLE AND SECONDARY THROTTLE LOCK-OUT AD-JUSTMENT 1 Preliminary Adjustment Loosen choke lever clamp screw on choke shaft Lip of fast idle cam should lightly contact boss of flange casting Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw 2 Sec ondary Throttle Lock Out Adjustment (a) With choke valve tightly closed tighten fast idle adjusting screw until there is 010 inch (gauge T109 200) opening between primary throttle valve and bore of carbureter (side opposite idle port) Lock pawl should now be in unlocked position if not adjust by bend ing tang on lock pawl (use bending tool T109 105) (b) Hold primary throttle valves half way open Open choke valve fully then open primary throttle valves all the way Tang on sec ondary throttle arm should engage in notch on lock out lever preventing secondary throttle shaft movement Keep choke valve in wide open position Close primary throttle valves so that lock pawl is unlocked then open primary throttle valves all the way Lock out lever should fall free allowing secondary throttle valves to be open before primary throttle valves are fully open If necessary bend tang on secondary throttle lever to provide clearance for proper operation of lock out lever

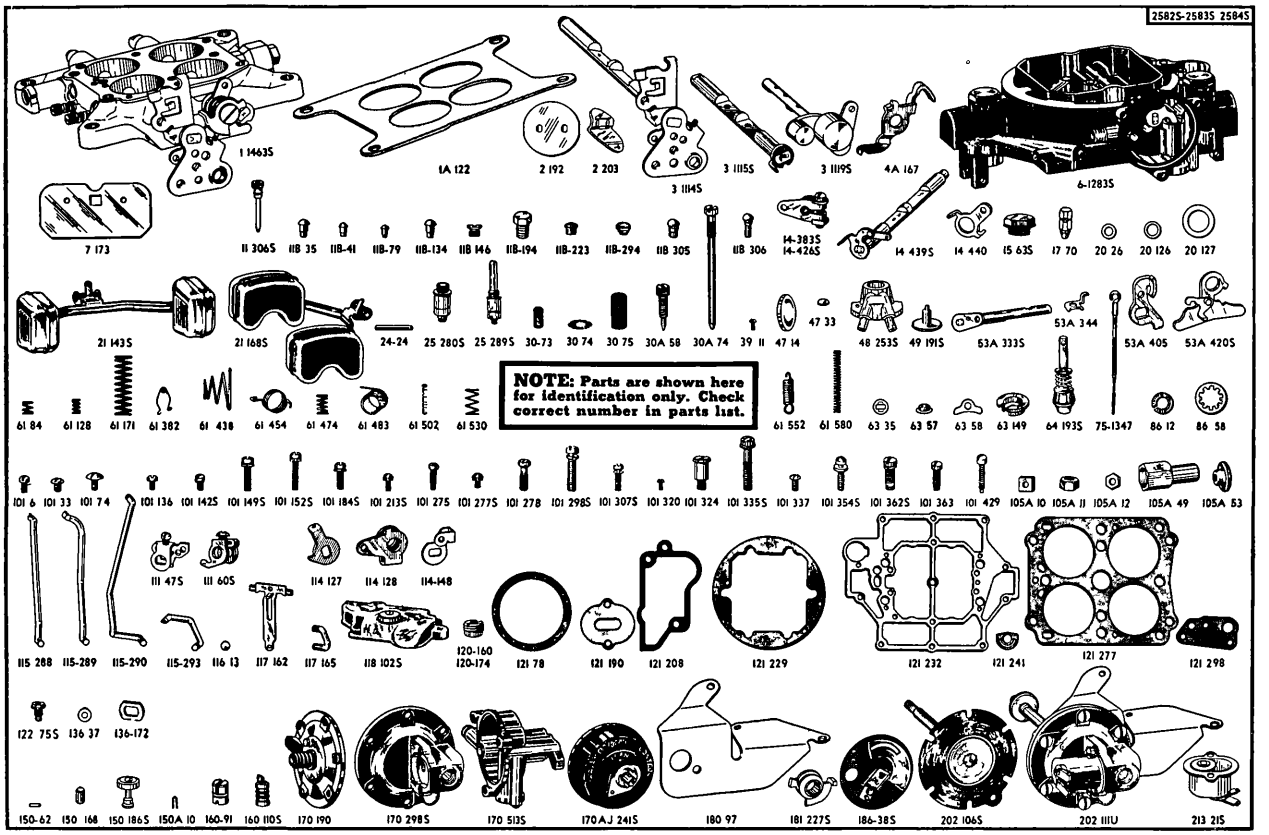
FAST IDLE ON CAR 1700 R P M hot engine in neutral with fast idle screw on high step of cam

UNLOADER ADJUSTMENT With throttle wide open there should be 13/64 inch (gauge T109 39) clearance between upper edge of choke valve and inner wall of air horn Adjust by bending unloader lip on throttle shaft lever (use bending tool T109 41)

SECONDARY THROTTLE LEVER ADJUSTMENT Primary and secondary throttle valves should reach wide open position at the same time To adjust bend throttle operating rod at upper angle (use bending tool T109 213) With primary and sec ondary throttle valves in tightly closed position there should be 017 022 inch (gauge T109 29) clearance between positive clos ing shoes on primary and secondary throttle levers To adjust bend shoe on primary lever

IDLE SPEED AND MIXTURE ADJUSTMENT (Normal Engine Temp) In making the idle adjustment on the engine the air adjustment screw is used to adjust idle speed in a similar man ner as the throttle speed screw used previously Turning the air adjustment screw outward increases engine speeds but also leans the mixture supplied to the manifold which must be com pensated for by adjustment of the idle mixture adjusting screws

AIR CONDITIONER FAST IDLE DEVICE ADJUSTMENT This adjustment must be made after carbureter is installed on car engine at normal operating temperature and slow idle adjust ment is completed With shift lever in neutral and air condi tioner turned on engine should idle 900 R P M To adjust loosen lock nut on diaphragm shaft and adjust knurled nut tc obtain specified R P M then tighten lock nut



Cadillac "V-8"—1957—Carbureters Nos. 2582S-2583S-2584S

WHEN SERVICING, USE GASKET ASSORTMENT No. 295; REPAIR PACKAGE No. 1855
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1463S	—Body flange assembly	
1A-122	—FLANGE GASKET	
2-192	—Primary and secondary throttle valve	(4)
2-203	—Auxiliary throttle valve	
3-1114S	—Primary throttle shaft and lever assembly	
3-1115S	—Secondary throttle shaft and dog assembly	
3-1119S	—Auxiliary throttle shaft lever and weight assembly	
4A-167	Throttle shaft dog	
6-1283S	—Air horn assembly	
7-173	Choke valve	
11-306S	—LOW SPEED JET ASSEMBLY	(2)
11B-35	Rivet plug	(4)
11B-41	Rivet plug	(2)
11B-79	Rivet plug	(4)
11B-134	Rivet plug (2582S 2583S (1) (2584S (2)	
11B-146	Level sight plug	(2)
11B-194	Pipe plug (2582S (2), (2583S 2584S (1)	
11B-223	Nozzle passage rivet plug	(6)
11B-294	Idle port rivet plug	(2)
11B-305	Rivet plug	(2)
11B-306	Rivet plug	
14-383S	Choke lever and screw assembly	
14-426S	Coil shaft lever and screw assembly	
14-439S	Choke piston lever link and shaft assembly	
14-440	Cam trip lever	
15-63S	Strainer nut assembly	(2)
17-70	PUMP CHECK NEEDLE	
20-26	Relief valve gasket	
20-126	Needle seat gasket	(2)

Part No.	PART NAME	
20-127	BOWL STRAINER GASKET	(2)
21-143S	Primary float and lever assembly	
21-168S	Secondary float and lever assembly	
24-24	Float lever pin	(2)
25-280S	PRIMARY NEEDLE AND SEAT ASSEMBLY	
25-289S	SECONDARY NEEDLE AND SEAT ASSEMBLY	
30-73	PRIMARY NEEDLE SEAT STRAINER	
30-74	SECONDARY FUEL INLET STRAINER	
30-75	BOWL STRAINER	
30A-58	Idle adjustment screw	(2)
30A-74	—Idle air adjustment screw	
39-11	Choke valve attaching screw	(2)
47-14	Welsh plug (piston housing)	
47-33	Welsh plug (spark port)	
48-253S	—Pump jet and housing assembly	
49-191S	Electro magnet plunger assembly (2584S)	
53A-333S	Pump operating lever and countershaft assembly	
53A-344	VENT ARM	
53A-405	Secondary operating lever	
53A-420S	—Lockout arm and pawl assembly	
61-84	Idle adjustment screw and air conditioning unit adjusting nut spring (2582S (3) (2583S (2) (2584S (4)	
61-128	CONNECTOR ROD SPRING	(2)
61-171	PUMP SPRING	
61-382	METERING ROD SPRING	
61-438	Diaphragm return spring (2584S)	
61-454	Fast idle cam spring	
61-474	Bowl vent spring	

Part No.	PART NAME	
61-483	SECONDARY THROTTLE RETURN SPRING	
61-502	Electro magnet plunger spring (2584S)	
61-530	Idle air adjustment screw spring (Sup by 61 598)	
61-552	Throttle flex spring	
61-580	VACUUM PISTON SPRING	
61-598	—Idle air adjustment screw spring	
63-35	Connector rod retainer	(2)
63-57	INTAKE CHECK BALL RETAINER	
63 58	Coil housing retainer	(3)
63-149	Bowl vent spring retainer	
64-193S	PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
75-1347	—METERING ROD—STANDARD 071" x 06325" x 055"	(2)
86-12	Flange stud lock washer	(4)
86-58	Air conditioning unit lock washer (2584S)	
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	(2)
101-136	Coil housing attaching screw	(3)
101-142S	Electro magnet housing attaching screw and washer assembly (2584S)	(2)
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-213S	Diaphragm cover attaching screw and washer assembly (2584S)	(6)
101-275	Piston housing attaching screw	
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet housing attaching screw	
101-298S	Body flange attaching screw and washer assembly	(2)
101-307S	Air horn attaching screw and washer assembly (2582S 2583S (8) (2584S (5)	
101 320	Auxiliary throttle valve attaching screw	(4)
101-324	Fast idle cam screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Primary and secondary throttle valve attaching screw	(8)
101-354S	Coil shaft and choke lever clamp screw assembly	(2)
101-362S	Air horn attaching screw and washer assembly (2584S)	(3)
101-363	Piston housing attaching screw	(2)
101-429	—Fast idle adjustment screw (2582S 2584S)	
105A-10	Choke lever clamp screw nut	(2)
105A-11	Flange stud nut	(4)
105A-12	Air conditioning diaphragm unit lock nut (2584S)	
105A-49	Air conditioning unit to bracket attaching nut (2584S)	

Part No.	PART NAME	
105A-53	Air condition ng unit adjusting nut (2584S)	
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
114-127	Throttle shaft arm (outer)	
114-128	Throttle shaft arm (inner)	
114-148	—Throttle shaft arm (outer)	
115-288	—Choke connector rod	
115-289	—Choke connector rod (Climatic® Control side)	
115-290	—THROTTLE CONNECTOR ROD	
115-293	—Throttle operating rod	
116-13	PUMP INTAKE AND AIR CONDITIONING UNIT CHECK BALL (2582S 2583S (1) (2584S	(2)
117-162	Vacumeter piston link	
117-165	PUMP ARM LINK	
118-102S	Dust cover assembly	
120-160	PRIMARY METERING ROD JET	(2)
120-174	SECONDARY METERING JET	(2)
121-78	COIL HOUSING GASKET	
121-190	Electro magnet housing gasket (2584S)	
121-208	DUST COVER GASKET	
121-229	AIR CLEANER GASKET	
121-232	AIR HORN GASKET	
121-241	PUMP JET HOUSING GASKET	
121-277	BODY FLANGE GASKET	
121 298	—PISTON HOUSING GASKET	
122-75S	PUMP RELIEF VALVE ASSEMBLY	
136-37	Throttle operating rod washer	(2)
136-172	Secondary throttle shaft washer	
150 62	Choke piston pin	
150-168	Air conditioning unit diaphragm air bleed pin (2584S)	
150 186S	Pin and valve cap assembly	
150A-10	PIN SPRING	(5)
160-91	Choke piston	
160-110S	Vacuum p ston and pin assembly	
170-190	Inner diaphragm housing (2584S)	
170-298S	Outer diaphragm housing and plug assembly (2584S)	
170-513S	—Piston housing and plug assembly	
170AJ241S	Thermostatic coil and housing assembly	
180-97	—Air conditioning unit bracket (2584S)	
181-227S	Fast idle cam assembly (Sup by 181 244S)	
181-244S	—Fast idle cam assembly	
186-38S	Choke baffle plate and spring assembly	
202-106S	—Air conditioning unit diaphragm and shaft assembly (2584S)	
202-111U	—Unitized package (Consists of 3—101 362S and 1—202 107S) (2582S 2584S)	
213-21S	—Electro magnet and housing assembly (2584S)	

—Parts so marked are new and listed for the first time

NOTE **Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used**

2543S
Cars Without
Air Conditioning

2544S
Cars With
Air Conditioning

CADILLAC

1956

All Models Except Eldorado and Two Carbureter Installations

(Use 2545S to replace 2543S)

(Use 2545S with 202-44U to replace 2544S)

WCFB Four Bore Down-Draft Climatic® Control Carbureters

Nos. 2543S-2544S-2545S

CARBURETER SPECIFICATIONS

For Cadillac 8 Cylinder Engine: 4 Inch Bore, 3⅝ Inch Stroke

Dimensions: Flange Four Bore—4 bolt type size 1¼ inch
Primary venturi size 11/32 inch (I D)
Main venturi size 1-3/16 inch (primary side) and (secondary side)

Vent: Inside (5) Outside in flange (4)

Gasoline Intake: Size No 38 (1015 inch) drill hole in needle seat

Low Speed Jet Tube: Jet, (primary and secondary) size No 67 (032 inch) drill
By-pass in body size 057 inch diameter
Economizer in body, size No 54 (055 inch) drill
Idle bleed in body size 0826 inch diameter

Idle Port: (Upper) slot type Primary length 175 inch widtn 030 inch
Secondary, length 100 inch, width 030 inch

Idle Port Opening: Primary 091 to 097 inch secondary 050 to 056 inch above upper edge of valve with valve tightly closed

Lower Port: Primary (for idle adjustment screw), size No 51 (067 inch) drill Secondary, none

Set Idle Adjustment Screw: 1 to 2 turns open For richer mixture turn screw out Do not idle engine below 420 R P M (Transmission in Drive Range) For cars with air conditioning set idle with air conditioning on (Transmission in Drive Range)

Idle Air Adjusting Screw: Seat size 240 inch diameter

Main Nozzle: Installed permanently DO NOT REMOVE. Anti-percolating jet (Primary), size No 70 (028 inch) drill Anti-percolating jet (secondary) to idle well, size No 70 (028 inch) drill

Metering Rod: Primary, economy step 0705 inch diameter.
Middle step tapers to 064 inch diameter
Power step 040 inch diameter
Secondary, none

Metering Rod Jet: Primary, size 098 inch diameter (for metering rod) Secondary size 067 inch diameter (No metering rod)

Accelerating Pump: Discharge jet (twin) primary only, size No. 74 (0225 inch) drill
Intake ball check seat, size 115 to 120 inch diameter
Discharge needle seat, size 070 inch diameter
Relief ball check, size No 55 (052 inch) drill
Relief passage (vent) to fuel chamber No 42 (0935 inch) drill

Choke: Carter Climatic® Control, set one point lean Butterfly type offset choke valve, primary side only Choke heat suction hole restriction in piston housing, size No 44 (086 inch) drill

Vacuum Spark Port: Half Round type, 180 inch diameter—091 inch wide Top of port 027 to 035 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighen manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .0125"-.0175"	Ignition Timing Breaker Points to Open: 5° B. T. C. At "A" Mark	Float Setting Primary ⅛ Inch (Use Gauge T109-232) Secondary 3/16 Inch (Use Gauge T109-222)	Idle Adjustment Screw Setting 1 to 2 Turns Open Idle Engine at 420 R.P.M. In Drive Range

NOTE: These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT.

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CARBURETER
TRADE MARK REG U. S. PAT. OFF.
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S S PRINTED IN U.S.A.

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT Two separate float adjustments must be made—lateral and vert cal

LATERAL ADJUSTMENT With bowl cover assembly inverted bowl cover gasket removed and float resting on seated needle place float gauge directly under center of floats with notched portions of gauge fitted over edges of casting Sides of floats should just clear the vertical upright of float gauge Adjust ment should be made by bending arms of floats

VERTICAL ADJUSTMENT With float gauge in same position floats should just clear the horizontal portion of gauge The vertical d stance between top of float and machined surface of casting must be 1/8 inch (gauge T109 232) for primary floats and 3/16 inch (gauge T109 222) for secondary floats Adjust by bending float arms

FLOAT DROP ADJUSTMENT With bowl cover held in upright position and measuring from center of float the distance be tween top of floats and bowl cover should be 5/8 inch for pri mary floats and 11/16 inch for secondary floats Adjust by bending stop tabs on float bracket

PUMP ADJUSTMENT Install pump connector link in outer hole (long stroke) of pump arm with ends extending toward counter shaft arm Seat throttle valves in bores of carbureter Hold straight edge across top of dust cover boss at pump arm The flat on top of pump arm should be parallel to straight edge Adjust by bending throttle connector rod at lower angle (Use tool T109 213)

METERING ROD ADJUSTMENT Metering rod adjustment is important and must be made after completing the pump ad justment No metering rod gauges are necessary Procedure is as follows 1 Seat throttle valves in bores of carbureter and loosen metering rod arm clamp screw 2 With metering rods in place press down on vacumeter link until metering rods bot tom in carbureter body casting 3 Holding rods in downward position and throttle valves seated revolve metering rod arm until finger on arm contacts lip of vacumeter link Hold in place and carefully tighten clamp screw

BOWL VAPOR VENT ADJUSTMENT This adjustment should be made after completing pump and metering rod adjustments Install dust cover gasket and dust cover Seat throttle valves in bores of carbureter There should be 1/16 inch (gauge T109 197) between lower edge of bowl vapor vent valve and dust cover To adjust remove dust cover and bend vapor vent arm

CHOKE MODIFIER ADJUSTMENT 1 Set Climatic® Control assembly one point lean 2 Loosen clamp screw 3 Remove lower end of connector rod 4 Rotate metal pointer until it is in line with raised pointer on coil housing 5 Align scribed line on lever so that it is straight up and down Hold in place and tighten clamp screw 6 Seat throttle valves (hold choke valve wide open) 7 Hold pointer as indicated in No 4 Lower end of rod must slide freely into hole in throttle arm Bend rod at upper angle to adjust

FAST IDLE AND SECONDARY THROTTLE LOCK OUT AD JUSTMENT 1 Preliminary Adjustment Loosen choke lever clamp screw on choke shaft Insert 015 inch feeler gauge (T109 44) between lip of fast idle cam and boss of flange cast ing Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and t ghten clamp screw 2 Secondary Throttle Lock Out Adjustment (a) With choke valve tightly closed tighten fast idle adjust ng screw until there is 015 inch (gauge T109 44) opening between primary throttle valve and bore of carbureter (side opposite idle port) Lock pawl should now be in unlocked pos tion if not adjust by bending tang on lock pawl (use bend ing tool T109 105) (b) Hold primary throttle valves half way open Open choke valve fully then open primary throttle valves all the way Tang on secondary throttle arm should engage in notch on lock out lever preventing secondary throttle shaft movement Keep choke valve in wide open position Close primary throttle valves so that lock pawl is unlocked then open primary throttle valves all the way Lock out lever should fall free allowing secondary throttle valves to be open before pri mary throttle valves are fully open If necessary bend tang on secondary throttle lever to provide clearance for proper opera tion of lock out lever

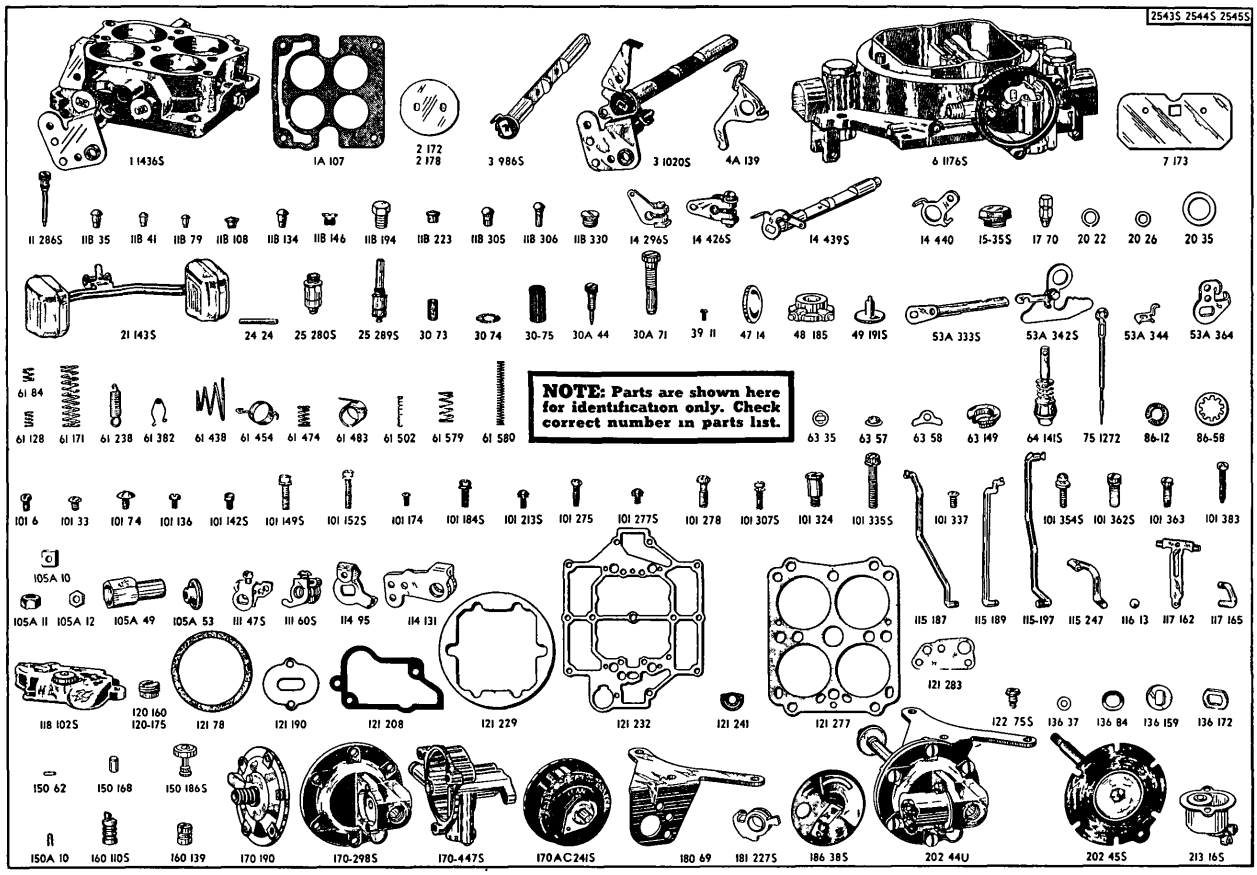
FAST IDLE ON CAR 1700 R P M (Hot)

UNLOADER ADJUSTMENT With throttle wide open there should be 13/64 inch (gauge T109 39) clearance between upper edge of choke valve and inner wall of air horn Adjust by bending unloader lip on throttle shaft lever (use bending tool T109 41)

SECONDARY THROTTLE LEVER ADJUSTMENT Primary and secondary throttle valves should reach wide open position at the same time To adjust bend throttle operating rod at upper angle (Use bending tool T109 213) With primary and sec ondary throttle valves in tightly closed position there should be 017 022 inch (gauge T109 29) clearance between posit ve closing shoes on primary and secondary throttle levers To adjust bend shoe on primary lever

IDLE SPEED AND MIXTURE ADJUSTMENT (Normal Engine Temp) In making the idle adjustment on the engine the air adjustment screw is used to adjust idle speed in a similar man ner as the throttle speed screw used previously Turning the air adjustment screw outward increases engine speed but also leans the mixture supplied to the manifold which must be com pensated for by adjustment of the idle mixture adjusting screws

AIR CONDITIONER FAST IDLE DEVICE ADJUSTMENT This adjustment must be made after carbureter is installed on car engine at normal operating temperature and slow idle adjust ment s completed With shift lever in neutral and air condi tioner turned on engine should idle 900 RPM To adjust loosen lock nut on diaphragm shaft and adjust knurled nut to obtain specified RPM then tighten lock nut



Cadillac 8—1956—Carbureters Nos. 2543S-2544S-2545S

WHEN SERVICING, USE GASKET ASSORTMENT No 277A; REPAIR PACKAGE No 1847A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1436S	—Body flange assembly	
1A-107	FLANGE GASKET	
2-172	Secondary throttle valve	(2)
2-178	Primary throttle valve	(2)
3-986S	Secondary throttle shaft and dog assembly	
3-1020S	Primary throttle shaft lever and bushing assembly	
4A-139	Throttle shaft dog	
6-1176S	—Air horn assembly	
7-173	Choke valve	
11-286S	LOW SPEED JET ASSEMBLY	(4)
11B-35	Rivet plug	(4)
11B-41	Rivet plug	
11B-79	Rivet plug	(4)
11B-108	Idle port rivet plug	(4)
11B-134	Rivet plug (2543S 2545S (1) (2544S (2)	
11B-146	Level sight plug	(2)
11B-194	Pipe plug (2545S)	
11B-223	Nozzle passage rivet plug	(4)
11B-305	Rivet plug	(2)
11B-306	Rivet plug	
11B-330	Flange plug	
14-296S	Choke lever and screw assembly	
14-426S	Coil shaft lever and screw assembly	
14-439S	Choke piston lever link and shaft assembly	
14-440	Cam trip lever	

Part No.	PART NAME	
15-35S	Strainer nut assembly	(2)
17-70	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	(2)
20-26	Relief valve gasket	
20-35	BOWL STRAINER GASKET	(2)
21-143S	Float and lever assembly	(2)
24-24	Float lever pin	(2)
25-280S	PRIMARY NEEDLE AND SEAT ASSEMBLY	
25-289S	SECONDARY NEEDLE AND SEAT ASSEMBLY	
30-73	PRIMARY NEEDLE SEAT STRAINER	
30-74	SECONDARY FUEL INLET STRAINER	
30-75	BOWL STRAINER	
30A-44	Idle adjustment screw	(2)
30A-71	—Idle air adjustment screw	
39-11	Choke valve attaching screw	(2)
47-14	Welsh plug	
48-185	Pump jet housing	
49-191S	Electro magnet plunger assembly (2544S)	
53A-333S	Pump operating lever and coutershaft assembly	
53A-342S	Lockout arm and pawl assembly	
53A-344	VENT ARM	
53A-364	Secondary operating lever	
61-84	Idle adjustment screw and air conditioning unit adjusting nut spring (2543S 2545S (2) (2544S (3)	
61-128	CONNECTOR ROD SPRING	(2)

Part No	PART NAME	
61-171	PUMP SPRING	
61-238	Throttle flex spring	
61-382	METERING ROD SPRING	
61-438	Diaphragm return spring (2544S)	
61-454	Fast idle cam spring	
61-474	Bowl vent spring	
61-483	SECONDARY THROTTLE RETURN SPRING	
61-502	Electro magnet plunger spring (2544S)	
61-579	Idle air adjustment screw spring	
61-580	VACUUM PISTON SPRING	
63-35	Connector rod spring retainer	(2)
63-57	CHECK BALL RETAINER	
63-58	Coil housing retainer	(3)
63-149	Bowl vent spring retainer	
64-141S	PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
75-1272	METERING ROD—STANDARD	(2)
75-1317U	—Metering rod and jet unit for altitude use (Consists of 1—61 332 2—75 1299 and 2—120 185)	
86-12	Flange stud lock washer	(4)
86-58	Air conditioning unit lock washer (2544S)	
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	(2)
101-136	Coil housing attaching screw	(3)
101-142S	Electro magnet housing attaching screw and washer assembly (2544S)	(2)
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	
101-174	Primary throttle valve attaching screw	(4)
101-184S	Dust cover attaching screw and washer assembly	(2)
101-213S	Diaphragm cover attaching screw and washer assembly (2544S)	(6)
101-275	Piston housing attaching screw	
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet housing attaching screw	
101-307S	Air horn attaching screw and washer assembly (2543S 2545S (8) (2544S (5)	
101-324	Fast idle cam screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-354S	Coil shaft and choke lever clamp screw assembly	(2)
101-362S	Air horn attaching screw and washer assembly (2544S)	(3)
101-363	Piston housing attaching screw	(2)
101-383	Fast idle adjustment screw	
105A-10	Choke lever clamp screw nut	(2)
105A-11	Flange stud nut	(4)
105A-12	Air conditioning diaphragm unit lock nut (2544S)	

Part No.	PART NAME	
105A-49	Air conditioning unit to bracket attaching nut (2544S)	
105A-53	Air conditioning unit adjusting nut (2544S)	
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
114-95	Outer throttle shaft arm	
114-131	Inner throttle shaft arm	
115-187	Choke connector rod (Climatic® control side)	
115-189	Choke connector rod	
115-197	THROTTLE CONNECTOR ROD	
115-247	Throttle operating rod	
116-13	PUMP INTAKE AND AIR CONDITIONING UNIT CHECK BALL (2543S 2545S (1) (2544S	(2)
117-162	Vacumeter piston link	
117-165	PUMP CONNECTOR LINK	
118-102S	Dust cover assembly	
120-160	Primary metering rod jet (Sup by 120 163)	(2)
120-163	PRIMARY METERING ROD JET	(2)
120-175	Secondary metering jet (Sup by 120 185)	(2)
120-185	SECONDARY METERING JET	(2)
121-78	COIL HOUSING GASKET	
121-190	Electro magnet housing gasket (2544S)	
121-208	DUST COVER GASKET	
121-229	AIR CLEANER GASKET	
121-232	AIR HORN GASKET	
121-241	PUMP JET HOUSING GASKET	
121-277	BODY FLANGE GASKET	
121-283	PISTON HOUSING GASKET	
122-75S	PUMP RELIEF VALVE ASSEMBLY	
136-37	Throttle operating rod washer	(2)
136-84	Throttle shaft spring washer	
136-159	Primary throttle shaft washer	
136-172	Secondary throttle shaft washer	
150-62	Choke piston pin	
150-168	Air conditioning unit diaphragm air bleed pin (2544S)	
150-186S	Pin and valve cap assembly	
150A-10	PIN SPRING	(5)
160-110S	Vacuum piston and pin assembly	
160-139	Choke piston	
170-190	Inner diaphragm housing (2544S)	
170-298S	Outer diaphragm housing and plug assembly (2544S)	
170-447S	—Piston housing and plug assembly	
170AC241S	Thermostatic coil and housing assembly	
180-69	Air conditioning unit bracket (2544S)	
181-227S	Fast idle cam assembly	
186-38S	Choke baffle plate and spring assembly	
202-44U	Unitized package (2544S 2545S) (Consists of 3—101 362S 1—101 371S and 1—202 43S)	
202-45S	Air conditioning unit diaphragm and shaft assembly (2544S)	
213-16S	Electro magnet and housing assembly (2544S)	

—Parts so marked are new and listed for the first time

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

CADILLAC

1956

2333S-2333SA
Cars Without
Air Conditioning

2334S-2334SA
Cars With
Air Conditioning

All Models Except Eldorado and Two Carbureter Installations

(Use 2545S to replace 2333S-SA, 2370SA)

(Use 2545S with 202-44U to replace 2334S-SA)

WCFB Four Bore Down-Draft Climatic® Control Carbureters

Nos. 2333S-2333SA-2334S-2334SA-2370S-2370SA

CARBURETER SPECIFICATIONS

For Cadillac 8 Cylinder Engine 4 Inch Bore, 3⅝ Inch Stroke

Dimensions Flange Four Bore—4 bolt type size 1¼ inch
Primary venturi size 11/32 inch (1 D)
Main venturi size 1 3/16 inch (primary side) and (secondary side)

Vent Inside (5) Outside in flange (4)

Gasoline Intake Size No 38 (1015 inch) drill hole in needle seat

Low Speed Jet Tube Jet (primary and secondary) size No 67 (032 inch) drill
By pass in body size 057 inch diameter
Economizer in body size No 54 (055 inch) drill
Idle bleed in body size 0826 inch diameter

Idle Port (Upper) slot type Primary length 175 inch width 030 inch
Secondary length 100 inch width 030 inch

Idle Port Opening Primary 091 to 097 inch secondary 050 to 056 inch above upper edge of valve with valve tightly closed

Lower Port Primary (for idle adjustment screw) size No 53 (0595 inch) drill Secondary none

Set Idle Adjustment Screw 1¾ to 2¾ turns open For richer mixture turn screw out Do not idle engine below 420 R P M (Transmission in Drive Range) For cars with air conditioning set idle with air conditioning on (Transmission in Drive Range)

Idle Air Adjusting Screw Seat size (2333S 2334S 2370S) 187 inch diameter (2333SA 2334SA 2370SA) 221 inch diameter
Constant air bleed restriction size (2333S 2334S 2370S) No 49 (073 inch) drill

Main Nozzle Installed permanently DO NOT REMOVE Anti percolating jet (Primary) size No 70 (028 inch) drill Anti percolating jet (secondary) to idle well size No 70 (028 inch) drill

Metering Rod Primary economy step 0715 inch diameter
Middle step tapers to 064 inch diameter
Power step 040 inch diameter
Secondary none

Metering Rod Jet Primary size 096 inch diameter (for metering rod) Secondary size 070 inch diameter (No metering rod)

Accelerating Pump Discharge jet (twin) primary only size No 74 (0225 inch) drill
Intake ball check seat size 115 to 120 inch diameter
Discharge needle seat size 070 inch diameter
Relief ball check size No 55 (052 inch) drill
Relief passage (vent) to fuel chamber No 42 (0935 inch) drill

Choke Carter Climatic® Control set one point lean Butterfly type offset choke valve primary side only Choke heat suction hole restriction in piston housing size No 44 (086 inch) drill

Vacuum Spark Port Half Round type 180 inch diameter—091 inch wide Top of port 027 to 035 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter

Spark Plug Gap 035"	Breaker Point Setting .0125"-.0175" Note Set Dwell Angle 31°	Ignition Timing Breaker Points to Open 5° B T C At 'A' Mark	Float Setting Primary 1/8 Inch (Use Gauge T109-232) Secondary 3/16 Inch (Use Gauge T109-222)	Idle Adjustment Screw Setting 1¾ to 2¾ Turns Open Idle Engine at 400 R P M In Drive Range

NOTE These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT Two separate float adjustments must be made—lateral and vertical

LATERAL ADJUSTMENT With bowl cover assembly inverted bowl cover gasket removed and float resting on seated needle place float gauge directly under center of floats with notched portions of gauge fitted over edges of casting Sides of floats should just clear the vertical upright of float gauge Adjustment should be made by bending arms of floats

VERTICAL ADJUSTMENT With float gauge in same position floats should just clear the horizontal portion of gauge The vertical distance between top of float and machined surface of casting must be 1/8 inch (gauge T109 232) for primary floats and 3/16 inch (gauge T109 222 for secondary floats Adjust by bending float arms

FLOAT DROP ADJUSTMENT With bowl cover held in upright position and measuring from center of float the distance between top of floats and bowl cover should be 5/8 inch for primary floats and 11/16 inch for secondary floats Adjust by bending stop tabs on float bracket

PUMP ADJUSTMENT Install pump connector link in outer hole (long stroke) of pump arm with ends extending toward countershaft arm Seat throttle valves in bores of carbureter Hold straight edge across top of dust cover boss at pump arm The flat on top of pump arm should be parallel to straight edge Adjust by bending throttle connector rod at lower angle (Use tool T109 213)

METERING ROD ADJUSTMENT Metering rod adjustment is important and must be made after completing the pump adjustment No metering rod gauges are necessary Procedure is as follows 1 Seat throttle valves in bores of carbureter and loosen metering rod arm clamp screw 2 With metering rods in place press down on vacumeter link until metering rods bottom in carbureter body casting 3 Holding rods in downward position and throtl'e valves seated revolve metering rod arm until finger on arm contacts lip of vacumeter link Hold in place and carefully tighten clamp screw

BOWL VAPOR VENT ADJUSTMENT This adjustment should be made after completing pump and metering rod adjustments Install dust cover gasket and dust cover Seat throttle valves in bores of carbureter There should be 1/16 inch (gauge T109 197) between lower edge of bowl vapor vent valve and dust cover To adjust remove dust cover and bend vapor vent arm

CHOKE MODIFIER ADJUSTMENT 1 Set Climatic® Control assembly one point lean 2 Loosen clamp screw 3 Remove lower end of connector rod 4 Rotate metal pointer until it is in line with raised pointer on coil housing 5 Align scribed line on lever so that it is straight up and down Hold in place and tighten clamp screw 6 Seat throttle valves (hold choke valve wide open) 7 Hold po nter as indicated in No 4 Lower end of rod must slide freely into hole in throttle arm Bend rod at upper angle to adjust

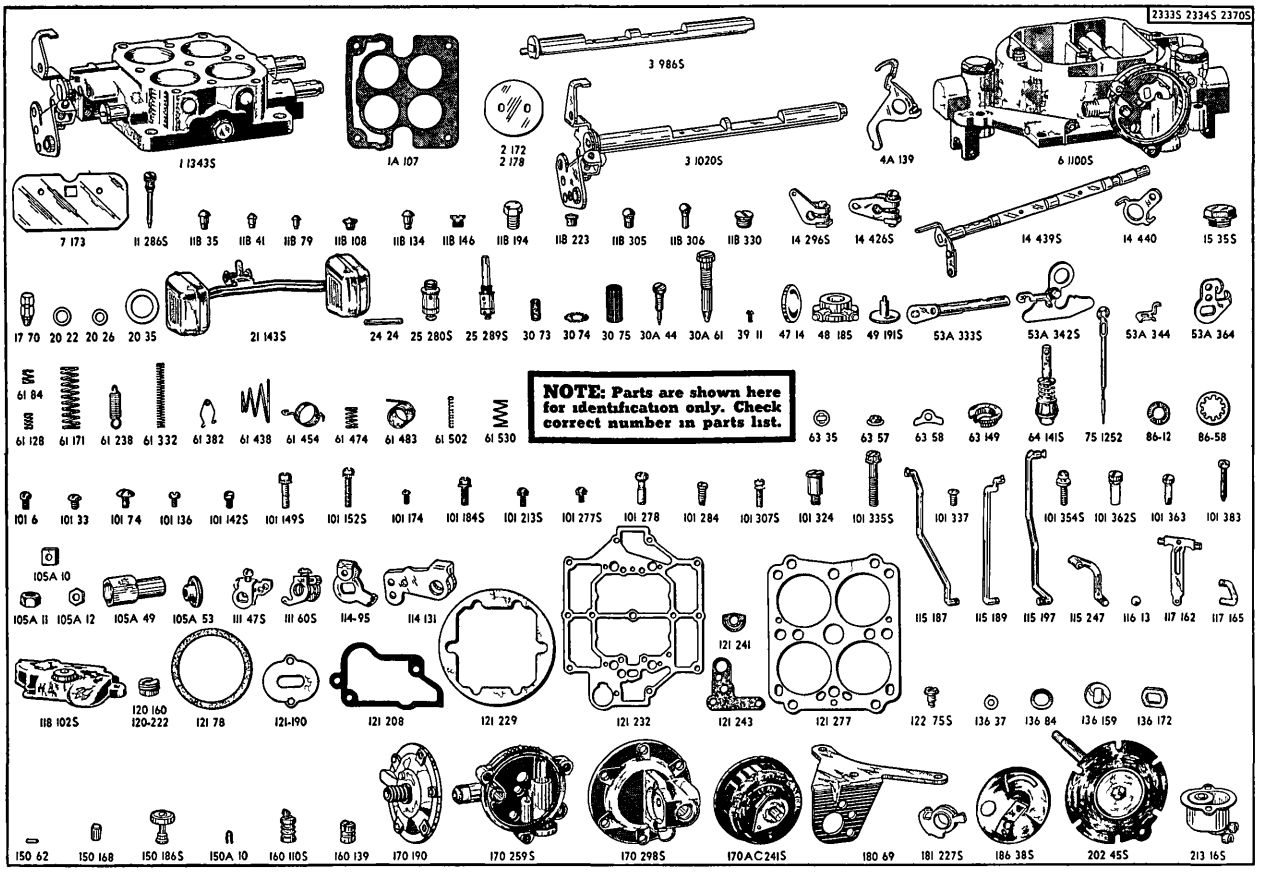
FAST IDLE AND SECONDARY THROTTLE LOCK-OUT ADJUSTMENT 1 Preliminary Adjustment Loosen choke lever clamp screw on choke shaft Insert 015 inch feeler gauge (T109 44) between lip of fast idle cam and boss of flange casting Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw 2 Secondary Throttle Lock Out Adjustment (a) With choke valve tightly closed tighten fast idle adjusting screw until there is 015 inch (gauge T109 44) opening between primary throttle valve and bore of carbureter (side opposite idle port) Lock pawl should now be in unlocked position if not adjust by bending tang on lock pawl (use bending tool T109 105) (b) Hold primary throttle valves half way open Open choke valve fully then open primary throttle valves all the way Tang on secondary throttle arm should engage in notch on lock out lever preventing secondary throttle shaft movement Keep choke valve in wide open position Close primary throttle valves so that lock pawl is unlocked then open primary throttle valves all the way Lock out lever should fall free allowing secondary throttle valves to be open before primary throttle valves are fully open If necessary bend tang on secondary throttle lever to provide clearance for proper operation of lock out lever

UNLOADER ADJUSTMENT With throttle wide open there should be 13/64 inch (gauge T109 39) clearance between upper edge of choke valve and inner wall of air horn Adjust by bending unloader lip on throttle shaft lever (use bending tool T109 41)

SECONDARY THROTTLE LEVER ADJUSTMENT Primary and secondary throttle valves should reach wide open position at the same time To adjust bend throttle operating rod at upper angle (Use bending tool T109 213) With primary and secondary throttle valves in tightly closed position there should be 017 022 inch (gauge T109 29) clearance between positive closing shoes on primary and secondary throttle levers To adjust bend shoe on primary lever

IDLE SPEED AND MIXTURE ADJUSTMENT (Normal Engine Temp) In making the idle adjustment on the engine the air adjustment screw is used to adjust idle speed in a similar manner as the throttle speed screw used previously Turning the air adjustment screw outward increases engine speed but also leans the mixture supplied to the manifold which must be compensated for by adjustment of the idle mixture adjusting screws

AIR CONDITIONER FAST IDLE DEVICE ADJUSTMENT This adjustment must be made after carbureter is installed on car engine at normal operating temperature and slow idle adjustment is completed With shift lever in neutral and air conditioner turned on engine should idle 900 RPM To adjust loosen lock nut on diaphragm shaft and adjust knurled nut to obtain specified RPM then tighten lock nut



Cadillac 8—1956—Carbureters Nos. 2333S-SA, 2334S-SA, 2370S-SA

WHEN SERVICING, USE GASKET ASSORTMENT No 277A, REPAIR PACKAGE No 1818A

PART NAMES IN CAPITAL LETTERS LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-1343S	Body flange assembly (2333S 2334S 2370S) (Sup by 1 1416S)	
1-1416S	Body flange assembly	
1A-107	FLANGE GASKET	
2-172	Secondary throttle valve	(2)
2-178	Primary throttle valve	(2)
3-986S	Secondary throttle shaft and dog assembly	
3-1020S	Primary throttle shaft lever and bushing assembly	
4A-139	Throttle shaft dog	
6-1100S	Air horn assembly (Casting No 6 1116) (Sup by 6 1176S)	
6-1176S	Air horn assembly (Casting No 6 1155)	
7-173	Choke valve	
11-286S	LOW SPEED JET ASSEMBLY	(4)
11B-35	Rivet plug	(4)
11B-41	Rivet plug (6—1100S (2) (6—1176S (1)	
11B-79	Rivet plug	(4)
11B-108	Idle port rivet plug	(4)
11B-134	Rivet plug (2333S SA 2370S SA (1) (2334S SA	(2)
11B-146	Level sight plug	(2)
11B-194	Pipe plug (2370S SA)	
11B-223	Nozzle passage rivet plug	(4)
11B-305	Rivet plug (6—1100S (1) (6—1176S (2)	
11B-306	Rivet plug (6—1100S (2) (6—1176S (1)	
11B-330	Flange plug	

Part No.	PART NAME	
14-296S	Choke lever and screw assembly	
14-426S	Coil shaft lever and screw assembly	
14-439S	Choke piston lever link and shaft assembly	
14-440	Cam trip lever	
15-35S	Strainer nut assembly	(2)
17-70	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	(2)
20-26	Relief valve gasket	
20-35	BOWL STRAINER GASKET	(2)
21-143S	Float and lever assembly	(2)
24-24	Float lever pin	(2)
25-280S	PRIMARY NEEDLE AND SEAT ASSEMBLY	
25-289S	SECONDARY NEEDLE AND SEAT ASSEMBLY	
30-73	PRIMARY NEEDLE SEAT STRAINER	
30-74	SECONDARY FUEL INLET STRAINER	
30-75	BOWL STRAINER	
30A-44	Idle adjustment screw	(2)
30A-61	Idle air adjustment screw (2333S 2334S 2370S) (Use with 1 1343S)	
30A-69	Idle air adjustment screw (Use with 1 1416S)	
39-11	Choke valve attaching screw	(2)
47-14	Welsh plug	
48-185	Pump jet housing	
49-191S	Electro magnet plunger assembly (2334S SA)	
53A-333S	Pump operating lever and countershaft assembly	

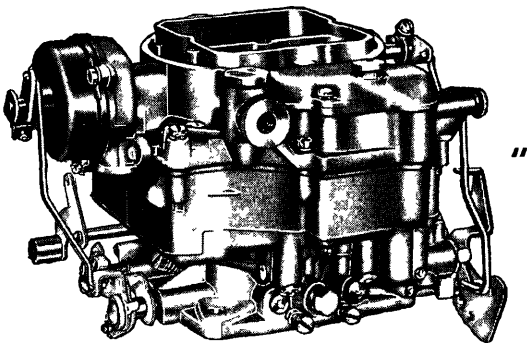
Part No.	PART NAME	
53A-342S	Lockout arm and pawl assembly	
53A-344	VENT ARM	
53A-364	Secondary operating lever	
61-84	Idle adjustment screw and air conditioning unit adjusting nut spring (2333S SA 2370S SA (2) (2334S SA (3)	
61-128	CONNECTOR ROD SPRING	(2)
61-171	PUMP SPRING	
61-238	Throttle flex spring	
61-332	VACUUM PISTON SPRING	
61-382	METERING ROD SPRING	
61-438	Diaphragm return spring (2334S SA)	
61-454	Fast idle cam spring	
61-474	Bowl vent spring	
61-483	SECONDARY THROTTLE RETURN SPRING	
61-502	Electro magnet plunger spring (2334S SA)	
61-530	Idle air adjustment screw spring (2333S 2334S 2370S) (Use with 1 1343S)	
61-579	Idle air adjustment screw spring (Use with 1 1416S)	
63-35	Connector rod spring retainer	(2)
63-57	CHECK BALL RETAINER	
63-58	Coil housing retainer	(3)
63-149	Bowl vent spring retainer	
64-141S	PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
75-1229	Metering rod—standard (Sup by 75 1252)	(2)
75-1252	METERING ROD—STANDARD	(2)
75-1260U	Metering rod and jet unit for altitude use (Consists of 2—75 1258 and 2—120 185)	
75-1318U	Unitized package (Consists of 1—61 580 and 2—75 1272)	
86-12	Flange stud lock washer	(4)
86-58	Air conditioning unit lock washer (2334S SA)	
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	(2)
101-136	Coil housing attaching screw	(3)
101-142S	Electro magnet housing attaching screw and washer assembly (2334S SA)	(2)
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	
101-174	Primary throttle valve attaching screw	(4)
101-184S	Dust cover attaching screw and washer assembly	(2)
101-213S	Diaphragm cover attaching screw and washer assembly (2334S SA)	(6)
101-275	Piston housing attaching screw (Use with 6 1176S)	
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet housing attaching screw	
101-284	Piston housing attaching screw (6—1100S (2)	
101-307S	Air horn attaching screw and washer assembly (2333S SA 2370S SA (8) (2334S SA (5)	
101-324	Fast idle cam screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-354S	Coil shaft and choke lever clamp screw assembly	(2)
101-362S	Air horn attaching screw and washer assembly (2334S SA)	(3)
101-363	Piston housing attaching screw (6—1100S (1) (6—1176S (2)	
101-383	Fast idle adjustment screw	
105A-10	Choke lever clamp screw nut	(2)
105A-11	Flange stud nut	(4)
105A-12	Air conditioning diaphragm unit lock nut (2334S SA)	
105A-49	Air conditioning unit to bracket attaching nut (2334S SA)	
105A-53	Air conditioning unit adjusting nut (2334S SA)	
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
114-95	Outer throttle shaft arm	
114-131	Inner throttle shaft arm	
115-187	Choke connector rod (Climatic® control side)	
115-189	Choke connector rod	
115-197	THROTTLE CONNECTOR ROD	
115-247	Throttle operating rod	
116-13	PUMP INTAKE AND AIR CONDITIONING UNIT CHECK BALL (2333S SA 2370S SA (1) (2334S SA (2)	
117-162	Vacumeter piston link	
117-165	PUMP CONNECTOR LINK	
118-102S	Dust cover assembly	
120-160	PRIMARY METERING ROD JET	(2)
120-222	SECONDARY METERING JET	(2)
121-78	COIL HOUSING GASKET	
121-190	Electro magnet housing gasket (2334S SA)	
121-208	DUST COVER GASKET	
121-229	AIR CLEANER GASKET	
121-232	AIR HORN GASKET	
121-241	PUMP JET HOUSING GASKET	
121-243	PISTON HOUSING GASKET (Use with 6 1100S)	
121-277	BODY FLANGE GASKET	
121-283	PISTON HOUSING GASKET (Use with 6 1176S)	
122-75S	PUMP RELIEF VALVE ASSEMBLY	
136-37	Throttle operating rod washer	(2)
136-84	Throttle shaft spring washer	
136-159	Primary throttle shaft washer	
136-172	Secondary throttle shaft washer	
150-62	Choke piston pin	
150-168	Air conditioning unit diaphragm air bleed pin (2334S SA)	
150-186S	Pin and valve cap assembly	
150A-10	PIN SPRING	(5)
160-139	Choke piston	
160-110S	Vacuum piston and pin assembly	
170-190	Inner diaphragm housing (2334S SA)	
170-259S	Piston housing and plug assembly (Use with 6 1100S)	
170-298S	Outer diaphagm housing and plug assembly (2334S SA)	
170-447S	Piston housing and plug assembly (Use with 6 1176S)	
170AC241S	Thermostatic coil and housing assembly	
180-69	Air conditioning unit bracket (2334S SA)	
181-227S	Fast idle cam assembly	
186-38S	Choke baffle plate and spring assembly	
202-44U	Unitized package (2334S SA 2370S SA) (Consists of 3—101 362S 1—101 371S and 1—202 43S)	
202-45S	Air conditioning unit diaphragm and shaft assembly (2334S SA)	
213-16S	Electro magnet and housing assembly (2334S SA)	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

2371S
Front Carbureter
Without Air Conditioning

2372S
Rear Carbureter

2373S
Front Carbureter
With Air Conditioning



CADILLAC

MODELS "ELDORADO" and "ALL TWO CARBURETER INSTALLATIONS"

1956

(Use 2371S to replace 2372S
Use 2371S and 202-100U to replace 2373S)

WCFB Four-Bore Down-Draft Climatic® Control **Carbureters Nos. 2371S-2372S-2373S**

CARBURETER SPECIFICATIONS

For Cadillac 8 Cylinder Engine: 4 Inch Bore, 3⅝ Inch Stroke

Dimensions: Flange Four Bore—4 bolt type, size 1¼ inch.
Primary venturi size, 11/32 inch (I. D.).
Main venturi size, 1-3/16 inch (primary side) and (secondary side).

Vent: Inside, (5).
Outside, in flange, (4).

Gasoline Intake: Size No. 38 (.1015 inch) drill hole in needle seat.

Low Speed Jet Tube: Jet, (primary only) size No. 69 (.0292 inch) drill. By-pass in body size .057 inch diameter.
Economizer, in body, size No. 54 (.055 inch) drill.
Idle bleed, in body, size No. 44 (.086 inch) drill.

Idle Port: (Upper) slot type, Primary, length .136 inch; width .030 inch.
Secondary, none.

Idle Port Opening: Primary, .061 to .067 inch, above upper edge of valve with valve tightly closed.

Lower Port: Primary (for idle adjustment screw), size No. 53 (.0595 inch) drill.
Secondary, none.

Set Idle Adjustment Screw: ¾ to 1¾ turns open. For richer mixture turn screw out. Do not idle engine below 490-510 R.P.M. (Transmission in Drive Range). For cars with air conditioning set idle at 490 R.P.M. with air conditioning on (Transmission in Drive Range).

Idle Air Adjusting Screw: Seat size .187 inch diameter.
Constant air bleed restriction, None.

Main Nozzle: Installed permanently. DO NOT REMOVE. Anti-percolating jet (Primary), size No. 70 (.028 inch) drill. Anti-percolating jet (secondary) to idle well, size No. 70 (.028 inch) drill.

Metering Rod: Primary, economy step .0705 inch diameter.
Middle step tapers to .064 inch diameter.
Power step .040 inch diameter.
Secondary, none.

Metering Rod Jet: Primary, size .096 inch diameter (for metering rod).
Secondary, size .059 inch diameter. (No metering rod.)

Accelerating Pump: Discharge jet (twin) primary only, size No. 69 (.029 inch) drill.
Intake ball check seat, size .115 to .120 inch diameter.
Discharge needle seat, size .070 inch diameter.
Relief ball check, size No. 55 (.052 inch) drill.
Relief passage (vent) to fuel chamber No. 42 (.0935 inch) drill.

Choke: Carter Climatic® Control, set on Index. Butterfly type, offset choke valve, primary side only. Choke heat suction hole, restriction in piston housing, size No. 44 (.086 inch) drill.

Vacuum Spark Port: Horizontal slot, round end type; .065 x .120 inch. Top of port .007 to .015 inch above top edge of valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .0125"-.0175" Note: Set Dwell Angle 31°	Ignition Timing Breaker Points to Open: 5° B.T.C. at "A" Mark	Float Setting Primary 1/8 Inch (Use Gauge T109-232) Secondary 3/16 Inch (Use Gauge T109-222)	Idle Adjustment Screw Setting ¾ to 1¾ Turns Open Idle Engine at 490 to 510 r.p.m. In Drive Rang

NOTE: These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT Two separate float adjustments must be made—lateral and vertical LATERAL ADJUSTMENT With bowl cover assembly inverted bowl cover gasket removed and float resting on seated needle place float gauge directly under center of floats with notched portions of gauge fitted over edges of casting Sides of floats should just clear the vertical upright of float gauge Adjustment should be made by bending arms of floats VERTICAL ADJUSTMENT With float gauge in same position floats should just clear the horizontal portion of gauge The vertical distance between top of float and machined surface of casting must be 1/8 inch (gauge T109 232) for primary floats and 3/16 inch (gauge T109 222) for secondary floats Adjust by bending float arms

FLOAT DROP ADJUSTMENT· With bowl cover held in upright position and measuring from center of float the distance between top of floats and bowl cover should be 5/8 inch for primary floats and 11/16 inch for secondary floats Adjust by bending stop tabs on float bracket

PUMP ADJUSTMENT Install pump connector link in outer hole (long stroke) of pump arm with ends extending toward counter shaft arm Seat throttle valves in bores of carbureter Hold straight edge across top of dust cover boss at pump arm The flat on top of pump arm should be parallel to straight edge Adjust by bending throttle connector rod at lower angle (Use tool T109 213)

METERING ROD ADJUSTMENT Metering rod adjustment is important and must be made after completing the pump adjustment No metering rod gauges are necessary Procedure is as follows 1 Seat throttle valves in bores of carbureter and loosen metering rod arm clamp screw 2 With metering rods in place press down on vacumeter link until metering rods bottom in carbureter body casting 3 Holding rods in downward position and throttle valves seated revolve metering rod arm until finger on arm contacts lip of vacumeter link Hold in place and carefully tighten clamp screw

BOWL VAPOR VENT ADJUSTMENT· This adjustment should be made after completing pump and metering rod adjustments Install dust cover gasket and dust cover Seat throttle valves in bores of carbureter There should be 1/16 inch (gauge T109 197) between lower edge of bowl vapor vent valve and dust cover To adjust remove dust cover and bend vapor vent arm

CHOKE MODIFIER ADJUSTMENT 1 Set Climatic® Control assembly on index 2 Loosen clamp screw 3 Remove lower end of connector rod 4 Rotate metal pointer until it is in line with raised pointer on coil housing 5 Align scribed line on lever so that it is straight up and down Hold in place and tighten clamp screw 6 Seat throttle valves (hold choke valve wide open) 7 Hold pointer as indicated in No 4 Lower end of rod must slide freely into hole in throttle arm Bend rod at upper angle to adjust

FAST IDLE ADJUSTMENT (Front Carbureter Only) 1 Loosen choke lever clamp screw on choke shaft Insert 015 inch gauge (T109 44) between lip of fast idle cam and boss of flange casting Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw 2 With choke valve tightly closed tighten fast idle adjusting screw until there is 015 inch (gauge T109 44) opening between primary throttle valve and bore of carbureter (side opposite idle port) Be sure fast idle adjusting screw is on high step of cam while making this adjustment

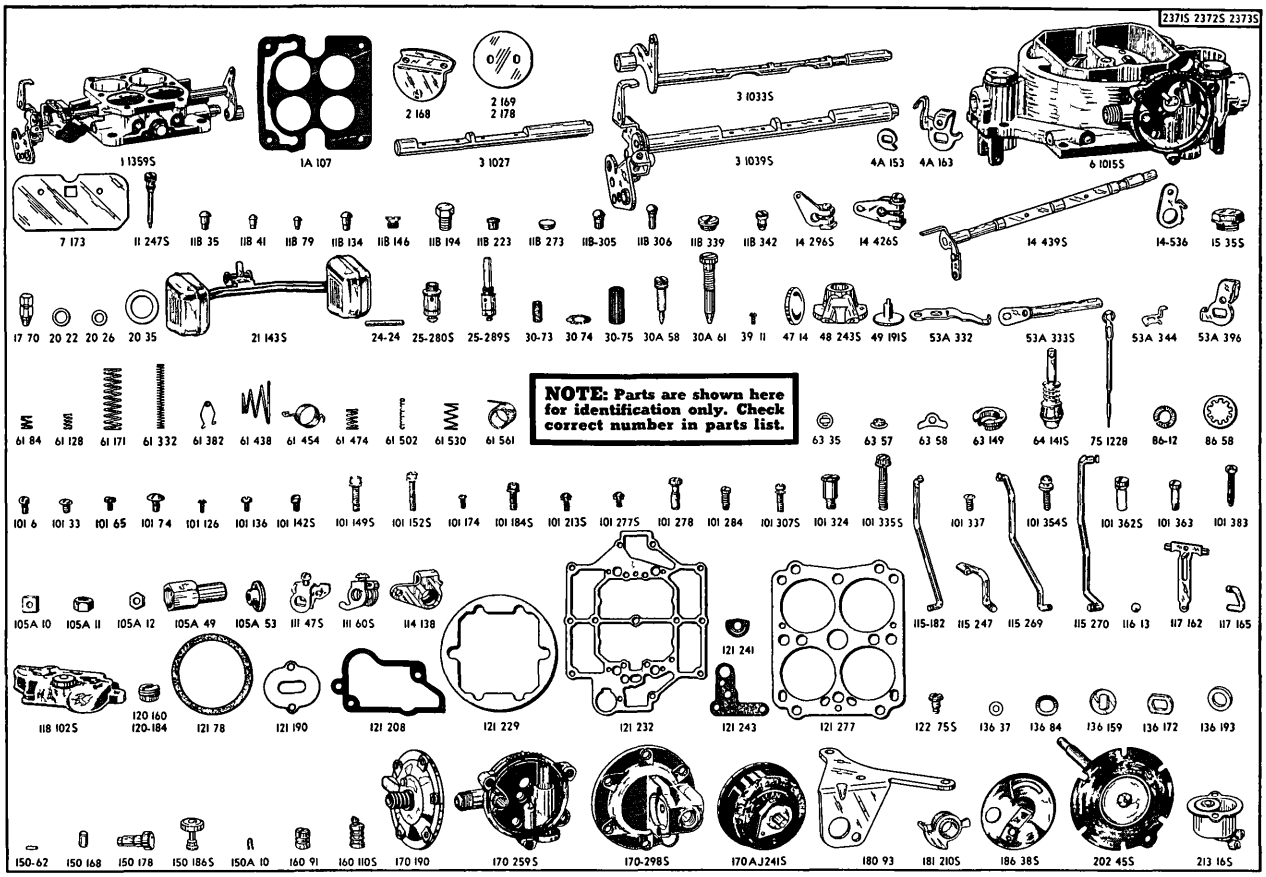
UNLOADER ADJUSTMENT With throttle wide open there should be 13/64 inch (gauge T109 39) clearance between upper edge of choke valve and inner wall of air horn Adjust by bending unloader lip on throttle shaft lever (use bending tool T109 41)

SECONDARY THROTTLE LEVER ADJUSTMENT Primary and secondary throttle valves should reach wide open position at the same time To adjust bend throttle operating rod at upper angle (Use bending tool T109 213) With primary and secondary throttle valves in tightly closed position there should be 017 022 inch (gauge T109 29) clearance between positive closing shoes on primary and secondary throttle levers To adjust bend shoe on primary lever

AUXILIARY THROTTLE LOCK-OUT ADJUSTMENT 1 With choke valve closed edge of hook on lock out arm should contact auxiliary throttle lever making maximum contact of locking step on lever 2 Open choke valve Auxiliary throttle valve should become unlocked a few degrees before the choke reaches wide open position Adjust by bending lock out arm

IDLE SPEED AND MIXTURE ADJUSTMENT (Normal Engine Temp) In making the idle adjustment on the engine the air adjustment screw is used to adjust idle speed in a similar manner as the throttle speed screw used previously Turning the air adjustment screw outward increases engine speed but also leans the mixture supplied to the manifold which must be compensated for by adjustment of the idle mixture adjusting screws

AIR CONDITIONER FAST IDLE DEVICE ADJUSTMENT This adjustment must be made after carbureter is installed on car engine at normal operating temperature and slow idle adjustment is completed With shift lever in neutral and air conditioner turned on engine should idle 900 R P M To adjust loosen lock nut on diaphragm shaft and adjust knurled nut to obtain specified R P M then tighten lock nut



Cadillac 8—1956—Carbureters Nos. 2371S-2372S-2373S

WHEN SERVICING, USE GASKET ASSORTMENT No. 277A; REPAIR PACKAGE No. 1819

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1359S	—Body flange assembly	
1A-107	—FLANGE GASKET	
2-168	Auxiliary throttle valve	(2)
2-169	Secondary throttle valve	(2)
2-178	—Primary throttle valve	(2)
3-1027	—Secondary throttle shaft	
3-1033S	—Auxiliary throttle shaft, lever and weight assembly	
3-1039S	—Primary throttle shaft and lever assembly	
4A-153	—Auxiliary throttle shaft dog	
4A-163	—Throttle shaft dog	
6-1015S	Air horn assembly (Casting No 6 950) (Sup by 6 1177S)	
6-1177S	—Air horn assembly (Casting No 6 1144)	
7-173	Choke valve	
11-247S	LOW SPEED JET ASSEMBLY	(2)
11B-35	Rivet plug	(4)
11B-41	Rivet plug (6 1015S (2) (6 1177S (1)	
11B-79	Rivet plug	(4)
11B-134	Rivet plug (2371S 2372S (1) (2373S (2)	
11B-146	Level sight plug	(2)
11B-194	Pipe plug (2371S (2) (2372S 2373S (1)	
11B-223	Nozzle passage rivet plug	(6)
11B-273	Secondary throttle shaft rivet plug	
11B-305	Rivet plug (6 1015S (1) (6 1177S) (2)	
11B-306	Rivet plug (6 1015S (2) (6 1177S (1)	
11B-339	—Flange plug	
11B-342	—Secondary low speed passage screw plug	(2)
14-296S	Choke lever and screw assembly	
14-426S	Coil shaft lever and screw assembly	
14-439S	Choke piston lever, link and shaft assembly	
14-536	—Cam trip lever	
15-35S	Strainer nut assembly	(2)
17-70	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	(2)
20-26	Relief valve gasket	
20-35	BOWL STRAINER GASKET	(2)
21-143S	Float and lever assembly	(2)
24-24	Float lever pin	(2)
25-280S	PRIMARY NEEDLE AND NEEDLE SEAT ASSEMBLY	
25-289S	SECONDARY NEEDLE AND NEEDLE SEAT ASSEMBLY	
30-73	PRIMARY NEEDLE SEAT STRAINER	
30-74	SECONDARY FUEL INLET STRAINER	
30-75	BOWL STRAINER	
30A-58	Idle adjustment screw	(2)
30A-61	Idle air adjustment screw	
39-11	Choke valve attaching screw	(2)
47-14	WELSH PLUG	
48-157S	Pump jet and housing assembly (Sup by 48 253S)	
48-243S	Pump jet and housing assembly (Sup by 48 157S)	
48-253S	—Pump jet and housing assembly	
49-191S	Electro magnet plunger assembly (2373S)	
53A-332	Lockout arm	
53A-333S	Pump operating lever and countershaft assembly	
53A-344	VENT ARM	

Part No.	PART NAME
53A-396	—Secondary operating lever
61-84	Idle adjustment screw and air conditioning unit adjusting nut spring (2371S 2372S (2) (2373S (3)
61-128	CONNECTOR ROD SPRING (2)
61-171	PUMP SPRING
61-332	†Vacuum piston spring (Sup by 61 580)
61-382	METERING ROD SPRING
61-438	Diaphragm return spring (2373S)
61-454	Fast idle cam spring
61-474	Bowl vent spring
61-502	Electro magnet plunger spring (2373S)
61-530	Idle air adjustment screw spring
61-561	—SECONDARY THROTTLE RETURN SPRING
61-580	—VACUUM PISTON SPRING
63-35	CONNECTOR ROD RETAINER (2)
63-57	INTAKE CHECK BALL RETAINER
63-58	Coil housing retainer (3)
63-149	Bowl vent spring retainer
64-141S	Pump plunger, rod, spring and retainer assembly (Sup by 64 193S)
64-193S	—PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY
75-1228	—†Metering rod—standard (Sup by 75 1272) (2)
75-1261U	—Metering rod and jet unit for altitude use (Consists of 2—75 1259 and 2—120 174) (Sup by 75 1301U)
75-1272	—METERING ROD—STANDARD
75-1301U	—Metering rod and jet unit for altitude use (Consists of 1—61 332 2—75 1299 and 2—120 193)
86-12	Flange stud lock washer (4)
86-58	Air conditioning unit lock washer (2373S)
101-6	Pump arm clamp screw
101-33	Metering rod arm clamp screw
101-65	Choke baffle plate attaching screw
101-74	Throttle shaft screw (2)
101-126	Auxiliary throttle valve attaching screw (4)
101-136	Coil housing attaching screw (3)
101-142S	Electro magnet housing attaching screw and washer assembly (2373S) (2)
101-149S	Body flange attaching screw and washer assembly (4)
101-152S	Air horn attaching screw and washer assembly
101 174	Primary throttle valve attaching screw (4)
101-184S	Dust cover attaching screw and washer assembly (2)
101-213S	Diaphragm cover attaching screw and washer assembly (2373S) (6)
101 275	Piston housing attaching screw (Use with 6 1177S)
101-277S	Vent arm attaching screw and washer assembly
101-278	Pump jet housing attaching screw
101-284	Piston housing attaching screw (6 1015S (2)
101-307S	Air horn attaching screw and washer assembly (2371S 2372S (8) (2373S (5)
101 324	Fast idle cam screw
101-335S	Air horn attaching screw and washer assembly (7)
101-337	Secondary throttle valve attaching screw (4)
101-354S	Coil shaft and choke lever clamp screw assembly (2)
101-362S	Air horn attaching screw and washer assembly (2373S) (3)
101-363	Piston housing attaching screw (6 1015S (1) (6 1177S (2)
101-383	Fast idle adjustment screw (2371S 2373S)
105A-10	Choke lever clamp screw nut (2)
105A-11	Flange stud nut (4)
105A-12	Air conditioning diaphragm unit lock nut (2373S)
105A-49	Air conditioning unit to bracket attaching nut (2373S)
105A-53	Air conditioning unit adjusting nut (2373S)
111-47S	Pump arm and screw assembly
111-60S	Metering rod arm and screw assembly
114-138	—Inner throttle shaft arm
115-182	Choke connector rod
115-247	Throttle operating rod
115-269	—Choke connector rod (Climatic® control side)
115-270	—THROTTLE CONNECTOR ROD
116-13	PUMP INTAKE AND AIR CONDITIONING UNIT CHECK BALL (2371S 2372S (1) (2373S (2)
117-162	Vacumeter piston link
117-165	PUMP ARM LINK
118-102S	Dust cover assembly
120-160	PRIMARY METERING ROD JET (2)
120-184	SECONDARY METERING JET (2)
121-78	COIL HOUSING GASKET
121-190	Electro magnet housing gasket (2373S)
121-208	DUST COVER GASKET
121-229	AIR CLEANER GASKET
121-232	AIR HORN GASKET
121-241	PUMP JET HOUSING GASKET
121-243	PISTON HOUSING GASKET (Use with 6 1015S)
121-277	—BODY FLANGE GASKET
121-283	PISTON HOUSING GASKET (Use with 6 1177S)
122-75S	PUMP RELIEF VALVE ASSEMBLY
136-37	Throttle operating rod washer (2)
136-159	Primary throttle shaft washer
136-172	Secondary throttle shaft washer
136-193	—Fast idle cam attaching screw washer
150-62	Choke piston pin
150-168	Air conditioning unit diaphragm air bleed pin (2373S)
150-178	Auxiliary valve lockout arm pin
150-186S	Pin and valve cap assembly
150A-10	PIN SPRING (5)
160-91	Choke piston
160-110S	Vacuum piston and pin assembly
170-190	Inner diaphragm housing (2373S)
170-259S	Piston housing and plug assembly (Use with 6 1015S)
170-298S	Outer diaphragm housing and plug assembly (2373S)
170-447S	—Piston housing and plug assembly (Use with 6 1177S)
170AJ241S	Thermostatic coil and housing assembly
180-93	—Air conditioning unit bracket (2373S)
181-210S	Fast idle cam assembly
186-38S	Choke baffle plate and spring assembly
202-100U	—Unitized package (Consists of 3—101 362S and 1—202 97S) (2371S 2373S)
202-45S	Air conditioning unit diaphragm and shaft assembly (2373S)
213-16S	Electro magnet and housing assembly (2373S)

—Parts so marked are new and listed for the first tim .

†When replacing 61 332 and 75 1228 with 61 580 and 75 1272 a different accumulator inner spring (Cadillac part) must be installed in the automatic transmission See Carter bulletin Cadillac No 4 dated 2 29 56

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

2354S
Cars Without
Air Conditioning

2355S
Cars With
Air Conditioning

CADILLAC

1955

All Models Except Eldorado

(Use 2255S with 195-64U to replace 2354S)

(Use 2255S with 195-64U and 202-44U to replace 2355S)

WCFB Four Bore Down-Draft Climatic® Control Carbureters

Nos. 2354S-2355S

CARBURETER SPECIFICATIONS

For Cadillac 8 Cylinder Engine 3 13/16 Inch Bore, 3⅝ Inch Stroke

Dimensions Flange Four Bore — 4 bolt type size 1⅛ inch (primary side) and 1¼ inch (secondary side)
Primary venturi size 11/32 inch (I D)
Main venturi size 1 1/16 inch (primary side) and 1 3/16 inch (secondary side)

Float Level See adjustments

Vent Outside None
Inside balance vent tube in air horn 2 on primary side 3 on secondary side

Gasoline Intake Size No 38 (1015 inch) drill hole in needle seat

Low Speed Jet Tube Jet size No 70 (028 inch) drill By pass (2 in low speed jet) size No 54 (055 inch) drill
Economizer in body size No 54 (055 inch) drill
Idle bleed in body size No 52 (0635 inch) drill

Idle Port (Upper) slot type Primary length 175 inch width 030 inch
Secondary length 100 inch width 030 inch

Idle Port Opening Primary 091 to 097 inch secondary 050 to 056 inch above upper edge of valve with valve tightly closed

Lower Port Primary (for idle adjustment screw) size No 53 (0595 inch) drill
Secondary None

Set Idle Adjustment Screw ¾ to 1¾ turns open For richer mixture turn screw out Do not idle engine below 400 RPM (Transmission in Drive range)

Main Nozzle Installed permanently DO NOT REMOVE Anti percolating jet (secondary only) size No 70 (028 inch) drill

Metering Rod Primary economy step 0715 inch diameter
Middle step tapers to 067 inch diameter
Power step 053 inch diameter
Secondary None

Metering Rod Jet Primary size 0935 inch diameter (for metering rod)
Secondary size 082 inch diameter (No metering rod)

Metering Rod Setting See adjustments

Accelerating Pump Discharge jet (twin) primary only size No 74 (0225 inch) drill
Intake ball check seat size 115 to 120 inch diameter
Discharge needle seat size 070 inch diameter
Relief ball check size No 55 (052 inch) drill
Relief passage (vent) to fuel chamber No 42 (0935 inch) drill

Choke Carter Climatic® Control set one point lean Butterfly type offset choke valve primary side only Choke heat suction hole restriction in piston housing size No 44 (086 inch) drill

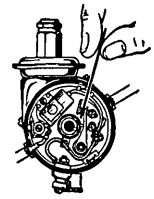
Vacumm Spark Port Round type 127 to 129 inch diameter Top of port 035 to 043 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



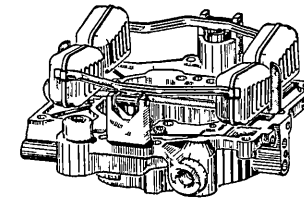
Spark Plug
Gap
035



Breaker Point
Setting
0125 ' 0175



Ignition Timing
Breaker Points to Open
2½° B T C
½ Distance C to A
Distributor vacuum line
disconnected



Float Setting
See Adjustment

Idle Adjustment
Screw Setting
¾ to 1¾
Turns Open
Idle Engine at
400 R P M
in Drive range

NOTE These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENTS

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT Two separate float adjustments must be made—lateral and vertical

LATERAL ADJUSTMENT With bowl cover assembly inverted bowl cover gasket removed and float resting on seated needle place float gauge directly under center of floats with notched portions of gauge fitted over edges of casting Sides of floats should just clear the vertical upright of float gauge Adjust ment should be made by bending arms of floats

VERTICAL ADJUSTMENT With float gauge in same position floats should just clear the horizontal portion of gauge The vertical distance between top of float and machined surface of casting must be 1/8 inch (gauge T109 232) for primary floats and 3/16 inch (gauge T109 222) for secondary floats Adjust by bending float arms

FLOAT DROP ADJUSTMENT With bowl cover held in upright position and measuring from center of float the distance be tween top of floats and bowl cover should be 5/8 inch for pri mary floats and 11/16 inch for secondary floats Adjust by bending stop tabs on float bracket

PUMP ADJUSTMENT Install pump connector link in outer hole (long stroke) of pump arm with ends extending toward counter shaft arm Seat throttle valves in bores of carbureter Hold straight edge across top of dust cover boss at pump arm The flat on top of pump arm should be parallel to straight edge Adjust by bending throttle connector rod at lower angle (Use tool T109 213)

METERING ROD ADJUSTMENT Metering rod adjustment is important and must be made after completing the pump ad justment No metering rod gauges are necessary Procedure is as follows 1 Seat throttle valves in bores of carbureter and loosen metering rod arm clamp screw 2 With metering rods in place press down on vacumeter link until metering rods bot tom in carbureter body casting 3 Holding rods in downward position and throttle valves seated revolve metering rod arm until finger on arm contacts lip of vacumeter link Hold in place and carefully tighten clamp screw

BOWL VAPOR VENT ADJUSTMENT This adjustment should be made after completing pump and metering rod adjustments Install dust cover gasket and dust cover Seat throttle valves in bores of carbureter There should be 1/16 inch (gauge T109 197) between lower edge of bowl vapor vent valve and dust cover To adjust remove dust cover and bend vapor vent arm

CHOKE MODIFIER ADJUSTMENT 1 Set Climatic® Control assembly one point lean 2 Loosen clamp screw 3 Remove lower end of connector rod 4 Rotate metal pointer until it is in line with raised pointer on coil housing 5 Align scribed line on lever so that it is straight up and down Hold in place and tighten clamp screw 6 Seat throttle valves (hold choke valve wide open) 7 Hold pointer as indicated in No 4 Lower end of rod must slide freely into hole in throttle arm Bend rod at upper angle to adjust

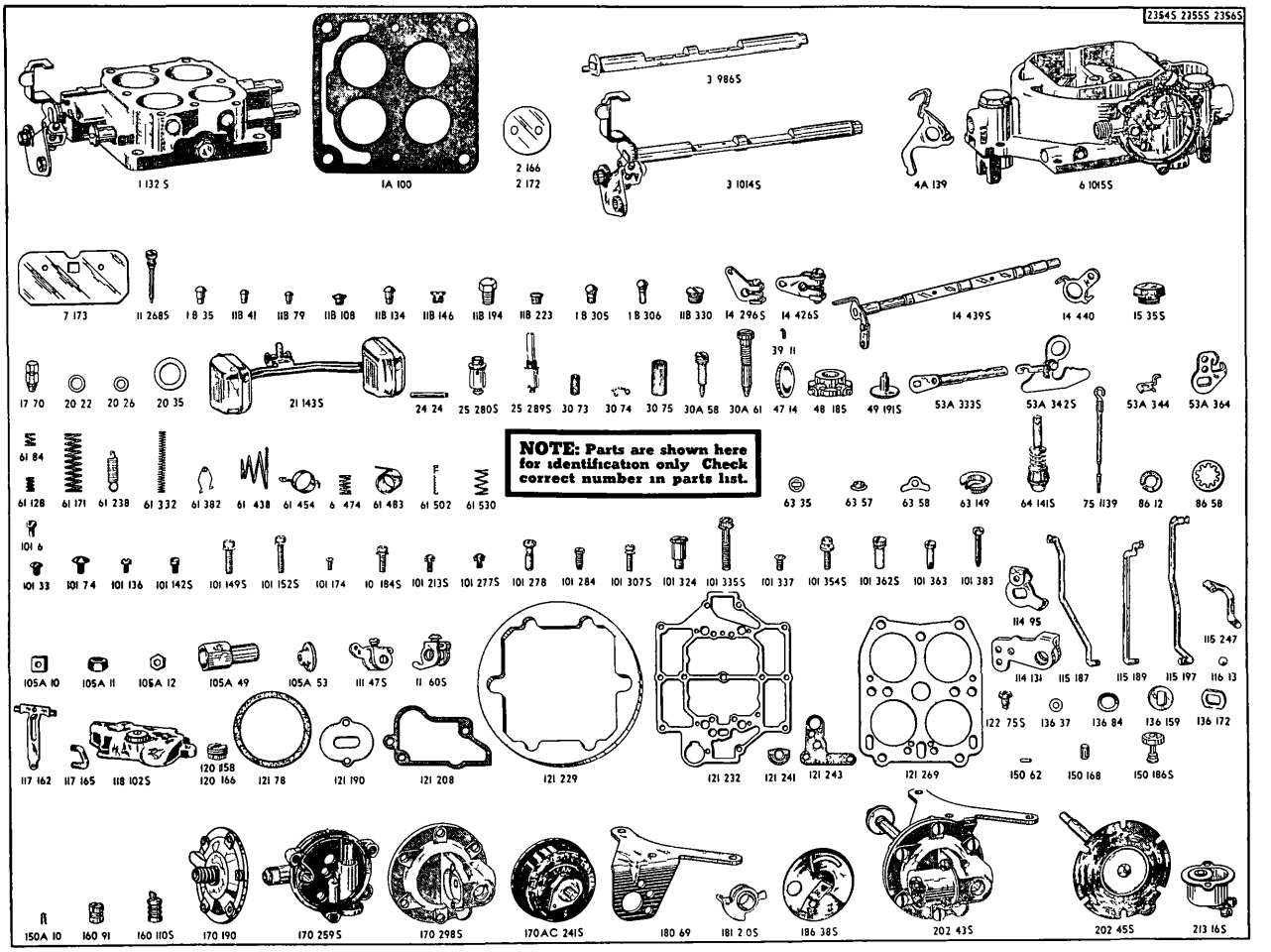
FAST IDLE AND SECONDARY THROTTLE LOCK-OUT AD JUSTMENT 1 Preliminary Adjustment Loosen choke lever clamp screw on choke shaft Insert 020 inch feeler gauge (T109 29) between lip of fast idle cam and boss of flange cast ing Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw 2 Secondary Throttle Lock Out Adjustment (a) With choke valve tightly closed tighten fast idle adjusting screw until there is 015 inch (gauge T109 44) opening between primary throttle valve and bore of carbureter (side opposite idle port) Lock pawl should now be in unlocked position if not adjust by bending tang on lock pawl (use bend ing tool T109 105) (b) Hold primary throttle valves half way open Open choke valve fully then open primary throttle valves all the way Tang on secondary throttle arm should engage in notch on lock out lever preventing secondary throttle shaft movement Keep choke valve in wide open position Close primary throttle valves so that lock pawl is unlocked then open primary throttle valves all the way Lock out lever should fall free allowing secondary throttle valves to be open before pri mary throttle valves are fully open If necessary bend tang on secondary throttle lever to provide clearance for proper opera tion of lock out lever

UNLOADER ADJUSTMENT With throttle wide open there should be 13/64 inch (gauge T109 39) clearance between upper edge of choke valve and inner wall of air horn Adjust by bending unloader lip on throttle shaft lever (use bending tool T109 41)

SECONDARY THROTTLE LEVER ADJUSTMENT Primary and secondary throttle valves should reach wide open position at the same time To adjust bend throttle operating rod at upper angle (Use bending tool T109 213) With primary and sec ondary throttle valves in tightly closed position there should be 017 022 inch (gauge T109 29) clearance between positive closing shoes on primary and secondary throttle levers To adjust bend shoe on primary lever

AIR CONDITIONER FAST IDLE DEVICE ADJUSTMENT This adjustment must be made after carbureter is installed on car engine at normal operating temperature and slow idle adjust ment is completed With shift lever in neutral and air condi tioner turned on engine should idle 900 RPM To adjust loosen lock nut on diaphragm shaft and adjust knurled nut to obtain specified RPM then tighten lock nut

IDLE SPEED AND MIXTURE ADJUSTMENT (Normal Engine Temp) In making the idle adjustment on the engine the air adjustment screw is used to adjust idle speed in a similar man ner as the throttle speed screw used previously Turning the air adjustment screw outward increases engine speed but also leans the mixture supplied to the manifold which must be com pensated for by adjustment of the idle mixture adjusting screws



Cadillac 8—1955—Carbureters Nos. 2354S-2355S

WHEN SERVICING, USE GASKET ASSORTMENT No 263, REPAIR PACKAGE No 1792A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-1321S	Body flange assembly	
1A-100	FLANGE GASKET	
2-166	Primary throttle valve	(2)
2-172	Secondary throttle valve	(2)
3-986S	Secondary throttle shaft and dog ass y	
3-1014S	Primary throttle shaft lever and bushing ass'y	
4A-139	Throttle shaft dog	
6-1015S	Air horn assembly	
7-173	Choke valve	
11-268S	LOW SPEED JET ASSEMBLY	(4)
11B-35	Rivet plug	(4)
11B-41	Rivet plug	(2)
11B-79	Rivet plug	(4)
11B-108	Idle port rivet plug	(4)
11B-134	Rivet plug (2354S (1) (2355S (2)	
11B-146	Level sight plug	(2)
11B-194	Pipe plug	
11B-223	Nozzle passage rivet plug	(4)
11B-305	Rivet plug	
11B-306	Rivet plug	(2)
11B-330	Flange plug	
14-296S	Choke lever and screw assembly	
14-426S	Coil shaft lever and screw assembly	
14-439S	Choke piston lever link and shaft ass y	
14-440	Cam trip lever	
15-35S	Strainer nut assembly	(2)
17-70	PUMP CHECK NEEDLE	

Part No	PART NAME	
20-22	Needle seat gasket	(2)
20-26	Relief valve gasket	
20-35	BOWL STRAINER GASKET	(2)
21-143S	Float and lever assembly	(2)
24-24	Float lever pin	(2)
25-280S	PRIMARY NEEDLE AND SEAT ASSEMBLY	
25-289S	SECONDARY NEEDLE AND SEAT ASSEMBLY	
30-73	PRIMARY NEEDLE SEAT STRAINER	
30-74	SECONDARY FUEL INLET STRAINER	
30-75	BOWL STRAINER	
30A-58	Idle adjustment screw	(2)
30A-61	Idle air adjustment screw	
39-11	Choke valve attaching screw	(2)
47-14	Welsh plug	
48-185	Pump jet housing	
49-191S	Electro magnet plunger assembly (2355S)	
53A-333S	Pump operating lever and countershaft ass y	
53A-342S	Lockout arm and pawl assembly	
53A-344	VENT ARM	
53A-364	Secondary operating lever	
61-84	Idle adjustment screw and air conditioning unit adjustment nut spring (2354S (2) (2355S (3)	
61-128	CONNECTOR ROD SPRING	(2)
61-171	PUMP SPRING	
61-238	Throttle flex spring	
61-332	VACUUM PISTON SPRING	

Part No	PART NAME	
61-382	METERING ROD SPRING	
61-438	Diaphragm return spring (2355S)	
61-454	Fast idle cam spring	
61-474	Bowl vent spring	
61-483	SECONDARY THROTTLE RETURN SPRING	
61-502	Electro magnet plunger spring (2355S)	
61-530	Idle air adjustment screw spring	
63-35	Connector rod spring retainer	(2)
63-57	CHECK BALL RETAINER	
63-58	Coil housing retainer	(3)
63-149	Bowl vent spring retainer	
64-141S	PUMP PLUNGER ROD SPRING AND RETAINER ASS Y	
75-1139	METERING ROD—STANDARD	(2)
75-1201U	Metering rod and jet unit for altitude use (Consists of 1—61 246 2—75 1199 and 2—120 194) (Sup by 75 1300U)	
75 1300U	—Metering rod and jet unit for altitude use (Consists of 2—75 1298 and 2—120 176)	
86-12	Flange stud lock washer	(4)
86-58	Air conditioning unit lock washer (2355S)	
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	(2)
101-136	Coil housing attaching screw	(3)
101-142S	Electro magnet housing attaching screw and washer assembly (2355S)	(2)
101-149S	Body flange attaching screw and washer ass y	(4)
101-152S	Air horn attaching screw and washer assembly	
101-174	Primary throttle valve attaching screw	(4)
101-184S	Dust cover attaching screw and washer ass y	(2)
101-213S	Diaphragm cover attaching screw and washer assembly (2355S)	(6)
101-277S	Vent arm attaching screw and washer ass y	
101-278	Pump jet housing attaching screw	
101-284	P ston housing attaching screw	(2)
101-307S	Air horn attaching screw and washer assembly (2354S (8) (2355S (5)	
101-324	Fast idle cam screw	
101-335S	Air horn attaching screw and washer ass y	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-354S	Coil shaft and choke lever clamp screw ass y	(2)
101 362S	Air horn attaching screw and washer ass y (2355S)	(3)
101-363	Piston hous ng attach ng screw	
101 383	Fast idle adjustment screw	
105A-10	Choke lever clamp screw nut	(2)
105A-11	Flange stud nut	(4)
105A 12	Air condit oning diaphragm unit lock nut (2355S)	

Part No	PART NAME	
105A-49	Air conditioning unit to bracket attaching nut (2355S)	
105A-53	Air cond tioning unit adjusting nut (2355S)	
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
114-95	Outer throttle shaft arm	
114-131	Inner throttle shaft arm	
115-187	Choke connector rod (Climatic® control side)	
115 189	Choke connector rod	
115-197	THROTTLE CONNECTOR ROD	
115-247	Throttle operating rod	
116-13	PUMP INTAKE AND AIR CONDITIONING UNIT CHECK BALL (2354S (1) (2355S (2)	
117-162	Vacumeter piston link	
117-165	PUMP CONNECTOR LINK	
118-102S	Dust cover assembly	
120-158	SECONDARY METERING JET	(2)
120-166	PRIMARY METERING ROD JET	(2)
121-78	COIL HOUSING GASKET	
121-190	Electro magnet housing gasket (2355S)	
121-208	DUST COVER GASKET	
121-229	AIR CLEANER GASKET	
121-232	AIR HORN GASKET	
121-241	PUMP JET HOUSING GASKET	
121-243	PISTON HOUSING GASKET	
121-269	BODY FLANGE GASKET	
122-75S	PUMP RELIEF VALVE ASSEMBLY	
136-37	Throttle operating rod washer	(2)
136-84	Throttle shaft spring washer	
136-159	Primary throttle shaft washer	
136-172	Secondary throttle shaft washer	
150-62	Choke piston pin	
150-168	Air conditioning unit diaphragm air bleed pin (2355S)	
150-186S	Pin and valve cap assembly	
150A-10	PIN SPRING	(5)
160-91	Choke piston	
160-110S	Vacuum piston and p n assembly	
170 190	Inner diaphragm housing (2355S)	
170-259S	Piston housing and plug assembly	
170-298S	Outer diaphragm housing and plug ass y (2355S)	
170AC241S	Thermostatic coil and housing assembly	
180-69	Air conditioning unit bracket (2355S)	
181-210S	Fast idle cam assembly	
186-38S	Choke baffle plate and spring assembly	
202 43S	Air conditioning (fast idle device) assembly (complete) (2355S)	
202-45S	Air conditioning unit diaphragm and shaft ass y (2355S)	
213-16S	Electro magnet and housing assembly (2355S)	

—Parts so marked are new and listed for the first time

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

2185S-2266S
Cars Without
Air Conditioning

2186S-2267S
Cars With
Air Conditioning

CADILLAC
1955

All Models Except Eldorado

(Use 2255S to replace 2185S-2266S)

(Use 2255S with 202-44U to replace 2186S-2267S)

WCFB Four Bore Down-Draft Climatic® Control Carbureters

Nos. 2185S-2186S-2255S-2266S-2267S

CARBURETER SPECIFICATIONS

For Cadillac 8 Cylinder Engine: 3-13/16 Inch Bore, 3⅝ Inch Stroke

Dimensions: Flange Four Bore—4 bolt type, size (2185S-2186S) 1⅛ inch; (2255S-2266S-2267S) 1⅛ inch (primary side) and 1¼ inch (secondary side).
Primary venturi size, 11/32 inch (I. D.).
Main venturi size, (2185S-2186S) 1-1/16 inch; (2255S-2266S-2267S) 1-1/16 inch (primary side) and 1-3/16 inch (secondary side).

Float Level: See adjustments.

Vent: Outside, None.
Inside, balance vent tube in air horn; 2 on primary side, 3 on secondary side.

Gasoline Intake: Size No. 38 (.1015 inch) drill hole in needle seat.

Low Speed Jet Tube: Jet, size No. 70 (.028 inch) drill. By-pass (2 in low speed jet), size No. 54 (.055 inch) drill.
Economizer, in body, size No. 54 (.055 inch) drill.
Idle bleed, in body, size No. 52 (.0635 inch) drill.

Idle Port: (Upper) slot type. Primary, length .175 inch; width .030 inch.
Secondary, length .100 inch; width .030 inch.

Idle Port Opening: Primary, .091 to .097 inch, secondary, .050 to .056 inch above upper edge of valve with valve tightly closed.

Lower Port: Primary (for idle adjustment screw), size No. 53 (.0595 inch) drill.
Secondary, None.

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture turn screw out. Do not idle engine below 400 RPM. (Transmission in Drive range).

Main Nozzle: Installed permanently. DO NOT REMOVE. Anti-percolating jet (secondary only), size No. 70 (.028 inch) drill.

Metering Rod: Primary, economy step .0715 inch diameter.
Middle step tapers to .067 inch diameter.
Power step, .053 inch diameter.
Secondary, None.

Metering Rod Jet: Primary, size .0935 inch diameter (for metering rod).
Secondary, size, (2185S-2186S) .067 inch diameter; (2255S-2266S-2267S) .082 inch diameter. (No metering rod).

Metering Rod Setting: See adjustments.

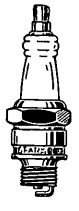
Accelerating Pump: Discharge jet (twin) primary only, size No. 74 (.0225 inch) drill.
Intake ball check seat, size .115 to .120 inch diameter.
Discharge needle seat, size .070 inch diameter.
Relief ball check, size No. 55 (.052 inch) drill.
Relief passage (vent) to fuel chamber No. 42 (.0935 inch) drill.

Choke: Carter Climatic® Control, set one point lean. Butterfly type, offset choke valve, primary side only. Choke heat suction hole, restriction in piston housing, size No. 44 (.086 inch) drill.

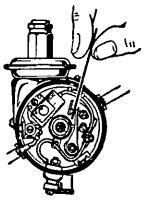
Vacuum Spark Port: Round type, .127 to .129 inch diameter. Top of port .035 to .043 inch above top edge of valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

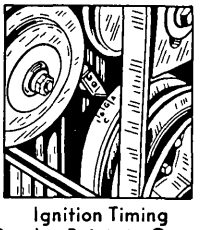
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



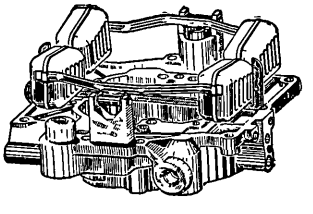
Spark Plug Gap .035"



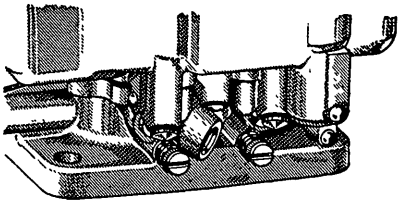
Breaker Point Setting .0125"-.0175"



Ignition Timing Breaker Points to Open: 21½° B. T. C. ½ Distance C to A Distributor vacuum line disconnected



Float Setting See Adjustments



Idle Adjustment Screw Setting ½ to 1½ Turns Open

NOTE: These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT.

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TRADE MARK REG. U. S. PAT. FF.
MARCA REGISTRADA

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT Two separate float adjustments must be made—lateral and vertical

LATERAL ADJUSTMENT With bowl cover assembly inverted bowl cover gasket removed and float resting on seated needle place float gauge directly under center of floats with notched portions of gauge fitted over edges of casting Sides of floats should just clear the vertical upright of float gauge Adjustment should be made by bending arms of floats

VERTICAL ADJUSTMENT With float gauge in same position floats should just clear the horizontal portion of gauge The vertical distance between top of float and machined surface of casting must be 1/8 inch (gauge T109 232) for primary floats and 3/16 inch (gauge T109 222) for secondary floats Adjust by bending float arms

FLOAT DROP ADJUSTMENT With bowl cover held in upright position and measuring from center of float the distance between top of floats and bowl cover should be 5/8 inch for primary floats and 11/16 inch for secondary floats Adjust by bending stop tabs on float bracket

PUMP ADJUSTMENT Install pump connector link in outer hole (long stroke) of pump arm with ends extending toward counter shaft arm Seat throttle valves in bores of carbureter Hold straight edge across top of dust cover boss at pump arm The flat on top of pump arm should be parallel to straight edge Adjust by bending throttle connector rod at lower angle (Use tool T109 213)

METERING ROD ADJUSTMENT Metering rod adjustment is important and must be made after completing the pump adjustment No metering rod gauges are necessary Procedure is as follows 1 Seat throttle valves in bores of carbureter and loosen metering rod arm clamp screw 2 With metering rods in place press down on vacumeter link until metering rods bottom in carbureter body casting 3 Holding rods in downward position and throttle valves seated revolve metering rod arm until finger on arm contacts lip of vacumeter link Hold in place and carefully tighten clamp screw

BOWL VAPOR VENT ADJUSTMENT This adjustment should be made after completing pump and metering rod adjustments Install dust cover gasket and dust cover Seat throttle valves in bores of carbureter There should be 1/16 inch (gauge T109 197) between lower edge of bowl vapor vent valve and dust cover To adjust remove dust cover and bend vapor vent arm

CHOKE MODIFIER ADJUSTMENT 1 Set Climatic® Control assembly on one point lean 2 Loosen clamp screw 3 Remove lower end of connector rod 4 Rotate metal pointer until it is in line with raised pointer on coil housing 5 Align scribed line on lever so that it is straight up and down Hold in place and tighten clamp screw 6 Seat throttle valves (hold choke valve wide open) 7 Hold pointer as indicated in No 4 Lower end of rod must slide freely into hole in throttle arm Bend rod at upper angle to adjust

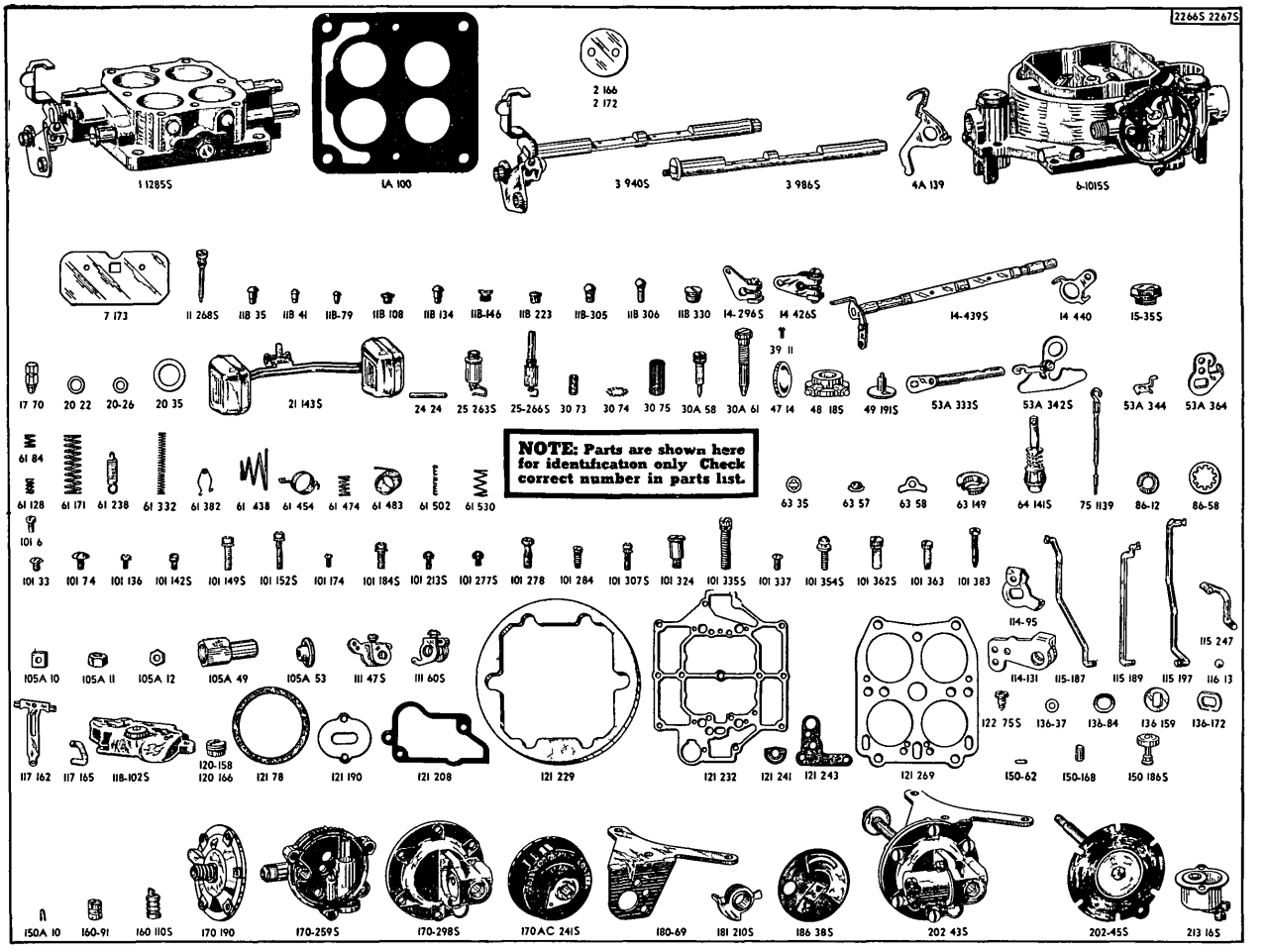
FAST IDLE AND SECONDARY THROTTLE LOCK-OUT ADJUSTMENT 1 Preliminary Adjustment Loosen choke lever clamp screw on choke shaft Insert 020 inch feeler gauge (T109 29) between lip of fast idle cam and boss of flange casting Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw 2 Secondary Throttle Lock Out Adjustment (a) With choke valve tightly closed tighten fast idle adjusting screw until there is 015 inch (gauge T109 44) opening between primary throttle valve and bore of carbureter (side opposite idle port) Lock pawl should now be in unlocked position if not adjust by bending tang on lock pawl (use bending tool T109 105) (b) Hold primary throttle valves half way open Open choke valve fully then open primary throttle valves all the way Tang on secondary throttle arm should engage in notch on lock out lever preventing secondary throttle shaft movement Keep choke valve in wide open position Close primary throttle valves so that lock pawl is unlocked then open primary throttle valves all the way Lock out lever should fall free allowing secondary throttle valves to be open before primary throttle valves are fully open If necessary bend tang on secondary throttle lever to provide clearance for proper operation of lock out lever

UNLOADER ADJUSTMENT With throttle wide open there should be 13/64 inch (gauge T109 39) clearance between upper edge of choke valve and inner wall of air horn Adjust by bending unloader lip on throttle shaft lever (use bending tool T109 41)

SECONDARY THROTTLE LEVER ADJUSTMENT Primary and secondary throttle valves should reach wide open position at the same time To adjust bend throttle operating rod at upper angle (Use bending tool T109-213)

AIR CONDITIONER FAST IDLE DEVICE ADJUSTMENT This adjustment must be made after carbureter is installed on car engine at normal operating temperature and slow idle adjustment is completed With shift lever in neutral and air conditioner turned on engine should idle 900 RPM To adjust loosen lock nut on diaphragm shaft and adjust knurled nut to obtain specified RPM then tighten lock nut

IDLE SPEED AND MIXTURE ADJUSTMENT (Normal Engine Temp) In making the idle adjustment on the engine the air adjustment screw is used to adjust idle speed in a similar manner as the throttle speed screw used previously Turning the air adjustment screw outward increases engine speed but also leans the mixture supplied to the manifold which must be compensated for by adjustment of the idle mixture adjusting screws



Cadillac 8—1955—Carbureters Nos. 2185S-2186S-2255S-2266S-2267S

WHEN SERVICING, USE GASKET ASSORTMENT No 263 (2255S-2266S-2267S), REPAIR PACKAGE No. 1792 (2255S-2266S 2267S)
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1216S	Body flange assembly (2185S 2186S) (Sup by 1 1285S)	
1-1285S	Body flange assembly	
1A-97	Flange gasket (2185S 2186S) (Sup by 1A 108)	
1A-100	FLANGE GASKET (2255S 2266S 2267S)	
1A-108	Flange gasket (2185S 2186S)	
2-161	Secondary throttle valve (2185S 2186S)	(2)
2-166	Primary throttle valve	(2)
2-172	Secondary throttle valve (2255S 2266S 2267S)	(2)
3-812S	Secondary throttle shaft and dog assembly (2185S 2186S)	
3-940S	Primary throttle shaft lever and bushing assembly	
3-986S	Secondary throttle shaft and dog assembly (2255S 2266S 2267S)	
4A 139	Throttle shaft dog	
6 1015S	Air horn assembly (Casting No 6 950)	
6-1177S	—Air horn assembly (Casting No 6 1144)	
7-173	Choke valve	
11 268S	LOW SPEED JET ASSEMBLY	(4)
11B-35	Rivet plug	(4)
11B-41	Rivet plug (6 1015S (2) (6 1177S (1)	
11B-79	Rivet plug	(4)
11B 108	Idle port rivet plug	(4)
11B-124	Flange plug (2185S 2186S)	
11B 134	Rivet plug (2185S 2266S (1) (2186S 2255S 2267S	(2)
11B 146	Level sight plug	(2)

Part No.	PART NAME	
11B-223	Nozzle passage rivet plug	(4)
11B-305	Rivet plug (6 1015S (1) (6 1177S (2)	
11B 306	Rivet plug (6 1015S (2) (6 1177S (1)	
11B 330	Flange plug (2255S 2266S 2267S)	
14 296S	Choke lever and screw assembly	
14-426S	Coil shaft lever and screw assembly	
14-439S	Choke piston lever link and shaft assembly	
14 440	Cam trip lever	
15-35S	Strainer nut assembly	(2)
17-70	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	(2)
20-26	Relief valve gasket	
20-35	BOWL STRAINER GASKET	(2)
21-143S	Float and lever assembly	(2)
24-24	Float lever pin	(2)
25-263S	Primary needle and seat assembly (Sup by 25 280S)	
25 266S	Secondary needle and seat assembly (Sup by 25 289S)	
25-280S	PRIMARY NEEDLE AND SEAT ASSEMBLY	
25-289S	SECONDARY NEEDLE AND SEAT ASSEMBLY	
30-73	PRIMARY NEEDLE SEAT STRAINER	
30-74	SECONDARY FUEL INLET STRAINER	
30-75	BOWL STRAINER	
30A-58	Idle adjustment screw	(2)

Part No.	PART NAME	
30A 61	Idle air adjustment screw	
39-11	Choke valve attaching screw	(2)
47-14	Welsh plug	
48-185	Pump jet housing	
49-191S	Electro magnet plunger assembly (2186S 2267S)	
53A-333S	Pump operating lever and countershaft assembly	
53A-342S	Lockout arm and pawl assembly	
53A-344	VENT ARM	
53A-364	Secondary operating lever	
61-84	Idle adjustment screw and air conditioning unit adjusting nut spring (2185S 2255S 2266S (2) (2186S 2267S (3)	
61-128	CONNECTOR ROD SPRING	(2)
61-171	PUMP SPRING	
61-238	Throttle flex spring	
61-332	VACUUM PISTON SPRING	
61-382	METERING ROD SPRING	
61-438	Diaphragm return spring (2186S 2267S)	
61-454	Fast idle cam spring	
61-474	Bowl vent spring	
61-483	SECONDARY THROTTLE RETURN SPRING	
61-502	Electro magnet plunger spring (2186S 2267S)	
61-530	Idle air adjustment screw spring	
63-35	Connector rod spring retainer	(2)
63-57	CHECK BALL RETAINER	
63-58	Coil housing retainer	(3)
63-149	Bowl vent spring retainer	
64-141S	PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
75-1139	METERING ROD—STANDARD	(2)
75-1200U	Metering rod and jet unit for altitude use (consists of 1—61 246 2—75 1199 and 2—120 176) (2185S 2186S) (Sup by 75 1300U)	
75-1201U	Metering rod and jet unit for altitude use (consists of 1—61 246 2—75 1199 and 2—120 194) (2255S 2266S 2267S) (Sup by 75 1300U)	
75-1300U	—Metering rod and jet unit for altitude use (Consists of 2—75 1298 and 2—120 176)	
86-12	Flange stud lock washer	(4)
86-58	Air conditioning unit lock washer (2186S 2267S)	
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	(2)
101-136	Coil housing attaching screw	(3)
101-142S	Electro magnet housing attaching screw and washer assembly (2186S 2267S)	(2)
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	
101-174	Primary throttle valve attaching screw	(4)
101-184S	Dust cover attaching screw and washer assembly	(2)
101-213S	Diaphragm cover attaching screw and washer assembly (2186S 2267S)	(6)
101-275	Piston housing attaching screw (Use with 6 1177S)	
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet housing attaching screw	
101-284	Piston housing attaching screw (6 1015S)	(2)
101-307S	Air horn attaching screw and washer assembly (2185S 2255S 2266S (8) (2186S 2267S (5)	
101-324	Fast idle cam screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-354S	Coil shaft and choke lever clamp screw assembly	(2)
101-362S	*Air horn attaching screw and washer assembly (2186S 2267S)	(3)
101-363	Piston housing attaching screw (6 1015S (1) (6 1177S (2)	

Part No.	PART NAME	
101-383	Fast idle adjustment screw	
105A-10	Choke lever clamp screw nut	(2)
105A-11	Flange stud nut	(4)
105A-12	Air conditioning diaphragm unit lock nut (2186S 2267S)	
105A-49	Air conditioning unit to bracket attaching nut (2186S 2267S)	
105A-53	Air conditior ng unit adjusting nut (2186S 2267S)	
111-47S	Pump arm and screw assembly	
111 60S	Metering rod arm and screw assembly	
114-95	Outer throttle shaft arm	
114-131	Inner throttle shaft arm	
115-187	Choke connector rod (Climat c® control side)	
115-189	Choke connector rod	
115-197	THROTTLE CONNECTOR ROD	
115-247	Throttle operating rod	
116-13	PUMP INTAKE AND AIR CONDITIONING UNIT CHECK BALL (2185S 2255S 2266S (1) (2186S 2267S (2)	
117-162	Vacumeter piston link	
117-165	PUMP CONNECTOR LINK	
118-102S	Dust cover assembly	
120-158	SECONDARY METERING JET (2255S 2266S 2267S)	(2)
120-166	PRIMARY METERING ROD JET	(2)
120-185	Secondary metering jet (2185S 2186S) (Sup by 120 158 on 2255S 2266S 2267S)	(2)
121-78	COIL HOUSING GASKET	
121-190	Electro magnet housing gasket (2186S 2267S)	
121-208	DUST COVER GASKET	
121-229	AIR CLEANER GASKET	
121-232	AIR HORN GASKET	
121-241	PUMP JET HOUSING GASKET	
121-243	PISTON HOUSING GASKET (Use with 6 1015S)	
121-259	Body flange gasket (2185S 2186S)	
121-269	BODY FLANGE GASKET (2255S 2266S 2267S)	
121-283	Piston housing gasket (Use with 6 1177S)	
122-75S	PUMP RELIEF VALVE ASSEMBLY	
136-37	Throttle operating rod washer	(2)
136-84	Throttle shaft spring washer	
136-159	Primary throttle shaft washer	
136-172	Secondary throttle shaft washer	
150-62	Choke piston pin	
150-168	Air conditioning unit diaphragm air bleed pin (2186S 2267S)	
150-186S	Pin and valve cap assembly	
150A-10	PIN SPRING	(5)
160-91	Choke piston	
160-110S	Vacuum piston and pin assembly	
170-190	Inner diaphragm housing (2186S 2267S)	
170-259S	Piston housing and plug assembly (Use with 6 1015S)	
170-298S	Outer diaphragm housing and plug assembly (2186S 2267S)	
170 447S	—Piston housing and plug assembly (Use with 6 1177S)	
170AC241S	Thermostatic coil and housing assembly	
180-69	Air conditioning unit bracket (2186S 2267S)	
181-210S	Fast idle cam assembly	
186-38S	Choke baffle plate and spring assembly	
195-64U	Unitized package (Consists of 1—86 62 1—108 63 1—136 188 1—150 209S 1—105A 24 1—106 9 1—F136 153) (Use with 2255S to replace 2354S 2355S)	
202-43S	*Air conditioning (fast idle device) assembly (complete) (2186S 2267S)	
202-44U	Unitized package (2255S) (Consists of 3—101 362S 1—101 371S 1—202 43S)	
202-45S	Air conditioning unit diaphragm and shaft assembly (2186S 2267S)	
213-16S	Electro magnet and housing assembly (2186S 2267S)	

*Part of 202 44U Unitized package

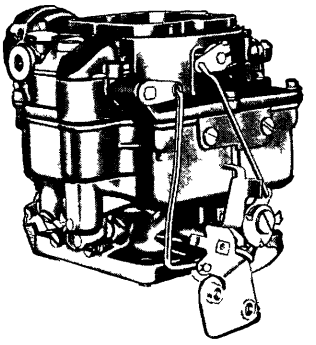
NOTE **Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown only ne is used.**

(2143S)
1952—All Models
1953—Hydra Matic Trans without Air Conditioning
1954—All Models without Air Conditioning

(2143S with 202-44U)
1953—Hydra Matic with Air Conditioning
1954—All Models with Air Conditioning

(2143S with 202-60U)
1953—Twin Turbine Trans without Air Conditioning

(2143S with 202-44U and 202-60U)
1953—Twin Turbine Trans with Air Conditioning



CADILLAC

1952-1954

WCFB Four Bore Down-Draft Climatic® Control **Carbureter No. 2143S**

CARBURETER SPECIFICATIONS

For Cadillac 8 Cylinder Engine 3-13/16 Inch Bore, 3⅝ Inch Stroke

Dimensions Flange size 1⅛ inch Four Bore—4 bolt type
Primary venturi size 11/32 inch I D
Main venturi size 1 1/16 inch I D

Float Level See adjustments

Vent Outside None
Inside balance vent tube in air horn 2 on primary side 3 on secondary side

Gasoline Intake Size No 38 (1015 inch) drill hole in needle seat

Low Speed Jet Tube Jet size No 70 (028 inch) drill
By pass (2 in low speed jet) size 0492 inch drill
Economizer in body size No 56 (0465 inch) drill
Idle bleed in body size 059 inch drill

Idle Port (Upper) slot type Primary length 140 inch width 030 inch
Secondary length 103 inch width 030 inch

Idle Port Opening Primary 091 to 097 inch secondary 067 to 073 inch above upper edge of valve with valve tightly closed

Lower Port Primary (for idle adjustment screw) size No 53 (0595 inch) drill
Secondary None

Set Idle Adjustment Screw ¾ to 1¾ turns open For richer mixture turn screw out Do not idle engine below 400 r p m (Hydra Matic In Drive range) 425 r p m (Twin Turbine In Drive range)

Main Nozzle Installed permanently DO NOT REMOVE
Anti percolating jet (secondary only) size No 70 (028 inch) drill

Metering Rod Economy step (75 944) 071 inch (75 889) 073 inch (75 937) 074 inch diameter Middle step tapers to (75 944 75 889) 063 inch (75 937) 065 inch diameter Power step (75 944 75 889) 054 inch (75 937) 056 inch diameter

Metering Rod Jet Primary size 0935 inch diameter (for metering rod)
Secondary size 067 inch diameter (no metering rod)

Metering Rod Setting See adjustments

Accelerating Pump Discharge jet (twin) primary only size No 74 (0225 inch) drill
Intake ball check seat size 115 to 120 inch diameter
Discharge needle seat size 070 inch diameter
Relief ball check size No 55 (052 inch) drill
Relief passage (vent) to fuel chamber No 42 (0935 inch) drill

Choke Carter Climatic® Control set on index Butterfly type, offset choke valve primary side only Choke heat suction hole restriction in piston housing size No 44 (086 inch) drill

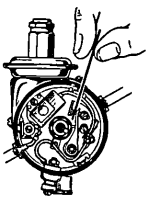
Vacuum Spark Port Round type 127 to 129 inch diameter Top of port 060 to 070 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter.



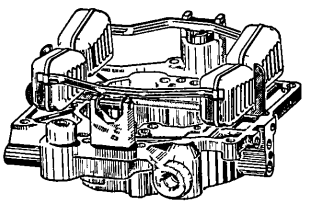
Spark Plug
Gap
035"



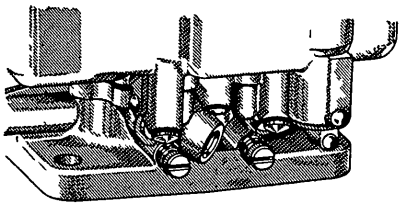
Breaker Point
Setting
0125" 0175"



Ignition Timing
Breaker Points to Open
1952
5° B T C at "A" Mark
1953 54
2½° B T C —½ Distance C to A
(Distributor vacuum line disconnected)



Float Setting
Primary ⅛ Inch
(Use Gauge T109-232)
Secondary 3/16 Inch
(Use Gauge T109-222)



Idle Adjustment
Screw Setting
¾ to 1¾
Turns Open

NOTE These cars are equipped with hydraulic valve lifters—NO ADJUSTMENT

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CARBURETER
TRADE MARK RE U S PAT FF
MARCA REGISTRADA

CARBURETER ADJUSTMENTS

Float Adjustment Two separate float adjustments must be made—lateral and vertical LATERAL ADJUSTMENT With bowl cover assembly inverted bowl cover gasket removed and float resting on seated needle place float gauge directly under center of floats with notched portions of gauge fitted over edges of casting Sides of floats should just clear the vertical upright of float gauge Adjustment should be made by bend ing arms of floats VERTICAL ADJUSTMENT With float gauge in same position floats should just clear the horizontal portion of gauge The vertical distance between top of float and machined surface of casting must be 1/8 inch (gauge T109 232) for primary floats and 3/16 inch (gauge T109 222) for sec ondary floats Adjust by bending float arms

Float Drop Adjustment With bowl cover held in upright position and measuring from center of float the d stance be tween top of floats and bowl cover should be 5/8 inch for pri mary floats and 11/16 inch for secondary floats Adjust by bending stop tabs on float bracket

Pump Adjustment Install pump connector link in outer hole (long stroke) of pump arm with ends extending toward counter shaft arm Back out throttle lever set screw until throttle valves seat in bores of carbureter Hold straight edge across top of dust cover boss at pump arm The flat on top of pump arm should be parallel to straight edge Adjust by bending throttle connector rod at lower angle (Use tool T109 213)

Metering Rod Adjustment Metering rod adjustment is im portant and must be made after completing the pump adjust ment No metering rod gauges are necessary Procedure is as follows 1 Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw 2 With metering rods in place press down on vacumeter link until metering rods bottom in carbureter body casting 3 Holding rods in downward position and throttle valves seated revolve metering rod arm until finger on arm contacts lip of vacumeter link Hold in place and carefully tighten clamp screw

Bowl Vapor Vent Adjustment This adjustment should be made after completing pump and metering rod adjustments Install dust cover gasket and dust cover Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter There should be 1/16 inch (gauge T109 197) between lower edge of bowl vapor vent valve and dust cover To adjust re move dust cover and bend vapor vent arm

Choke Modifier Adjustment 1 Set Climatic® control as sembly on index 2 Loosen clamp screw 3 Remove lower end of connector rod 4 Rotate metal pointer until it is in line with raised pointer on coil housing 5 Align scribed line on lever so that it is straight up and down Hold in place and tighten clamp screw 6 Seat throttle valves (back out throttle lever set screw and hold choke valve wide open) 7 Hold pointer as indicated in No 4 Lower end of rod must slide freely into hole in throttle arm Bend rod at upper angle to adjust

Fast Idle and Secondary Throttle Lock-out Adjustment 1 Preliminary Adjustment Loosen choke lever clamp screw on choke shaft Insert 020 inch feeler gauge (T109 29) between lip of fast idle cam and boss of flange casting Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw 2 Secondary Throttle Lock Out Adjustment (a) With choke valve tightly closed tighten fast idle adjusting screw until there is 015 inch (gauge T109 44) opening between primary throttle valve and bore of carbureter (side opposite idle port) Lock pawl should now be in unlocked position if not adjust by bending tang on lock pawl (use bending tool T109 105) (b) Hold primary throttle valves half way open Open choke valve fully then open primary throttle valves all the way Tang on secondary throttle arm should engage in notch on lock out lever preventing secondary throttle shaft movement Keep choke valve in wide open position Close primary throttle valves so that lock pawl is unlocked then open primary throttle valves all the way Lock out lever should fall free allowing secondary throttle valves to be open before pri mary throttle valves are fully open If necessary bend tang on secondary throttle lever to provide clearance for proper operation of lock out lever 3 Fast Idle Adjustment With choke valve tightly closed tighten fast idle adjusting screw until there is 020 inch (gauge T109 29) opening between throttle valve and bore of carbureter (side opposite idle port) Be sure fast idle adjusting screw is on high step of cam while making this adjustment

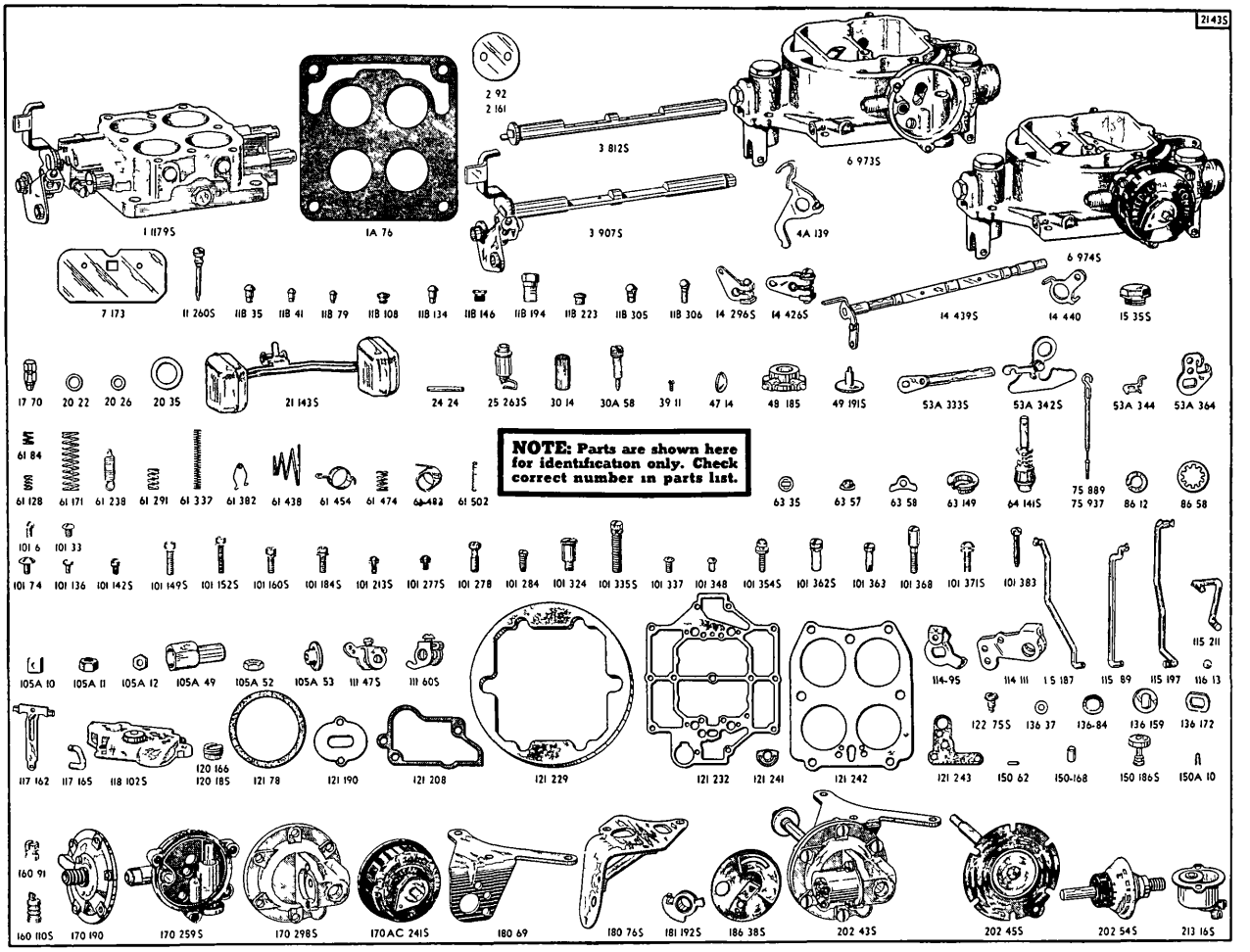
Unloader Adjustment With throttle wide open there should be 3/16 inch (gauge T109 28) clearance between upper edge of choke valve and inner wall of air horn Adjust by bending unloader lip on throttle shaft lever (use bending tool T109 41)

Secondary Throttle Lever Adjustment Primary and secondary throttle valves should reach wide open position at the same time To adjust bend throttle operating rod at upper angle (Use bending tool T109 213)

Dashpot (Slow Closing Throttle) Adjustment Maximum dash pot action is obtained by adjusting as follows With throttle valves seated loosen lock nut and adjust dashpot assembly so that plunger shaft can be moved inward approximately 005 inch

AIR CONDITIONER FAST IDLE DEVICE ADJUSTMENT

This adjustment must be made after carbureter is installed on car engine at normal operating temperature and slow idle adjustment is completed With shift lever in neutral and air conditioner turned on engine should idle at 900 r p m To adjust loosen lock nut on diaphragm shaft and adjust knurled nut to obtain specified r p m then tighten lock nut



Cadillac 8—1952-1954—Carbureter No. 2143S

WHEN SERVICING, USE GASKET ASSORTMENT No. 233 OR 275A

Part No.	PART NAME	
1-1178S	Body flange assembly	
1-1179S	Body flange assembly (Sup by 1 1178S)	
1A-76	Flange gasket (Sup by 1A 97)	
1A-97	Flange gasket (Sup by 1A 108)	
1A-108	Flange gasket	
2-92	Primary throttle valve	(2)
2-161	Secondary throttle valve	(2)
3-812S	Secondary throttle shaft and dog assembly	
3-907S	Primary throttle shaft and lever assembly	
4A-139	Throttle shaft dog	
6-973S	Air horn assembly (Casting No 6 972)	
6-974S	Air horn and Climatic® control assembly (Casting No 6 972)	
6-1211S	Air horn assembly (Casting No 6 1159)	
7-173	Choke valve	
11-260S	Low speed jet assembly	(4)
11B-35	Rivet plug	(4)
11B-41	Rivet plug (6 973S 6 974S (2) (6 1211S (1)	
11B-79	Rivet plug (early prod (4) (late prod (3)	
11B-108	Idle port rivet plug	(4)
11B-134	Rivet plug	
11B-146	Level sight plug	(2)
11B-194	Pipe plug	(2)
11B-223	Nozzle passage rivet plug	(4)
11B-305	Rivet plug (6 973S 6 974S (1) (6 1211S (2)	
11B-306	Rivet plug (6 973S 6 974S (2) (6 1211S (1)	
14-296S	Choke lever and screw assembly	
14-426S	Coil shaft lever and screw assembly	

Part No.	PART NAME	
14-439S	Choke piston lever, link and shaft assembly	
14-440	Cam trip lever	
15-35S	Strainer nut assembly	(2)
17-70	Pump check needle	
20-22	Needle seat gasket	(2)
20-26	Relief valve gasket	
20-35	Bowl strainer gasket	(2)
21-143S	Float and lever assembly	(2)
24-24	Float lever pin	(2)
25-263S	Needle and seat assembly (Sup by 25 280S)	(2)
25-280S	Needle and seat assembly	(2)
30-14	Bowl strainer	(2)
30A-58	Idle adjustment screw	(2)
39-11	Choke valve attaching screw	(2)
47-14	Welsh plug	
48-185	Pump jet housing	
49-191S	*Electro magnet plunger	
53A-333S	Pump operating lever and countershaft assembly	
53A-342S	Lockout arm and pawl assembly	
53A-344	Vent arm	
53A-364	Secondary operating lever	
61-84	*Idle adjustment screw, dash pot adjusting screw and air conditioning unit adjusting nut spring	(3)
61-128	Connector rod spring	(2)
61-171	Pump spring (lower)	
61-238	Throttle flex spring	
61-291	Throttle lever adjusting screw spring	
61-332	Vacuum piston spring	

Part N	PART NAME	
61-382	Metering rod spring	
61-438	*Diaphragm return spring	
61-502	*Electro magnet plunger spring	
61-454	Fast idle cam spring	
61-474	Bowl vent spring	
61-483	Secondary throttle return spring	
63-35	Connector rod spring retainer	(2)
63-57	Intake check ball retainer	
63-58	Coil housing retainer	(3)
63-149	Bowl vent spring retainer	
64-141S	Pump plunger rod spring and retainer assembly	
75-889	Metering rod—standard (1953 54 cars except Twin Turbine equipped)	(2)
75-937	†Metering rod (Twin Turbine equipped)	(2)
75-944	Metering rod—standard (1952 cars)	.(2)
86-12	Flange stud lock washer	.(4)
86-58	*Air conditioning unit lock washer	
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	(2)
101-136	Coil housing attaching screw	(3)
101-142S	*Electro magnet housing attaching screw and washer assembly	(2)
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	
101-160S	Air horn attaching screw and washer assembly (early prod)	(8)
101-184S	Dust cover attaching screw and washer assembly	(2)
101-213S	*Diaphragm cover attaching screw and washer assembly	(2)
101-275	Piston housing attaching screw (Use with 6 1211S)	
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet housing attaching screw	
101-284	Coil housing attaching screw (6 973S 6 974S (2)	
101-296	Fast idle adjustment screw	
101-307S	Air horn attaching screw and lock washer assembly (early prod)	(8)
101-324	Fast idle cam screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-348	Primary throttle valve attaching screw	(4)
101-354S	Choke and coil shaft lever clamp screw assembly	(2)
101-362S	Air horn attaching screw and washer assembly	(3)
101-363	Piston housing attaching screw (6 973S 6 974S (1) (6-1211S (2)	
101-368	Throttle lever adjusting screw	
101 371S	*†Air horn attaching screw and washer assembly	
101-383	Fast idle adjustment screw (Sup by 101 296)	
103-14	Lead shot (late prod)	
105A-10	Choke lever clamp screw nut	(2)
105A-11	Flange stud nut	(4)
105A-12	Air conditioning unit diaphragm lock nut	
105A-49	Air conditioning to bracket attaching nut	
105A-52	†Dash pot lock nut	

Part No.	PART NAME	
105A-53	*Air conditioning unit adjusting nut	
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
114-95	Outer throttle shaft arm	
114-111	Inner throttle shaft arm	
115-187	Choke connector rod (Climatic® control)	
115-189	Choke connector rod	
115-197	Throttle connector rod	
115 211	Throttle operating rod	
116-13	Pump intake check ball	
117-162	Vacumeter piston link	
117-165	Pump connector link	
118-102S	Dust cover assembly	
120-166	Primary metering rod jet	(2)
120-185	Secondary metering jet	(2)
121-78	Coil housing gasket	
121-190	*Electro magnet housing gasket	
121-208	Dust cover gasket	
121-229	Air cleaner gasket	
121-232	Air horn gasket	
121-241	Pump jet housing gasket	
121-242	Body flange gasket	
121-243	Piston housing gasket (Use with 6 973S 6 974S)	
121-283	Piston housing gasket (Use with 6 1211S)	
122-75S	Pump relief valve assembly	
136-37	Throttle operating rod washer	(2)
136-84	Throttle shaft spring washer	
136-159	Primary throttle shaft washer	
136-172	Secondary throttle shaft washer	
150-62	Choke piston pin	
150-168	*Air conditioning unit diaphragm air bleed pin	
150-186S	Pin and valve cap assembly	
150A-10	Pin spring	(5)
160-91	Choke piston	
160-110S	Vacuum piston and pin assembly	
170-190	*Inner diaphragm housing	
170-259S	Piston housing and plug assembly (Use with 6 973S 6 974S)	
170-298S	*Air conditioning unit outer diaphragm housing and plug assembly	
170-447S	Piston housing and plug assembly (Use with 6 1211S)	
170AC241S	Thermostatic coil and housing assembly	
180-69	*Air conditioning unit bracket	
180-76S	†Dash pot bracket assembly	
181-192S	Fast idle cam assembly	
186-38S	Choke baffle plate and spring assembly	
202-43S	*Air conditioning (fast idle device) assembly (complete)	
202-44U	Unitized package (air conditioning fast idle device) unit	
202-45S	*Air conditioning unit diaphragm and shaft assembly	
202-54S	†Dash pot assembly	
202-60U	Unitized package (dash pot)	
213-16S	*Electro magnet and housing assembly	

*Part of 202 44U Unitized package

†Part of 202 60U Unitized package

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, nly one is used

CADILLAC

TWIN TURBINE TRANSMISSION

2088S — Cars Without Air Conditioning
2119S-2119SA — Cars With Air Conditioning

1953

(Use 2143S and 202-60U to replace 2088S)
(Use 2143S 202 44U and 202 60U to replace 2119S 2119SA)

WCFB Four Bore Down-Draft Climatic® Control Carbureters Nos. 2119S-2119SA-2088S

CARBURETER SPECIFICATIONS

For Cadillac 8 Cylinder Engine 3-13/16 Inch Bore, 3⅝ Inch Stroke

Dimensions Flange size 1⅛ inch Four Bore—4 bolt type
Primary venturi size 11/32 inch I D
Main venturi size 1 1/16 inch I D

Float Level See adjustments

Vent Outside None
Inside balance vent tube in air horn 2 on primary side 3 on secondary side

Gasoline Intake Size No 38 (1015 inch) drill hole in needle seat

Low Speed Jet Tube Jet size No 70 (028 inch) drill
By pass (2 in low speed jet) size 0492 inch diameter
Economizer size No 56 (0465 inch) drill
Idle bleed size 059 inch drill

Idle Port (Upper) slot type Primary length 140 inch width 030 inch
Secondary length 103 inch width 030 inch

Idle Port Opening Primary 091 to 097 inch secondary 067 to 073 inch above upper edge of valve with valve tightly closed

Lower Port Primary (for idle adjustment screw) size No 53 (0595 inch) drill
Secondary None

Set Idle Adjustment Screw ¾ to 1¾ turns open For richer mixture turn screw out Do not idle engine below 425 r p m (Transmission in Drive range)

Main Nozzle Installed permanently **DO NOT REMOVE**
Anti percolating jet (secondary only) size No 70 (028 inch) drill

Metering Rod Primary economy step 074 inch diameter
Middle step tapers to 065 inch diameter
Power step 056 inch diameter
Secondary None

Metering Rod Jet Primary size 0935 inch diameter (for metering rod)
Secondary size 067 inch diameter (no metering rod)

Metering Rod Setting See adjustments

Accelerating Pump Discharge jet (twin) primary only size No 74 (0225 inch) drill
Intake ball check seat size 115 to 120 inch diameter
Discharge needle seat size 070 inch diameter
Relief ball check size No 55 (052 inch) drill
Relief passage (vent) to fuel chamber No 42 (0935 inch) drill

Choke Carter Climatic® Control set on index Butterfly type offset choke valve primary side only Choke heat suction hole restriction in piston housing size No 44 (086 inch) drill

Vacuum Spark Port Round type 127 to 129 inch diameter
Top of port 060 to 070 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open	Float Setting	Idle Adjustment Screw Setting
033 '- 038	0125"- 0175"	2½° B T C Distance C to A Distributor Vacuum Line Disconnected	Primary ⅛ Inch (Use Gauge T109-232) Secondary 3/16 Inch (Use Gauge T109-222)	¾ to 1¾ Turns Open

NOTE These cars are equipped with hydraulic valve lifters—NO ADJUSTMENT

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CARBURETER ADJUSTMENTS

Fl at Adjustment Two separate float adjustments must be made—lateral and vertical LATERAL ADJUSTMENT With bowl cover assembly inverted bowl cover gasket removed and float resting on seated needle place float gauge directly under center of floats with notched portions of gauge fitted over edges of casting Sides of floats should just clear the vertical upright of float gauge Adjustment should be made by bending arms of floats VERTICAL ADJUSTMENT With float gauge in same pos tion floats should just clear the horizontal portion of gauge The vertical distance between top of float and machined surface of casting must be 1/8 inch (gauge T109 232) for primary floats and 3/16 inch (gauge T109 222) for secondary floats Adjust by bending float arms

Float Drop Adjustment With bowl cover held in upright position and measuring from center of float the distance be tween top of floats and bowl cover should be 5/8 inch for pri mary floats and 11/16 inch for secondary floats Adjust by bending stop tabs on float bracket

Pump Adjustment Install pump connector link in outer hole (long stroke) of pump arm with ends extending toward counter shaft arm Back out throttle lever set screw until throttle valves seat in bores of carbureter Hold straight edge across top of dust cover boss at pump arm The flat on top of pump arm should be parallel to straight edge Adjust by bending throttle connector rod at lower angle (Use tool T109 213)

Metering Rod Adjustment Metering rod adjustment is im portant and must be made after completing the pump ad justment No metering rod gauges are necessary Procedure is as follows 1 Back out throttle lever set screw to allow throt tle valves to seat in bores of carbureter and loosen metering rod arm clamp screw 2 With metering rods in place press down on vacumeter link until metering rods bottom in carbureter body casting 3 Holding rods in downward position and throt tle valves seated revolve metering rod arm until finger on arm contacts lip of vacumeter link Hold in place and carefully tighten clamp screw

Bowl Vapor Vent Adjustment This adjustment should be made after completing pump and metering rod adjustments Install dust cover gasket and dust cover Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter There should be 1/16 inch (gauge T109 197) between lower edge of bowl vapor vent valve and dust cover To adjust re move dust cover and bend vapor vent arm

Choke Modifier Adjustment 1 Set Climatic® control as sembly on index 2 Loosen clamp screw 3 Remove lower end of connector rod 4 Rotate metal pointer until it is in line with raised pointer on coil housing 5 Align scribed l ne on lever so that it is straight up and down Hold in place and tighten clamp screw 6 Seat throttle valves (back out throttle lever set screw and hold choke valve wide open) 7 Hold pointer as indicated in No 4 Lower end of rod must slide freely into hole in throttle arm Bend rod at upper angle to adjust

Fast Idle and Secondary Throttle Lock out Adjustment 1 Preliminary Adjustment Loosen choke lever clamp screw on choke shaft Insert 020 inch feeler gauge (T109 29) between lip of fast idle cam and boss of flange casting Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw 2 Secondary Throttle Lock Out Adjustment (a) With choke valve tightly closed tighten fast idle adjusting screw until there is 015 inch (gauge T109 44) opening between primary throttle valve and bore of carbureter (side opposite idle port) Lock pawl should now be in unlocked position if not adjust by bending tang on lock pawl (use bending tool T109 105) (b) Hold primary throttle valves half way open Open choke valve fully then open primary throttle valves all the way Tang on secondary throttle arm should engage in notch on lock out lever preventing secondary throttle shaft movement Keep choke valve in wide open position Close pr mary throttle valves so that lock pawl is unlocked then open primary throttle valves all the way Lock out lever should fall free allowing secondary throttle valves to be open before primary throttle valves are fully open If necessary bend tang on secondary throttle lever to provide clearance for proper operation of lock out lever 3 Fast Idle Adjustment With choke valve tightly closed tighten fast idle adjusting screw until there is 020 inch (gauge T109 29) opening between throttle valve and bore of carbureter (side opposite idle port) Be sure fast idle adjusting screw is on high step of cam while making this adjustment

Unloader Adjustment With throttle wide open there should be 3/16 inch (gauge T109 28) clearance between upper edge of choke valve and inner wall of air horn Adjust by bending un loader lip on throttle shaft lever (use bending tool T109 41)

Secondary Throttle Lever Adjustment Primary and secondary throttle valves should reach wide open posit on at the same time To adjust bend throttle operating rod at upper angle (Use bending tool T109 213)

Dashpot (Slow Closing Throttle) Adjustment Maximum dash pot action is obtained by adjusting as follows (2119S) with throttle valve seated adjust diaphragm adjusting screw so that the dash pot plunger shaft can be moved inward approximately 3/32 inch (2119SA 2088S) With throttle valves seated loosen lock nut and adjust dashpot assembly so that plunger shaft can be moved inward approximately 005 inch

AIR CONDITIONER FAST IDLE DEVICE ADJUSTMENT

This adjustment must be made after carbureter is installed on car engine at normal operating temperature and slow idle adjustment is completed With shift lever in neutral and air conditioner turned on engine should idle between 750 and 800 r p m To adjust loosen lock nut on diaphragm shaft and adjust knurled nut to obtain specified r p m then tighten lock nut

Cadillac 8—1953—Carbureters Nos. 2119S-2119SA-2088S

WHEN SERVICING, USE GASKET ASSORTMENT No. 233

Part No	PART NAME	
1 1041S	Body flange assembly (2119S) (Sup by 1 1134S)	
1 1133S	Body flange assembly (2119SA 2088S) (Sup by 1 1178S)	
1-1134S	Body flange assembly (2119S) (Sup by 1 1178S)	
1-1178S	Body flange assembly	
1A-76	Flange gasket (Sup by 1A 97)	
1A-97	Flange gasket (Sup by 1A 108)	
1A-108	Flange gasket	
2-92	Primary throttle valve	(2)
2-156	†Secondary throttle valve	(2)
2-161	*Secondary throttle valve (2119SA 2088S)	(2)
3-812S	Secondary throttle shaft and dog assembly	
3-839S	Primary throttle shaft and lever assembly (2119S)	
3-907S	Primary throttle shaft and lever assembly (2119SA 2088S)	
4A-128	Throttle shaft dog (2119S)	
4A-139	Throttle shaft dog (2119SA 2088S)	
6-870S	Air horn and Climatic® control assembly	
6-871S	Air horn assembly	
7-173	Choke valve	
11-243S	Low speed jet assembly (Sup by 11 260S)	(4)
11-260S	Low speed jet assembly	(4)
11B-35	Rivet plug (2119S SA(5) (2088S(3)	
11B-41	Rivet plug	(2)
11B-79	Rivet plug	(4)
11B-108	*Idle port rivet plug (2119SA 2088S)	(4)
11B-134	Rivet plug	(2)
11B-146	Level sight plug	(2)
11B-223	†Idle port and nozzle passage rivet plug (2119S(8) (2119SA 2088S(4)	
11B-272	Rivet plug	
11B-291	Rivet plug	(2)
11B-292	Rivet plug	
14-296S	Choke lever and screw assembly	
14-426S	Coil shaft lever and screw assembly	
14-439S	Choke piston lever link and shaft assembly	
14-440	Cam trip lever	
15-35S	Strainer nut assembly	
17-70	Pump check needle	
20-22	Needle seat gasket	(2)
20-26	Relief valve gasket	
20 35	Bowl strainer gasket	
21-143S	Float and lever assembly	(2)
24-24	Float lever pin	(2)
25-214S	Needle and seat assembly	(2)
30-14	Bowl strainer	
30A-58	Idle adjustment screw	(2)
39-11	Choke valve attaching screw	(2)
47-14	Welsh plug	
48-185	Pump jet housing	
49-191S	Electro magnet plunger assembly (2119S SA)	
53A-333S	Pump operating lever and countershaft assembly	
53A-342S	Lockout arm and pawl assembly	
53A-344	Vent arm	
53A 352	Secondary operating lever (2119S)	
53A 364	Secondary operating lever (2119SA 2088S)	
61-84	Idle adjustment screw dash-pot adjusting screw and air conditioning unit adjusting nut spring	(3)
61-128	Connector rod spring	(2)
61-171	Pump spring (lower)	
61-238	Throttle flex spring	
61-291	Throttle lever adjusting screw spring	

Part No	PART NAME	
61-332	Vacuum piston spring	
61-382	Metering rod spring	
61 438	Diaphragm return spring (2119S(2) (2119SA(1)	
61-454	Fast idle cam spring	
61-474	Bowl vent spring	
61-483	Secondary throttle return spring	
61-502	Electro magnet plunger spring (2119S SA)	
63-35	Connector rod spring retainer	(2
63-57	Intake ball check retainer	
63-58	Coil housing retainer	(3)
63-149	Bowl vent spring retainer	
64 141S	Pump plunger rod and spring assembly	
75-937	Metering rod — standard	(2)
75-939U	Metering rod and jet unit — 1 size lean	
75-940U	Metering rod and jet unit — 2 sizes lean	
86-12	Flange stud lock washer	(4)
86-58	Air conditioning unit and dash pot attaching nut lock washer (2119S(2) (2119SA(1)	
101-6	Pump arm clamp screw	
101-10	Pump arm clamp screw (2119S) (Sup by 101 6)	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	(2)
101-136	Coil housing attaching screw	(3)
101-142S	Electro magnet housing attaching screw and washer assembly (2119S SA)	(2)
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assy	
101-160S	Air horn attaching screw and washer assy (2119 SA(4) (2088S(6)	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-213S	Diaphragm cover attaching screw and washer assembly (2119S(12), (2119SA(6)	
101-277S	Vent arm attaching screw and washer assy	
101-278	Pump jet housing attaching screw	
101-284	Coil housing attaching screw	(2)
101-296	Fast idle adjustment screw (Sup by 101-383)	
101-324	Fast idle cam screw	
101-332	†Throttle lever adjusting screw	
101-335S	Air horn attaching screw and washer assy	(7)
101 337	Secondary throttle valve attaching screw	(4)
101-348	Primary throttle valve attaching screw	(4)
101-354S	Choke and coil shaft lever clamp screw assy	(2)
101-362S	Air horn attaching screw and washer assy (2119S SA)	(2)
101-363	Piston housing attaching screw	
101-368	*Throttle adjusting screw (2119SA 2088S)	
101 370	Dash pot adjusting screw (2119S)	
101-371S	Dash pot attaching screw and washer assy	(2)
101-383	Fast idle adjustment screw	
105A-10	Choke lever clamp screw nut	(2)
105A-11	Flange stud nut	(4)
105A-12	Air conditioning unit diaphragm lock nut (2119S SA)	
105A-49	Air conditioning to bracket attaching nut (2119S SA)	
105A 52	Dash pot lock nut (2119SA 2088S)	
105A 53	Air conditioning unit adjusting nut (2119S-SA)	
105A-55	Dash pot unit bracket attaching nut (2119S)	
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
114-95	Outer throttle shaft arm	
114 96	Inner throttle shaft arm (2119S)	
114 111	Inner throttle shaft arm (2119SA 2088S)	

Part No	PART NAME
115-186	Throttle operating rod (2119S)
115-187	Choke connector rod (Climatic® control side)
115-189	Choke connector rod
115-197	Throttle connector rod
115-211	Throttle operating rod (2119SA 2088S)
116-13	Pump intake and air conditioning unit check ball (2119S SA(2) (2088S(1)
117-28	Pump connector link (2119S SA)
117-165	Pump connector link (2088S)
117-155	Vacumeter piston link
118-98S	Dust cover assembly
120-166	Primary metering rod jet (2)
120-185	Secondary metering jet (2)
121-78	Coil housing gasket
121-190	Electro magnet housing gasket (2119S SA)
121-208	Dust cover gasket
121-229	Air cleaner gasket
121-232	Air horn gasket
121-241	Pump jet housing gasket
121-242	Body flange gasket
121-243	Piston housing gasket
122-75S	Pump relief valve assembly
136-37	Throttle operating rod washer (2)
136-84	Throttle shaft spring washer
136-159	Primary throttle shaft washer
136-172	Secondary throttle shaft washer
150-62	Choke piston pin

Part No	PART NAME
150-168	Air conditioning unit diaphragm air bleed pin (2119S SA)
150-186S	Pin and valve cap assembly
150A-10	Pin spring (5)
160-91	Choke piston
160-110S	Vacuum piston and pin assembly
170-190	Inner diaphragm housing (2119S(2) (2119SA(1)
170-259S	Piston housing and plug assembly
170 298S	Air conditioning unit outer diaphragm housing and plug assembly (2119S SA)
170-327S	Outer diaphragm housing assembly (Dash pot) (2119S)
170AC241S	Thermostatic coil and housing assembly
180-69	Air conditioning unit bracket (2119S SA)
180-74S	Dash pot bracket assembly (2119S)
180-76S	Dash pot bracket assembly (2119SA 2088S)
181-192S	Fast idle cam assembly
186 38S	Choke baffle plate and spring assembly
202-43S	Air conditioning (fast idle device) assembly (complete) (2119S SA)
202-45S	Air conditioning unit diaphragm and shaft assy (2119S SA)
202-51S	Dash pot diaphragm and shaft assembly (2119S)
202-52S	Dash pot unit complete (2119S)
202-54S	Dash pot assembly (2119SA 2088S)
213-16S	Electro magnet and housing assembly (2119S SA)

*These parts must be used on 2119S with cast iron flange
†These parts must be used on 2119S with aluminum flange
NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

CARBURETER
TRADE MARK REG U S PAT OFF
MARCA REGISTRADA

Form 4997E
Replacing Form 4997B and Form 5038

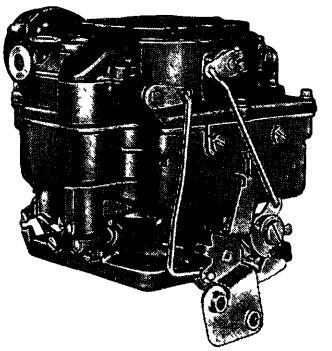
CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

CADILLAC 2005S-2005SA-2072S
February, 1953
Revised June, 1956

ALL MODELS
(With Hydra-Matic Transmission)

2005S-SA
Cars without Air Conditioning

2072S
Cars with Air Conditioning



Cut Shows 2005S Carbureter

CADILLAC EIGHT 1953

(Use 2143S to replace 2005S-2005SA)

(Use 2143S with 202-44U to replace 2072S)

WCFB Four Bore Down-Draft Climatic® Control **Carbs. Nos. 2005S-2005SA-2072S**

CARBURETER SPECIFICATIONS

For Cadillac 8 Cylinder Engine: 3-13/16 Inch Bore, 3⅝ Inch Stroke

Dimensions: Flange size, 1⅛ inch Four Bore—4 bolt type.
Primary venturi size, 11/32 inch I. D.
Main venturi size, 1-1/16 inch I. D.

Float Level: See adjustments.

Vent: Outside, None.
Inside, balance vent tube in air horn, 2 on primary side, 3 on secondary side.

Gasoline Intake: Size No. 38 (.1015 inch) drill hole in needle seat.

Low Speed Jet Tube: Jet, size No. 70 (.028 inch) drill.
By-pass (2 in low speed jet), size No. 56 (.0465 inch) drill.
Economizer, size No. 56 (.0465 inch) drill.
Idle bleed, size .059 inch drill.

Idle Port: (Upper) slot type. Primary, length .140 inch; width .030 inch.
Secondary, length .103 inch; width .030 inch.

Idle Port Opening: Primary, .091 to .097 inch, secondary, .067 to .073 inch above upper edge of valve with valve tightly closed.

Lower Port: Primary (for idle adjustment screw), size No. 53 (.0595 inch) drill.
Secondary, None.

Set Idle Adjustment Screw: 1¼ to 2¼ turns open. For richer mixture turn screw out. Do not idle engine below 400 r.p.m. (Transmission in Drive range).

Main Nozzle: Installed permanently. **DO NOT REMOVE.** Anti-percolating jet (secondary only), size No. 70 (.028 inch) drill.

Metering Rod: Primary, economy step .073 inch diameter.
Middle step tapers to .063 inch diameter.
Power step, .054 inch diameter.
Secondary, None.

Metering Rod Jet: Primary, size .0935 inch diameter (for metering rod).
Secondary, size .067 inch diameter (no metering rod).

Metering Rod Setting: See adjustments.

Accelerating Pump: Discharge jet (twin) primary only, size No. 74 (.0225 inch) drill.
Intake ball check seat, size .115 to .120 inch diameter.
Discharge needle seat, size .070 inch diameter.
Relief ball check, size No. 55 (.052 inch) drill.
Relief passage (vent) to fuel chamber No. 42 (.0935 inch) drill.

Choke: Carter Climatic ® Control, set on index. Butterfly type, offset choke valve, primary side only. Choke heat suction hole, restriction in piston housing, size No. 44 (.086 inch) drill.

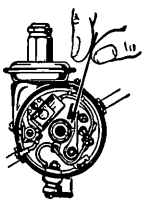
Vacuum Spark Port: Round type, .127 to .129 inch diameter. Top of port .060 to .070 inch above top edge of valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



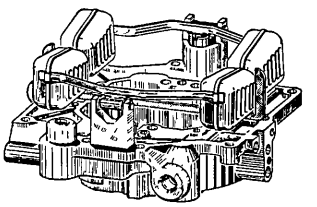
Spark Plug Gap .033"-.038"



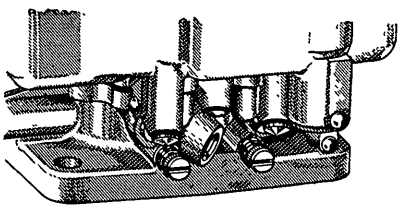
Breaker Point Setting .0125"-.0175"



Ignition Timing Breaker Points to Open: 2½° B.T.C. Distance C to A (Distributor vacuum line disconnected)



Float Setting Primary ⅛ Inch (Use Gauge T109-232) Secondary 3/16 Inch (Use Gauge T109-222)



Idle Adjustment Screw Setting 1¼ to 2¼ Turns Open

NOTE: These cars are equipped with hydraulic valve lifters.—NO ADJUSTMENT.

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CARBURETER
TRADE MARK REG. U. S PAT. OFF.
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CARBURETER ADJUSTMENTS

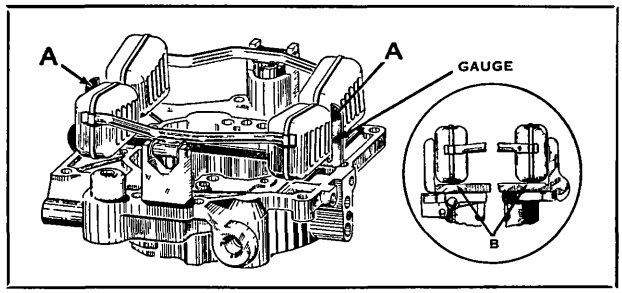


Figure 1
Float Adjustment

FLOAT ADJUSTMENT (Fig 1)

Two separate float adjustments must be made—lateral and vertical LATERAL ADJUSTMENT With bowl cover assembly inverted bowl cover gasket removed and float resting on seated needle place float gauge directly under center of floats with notched portions of gauge fitted over edges of casting Sides of floats should just clear the vertical upright of float gauge (A) Adjustment should be made by bending arms of floats VERTICAL ADJUSTMENT With float gauge in same position floats should just clear the horizontal portion of gauge The vertical distance (B) between top of float and machined surface of casting must be 1/8 inch (gauge T109 232) for primary floats and 3/16 inch (gauge T109 222) for secondary floats Adjust by bending float arms

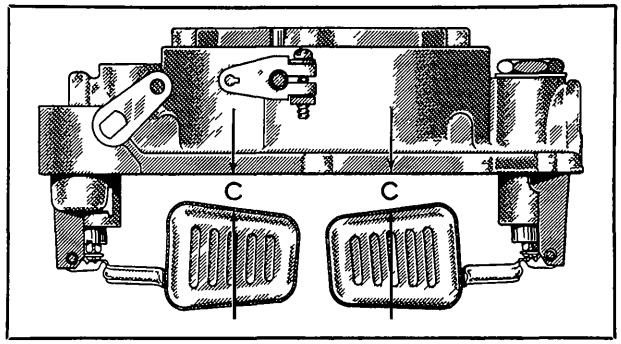


Figure 2
Float Drop Adjustment

FLOAT DROP ADJUSTMENT (Fig 2)

With bowl cover held in upright position and measuring from center of float (C) the distance between top of floats and bowl cover should be 5/8 inch for primary floats and 11/16 inch for secondary floats Adjust by bending stop tabs on float bracket

PUMP ADJUSTMENT (Fig 3)

Install pump connector link in outer hole (long stroke) of pump arm (D) with ends extending toward countershaft arm Back out throttle lever set screw until throttle valves seat in bores of carbureter Hold straight edge across top of dust cover boss at pump arm The flat on top of pump arm should be parallel to straight edge Adjust by bending throttle connector rod at lower angle (E) (Use tool T109 213)

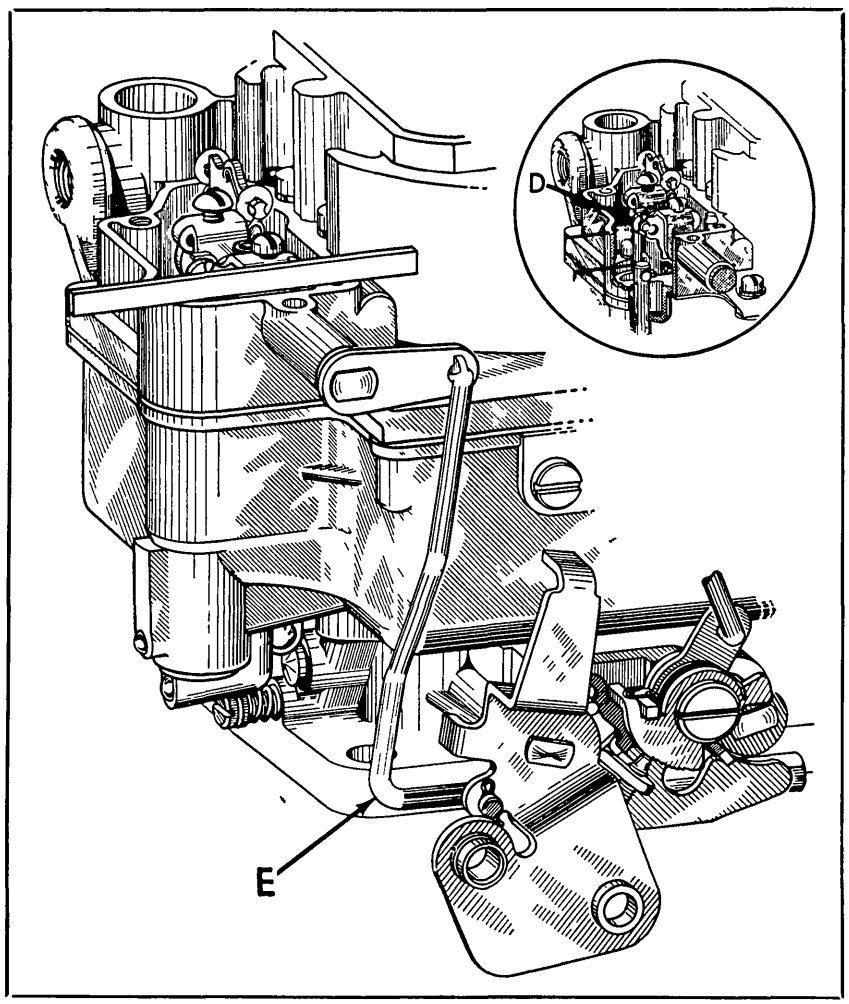


Figure 3
Pump Adjustment

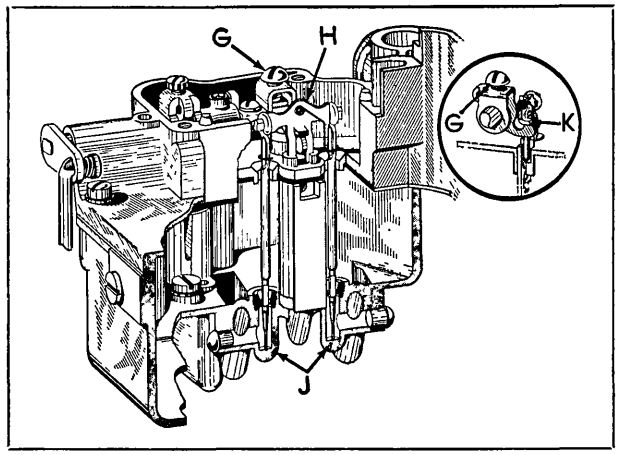


Figure 4
Metering Rod Adjustment

METERING ROD ADJUSTMENT (Fig. 4):

Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows: 1. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw (G). 2. With metering rods in place, press down on vacumeter link (H) until metering rods bottom in carbureter body casting (J). 3. Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link (K). Hold in place and carefully tighten clamp screw (G).

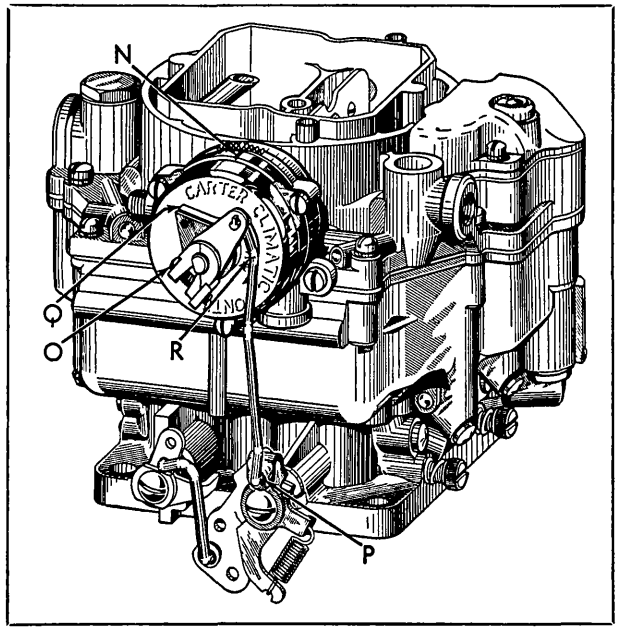


Figure 6
Choke Modifier Adjustment

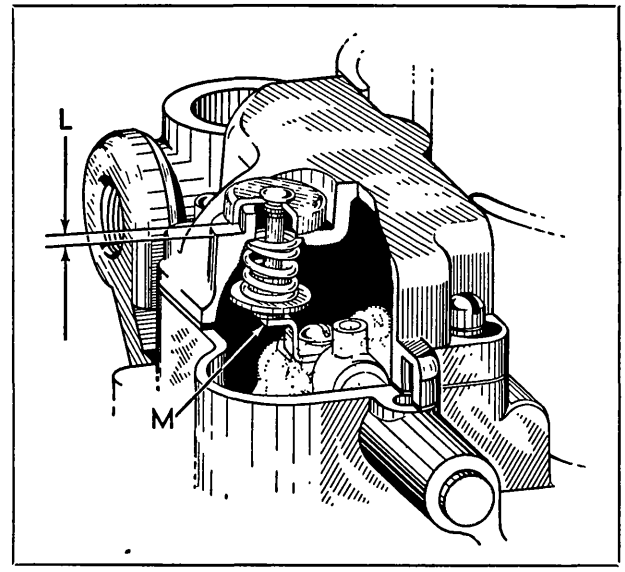


Figure 5
Bowl Vapor Vent Adjustment

BOWL VAPOR VENT ADJUSTMENT (Fig. 5):

This adjustment should be made after completing pump and metering rod adjustments. Install dust cover gasket and dust cover. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter. There should be 1/16 inch (L) (gauge T109-197) between lower edge of bowl vapor vent valve and dust cover. To adjust, remove dust cover and bend vapor vent arm (M).

CHOKE MODIFIER ADJUSTMENT (Fig. 6):

1. set Climatic® control assembly on index (N). 2. Loosen clamp screw (O). 3. Remove lower end of connector rod (P). 4. Rotate metal pointer until it is in line with raised pointer on coil housing (Q). 5. Align scribed line on lever so that it is straight up and down. Hold in place and tighten clamp screw (O). 6. Seat throttle valves (back out throttle lever set screw and hold choke valve wide open). 7. Hold pointer as indicated in No. 4. Lower end of rod (P) must slide freely into hole in throttle arm. Bend rod at upper angle (R) to adjust.

FAST IDLE AND SECONDARY THROTTLE LOCK-OUT ADJUSTMENT (Fig. 7):

1. Preliminary Adjustment: Loosen choke lever clamp screw (AA) on choke shaft. Insert .020 inch feeler gauge (T109-29) between lip of fast idle cam and boss of flange casting (BB). Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw (AA). 2. Secondary Throttle Lock-Out Adjustment: (a) With choke valve tightly closed, tighten fast idle adjusting screw (CC) until there is .015 inch (gauge T109-44) opening between primary throttle valve and bore of carbureter (side opposite idle port) (DD). Lock pawl (EE) should now be in unlocked position; if not, adjust by bending tang (FF) on lock pawl (use bending tool T109-105). (b) Hold primary throttle valves half way open. Open choke valve fully, then open primary throttle valves all the way. Tang (GG) on secondary throttle arm should engage in notch (HH) on lock out lever preventing secondary throttle shaft movement. Keep choke valve in wide open position. Close primary throttle valves so that lock pawl (EE) is unlocked, then open primary throttle valves all the way. Lock-out lever (JJ) should fall free allowing secondary throttle valves to be open before primary throttle valves are fully open. If necessary, bend tang (GG) on secondary throttle lever to provide clearance for proper operation of lock-out lever. 3. Fast Idle Adjustment: With choke valve tightly closed, tighten fast idle adjusting screw (CC) until there is .020 inch (gauge T109-29) opening between throttle valve and bore of carbureter (side opposite idle port) (DD). Be sure fast idle adjusting screw (CC) is on high step of cam while making this adjustment.

Part No	PART NAME	
61-332	VACUUM PISTON SPRING	
61-382	METERING ROD SPRING	
61-438	Diaphragm return spring (2072S)	
61 454	Fast idle cam spring	
61-474	Bowl vent spring	
61-483	SECONDARY THROTTLE RETURN SPRING	
61-502	Electro magnet plunger spring (2072S)	
63-35	CONNECTOR ROD SPRING RETAINER	(2)
63-57	INTAKE BALL CHECK RETAINER	
63-58	Coil housing retainer	(3)
63 149	Bowl vent spring retainer	
64-141S	PUMP PLUNGER ROD AND SPRING ASSEMBLY	
75-889	METERING ROD (STANDARD)	(2)
75-939U	Metering rod and jet unit (1 size lean)	
75-940U	Metering rod and jet unit (2 sizes lean)	
86-12	Flange stud lock washer	(4)
86-58	Diaphragm bracket nut lock washer (2072S)	
101-6	Pump arm clamp screw	
101-10	Pump arm clamp screw (2005S 2072S) (Sup by 101 6)	
101-19	Choke lever clamp screw (2005S) (Sup by 101 354S)	(2)
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	(2)
101-136	Coil housing attaching screw	(3)
101-142S	Electro magnet housing attaching screw and washer assembly (2072S)	(2)
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	
101-160S	Air horn attaching screw and washer assembly (2005S SA) (8) (2072S) (5)	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-213S	Diaphragm cover attaching screw and washer assembly (2072S)	(6)
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet housing attaching screw	
101-284	Piston housing attaching screw	(2)
101-288	Throttle lever adjusting screw (2005S) (Sup by 101-332)	
101-296	Fast idle adjustment screw	
101-324	Fast idle cam screw	
101-332	†Throttle lever adjusting screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-348	Primary throttle valve attaching screw	(4)
101-354S	Choke and coil shaft lever clamp screw assembly	(2)
101 362S	Air horn attaching screw and washer assembly (2072S)	(3)
101-363	Pistor housing attaching screw	
101-368	*Throttle lever adjusting screw (2005SA)	
105A-10	Choke lever clamp screw nut	(2)
105A-11	Flange stud nut	(4)

Part No.	PART NAME	
105A-12	Air conditioning unit diaphragm lock nut (2072S)	
105A-49	Air conditioning unit to bracket attaching nut (2072S)	
105A-53	Air conditioning unit adjusting nut (2072S)	
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
114-95	Outer throttle shaft arm	
114-96	Inner throttle shaft arm	
115-186	Throttle operating rod	
115-187	Choke connector rod (Climatic ® control side)	
115-189	Choke connector rod	
115-197	THROTTLE CONNECTOR ROD	
116-13	PUMP INTAKE AND AIR CONDITIONING UNIT CHECK BALL (2005S SA) (1) (2072S)	(2)
117-28	PUMP CONNECTOR LINK	
117-155	Vacumeter piston link	
118-98S	Dust cover assembly	
120-166	PRIMARY METERING ROD JET	(2)
120-185	SECONDARY METERING JET	(2)
121-78	COIL HOUSING GASKET	
121-149	Pump jet housing gasket (2005S) (Sup by 121 241)	
121-190	Electro magnet housing gasket (2072S)	
121-208	DUST COVER GASKET	
121-210	Body flange gasket (2005S) (Sup by 121 242)	
121-229	AIR CLEANER GASKET	
121-232	AIR HORN GASKET	
121-241	PUMP JET HOUSING GASKET	
121-242	BODY FLANGE GASKET	
121-243	PISTON HOUSING GASKET	
122-75S	PUMP RELIEF PLUG ASSEMBLY	
136-37	Throttle operating rod washer	(2)
136-84	Throttle shaft spring washer	
136-159	Primary throttle shaft washer	
136-172	Secondary throttle shaft washer	
150-62	Choke piston pin	
150-168	Diaphragm air bleed pin (2072S)	
150-186S	Pin and valve cap assembly	
150A-10	PIN SPRING	(5)
160-91	Choke piston	
160-110S	Vacuum piston and pin assembly	
170-190	Diaphragm housing (Inner) (2072S)	
170-259S	Piston housing and plug assembly	
170-298S	Air conditioning unit outer diaphragm housing and plug assembly (2072S)	
170AC241S	Thermostatic coil and housing assembly	
180-69	Air conditioning unit bracket (2072S)	
181-192S	Fast idle cam and spring assembly	
186-38S	Choke baffle plate and spring assembly	
202-43S	Air conditioning (Fast idle device) assy (Complete) (2072S)	
202-45S	Air conditioning unit diaphragm and shaft assembly (2072S)	
213-16S	Electro magnet and housing assembly (2072S)	

*These parts must be used on 2005S and 2072S with cast iron flange

†These parts must be used on 2005S and 2072S with aluminum flange

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

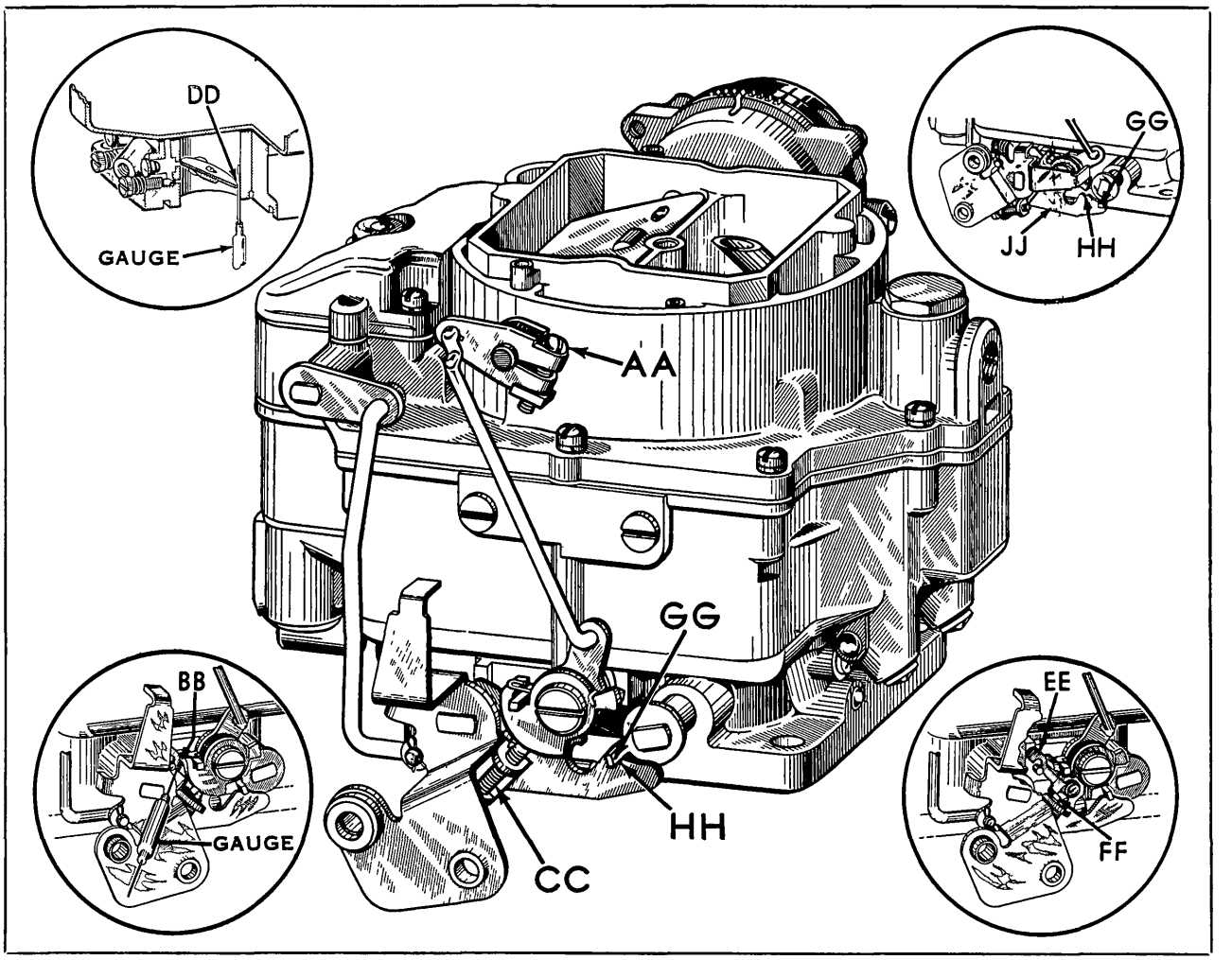


Figure 7
Fast Idle and Secondary Throttle Lock-Out Adjustment

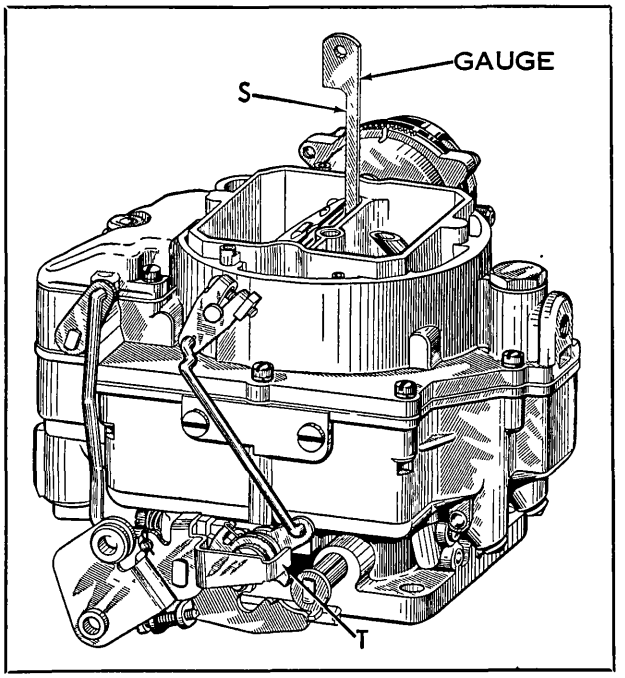


Figure 8
Unloader Adjustment

UNLOADER ADJUSTMENT (Fig. 8):
With throttle wide open there should be 3/16 inch (gauge T109-28) clearance (S) between upper edge of choke valve and inner wall of air horn. Adjust by bending unloader lip (T) on throttle shaft lever (use bending tool T109-41).

SECONDARY THROTTLE LEVER ADJUSTMENT (Fig. 9):
Primary and secondary throttle valves should reach wide open position at the same time. To adjust bend throttle operating rod at upper angle (U). (Use bending tool T109-213.)

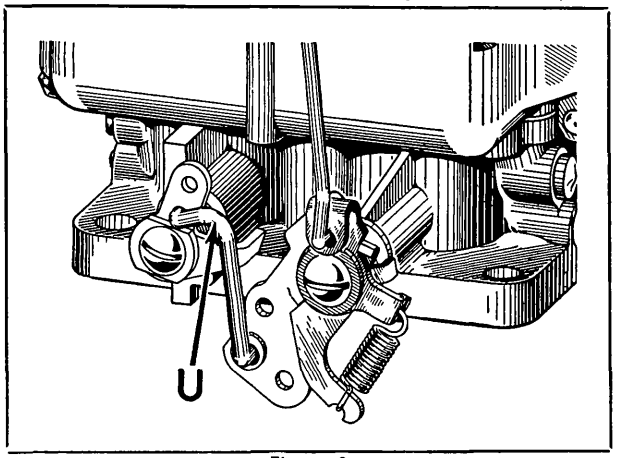
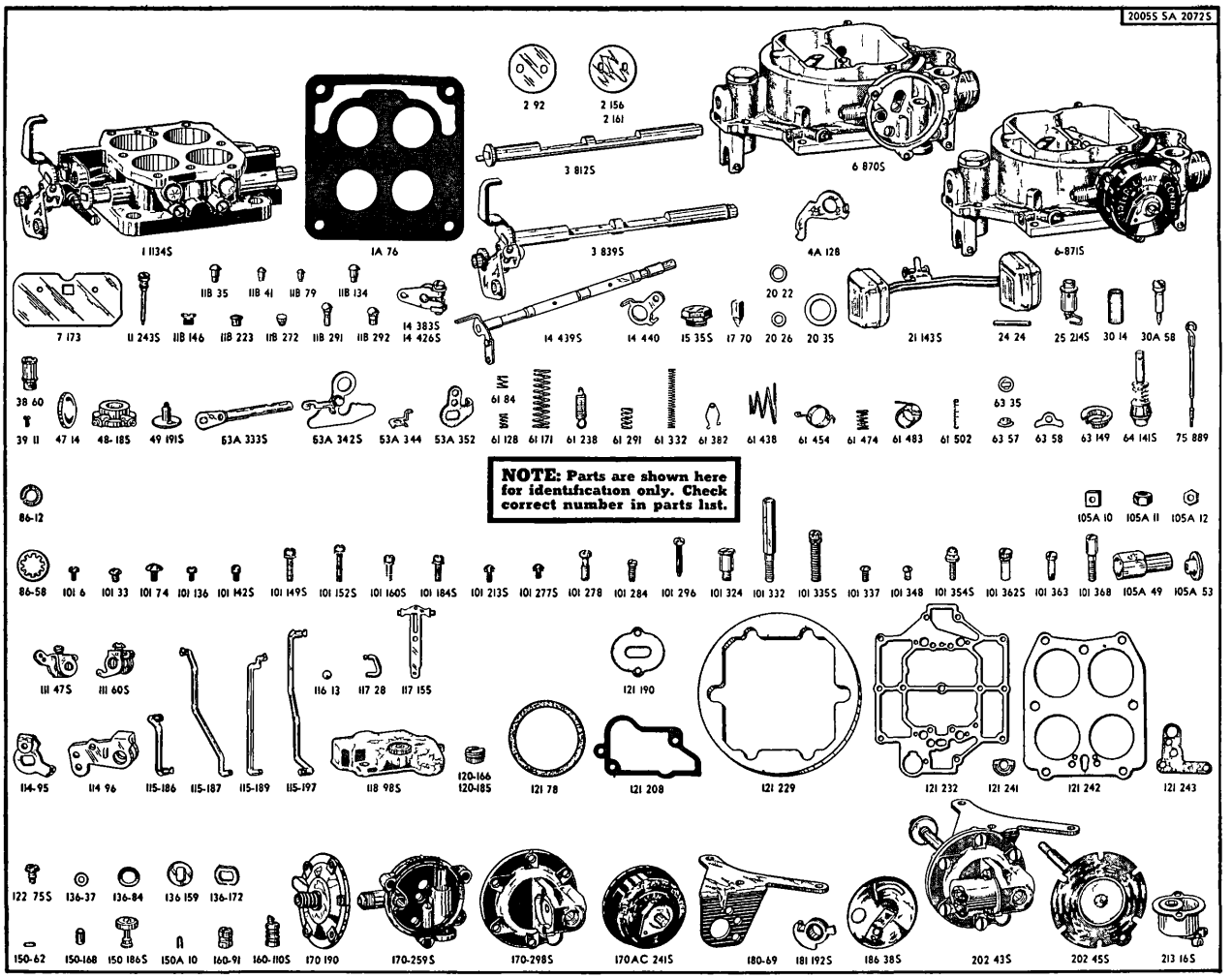


Figure 9
Secondary Throttle Lever Adjustment

AIR CONDITIONER FAST IDLE DEVICE ADJUSTMENT (Not Illustrated):
This adjustment must be made after carbureter is installed on car, engine at normal operating temperature and slow idle adjustment is completed. With shift lever in neutral and air conditioner turned on, engine should idle between 750 and 800 r.p.m. To adjust, loosen lock nut on diaphragm shaft and adjust knurled nut to obtain specified r.p.m., then tighten lock nut.



Cadillac 8—1953—Carbureters Nos. 2005S-2005SA-2072S

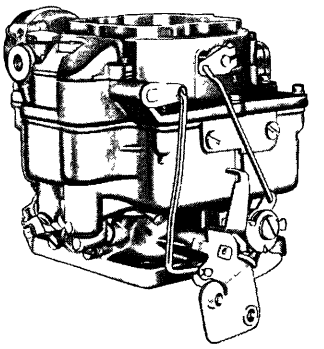
WHEN SERVICING, USE GASKET ASSORTMENT No. 233 or 275, REPAIR PACKAGE No. 1733

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1041S	Body flange assembly (2005S 2072S) (Sup by 1 1134S)	
1-1134S	Body flange assembly (Sup by 1 1178S)	
1-1178S	Body flange assembly	
1A-76	Flange gasket (Sup by 1A 97)	
1A-97	Flange gasket (Sup by 1A 108)	
1A-108	FLANGE GASKET	
2-92	Primary throttle valve	(2)
2-156	†Secondary throttle valve	(2)
2-161	Secondary throttle valve (2005SA)	
3-812S	Secondary throttle shaft and dog assembly	
3-839S	Primary throttle shaft and lever assembly	
4A-128	Throttle shaft dog	
6-870S	Air horn and Climatic ® control assembly	
6-871S	Air horn assembly	
7-173	Choke valve	
11-243S	LOW SPEED JET ASSEMBLY	(4)
11B-35	Rivet plug (2005S 2072S) (5) 2005SA) (3)	
11B-41	Rivet plug	(2)
11B-79	Rivet plug	(4)
11B-108	*Idle port rivet plug (2005SA)	(4)
11B-134	Rivet plug (2005S SA) (1) (2072S) (2)	
11B-146	Level sight plug	(2)
11B-223	Idle port and nozzle passage rivet plug (2005S 2072S) (8), (2005SA) (4)	
11B-272	Rivet plug	
11B-291	Rivet plug	(2)
11B-292	Rivet plug	
14-383S	Choke lever and screw assembly	
14-426S	Coil shaft lever assembly	
14-439S	Choke piston lever link and shaft assembly	
14-440	Cam trip lever	
15-35S	Strainer nut assembly	
17-70	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	(2)
20-26	Relief valve gasket	
20-35	BOWL STRAINER GASKET	
20-43	Piston housing gasket (2005S) (Sup by 121 243)	
21-143S	Float and lever assembly	(2)
24-24	Float lever pin	(2)
25-214S	NEEDLE AND SEAT ASSEMBLY	(2)
30-14	BOWL STRAINER	
30A-37	Idle adjustment screw (2005S) (Sup by 30A 58)	(2)
30A-58	Idle adjustment screw	(2)
38-60	Standpipe (Early Production) (2005S)	
39-11	Choke valve attaching screw	(2)
47-14	Welsh plug	
48-185	Pump jet housing	
49-191S	Electro magnet plunger assembly (2072S)	
53A-333S	Pump operating lever and countershaft assembly	
53A-342S	Lockout arm and pawl assembly	
53A-344	Vent arm	
53A-352	Secondary operating lever	
61-84	Idle adjustment screw and diaphragm adjusting nut spring (2005S SA) (2), (2072S) (3)	
61-128	CONNECTOR ROD SPRING	(2)
61-171	PUMP SPRING (LOWER)	
61-238	Throttle flex spring	
61-291	Throttle lever adjusting screw spring	

2109S
Cars Without Air Conditioning

2110S
Cars With Air Conditioning



CADILLAC EIGHT
ALL MODELS
1954

(Use 2143S to replace 2109S
Use 2143S and 202-44U to replace 2110S)

WCFB Four-Bore Down-Draft Climatic® Control **Carbureters Nos. 2109S-2110S**

CARBURETER SPECIFICATIONS

For Cadillac 8 Cylinder Engine: 3-13/16 Inch Bore, 3⅝ Inch Stroke

Dimensions: Flange size 1⅛ inch Four Bore—4 bolt type.
Primary venturi size 11/32 inch I. D.
Main venturi size, 1-1/16 inch I. D.

Float Level: See adjustments.

Vent: Outside, None.
Inside, balance vent tube in air horn, 2 on primary side, 3 on secondary side.

Gasoline Intake: Size No. 38 (.1015 inch) drill hole in needle seat.

Low Speed Jet Tube: Jet, size No. 70 (.028 inch) drill.
By-pass (2 in low speed jet), size .0492 inch drill.
Economizer, in body, size No. 56 (.0465 inch) drill.
Idle bleed, in body, size .059 inch drill.

Idle Port: (Upper) slot type. Primary, length .140 inch; width .030 inch.
Secondary, length .103 inch; width .030 inch.

Idle Port Opening: Primary, .091 to .097 inch, secondary, .067 to .073 inch above upper edge of valve with valve tightly closed.

Lower Port: Primary (for idle adjustment screw), size No. 53 (.0595 inch) drill.
Secondary, None.

Set Idle Adjustment Screw: ¾ to 1¾ turns open. For richer mixture turn screw out. Do not idle engine below 400 r.p.m. (Transmission in Drive range).

Main Nozzle: Installed permanently. DO NOT REMOVE.
Anti-percolating jet (secondary only), size No. 70 (.028 inch) drill.

Metering Rod: Primary, economy step .073 inch diameter.
Middle step tapers to .063 inch diameter.
Power step, .054 inch diameter.
Secondary, None.

Metering Rod Jet: Primary, size .0935 inch diameter (for metering rod).
Secondary, size .067 inch diameter (no metering rod).

Metering Rod Setting: See adjustments.

Accelerating Pump: Discharge jet (twin) primary only, size No. 74 (.0225 inch) drill.
Intake ball check seat, size .115 to .120 inch diameter.
Discharge needle seat, size .070 inch diameter.
Relief ball check, size No. 55 (.052 inch) drill.
Relief passage (vent) to fuel chamber No. 42 (.0935 inch) drill.

Choke: Carter Climatic® Control, set on index. Butterfly type, offset choke valve, primary side only. Choke heat suction hole, restriction in piston housing, size No. 44 (.086 inch) drill.

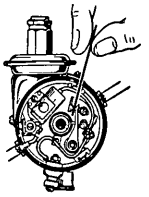
Vacuum Spark Port: Round type, .127 to .129 inch diameter. Top of port .060 to .070 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



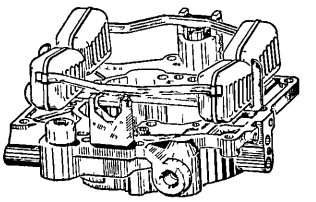
Spark Plug Gap .035"



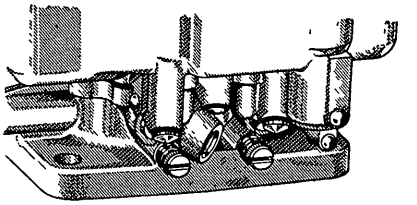
Breaker Point Setting 0125"-.0175"



Ignition Timing Breaker Points to Open: 2½° B.T.C. ½ Distance C to A Distributor vacuum line disconnected



Float Setting Primary ⅛ Inch (Use Gauge T109-232) Secondary 3/16 Inch (Use Gauge T109-222)



Idle Adjustment Screw Setting ¾ to 1¾ Turns Open

NOTE: These cars are equipped with hydraulic valve lifters.—NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT Two separate float adjustments must be made—lateral and vertical LATERAL ADJUSTMENT With bowl cover assembly inverted bowl cover gasket removed and float lip resting on seated needle place float gauge directly under center of floats with notched portions of gauge fitted over edges of casting Sides of floats should just clear the vertical upright of float gauge Adjustment should be made by bending arms of floats VERTICAL ADJUSTMENT With float gauge in same position floats should just clear the horizontal portion of gauge The vertical distance between top of float and machined surface of casting must be 1/8 inch (gauge T109 232) for primary floats and 3/16 inch (gauge T109 222) for secondary floats Adjust by bending float arms

FLOAT DROP ADJUSTMENT With bowl cover held in upright position and measuring from center of float the distance between top of floats and bowl cover should be 5/8 inch for primary floats and 11/16 inch for secondary floats Adjust by bending stop tabs on float bracket

PUMP ADJUSTMENT Install pump connector link in outer hole (long stroke) of pump arm with ends extending toward counter shaft arm Back out throttle lever set screw until throttle valves seat in bores of carbureter Hold straight edge across top of dust cover boss at pump arm The flat on top of pump arm should be parallel to straight edge Adjust by bending throttle connector rod at lower angle (Use tool T109 213)

METERING ROD ADJUSTMENT Metering rod adjustment is important and must be made after completing the pump adjustment No metering rod gauges are necessary Procedure is as follows 1 Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw 2 With metering rods in place press down on vacumeter link until metering rods bottom in carbureter body casting 3 Holding rods in downward position and throttle valves seated revolve metering rod arm until finger on arm contacts lip of vacumeter link Hold in place and carefully tighten clamp screw

BOWL VAPOR VENT ADJUSTMENT This adjustment should be made after completing pump and metering rod adjustments Install dust cover gasket and dust cover Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter There should be 1/16 inch (gauge T109 197) between lower edge of bowl vapor vent valve and dust cover To adjust remove dust cover and bend vapor vent arm

CHOKE MODIFIER ADJUSTMENT 1 Set Climatic® control assembly on index 2 Loosen clamp screw 3 Remove lower end of connector rod 4 Rotate metal pointer until it is in line with raised pointer on coil housing 5 Align scribed line on lever so that it is straight up and down Hold in place and tighten clamp screw 6 Seat throttle valves (back out throttle lever set screw and hold choke valve wide open) 7 Hold pointer as indicated in No 4 Lower end of rod must slide freely into hole in throttle arm Bend rod at upper angle to adjust

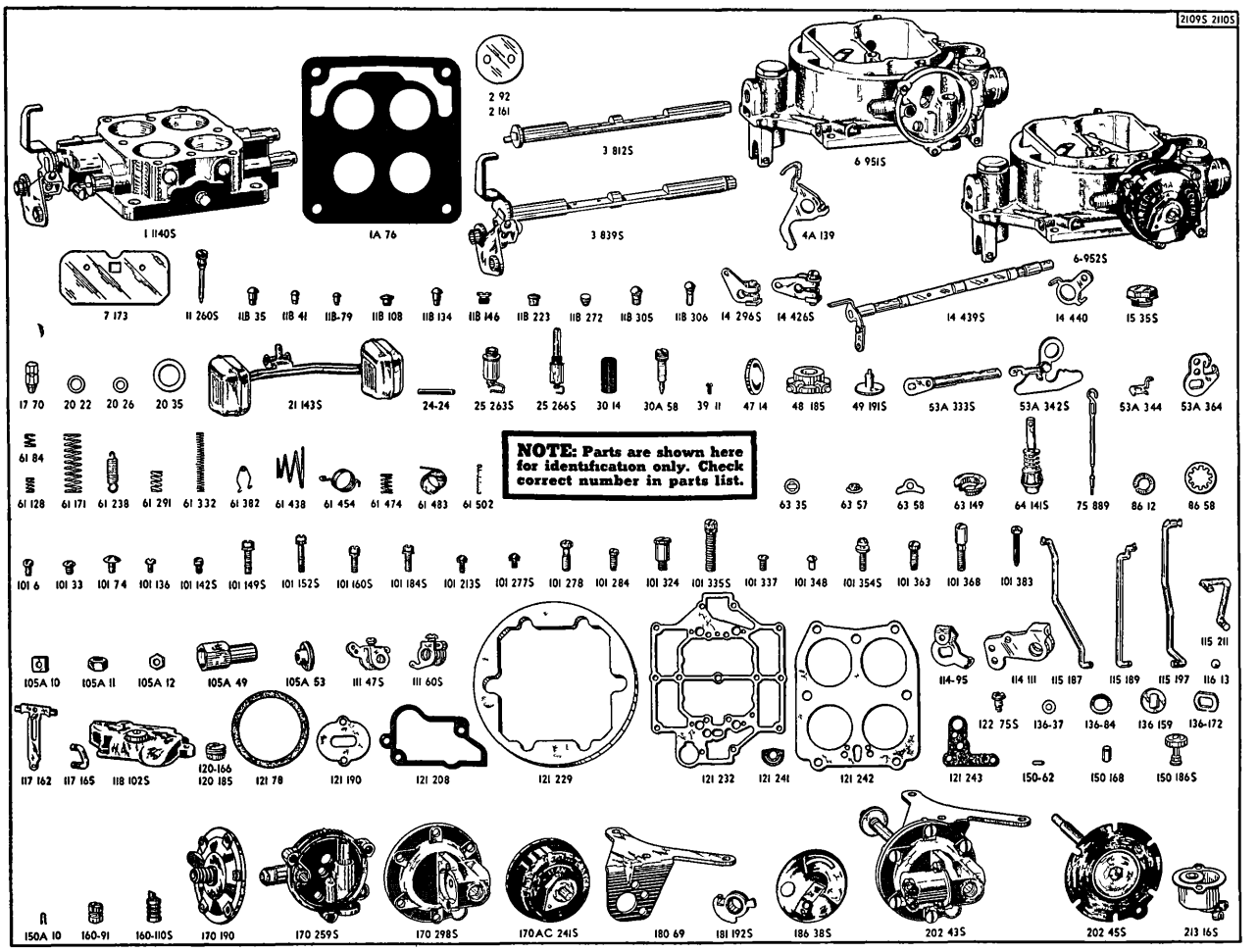
FAST IDLE AND SECONDARY THROTTLE LOCK OUT ADJUSTMENT 1 Preliminary Adjustment Loosen choke lever clamp screw on choke shaft Insert 020 inch feeler gauge (T109 29) between lip of fast idle cam and boss of flange casting Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw 2 Secondary Throttle Lock Out Adjustment (a) With choke valve tightly closed tighten fast idle adjusting screw until there is 015 inch (gauge T109 44) opening between primary throttle valve and bore of carbureter (side opposite idle port) Lock pawl should now be in unlocked position if not adjust by bending tang on lock pawl (use bending tool T109 105) (b) Hold primary throttle valves half way open Open choke valve fully then open primary throttle valves all the way Tang on secondary throttle arm should engage in notch on lock out lever preventing secondary throttle shaft movement Keep choke valve in wide open position Close primary throttle valves so that lock pawl is unlocked then open primary throttle valves all the way Lock out lever should fall free allowing secondary throttle valves to be open before primary throttle valves are fully open If necessary bend tang on secondary throttle lever to provide clearance for proper operation of lock out lever 3 Fast Idle Adjustment With choke valve tightly closed tighten fast idle adjusting screw until there is 020 inch (gauge T109 29) opening between throttle valve and bore of carbureter (side opposite idle port) Be sure fast idle adjusting screw is on high step of cam while making this adjustment

UNLOADER ADJUSTMENT With throttle wide open there should be 3/16 inch (gauge T109 28) clearance between upper edge of choke valve and inner wall of air horn Adjust by bending unloader lip on throttle shaft lever (use bending tool T109 41)

SECONDARY THROTTLE LEVER ADJUSTMENT Primary and secondary throttle valves should reach wide open position at the same time To adjust bend throttle operating rod at upper angle (Use bending tool T109 213)

AIR CONDITIONER FAST IDLE DEVICE ADJUSTMENT (2110S ONLY)

This adjustment must be made after carbureter is installed on car engine at normal operating temperature and slow idle adjustment is completed With shift lever in neutral and air conditioner turned on engine should idle 900 r p m To adjust loosen lock nut on diaphragm shaft and adjust knurled nut to obtain specified r p m then tighten lock nut



Cadillac 8—1954—Carbureters Nos. 2109S-2110S

WHEN SERVICING, USE GASKET ASSORTMENT No. 275A; REPAIR PACKAGE No. 1761
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1140S	Body flange assembly (Sup by 1 1178S)	
1-1178S	Body flange assembly	
1A-76	Flange gasket (Sup by 1A 97)	
1A-97	Flange gasket (Sup by 1A 108)	
1A-108	FLANGE GASKET	
2-92	Primary throttle valve	(2)
2-161	Secondary throttle valve	(2)
3-812S	Secondary throttle shaft and dog assembly	
3-839S	Primary throttle shaft and lever assembly	
4A-139	Throttle shaft dog	
6-951S	Air horn assembly	
6-952S	Air horn and Climatic® control assembly	
7-173	Choke valve	
11-260S	LOW SPEED JET ASSEMBLY	(4)
11B-35	Rivet passage plug	(4)
11B-41	Rivet passage plug	(2)
11B-79	Rivet passage plug	(4)
11B-108	Idle port rivet plug	(4)
11B-134	Rivet plug (2109S) (1); (2110S) (2)	
11B-146	Level sight plug	(2)
11B-223	Nozzle passage rivet plug	(4)
11B-272	Rivet plug (Sup by 11B 35)	
11B-305	Rivet plug	
11B-306	Rivet plug	(2)

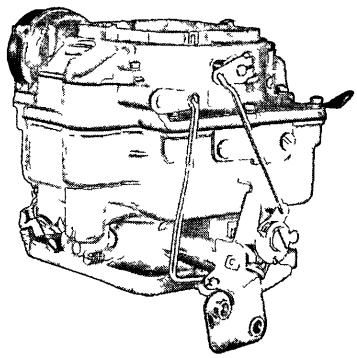
Part No.	PART NAME	
14-296S	Choke lever and screw assembly	
14-426S	Coil shaft lever and screw assembly	
14-439S	Choke piston lever, link and shaft assembly	
14-440	Cam trip lever	
15-35S	Strainer nut assembly	(2)
17-70	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	(2)
20-26	Relief valve gasket	
20-35	BOWL STRAINER GASKET	(2)
21-143S	Float and lever assembly	(2)
24-24	Float lever pin	(2)
25-263S	PRIMARY NEEDLE AND SEAT ASSEMBLY	
25-266S	SECONDARY NEEDLE AND SEAT ASSEMBLY	
30-14	BOWL STRAINER	
30A-58	Idle adjustment screw	(2)
39-11	Choke valve attaching screw	(2)
47-14	Welsh plug	
48-185	Pump jet housing	
49-191S	Electro magnet plunger assembly (2110S)	
53A-333S	Pump operating lever and countershaft assembly	
53A-342S	Lockout arm and pawl assembly	

Part N .	PART NAME	
53A-344	Vent arm	
53A-364	Secondary operating lever	
61-84	Idle adjustment screw and air conditioning unit adjusting nut spring (2109S) (2), (2110S) (3)	
61 128	CONNECTOR ROD SPRING	(2)
61-171	PUMP SPRING (LOWER)	
61-238	Throttle flex spring	
61-291	Throttle lever adjusting screw spring	
61-332	VACUUM PISTON SPRING	
61-382	METERING ROD SPRING	
61-438	Diaphragm return spring	
61-454	Fast idle cam spring	
61-474	Bowl vent spring	
61-483	SECONDARY THROTTLE RETURN SPRING	
61-502	Electro magnet plunger spring (2110S)	
63-35	CONNECTOR ROD SPRING RETAINER	(2)
63-57	INTAKE CHECK BALL RETAINER	
63-58	Coil housing retainer	(3)
63-149	Bowl vent spring retainer	
64-141S	PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
75-889	METERING ROD—STANDARD	(2)
86-12	Flange stud lock washer	(4)
86 58	Air conditioning unit lock washer (2110S)	
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	(2)
101-136	Coil housing attaching screw	(3)
101-142S	Electro magnet housing attaching screw and washer assembly (2110S)	(2)
101-149S	Body flange attaching screw and washer ass y	(4)
101-152S	Air horn attaching screw and washer assembly	
101-160S	Air horn attaching screw and washer assembly (Early Prod) (2109S) (8), (2110S) (5)	
101-184S	Dust cover attaching screw and washer ass y	(2)
101-213S	Diaphragm cover attaching screw and washer assembly	(6)
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet housing attaching screw	
101-284	Piston housing attaching screw	(2)
101-307S	Air horn attaching screw and washer assembly (Late Prod) (2109S) (8), (2110S) (5)	
101-324	Fast idle cam screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-348	Primary throttle valve attaching screw	(4)
101-354S	Coil shaft and choke lever clamp screw ass y	(2)
101-363	Piston housing attaching screw	
101-368	Throttle lever adjusting screw	
101-383	Fast idle adjustment screw	
105A-10	Choke lever clamp screw nut	(2)

Part No.	PART NAME	
105A-11	Flange stud nut	(4)
105A-12	Air conditioning diaphragm unit lock nut	---
105A-49	Air conditioning to bracket attaching nut	--
105A-53	Air conditioning unit adjusting nut	--
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	-
114-95	Outer throttle shaft arm	-
114-111	Inner throttle shaft arm	-
115-187	Choke connector rod (Climatic® control side)	
115-189	Choke connector rod	-
115-197	THROTTLE CONNECTOR ROD	
115-211	Throttle operating rod	-
116-13	PUMP INTAKE AND AIR CONDITIONING UNIT CHECK BALL (2109S) (1) (2110S) (2)	
117-162	Vacumeter piston link	-
117-165	PUMP CONNECTOR LINK	
118-102S	Dust cover assembly	
120-166	PRIMARY METERING ROD JET	(2)
120-185	SECONDARY METERING JET	(2)
121-78	COIL HOUSING GASKET	
121-190	Electro magnet housing gasket (2110S)	
121-208	DUST COVER GASKET	
121-229	AIR CLEANER GASKET	
121-232	AIR HORN GASKET	
121-241	PUMP JET HOUSING GASKET	
121-242	BODY FLANGE GASKET	
121-243	PISTON HOUSING GASKET	
122-75S	PUMP RELIEF VALVE ASSEMBLY	
136 37	Throttle operating rod washer	(2)
136-84	Throttle shaft spring washer	
136-159	Primary throttle shaft washer	-
136-172	Secondary throttle shaft washer	-
150-62	Choke piston pin	-
150-168	Air conditioning unit diaphragm air bleed pin (2110S)	-
150 186S	Pin and valve cap assembly	
150A-10	PIN SPRING	(5)
160-91	Choke piston	-
160-110S	Vacuum piston and pin assembly	
170-190	Inner diaphragm housing (2110S)	-
170-259S	Piston housing and plug assembly	-
170-298S	Outer diaphragm housing and plug assembly (2110S)	
170AC241S	Thermostatic coil and housing assembly	-
180-69	Air conditioning unit bracket (2110S)	---
181-192S	Fast idle cam assembly	---
186-38S	Baffle plate and spring assembly	-
202-43S	Air conditioning (fast idle device) assembly (complete) (2110S)	-
202-45S	Air conditioning unit diaphragm and shaft assembly (2110S)	
213-16S	Electro magnet and housing assembly (2110S)	-

NOTE **Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used**

ALL MODELS



CADILLAC EIGHT 1952

(2143S can also be used)

WCFB Four Bore Down-Draft Climatic® Control Carbureter **No. 896S**

CARBURETER SPECIFICATIONS

For Cadillac 8 Cylinder Engine: 3-13/16 Inch Bore, 3⅝ Inch Stroke

Dimensions: Flange size, 1⅛ inch Four Bore—4 bolt type
Primary venturi size 11/32 inch I. D.
Main venturi size: 1-1/16 inch I D.

Float Level: See adjustments

Vents: Outside, None. Inside, balance vent tube, in air horn, (secondary side) ahead of choke valve.

Gasoline Intake: Size No 42 (.0935 inch) drill hole in needle seat

Low Speed Jet Tube: Jet, size No. 70 (.028 inch) drill
By-pass, size No 54 (.055 inch) drill
Economizer, size No 57 (043 inch) drill
Idle bleed, size No 54 (055 inch) drill.

Idle Port: (Upper) Slot type. Primary, length .140 inch, width 030 inch Secondary, length 103 inch, width 030 inch.

Idle Port Opening: Top of port (aluminum flange) primary 084 to 090 inch, secondary 062 to 068 inch, (cast iron flange) primary 091 to 097 inch, secondary 067 to 073 inch above upper edge of valve with valve tightly closed

Lower Port: Primary (For Idle Adjustment Screw) (Early Production) Size No 55 (052 inch) drill, (Late Production) Size No. 53 (0595 inch) drill Secondary (None)

Set Idle Adjustment Screw: 1¼ to 2 turns open. For richer mixture turn screw out Do not idle engine below 380 R P.M with shift lever in drive position.

Main Nozzle: Installed permanently **Do not remove.**
Anti-percolating jet: (Off idle well) Size No. 75 (021 inch) drill.

Metering Rod: Primary, economy step .066 inch diameter.
Power step, .052 inch diameter.
(These rods designed with stabilizing flat on economy step)
Secondary, none.

Metering Rod Jet: Primary size 0935 inch diameter (for metering rod).
Secondary, size 073 inch diameter (no metering rod).

Metering Rod Setting: See adjustments.

Accelerating Pump: Discharge jet (twin) primary only size No 74 (.0225 inch) drill.
Intake ball check seat size .115 to 120 inch diameter
Discharge needle seat size 070 inch diameter.

Pump Adjustment. See adjustments.

Choke: Carter Climatic ® Control, set one notch lean Butterfly type offset choke valve, primary side only Choke heat suction hole, restriction in piston housing, size No 44 (086 inch) drill

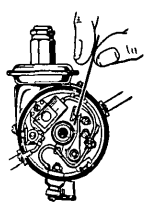
Vacuum Spark Port: (Aluminum flange) Horizontal slot (round end) 045 x 110 inch Top of port 033 to 043 inch above upper edge of valve with valve tightly closed
(Cast iron flange) Round type, 127 to 129 inch diameter Top of port 060 to 070 inch above upper edge of valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



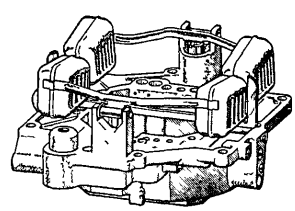
Spark Plug Gap .035"



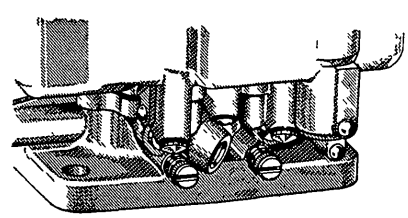
Breaker Point Setting 0125"-.0175"



Ignition Timing Breaker Points to Open. 5° B.T.C. at "A" Mark
(Distributor vacuum line disconnected)



Float Setting (Use Gauges) See Adjustments



Idle Adjustment Screw Setting 1¼ to 2 Turns Open

NOTE: These cars are equipped with hydraulic valve lifters.—NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

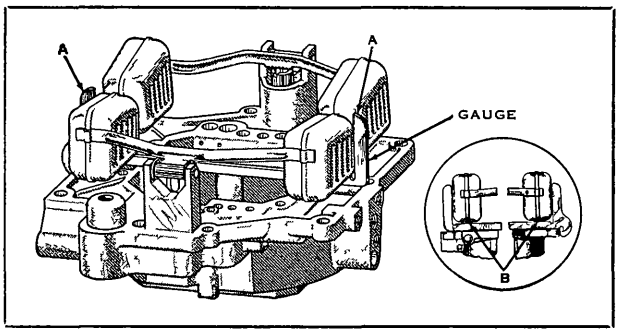


Figure 1
Float Adjustment

FLOAT ADJUSTMENT (Fig. 1).

Two separate float adjustments must be made—lateral and vertical

Lateral Adjustment With bowl cover assembly inverted bowl cover gasket removed and float resting on seated needle, place float gauge directly under center of floats with notched portions of gauge fitted over edges of casting Sides of floats should just clear the vertical uprights of float gauge (A) Adjustment should be made by bending arms of floats

Vertical Adjustment: (Late Production—with brass identification tags stamped "G2" and later, and having vertical ribbed floats) With float gauge in same position, floats should just clear the horizontal portion of gauge The vertical distance (B) between top of float and machined surface of casting must be ⅛ inch for primary floats (gauge T109-232), and 3/16 inch for secondary floats (gauge T109-222), (Early Production—prior to "G2" stamped on brass identification tag) The vertical distance (B) between top of float and machined surface of easting must be ¼ inch for primary floats (gauge T109-223), and 5/16 inch for secondary floats (gauge T109-220) Adjust by bending float arms

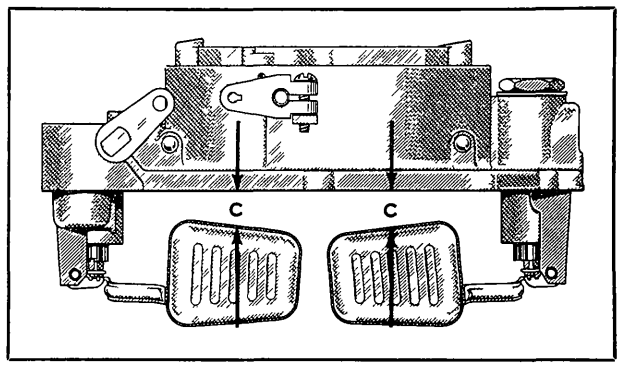


Figure 2
Float Drop Adjustment

FLOAT DROP ADJUSTMENT (Fig 2)

With bowl cover held in upright position and measuring from center of float, the distance (C) between top of floats and bowl cover should be (EARLY PRODUCTION) ¾ inch for primary floats, 13/16 inch for secondary floats, (LATE PRODUCTION—vertical ribbed floats) ⅝ inch for primary floats and 11/16 inch for secondary floats Adjust by bending stop tabs on float brackets

PUMP ADJUSTMENT (Fig. 3)

Install pump connector link in outer hole (long stroke) of pump arm (D), with ends extending toward countershaft arm Back out throttle lever set screw until throttle valves seat in bores of carbureter Hold straight edge across top of dust cover boss at pump arm The flat on top of pump arm should be parallel to straight edge Adjust by bending throttle connector rod at lower angle (E) (Use tool T109-213)

Optional Adjustment. With throttle valves seated in bores of carbureter, the distance from top of the plunger shaft to the top of the dust cover boss should be 9/32" (F) Adjust as mentioned above

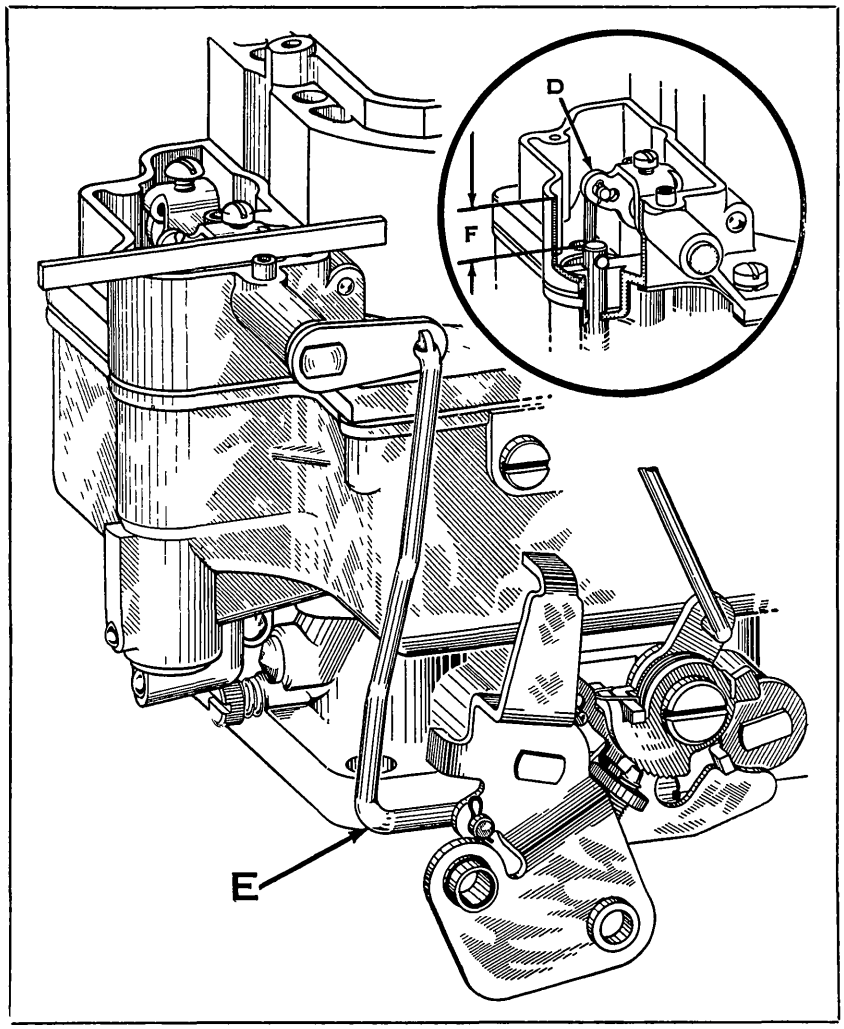


Figure 3
Pump Adjustment

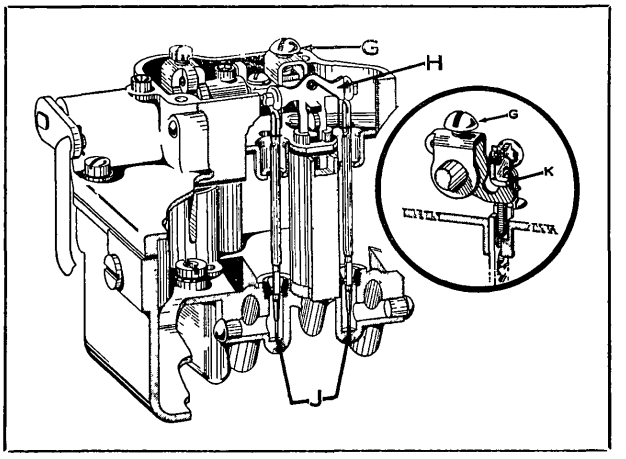


Figure 4
Metering Rod Adjustment

METERING ROD ADJUSTMENT (Fig. 4):

Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows: 1. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw (G). 2. With metering rods in place, press down on vacumeter link (H) until metering rods bottom in carbureter body casting (J). 3. Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link (K). Hold in place and carefully tighten clamp screw (G)

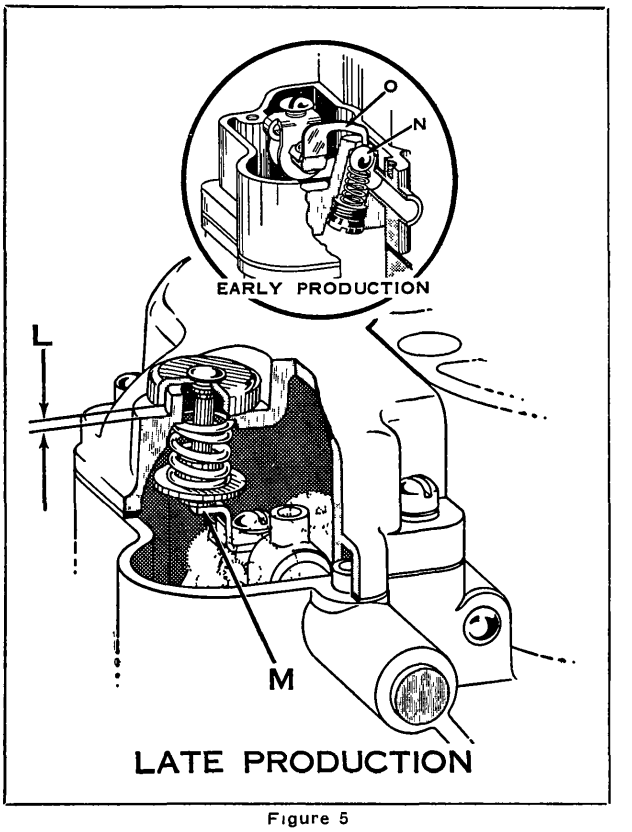


Figure 5
Bowl Vapor Vent Adjustment

*BOWL VAPOR VENT ADJUSTMENT (Fig. 5)

(LATE PRODUCTION) This adjustment should be made after completing pump and metering rod adjustments. Install dust cover gasket and dust cover. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter. There should be 1/16 inch (L) (gauge T109-197) between lower ledge of bowl vapor vent valve and dust cover. To adjust, remove dust cover and bend vapor vent arm (M).

(EARLY PRODUCTION) Place (.040") gauge T109-193 between the lower edge of throttle valve and bore of carbureter. Vapor relief arm should just contact ball (N) If necessary adjust by bending vapor vent arm (O)

*A limited number of these carbureters were built without the Bowl Vapor Vent on which no adjustment is necessary

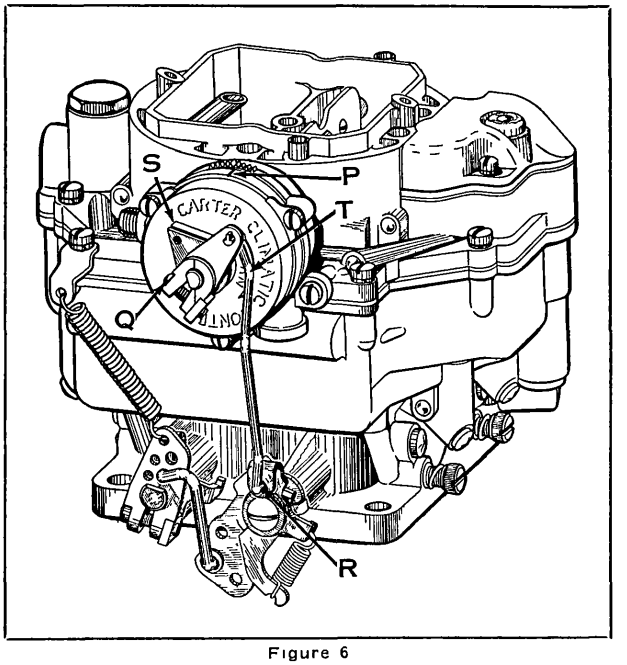


Figure 6
Choke Modifier Adjustment

CHOKE MODIFIER ADJUSTMENT (Fig. 6):

1 Set Climatic ® control assembly one point lean (P) 2 Loosen clamp screw (Q). 3. Remove lower end of connector rod (R) 4. Rotate metal pointer until it is in line with raised pointer on coil housing (S). 5. Align scribed line on lever so that it is straight up and down. Hold in place and tighten clamp screw (Q). 6. Seat throttle valves (back out throttle lever set screw and hold choke valve wide open). 7. Hold pointer as indicated in No. 4. Lower end of rod (R) must slide freely into hole in throttle arm Bend rod at upper angle (T) to adjust

FAST IDLE AND SECONDARY THROTTLE LOCK-OUT ADJUSTMENT (Fig. 7):

1. Preliminary Adjustment: Loosen choke lever clamp screw (AA) on choke shaft. Insert .020" feeler gauge T109-29 between lip of fast idle cam and boss of flange casting (BB). Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw (AA). 2. Secondary Throttle Lock-Out Adjustment: (a) With choke valve tightly closed, tighten fast idle adjusting screw (CC) until there is .015" opening between primary throttle valve and bore of carbureter (side opposite idle port) (DD) Use gauge T109-44. Lock pawl (EE) should now be in unlocked position; if not, adjust by bending tang (FF) on lock pawl (use bending tool T109-105). (b) Hold primary throttle valves half way open. Open choke valve fully then open primary throttle valves all the way. Tang (GG) on secondary throttle arm should engage in notch (HH) on lock-out lever preventing secondary throttle shaft movement. Keep choke valve in wide open position. Close primary throttle valves so that lock pawl (EE) is unlocked, then open primary throttle valves all the way. Lock-out lever (JJ) should fall free allowing secondary throttle valves to be open before primary throttle valves are fully open. If necessary, bend tang (GG) on secondary throttle arm to provide clearance for proper operation of lock-out

Part No.	PART NAME	
61-291	Throttle lever adjusting screw spring	
61-382	METERING ROD SPRING	
61-398	Upper pump spring	
61-454	Fast idle cam spring	
61-457	Bowl vent spring (Early production)	
61-462	†SECONDARY THROTTLE RETURN SPRING	
61-466	VACUUM PISTON SPRING	
61-467	Idle adjustment screw lock spring	(2)
61-474	Bowl vent spring (Late production)	
61-483	*Secondary throttle return spring	
63-35	SPRING RETAINER	(2)
63-57	INTAKE BALL CHECK RETAINER	
63-58	Coil housing retainer	(3)
63-149	Pump and bowl vent spring retainer	(2)
64-141S	PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
75-824	METERING ROD—STANDARD	(2)
86 12	Flange stud lock washer	(4)
101-10	Pump arm clamp screw	
101-19	Choke lever clamp screw (Sup by 101-354S)	(2)
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	
101-136	Coil housing attaching screw	(3)
101-149S	Body flange attaching screw and washer assembly	(4)
101-160S	Air horn attaching screw and washer assembly	(8)
101-164	Operating lever clamp screw	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet housing attaching screw	
101-284	Piston housing attaching screw	(3)
101-288	†Throttle lever adjusting screw	
101-296	Fast idle adjustment screw	
101-307S	Bracket attaching screw and washer assembly	
101-324	Fast idle cam screw	
101-331	†Secondary throttle valve attaching screw	(4)
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	*Secondary throttle valve attaching screw	(4)
101-348	*Primary throttle valve attaching screw	
101-354S	Choke ard coil shaft lever screw assembly	(2)
101-368	*Throttle lever adjusting screw	
105A-10	Cnoke lever nut	
105A-11	Flange stud nut	(4)
105A-28	Operating lever nut	
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
114-95	Outer throttle shaft arm	
114-96	Inner throttle shaft arm	
115-186	Throttle operating rod	
115-187	Choke connector rod (Climatic ® Control side)	
115-188	Throttle connector rod (Sup. by 115 197)	
115-189	Choke connector rod	
115-197	THROTTLE CONNECTOR ROD	
116-13	PUMP INTAKE CHECK BALL	
116-28	Bowl vent ball (Early production)	
117-28	Pump connector link	
117-155	Vacumeter piston link	
118-93	Dust cover (Early production)	
118-98S	Dust cover assembly (Late production)	
120-166	PRIMARY METERING ROD JET	(2)
120-175	SECONDARY METERING JET	(2)
121-78	COIL HOUSING GASKET	
121-149	Pump jet housing gasket (Sup by 121 241)	
121-208	DUST COVER GASKET	
121-210	Body flange gasket (Sup by 121-242)	
121-211	AIR HORN GASKET	
121-229	AIR CLEANER GASKET	
121-241	PUMP JET HOUSING GASKET	
121 242	BODY FLANGE GASKET	
121-243	PISTON HOUSING GASKET	
122-75S	PUMP RELIEF PLUG ASSEMBLY	
136-37	Throttle operating rod washer	(2)
136-84	Throttle shaft spring washer	
136-159	†Throttle shaft washer	
136-172	*Throttle shaft washer	
150-62	Piston pin	
150-186S	Pin and valve cap assembly (Late production)	
150A-10	PIN SPRING	(5)
160-91	Choke piston	
160-110S	Vacuum piston and pin assembly	
170-259S	Piston housing and plug assembly	
170AC-241S	Thermostatic housing, coil and shaft assembly	
180-60	Secondary throttle return spring bracket	
181-192S	Fast idle cam assembly	
186-38S	Baffle plate and spring assembly	

*These parts must be used with cast iron flange

†These parts must be used with aluminum flange

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

CARBURETER
TRADE MARK REG U S PAT OFF
MARCA REGISTRADA

FAST IDLE AND SECONDARY THROTTLE LOCK-OUT ADJUSTMENT (Fig. 7): (Cont'd)

lever 3 Fast Idle Adjustment With choke valve tigthly closed tighten fast idle adjustment screw (CC) until there is 020" opening between throttle valve and bore of carbureter (side opposite idle port) (DD) Use gauge T109-29 Be sure fast idle adjusting screw (CC) is on high step of cam while making this adjustment

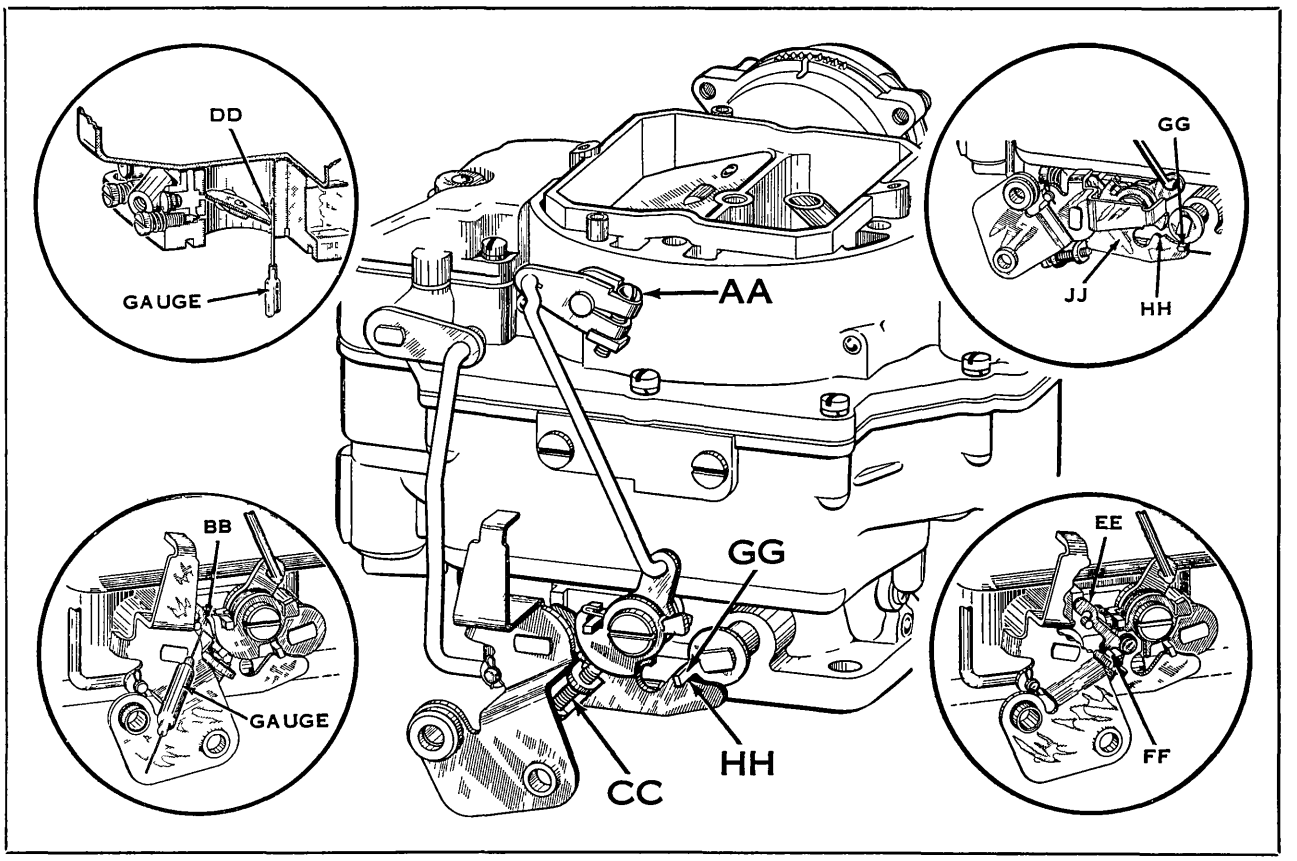


Figure 7
Fast Idle and Secondary Throttle Lock-out Adjustment

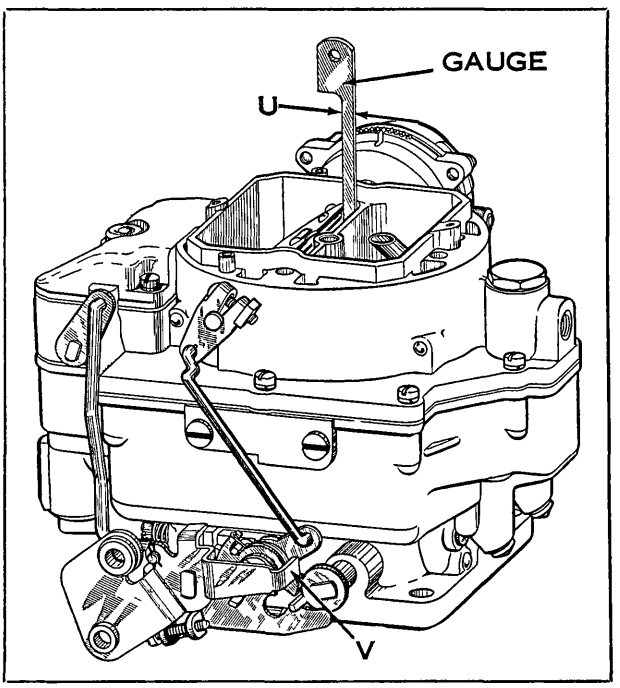


Figure 8
Unloader Adjustment

UNLOADER ADJUSTMENT (Fig. 8)
With throttle wide open there should be 3/16" clearance (U) between upper edge of choke valve and inner wall of air horn (gauge T109-28) Adjust by bending unloader lip (V) on throttle shaft lever (use bending tool T109-41)

SECONDARY THROTTLE LEVER ADJUSTMENT (Fig 9)
Install throttle return spring in bracket and top hole of secondary throttle lever To increase tension of spring turn bracket NOTE—There must be clearance between spring and boss on body

Primary and secondary throttle valves should reach wide open position at the same time To adjust, bend throttle operating rod at upper angle (W) (Use bending tool T109-213).

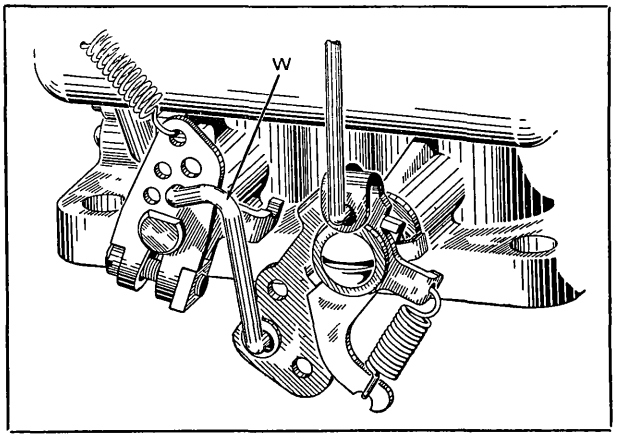
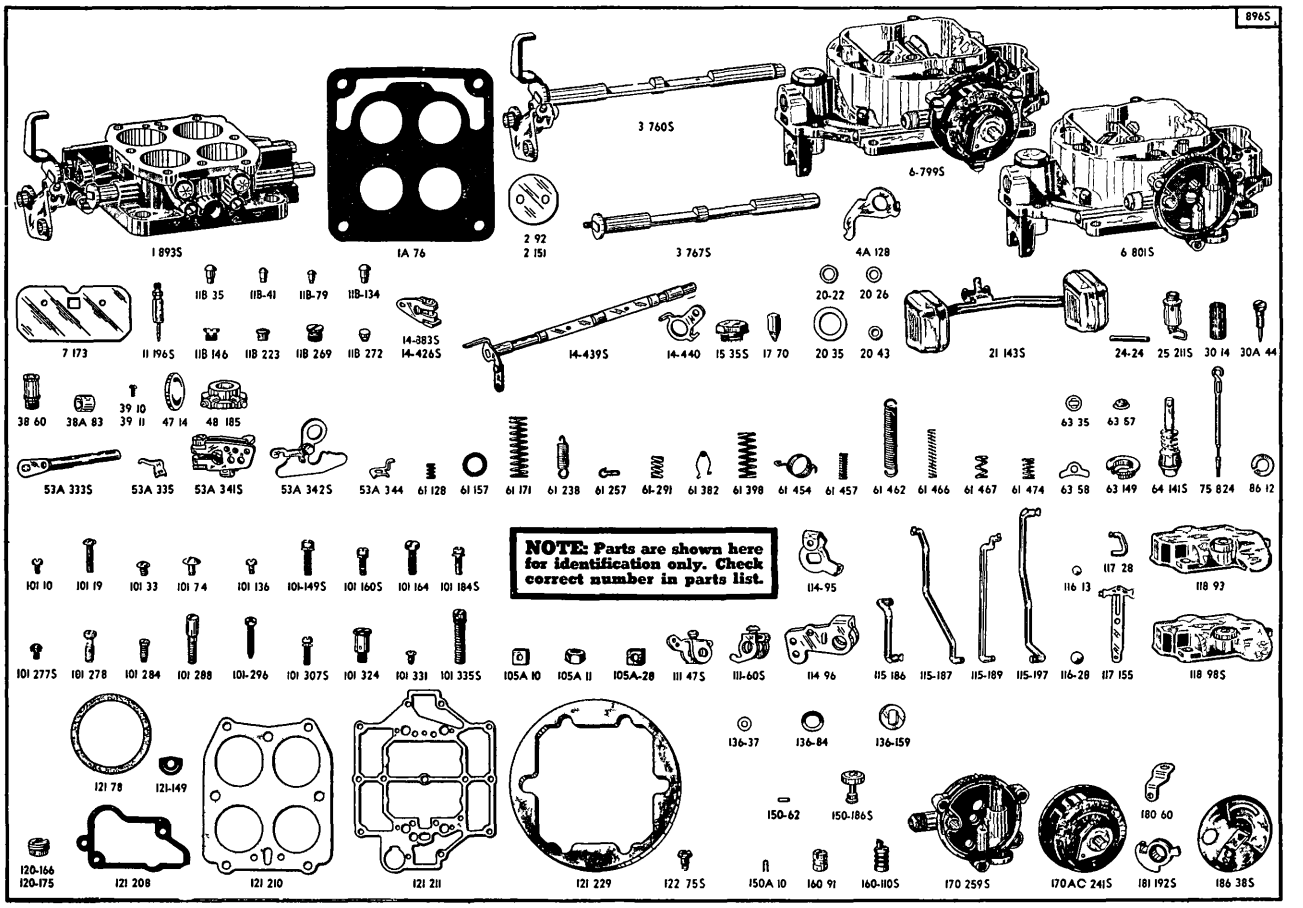


Figure 9
Secondary Throttle Lever Adjustment



Cadillac 8—1952—Carbureter No. 896S

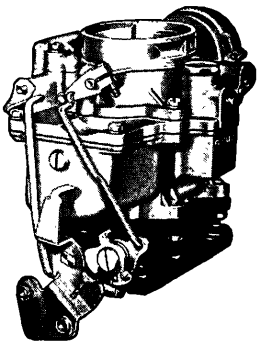
WHEN SERVICING, USE GASKET ASSORTMENT No 275, REPAIR PACKAGE No. 1718A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-893S	Body flange assembly (Sup by 1 1134S)	
1-1134S	Body flange assembly (Sup by 1 1178S)	
1-1178S	Body flange assembly	
1A-76	Flange gasket (Sup by 1A 97)	
1A-97	Flange gasket (Sup by 1A 108)	
1A-108	FLANGE GASKET	
2-92	Primary throttle valve	(2)
2-145	Secondary throttle valve (Sup by 2-151)	(2)
2-148	Primary throttle valve (Sup by 2-92)	(2)
2-151	Secondary throttle valve (Sup by 2-156)	(2)
2-156	†Secondary throttle valve	(2)
2-161	*Secondary throttle valve	(2)
3-760S	†Throttle shaft and lever assembly	
3-767S	†Secondary throttle shaft and dog assembly	
3-812S	*Secondary throttle shaft and dog assembly	
3-839S	*Primary throttle shaft and lever assembly	
4A-128	Throttle shaft dog	
6-799S	Air horn and Climatic ® control assembly	
6-801S	Air horn assembly	
7-173	Choke valve	
11-196S	LOW SPEED JET ASSEMBLY	(4)
11B-35	Rivet plug	(8)
11B-41	Rivet plug	(2)
11B-79	Rivet plug	(8)
11B-108	*Idle port rivet plug	(4)
11B-134	Rivet plug	
11B-146	Level sight plug	(2)
11B-223	†Idle port and nozzle passage rivet plug	(8)
11B-269	Bowl vent plug (Early production)	
11B-272	Rivet plug	
14-383S	Choke lever and screw assembly	
14-426S	Coil shaft lever assembly	

Part No.	PART NAME	
14-439S	Choke piston lever link and shaft assembly	
14-440	Cam trip lever	
15-35S	Strainer nut assembly	
17-70	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	(2)
20-26	Relief valve gasket	
20-35	BOWL STRAINER GASKET	
20-43	Piston housing gasket (Sup by 121 243)	
21-132S	Float and lever assembly (Sup by 21 143S)	
21-143S	Float and lever assembly	(2)
24-24	Float lever pin	(2)
25-211S	NEEDLE AND SEAT ASSEMBLY	(2)
30-14	BOWL STRAINER	
30A-44	Idle adjustment screw	(2)
38-60	Stardpipe	
38A-83	Countershaft bushing (Early production)	
39-10	†Secondary throttle valve attaching screw	(4)
39-11	Choke valve attaching screw	(2)
47-14	WELSH PLUG	
48-185	Pump jet housing	
53A-333S	Pump operating lever and countershaft assembly	
53A-335	Vent arm (Early production) (Sup by 38A 83)	
53A-341S	†Secondary operating lever assembly	
53A-342S	Lockout arm and pawl assembly	
53A-344	Vent arm (Late production)	
53A-352	*Secondary operating lever	
61-128	CONNECTOR ROD SPRING	(2)
61-157	Plunger spring	
61-171	PUMP SPRING (LOWER)	
61-238	Throttle flex spring	
61-257	Needle pull clip	(2)

ALL MODELS



Casting No. 821 on Face of Flange

CADILLAC EIGHT 1951

WCD DUAL DOWN-DRAFT CLIMATIC® CONTROL CARBURETER—**MODEL 845S**

CARBURETER SPECIFICATIONS

For Cadillac 8 Cylinder Engine: 3-13/16 Inch Bore, 3⅝ Inch Stroke

Dimensions: Flange size, 1¼ inch dual, 4 bolt type.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 21/32 inch I. D.
Main venturi, 1-3/16 inch I. D.

Float Level: See illustration.

Vents: (In air horn.) Outside, No. 12 drill—2 holes. Inside, No. 40 drill—2 holes.

Gasoline Intake: No. 38 drill in needle seat.

Low Speed Jet Tube: Jet size, No. 70 drill.
By-pass, size No. 58 drill. (.042 inch)
Economizer, size No. 65 drill. (.035 inch)
Idle bleed, size No. 58 drill. (.042 inch)

Idle Ports: Upper port, length, .175 inch. Width, .030 inch.

Idle Port Opening: .119 to .125 inch above upper edge of valve with valve tightly closed.

Lower Port (For Idle Adjustment Screw): Size .0615 to .0655 inch diameter.

Set Idle Adjustment Screw: ¾ to 1¼ turns open. For richer mixture turn screw out. Do not attempt to idle engine below 375 r.p.m. (Hydr. Trans.) 400 r.p.m. (Std. Trans.).

Main Nozzle: Nozzle is installed permanently. **Do not remove.**

Metering Rod (Vacumeter Type): Economy step .0675 inch diameter. Middle step tapers to .062 inch diameter. Power step .048 inch diameter. (This rod is designed with idle stabilizing flat on economy step.)

Metering Rod Jet: .089 inch diameter.

Metering Rod Setting: See Adjustments.

Accelerating Pump: Spring operated plunger. Discharge jet (twin) size, No. 72 drill. Intake ball check size, No. 32 drill. Discharge (needle seat) size, No. 50 drill.

Pump Adjustment: See Adjustments.

Choke: Carter Climatic ® Control, set one point rich. (See Adjustments.) Choke heat suction hole, in bowl cover. Size No. 43 (.089 inch) drill.

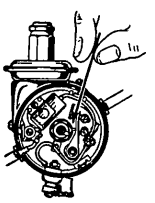
Vacuum Spark Port: Horizontal slot type, round end, .045 x .110 inch. Top of port .033 to .043 inch above valve.

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



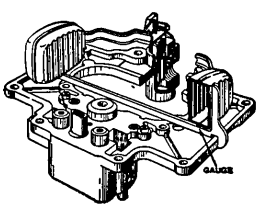
Spark Plug
Gap
.035"



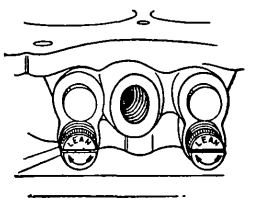
Breaker Point
Setting
.0125"-.0175"



Ignition Timing
Breaker Points to Open:
5° B.T.C. at "A" Mark



Float Setting
Both sides at top center
11/64 Inch
(Use gauge T109-205)



Idle Adjustment
Screw Setting
¾ to 1¼
Turns Open

NOTE: These cars are equipped with hydraulic valve lifters.—No adjustment.

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CARBURETER
TRADE MARK REG. U. S. PAT. FF.
MARCA REGISTRADA

PRINTED IN U.S.A.

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT:

Two separate float adjustments must be made—lateral and vertical.

Lateral Adjustment: With bowl cover assembly inverted, bowl cover gasket removed and float lip resting on seated needle, place float gauge T109-205 directly under float with notched portions of gauge fitted over edges of casting. Sides of floats should barely touch the vertical uprights of float gauge. Adjustment should be made by bending arms of floats.

Vertical Adjustments: With float gauge in same position, floats should just clear the horizontal portion of gauge. (Vertical distance between top of float and machined surface of casting must be 11/64".) Adjust by bending float arms. Remove float, install bowl cover gasket and then reinstall float.

PUMP ADJUSTMENT (Fig. 1):

The total distance the plunger head (not shaft) moves from closed to wide open throttle position controls the amount of fuel discharged. Correct pump plunger travel is important and should be checked each time the carbureter is disassembled or when leaner than standard metering rods are installed. Procedure is as follows Install pump connector link in outer hole (long stroke) of pump arm (A), with ends extending away from countershaft arm. Back out **throttle lever set screw** until throttle valves seat in bores of carbureter. Be sure **fast idle adjusting screw** does not hold throttle open. Place universal pump travel gauge T109-117S inverted on edge of dust cover boss of bowl cover. Turn knurled nut of gauge until finger (B) just touches upper end of plunger shaft. Number indicated on gauge should be "30". Hold the gauge vertical to insure correct reading. Adjust by bending the throttle connector rod at upper angle (C). Optional Adjustment: With throttle valves seated in bores of carbureter, the distance from the top of the plunger shaft to the top of the dust cover boss should be 19/64 inches. Adjust as mentioned above.

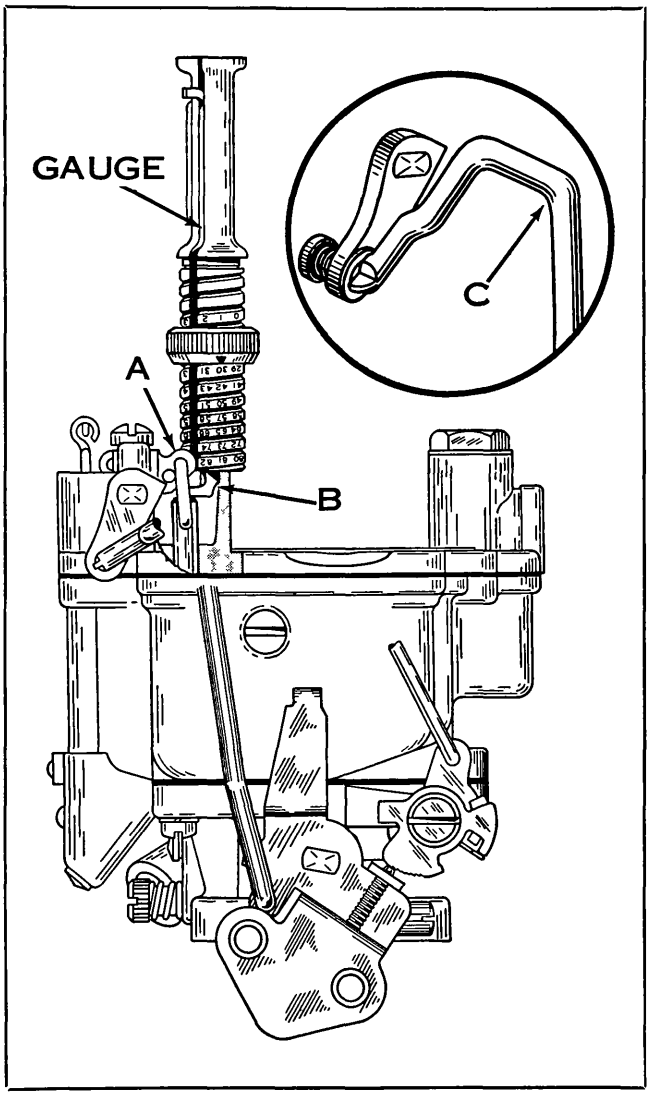


Figure 1

METERING ROD ADJUSTMENT (Fig. 2):

Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows:

1. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw (D).
2. With metering rods in place, press down on vacumeter link (E) until metering rods bottom in carbureter body casting (F).
3. Holding rods in downward position and throttle valves seated, revolve metering rod arm (G) until finger on arm contacts lip (H) of vacumeter link. Hold in place and carefully tighten clamp screw (D).

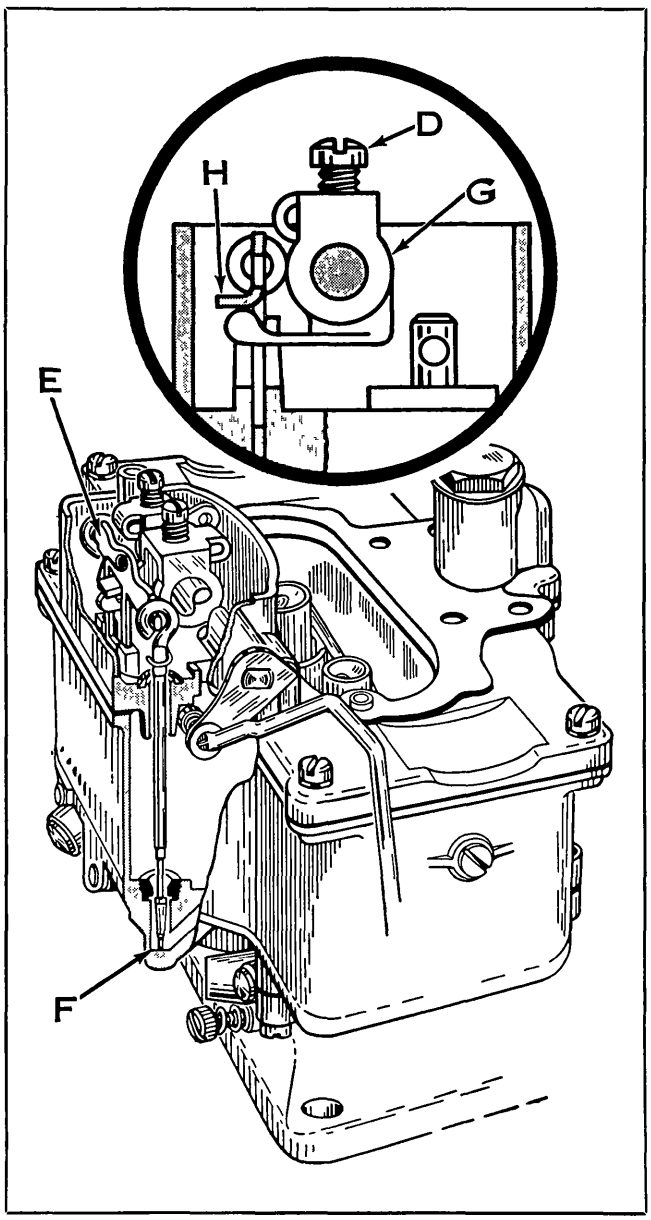


Figure 2

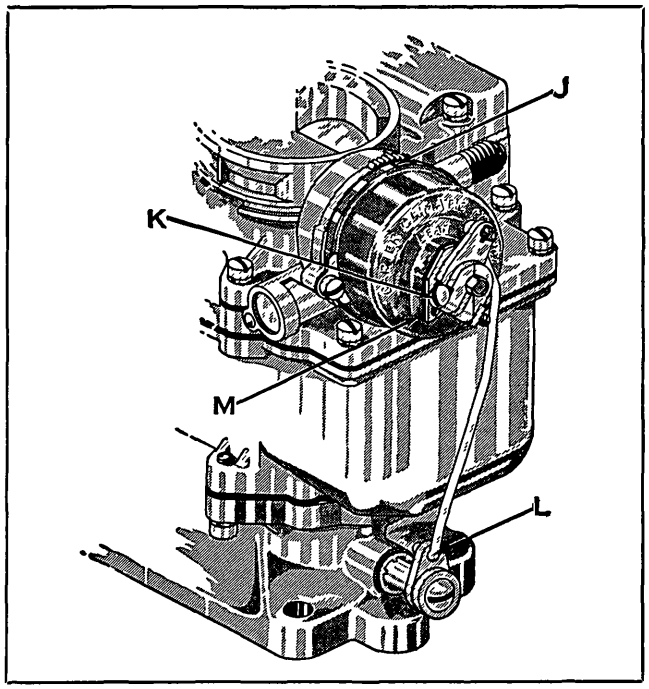


Figure 3

CHOKE MODIFIER ADJUSTMENT (Fig. 3):

1. Set Climatic ® Control Assembly one point rich (J).
2. Loosen screw (K).
3. Remove lower end of connector rod (L).
4. Rotate metal pointer until it is in line with raised pointer on coil housing (M).
5. Align scribed line on lever so that it is straight up and down. Hold in place and tighten screw (K).
6. Seat throttle valves (back out throttle lever set screw and hold choke valve wide open).
7. Hold pointer as indicated in No. 4. Lower end of rod must slide freely into hole in throttle arm. Bend rod at upper angle to adjust.

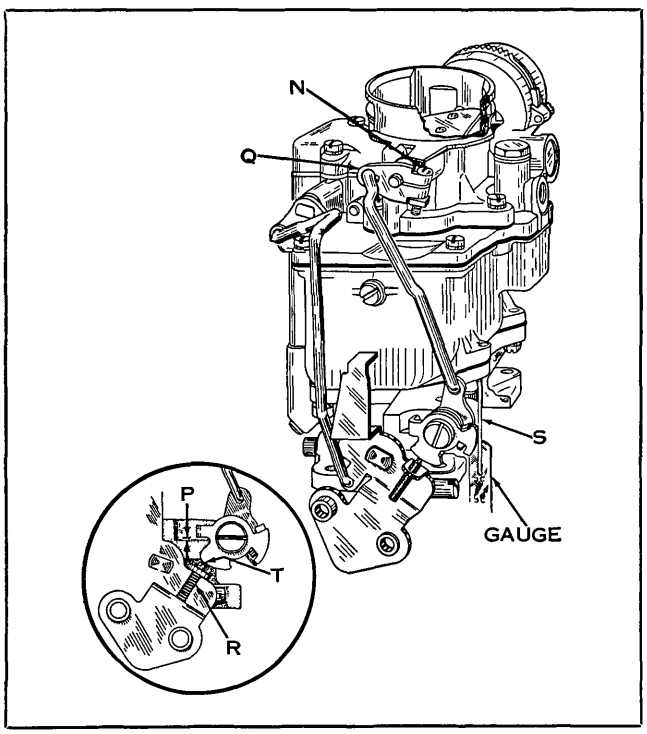


Figure 4

FAST IDLE ADJUSTMENT (Fig. 4):

A. Loosen choke lever clamp screw (N) on choke shaft. Insert .020" feeler gauge T109-29 between lip of fast idle cam and boss of flange casting (P). Hold choke valve tightly closed and take slack out of linkage by pressing choke lever (Q) towards closed position—hold in place and tighten clamp screw (N). B. With choke valve tightly closed, tighten fast idle adjusting screw (R) until there is .020" opening (S) between throttle valve and bore of carbureter (side opposite idle port). Be sure fast idle adjusting screw is on high step of cam (T) while making this adjustment.

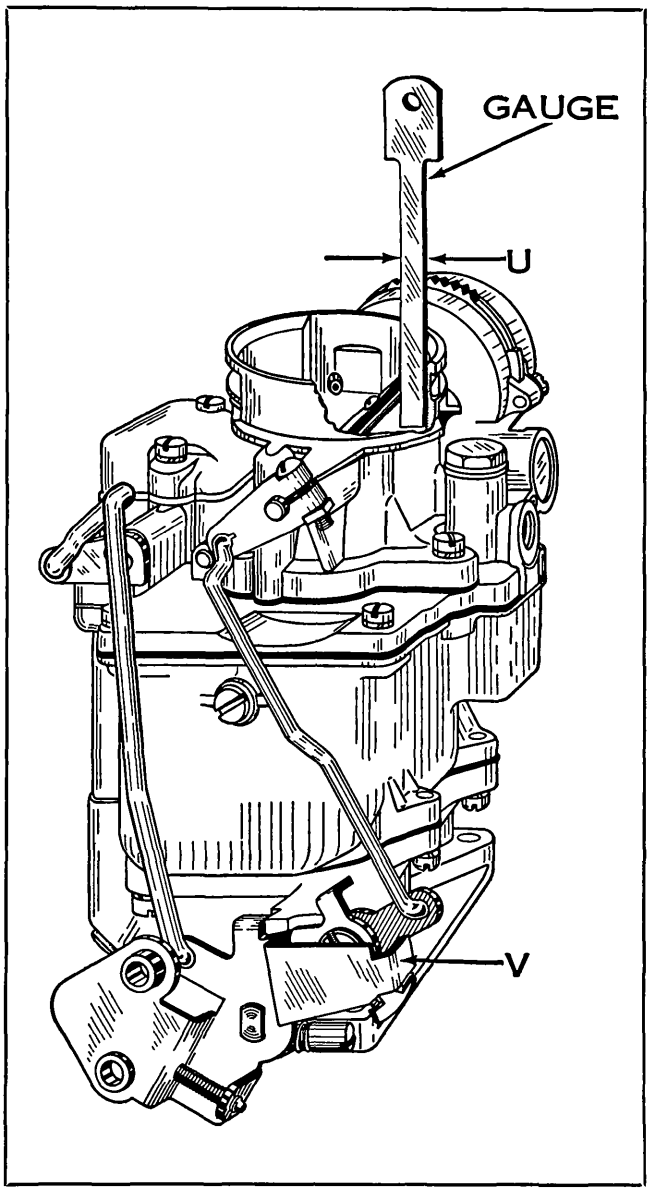
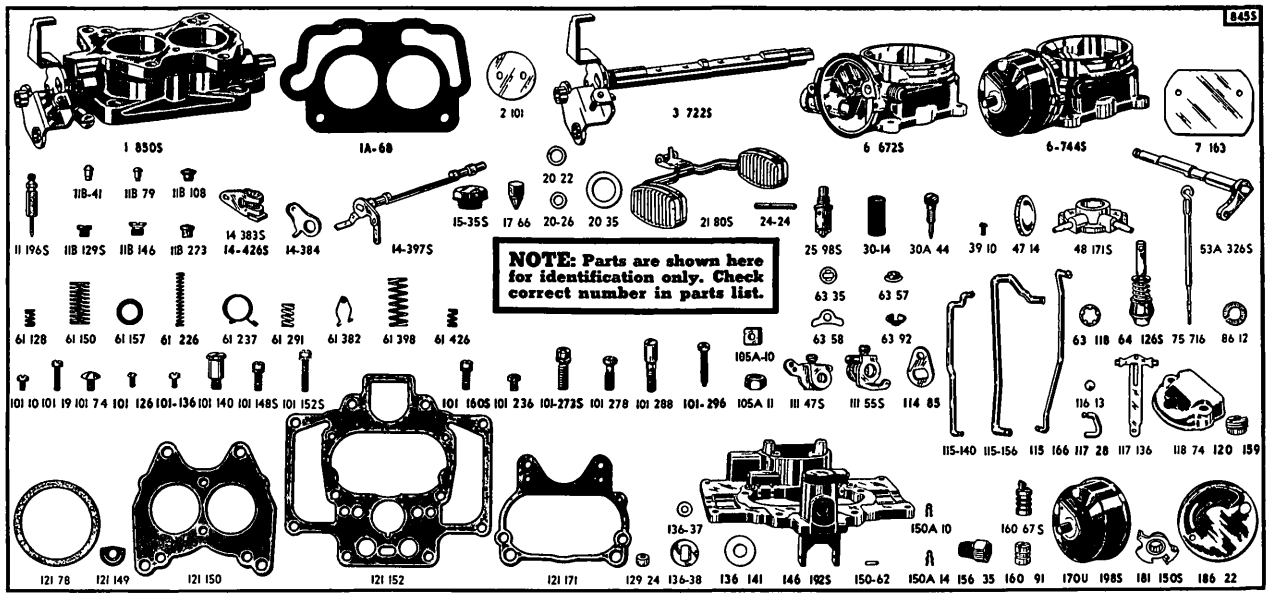


Figure 5

UNLOADER ADJUSTMENT (Fig. 5):

With throttle wide open there should be 7/32" clearance (U) between upper edge of choke valve and inner wall of air horn (gauge T109-106). Adjust by bending unloader lip (V) on **throttle** *shaft lever (use bending tool T109-41)*



Cadillac—1951—No. 845S

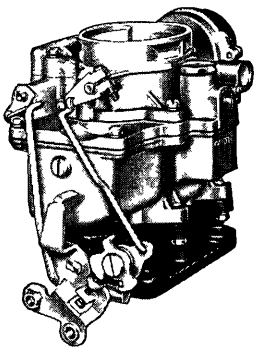
WHEN SERVICING USE GASKET ASSORTMENT No 201B REPAIR PACKAGE No 1538A

PART NAMES IN CAPITAL LETTERS LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1 850S	Body flange assembly	
1A 68	FLANGE GASKET	
2-101	Throttle valve	(2)
3 722S	Throttle shaft, lever and bushing assembly	
6 672S	Air horn and plug assembly	
6-744S	Air horn and Climatic ® control assembly	
7 163	Choke valve	
11 196S	LOW SPEED JET ASSEMBLY	(2)
11B 41	Rivet plug	(2)
11B 79	Rivet plug	(7)
11B 108	IDLE PORT RIVET PLUG	(2)
11B-129S	Pump passage plug assembly	
11B 146	Level sight plug	
11B 223	NOZZLE RIVET PLUG	(2)
14 383S	Choke lever and screw assembly	
14 384	Cam trip lever	
14 397S	Choke piston lever, link and shaft assembly	
14 426S	Coil shaft lever assembly	
15-35S	Strainer nut assembly	
17 66	PUMP CHECK NEEDLE	
20 22	Needle seat gasket	
20 26	Pump passage plug gasket	
20-35	Bowl strainer gasket	
21 80S	Float and lever assembly	
24-24	Float lever pin	
25 98S	NEEDLE AND SEAT ASSEMBLY	
30-14	BOWL COVER STRAINER	
30A 44	Idle adjustment screw	(2)
39 10	Choke valve attaching screw	(2)
47-14	Welsh plug	
48-171S	Pump jet and housing assembly	
53A-326S	Pump operating lever and countershaft assembly	
61-128	CONNECTOR ROD SPRING	
61-150	PUMP SPRING (lower)	
61-157	Plunger spring	
61 226	VACUUM PISTON SPRING	
61-237	Fast idle cam spring	
61-291	Throttle lever adjusting screw spring	
61 382	METERING ROD SPRING	
61-398	Pump spring (upper)	
61-426	Idle adjustment screw lock spring	(2)
63 35	SPRING RETAINER	
63-57	INTAKE BALL CHECK RETAINER	
63-58	Coil housing retainer	(2)
63 92	Pump spring retainer	
63-118	Throttle shaft retaining ring	
64 126S	PUMP PLUNGER, ROD, SPRING AND RETAINER ASSEMBLY	
75 716	METERING ROD (Standard)	
75 729	Metering rod (1 size lean) (Sup by 75 785)	(2)
75-730	Metering rod (2 sizes lean) (Sup by 75 786)	(2)
75 785	Metering rod (1 size lean)	(2)
75-786	Metering rod (2 sizes lean)	(2)
86-12	Flange stud lock washer	(4)
101-10	Pump arm clamp screw	
101-19	Choke lever clamp screw (Sup by 101 354S)	(2)
101-74	Throttle shaft arm attaching screw	
101-126	Throttle shaft valve attaching screw	(4)
101-136	Coil housing attaching screw	(2)
101-140	Fast idle screw	
101 148S	Dust cover attaching screw and washer assy	(2)
101 152S	Air horn attaching screw and washer assembly	(4)
101-160S	Bowl cover attaching screw and washer assembly	(6)
101-161S	Dust cover attach screw and washer assy (Sup by 101 148S)	(2)
101-236	Metering rod arm clamp screw	
101-273S	Body flange attaching screw and washer assembly	(4)
101-278	Pump jet housing screw	
101-288	Throttle lever adjustment screw	
101-296	Fast idle adjustment screw	
101 354S	Choke and coil shaft lever clamp screw assembly	
105A-10	Choke lever nut	(2)
105A-11	Flange stud nut	(4)
111-47S	Pump arm and screw assembly	
111-55S	Metering rod arm and screw assembly	
114 85	Throttle shaft arm	
115-140	Choke connector rod	
115-156	THROTTLE CONNECTOR ROD	
115-166	Choke connector rod (climatic control side)	
116-13	PUMP CHECK BALL	
117 28	Pump arm link	
117-136	Vacumeter piston link	
118-74	Dust cover	
120-159	METERING ROD JET	(2)
121-78	COIL HOUSING GASKET	
121-149	Pump jet housing gasket (Sup by 121 241)	
121-150	BODY FLANGE GASKET	
121-152	BOWL COVER GASKET	
121-171	AIR HORN GASKET	
121 241	PUMP JET HOUSING GASKET	
129 24	Metering rod disk	(2)
136-37	Connector rod washer	
136-38	Throttle shaft washer	
136-141	MOUNTING STUD WASHER—SPECIAL	(4)
146-192S	Bowl cover and strainer assembly	
150 62	Choke piston pin	
150A-10	PIN SPRING	(4)
156-35	Spark control connection fitting	
160 67S	Vacuum piston and pin assembly	
160 91	Choke piston	
170U-198S	Thermostatic housing, coil and shaft assembly	
181-150S	Fast idle cam assembly	
186 22	Baffle plate (Sup by 186 32S)	
186-32S	Baffle plate and spring assembly	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.

ALL MODELS



CADILLAC EIGHT 1950

Casting No 672 on Face of Flange

WCD Dual Down-Draft Climatic® Control Carbureter—**Model 742S**

CARBURETER SPECIFICATIONS

For Cadillac 8 Cylinder Engine 3 13/16 Inch Bore, 3⅝ Inch Stroke

Dimensions: Flange size 1¼ inch dual 4 bolt type
Primary venturi 11/32 inch I D
Secondary venturi 21/32 inch I D
Main venturi 1 3/16 inch I D

Float Level Distance from seam of float (both sides—at top center) to lower edge of bowl cover when needle is seated to be 11/64 inch (Use gauge No T109 205)

Vents (In air horn) Outside No 12 drill—2 holes Inside No 40 drill—2 holes

Gasoline Intake Square vertical needle Size No 38 drill in needle seat

Low Speed Jet Tube Jet size No 70 drill
By pass size No 58 drill (042 inch)
Economizer size No 65 drill (035 inch)
Idle bleed size No 58 drill (042 inch)

Idle Ports Upper port length 175 inch Width 030 inch

Idle Port Opening 115 to 121 inch (early production) 119 to 125 inch (late production) above upper edge of valve with valve closed tight

Lower Port (For Idle Adjustment Screw) Size 0615 to 0655 inch diameter

Set Idle Adjustment Screw ¾ to 1¼ turns open For richer mixture turn screw out Do not attempt to idle engine below 375 r p m (Hydra Trans) 400 r p m (Std Trans)

Main Nozzle In primary venturi closed tip angle 49° from horizontal Nozzle is installed permanently Do not remove

Metering Rod Economy step 068 inch diameter middle step tapers to 0575 inch diameter (early production) Economy step 0675 inch diameter middle step tapers to 062 inch diameter (late production) Power step 048 inch diameter These rods are designed with idle stabilizing flat on economy step Identify late production by two trade marks (c) stamped on flat

Metering Rod Jet 089 inch diameter

Metering Rod Setting With throttle tightly closed hold metering rods (assembled on vacumeter link) in maximum down position Tighten clamp screw securely with metering rod arm contacting vacumeter link

Accelerating Pump Pressure delayed action type (spring operated plunger)
Discharge jet (twin) size No 72 drill
Intake ball check size No 32 drill
Discharge (needle seat) size No 50 drill

Pump Adjustment 30 as indicated on gauge T109 117S with throttle valves seated or 19/64" from top of pump shaft to the top of the dust cover housing

Choke Carter Climatic® Control set one point lean Offset butterfly type Choke heat suction hole in bowl cover Size No 43 (089 inch) drill

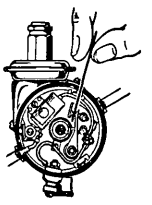
Vacuum Spark Port Horizontal slot type round end 045 x 110 inch Top of port 033 to 043 inch abov valv

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



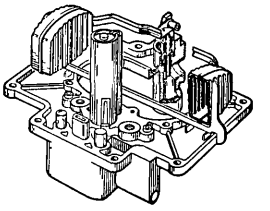
Spark Plug Gap
035"



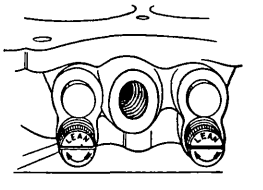
Breaker Point Setting
0125"-0175"



Ignition Timing Breaker Points to Open
5° B T C at I G A Mark



Float Setting
11/64 Inch
(Use Gauge T109 205)



Idle Adjustment Screw Setting
¾ to 1¼ Turns Open

NOTE These cars equipped with hydraulic valve lifters—No adjustment

CARBURETER ADJUSTMENTS

Float Adjustment Two separate float adjustments must be made—lateral and vertical as follows With bowl cover assembly inverted, gasket removed and float resting on seated needle, place gauge T109-205 (11/64") directly under float with notched portions of gauge fitted over machined surface of casting Float should just touch vertical sides of gauge and just clear horizontal portion Adjust by bending arms of float Remove gauge install bowl cover gasket then reinstall float

Pump Adjustment The total distance the plunger head (not shaft) moves from closed to wide open throttle position controls the amount of fuel discharged Correct pump plunger travel is important and should be checked each time the carbureter is dis-assembled or when leaner than standard metering rods are installed Procedure is as follows

Install pump connector link in outer hole (long stroke) of pump arm, with ends extending away from countershaft arm Back out throttle lever set screw until throttle valves seat in bores of carbureter Be sure fast idle adjusting screw does not hold throttle open Place universal pump travel gauge T109-117S inverted on edge of dust cover boss of bowl cover Turn knurled nut of gauge until finger just touches

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CARBURETER

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upper end of plunger shaft Number indicated on gauge should be '30' Hold the gauge vertical to insure correct reading Adjust by bending the throttle connector rod at upper angle Optional Adjustment With throttle valves seated in bores of carbureter, the distance from the top of the plunger shaft to the top of the dust cover boss should be 19/64 inches Adjust as mentioned above

Metering Rod Adjustment Metering rod adjustment is important and must be done after completing the pump adjustment No metering rod gauges are necessary Procedure is as follows

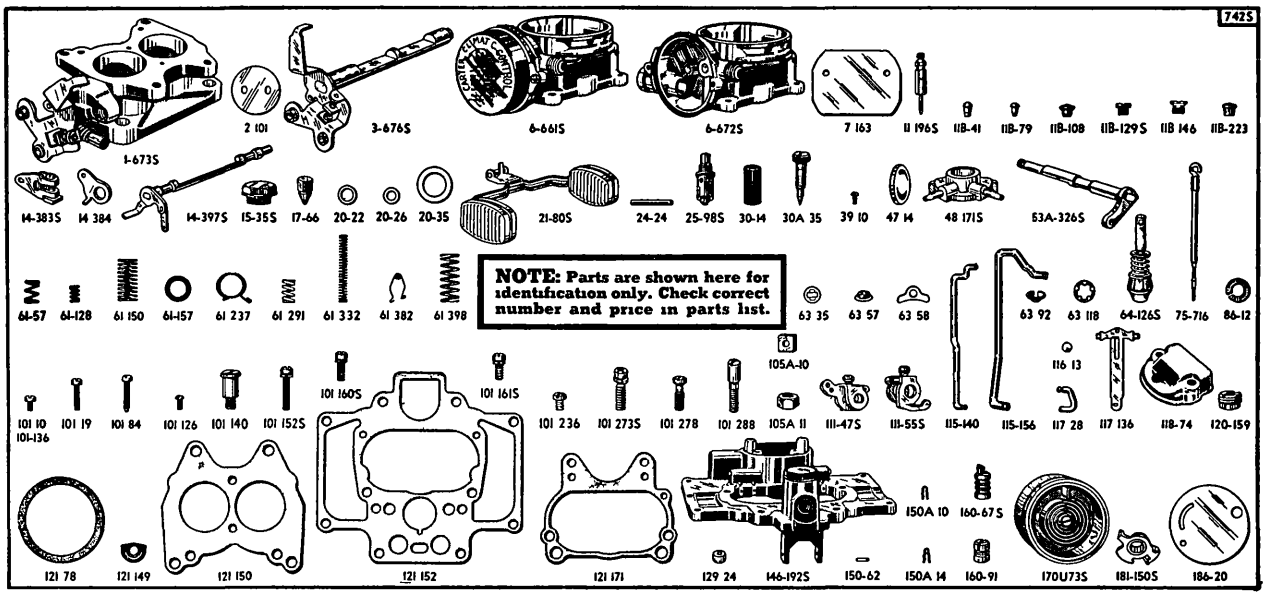
1 Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw.

2 With metering rods in place, press down on vacumeter link until metering rods bottom in carbureter body casting

3 Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link Hold in place and carefully tighten clamp screw

Fast Idle Adjustment: A Loosen choke lever clamp screw on choke shaft Insert .020" feeler gauge T109-29 between lip of fast idle cam and boss of flange casting Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw B With choke valve tightly closed, tighten fast idle adjusting screw until there is .020" opening between throttle valve and bore of carbureter (side opposite idle port) Use gauge T109-29 Be sure fast idle adjusting screw is on high step of cam while making this adjustment

Unloader Adjustment: With throttle wide open there should be 7/32" clearance between upper edge of choke valve and inner wall of air horn (gauge T109-106) Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41)



Cadillac—1950—No. 742S

WHEN SERVICING, USE GASKET ASSORTMENT No 201B, REPAIR PACKAGE No 1538A
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1 673S	Body flange assembly	
1A-68	FLANGE GASKET	
2 101	Throttle valve	(2)
3 676S	Throttle shaft lever and bushing assembly	
6 661S	Air horn assembly	
6 672S	Air horn and plug assembly	
7-163	Choke valve	
11-196S	LOW SPEED JET ASSEMBLY	(2)
11B-41	Rivet plug	(2)
11B-79	Rivet plug	(7)
11B-108	IDLE PORT RIVET PLUG	(2)
11B 129S	Pump passage plug assembly	
11B-146	Level sight plug	
11B 223	NOZZLE PASSAGE PLUG	(2)
14-383S	Choke lever and screw assembly	
14-384	Cam trip lever	
14-397S	Choke piston lever link and shaft assembly	
15-35S	Strainer nut assembly	
17-66	PUMP CHECK NEEDLE	
20 22	Needle seat gasket	
20-26	Gasket	
20-35	Bowl strainer gasket	
21-80S	Float and lever assembly	
24-24	Float lever pin	
25-98S	NEEDLE AND SEAT ASSEMBLY	
30-14	BOWL COVER STRAINER	
30A-35	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
47-14	Expansion plug	
48-171S	Pump jet and housing assembly	
53A-326S	Pump operating lever and countershaft assembly	
61-57	Idle adjustment screw lock spring	(2)
61-128	CONNECTOR ROD SPRING	
61-150	PUMP SPRING (LOWER)	
61-157	Plunger spring	
61-226	VACUUM PISTON SPRING (Use with 75-716 and leaner than standard rods)	
61-237	Fast idle cam spring	
61 291	Throttle lever adjusting screw spring	
61 332	Vacuum piston spring (Use with 75-771)	
61-382	METERING ROD SPRING	
61-398	Pump spring (upper)	
63 35	SPRING RETAINER	
63-57	INTAKE BALL CHECK RETAINER	
63-58	Coil housing retainer	(2)
63-92	Pump spring retainer	
63-118	Throttle shaft retaining ring	
64-126S	PLUNGER ROD, SPRING AND RETAINER ASSEMBLY	
75-716	METERING ROD, STANDARD	(2)
75-729	Metering rod—1 size lean (Sup by 75-785)	(2)
75-730	Metering rod—2 sizes lean (Sup by 75-786)	(2)

Part No.	PART NAME	
75-771	Metering rod, standard (Use with 61-332)	
75-772U	Unitized package (Consists of (1) 61-332 and (2) 75-771)	
75-785	Metering rod—1 size lean	(2)
75 786	Metering rod—2 sizes lean	(2)
86 12	Flange stud lock washer	
101-10	Pump arm clamp screw	
101-19	Choke lever clamp screw (Sup by 101-354S)	
101-84	Fast idle adjustment screw	
101 126	Throttle shaft valve attaching screw	(4)
101-136	Coil housing attaching screw	(2)
101-140	Fast idle screw	
101-148S	Dust cover attaching screw and washer assembly	(2)
101-152S	Air horn attaching screw and washer assembly	(4)
101-160S	Bowl cover attaching screw and washer assembly	(6)
101-161S	Dust cover attaching screw and washer assembly (Sup by 101-148S)	(2)
101-236	Metering rod arm clamp screw	
101-273S	Body flange attaching screw and washer assembly	(4)
101-278	Pump jet housing screw	
101-288	Throttle lever adjustment screw	
101 354S	Choke lever clamp screw assembly	
105A-10	Choke lever nut	
105A-11	Flange stud nut	
111-47S	Pump arm and screw assembly	
111-55S	Metering rod arm and screw assembly	
115-140	Choke connector rod	
115 156	THROTTLE CONNECTOR ROD	
116-13	PUMP CHECK BALL	
117 28	Pump arm link	
117-136	Vacumeter piston link	
118-74	Dust cover	
120-159	METERING ROD JET	(2)
121-78	COIL HOUSING GASKET	
121-149	Pump jet housing gasket (Sup by 121-241)	
121-150	BODY FLANGE GASKET	
121-152	BOWL COVER GASKET	
121-171	AIR HORN GASKET	
121-241	PUMP JET HOUSING GASKET	
129-24	Metering rod disk	(2)
136-141	MOUNTING STUD WASHER—SPECIAL	(4)
146-192S	Bowl cover and strainer assembly	
150-62	Choke piston pin	
150A-10	PIN SPRING	(3)
160 67S	Vacuum piston and pin assembly	
160 91	Choke piston	
170U-73S	Thermostatic housing and coil assembly	
181-150S	Fast idle cam assembly	
186-20	Baffle plate (Sup by 186-22)	
186 22	Baffle plate	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

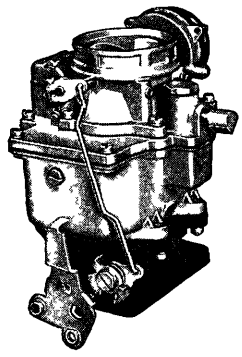
Form 4788D

CARTER CARBURETOR
DIVISION OF ACF INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

CADILLAC 722S
February, 1949
Revised November, 1952

ALL MODELS

MOTOR NUMBERS
06566 and higher



Casting No. 610 on Face of Flange

CADILLAC EIGHT 1949

WCD Dual Down-Draft Climatic® Control Carbureter—**Model 722S**

CARBURETER SPECIFICATIONS

For Cadillac 8 Cylinder Engine: 3-13/16 Inch Bore, 3⅝ Inch Stroke

Dimensions: Flange size, 1¼ inch dual, 4 bolt type.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 19/32 inch I. D
Main venturi, 1-3/16 inch I. D.

Float Level: Distance from seam of float (both sides—at top center) to lower edge of bowl cover, when needle is seated to be 9/64 inch. (Use gauge No. T109-160)

Vents: (In air horn) Outside, No. 30 drill—2 holes. Inside No. 35 drill—2 holes.

Gasoline Intake: Square vertical needle. Size No. 38 drill in needle seat.

Low Speed Jet Tube: Jet size, No. 68 drill (early production) No. 70 drill (late production).
By-pass, size No 57 drill.
Economizer, size No. 60 drill.
Idle bleed, size No. 56 drill.

Idle Ports: Upper port, length, .175 inch. Width, .030 inch.

Idle Port Opening: .115 to .121 inch above upper edge of valve with valve closed tight.

Lower Port (For Idle Adjustment Screw): Size 0615 to 0655 inch diameter

Set Idle Adjustment Screw: ½ to 1½ turns open For richer mixture turn screw out. Do not attempt to idle engine below 375 r.p.m. (Hydra Trans.), 400 r.p.m. (Std. Trans.).

Main Nozzle: In primary venturi, closed tip, angle 49° from horizontal Nozzle is installed permanently. Do not remove

Metering Rod (Vacumeter Type): Economy step 0695 inch diameter Middle step tapers to 059 inch diameter. Power step 0545 inch diameter. Length 3-41/64 inches.

Metering Rod Jet: 089 inch diameter.

Metering Rod Setting: With throttle tightly closed, hold metering rods (assembled on vacumeter link) in maximum down position Tighten clamp screw securely with metering rod arm contacting vacumeter link.

Accelerating Pump: Pressure, delayed action type (spring operated plunger).
Discharge jet (twin) size, No. 70 drill.
Intake ball check size, No. 32 drill.
Discharge (needle seat) size, No. 53 drill.

Pump Adjustment: "32" as indicated on gauge T109-117S with throttle valves seated or 5/16" from top of pump shaft to the top of the dust cover housing

Choke: Carter Climatic® Control, set at center index point. Offset butterfly type Choke heat suction hole, in bowl cover Size No 42 (.093") drill

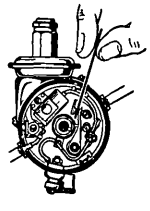
Vacuum Spark Port: Horizontal slot type, round end .045 x .110 inch. Top of port .033 to .043 inch above valve

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



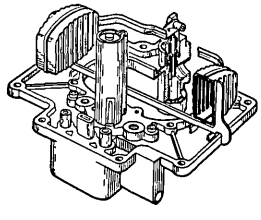
Spark Plug
Gap
.035"



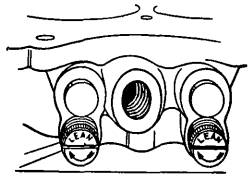
Breaker Point
Setting
.0125"-.0175"



Ignition Timing
Breaker Points to Open
5° B. T. C.



Float Setting
9/64 Inch
(Use Gauge T109-160)



Idle Adjustment
Screw Setting
½ t 1½
Turns Open

NOTE: These cars equipped with hydraulic valve lifters—No adjustment

CARBURETER ADJUSTMENTS

Float Adjustment: Two separate float adjustments must be made—lateral and vertical, as follows With bowl cover assembly inverted, gasket removed, and float resting on seated needle, place gauge T109-160 (9/64") directly under float with notched portions of gauge fitted over machined surface of casting Float should just touch vertical sides of gauge and just clear horizontal portion Adjust by bending arms of float Remove gauge, install bowl cover gasket, then reinstall float

Pump Adjustment: The total distance the plunger head (not shaft) moves from closed to wide open throttle position controls the amount of fuel discharged Correct pump plunger travel is important and should be checked each time the carbureter is dis-assembled or when leaner than standard metering rods are installed Procedure is as follows
Install pump connector link in upper hole (long stroke) of pump arm, with ends extending away from countershaft arm Back out throttle lever set screw until throttle valves seat in bores of carbureter Be sure fast idle adjusting screw does not hold throttle open. Place universal pump travel gauge T109-117S, inverted on edge of dust cover boss of bowl cover Turn knurled nut of gauge until finger just touches upper end of plunger shaft Number indicated on gauge should be "32" Hold the gauge vertical to insure correct reading

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Adjust by bending the throttle connector rod at upper angle Optional Adjustment With throttle valves seated in bores of carbureter the distance from the top of the plunger shaft to the top of the dust cover boss should be 5/16 Adjust as mentioned above

Metering Rod Adjustment Metering rod gauging is important and must be done after completing the pump adjustment No metering rod gauges are necessary on these carbureters Procedure is as follows

1 Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw

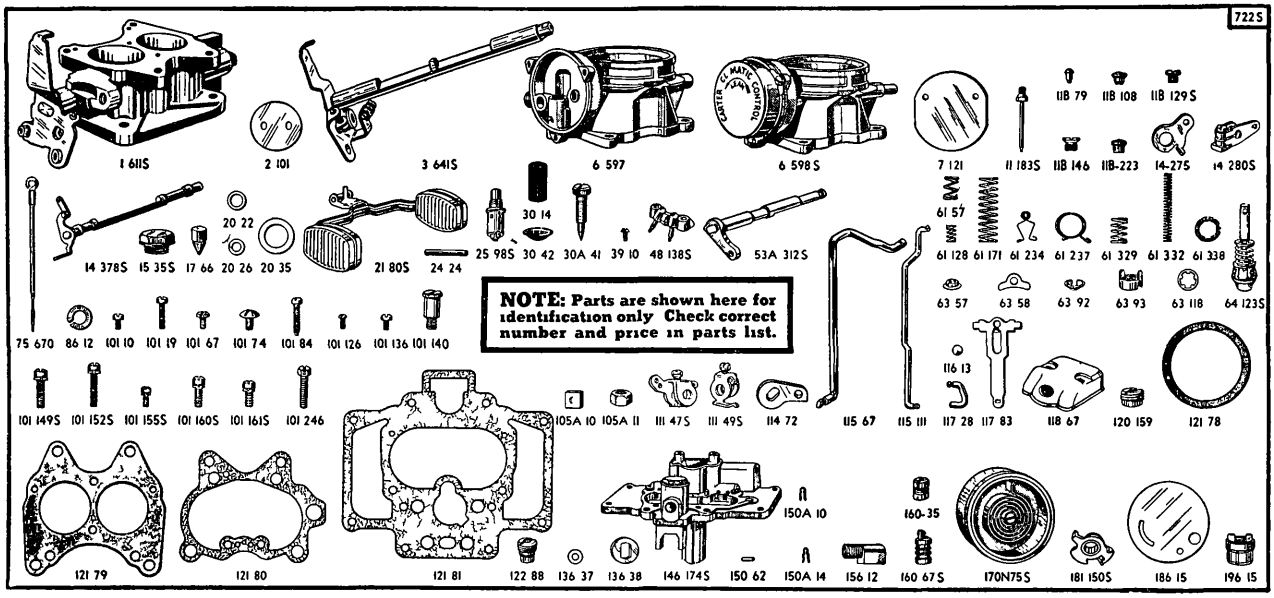
2 With metering rods in place press down on vacumeter link until metering rods bottom in carbureter body casting

3 Holding rods in downward position and throttle valves seated revolve metering rod arm until finger on arm contacts lip of vacumeter link Then carefully tighten clamp screw

Fast Idle Adjustment A Loosen choke lever clamp screw on choke shaft Insert 010 feeler gauge T109-200 between lip of fast idle cam and boss of flange casting Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw

B With choke valve tightly closed tighten fast idle adjusting screw until there is 020 opening between throttle valve and bore of carbureter (side opposite idle port) Use gauge T109-29 Be sure fast idle adjusting screw is on high step of cam while making this adjustment

Unloader Adjustment With throttle wide open there should be 3/16' clearance between upper edge of choke valve and inner wall of air horn (gauge T109-28) Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41)



Cadillac—1949—No. 722S

WHEN SERVICING, USE GASKET ASSORTMENT No. 189, REPAIR PACKAGE No. 1506A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-611S	Body flange assembly	
2-101	Throttle valve	(2)
3-641S	Throttle shaft, lever and bushing assembly	
6-598S	Air horn assembly	
7-121	Choke valve	
11-181S	Low speed jet assembly (Sup by 11-196S)	(2)
11-183S	Low speed jet assembly (Sup by 11-196S)	(2)
11-196S	LOW SPEED JET ASSEMBLY	(2)
11B 79	Rivet plug	(3)
11B 108	IDLE PORT RIVET PLUG	(2)
11B-129S	Pump discharge passage plug assembly	
11B 146	Level sight plug	
11B 223	NOZZLE RIVET PASSAGE PLUG	(2)
14-275	Cam trip lever	
14-280S	Choke lever and screw assembly	
14-378S	Choke lever and shaft assembly	
15-35S	Strainer nut assembly	
17-66	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	
20-26	Pump check plug gasket	
20-35	Bowl strainer gasket	
21-80S	Float and lever assembly	
24-24	Float lever pin	
25-98S	NEEDLE AND SEAT ASSEMBLY	
30-14	BOWL COVER STRAINER	
30-42	PUMP STRAINER	
30A-41	Idle adjustment screw	(2)
39 10	Choke valve attaching screw	(2)
48-138S	Pump jet and housing assembly	
53A 312S	Pump operating lever and countershaft assembly	
61-57	Adjustment screw lock spring	(2)
61-128	Connector rod spring (Use with 115-67)	
61-157	Plunger spring	
61 171	PUMP SPRING (LOWER)	
61 234	METERING ROD SPRING	
61-237	Fast idle cam spring	
61-329	Pump spring (upper)	
61-332	VACUUM PISTON SPRING	
61-338	Plunger spring (Sup by 61-157)	
63-57	INTAKE BALL CHECK RETAINER	
63-58	Coil housing retainer	(3)
63-92	Pump spring retainer	
63-93	Spring retainer (Use with 115-67)	
63 118	Throttle shaft retaining ring	
64-123S	PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
75 670	★METERING ROD—STANDARD (.0695"-.0695" to .059"-.0545")	(2)
75 680U	Unitized package (Consists of 2—75-670 metering rods and 2—11-196S low speed jets)	
75 731	Metering rod—1 size lean (.071"-.071" to .063"-.058")	(2)
86-12	Flange stud lock washer	(4)
101-10	Metering rod and pump lever clamp screw	(2)
101-19	Choke lever clamp screw	
101-67	Pump retainer screw	
101-74	Throttle shaft screw	
101-84	Fast idle adjustment screw	
101-126	Throttle valve attaching screw	(4)
101-136	Coil housing attaching screw	(3)
101-140	Fast idle attaching screw	
101-148S	Dust cover attaching screw and washer assembly	(2)
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	(4)
101-155S	Pump jet attaching screw and washer assembly	(2)
101-160S	Bowl cover attaching screw and washer assembly	(6)
101-161S	Dust cover attaching screw and washer assembly (Sup by 101-148S)	(2)
101 246	Throttle adjusting screw	
105A-10	Choke lever clamp nut	
105A-11	Flange stud nut	(4)
111-47S	Pump lever assembly	
111 49S	Metering rod arm assembly	
114-72	THROTTLE SHAFT ARM	
115 67	Throttle connector rod (Sup by 115-147)	
115-111	Fast idle connector rod	
115-147	THROTTLE CONNECTOR ROD	
115-148S	Throttle lever, connector rod and retainer assembly	
116-13	PUMP INTAKE CHECK BALL	
117-28	Pump arm link	
117-83	Vacumeter piston link	
118-67	Dust cover	
120-159	METERING ROD JET	(2)
121-78	COIL HOUSING GASKET	
121-79	BODY FLANGE GASKET	
121-80	AIR HORN GASKET	
121-81	BOWL COVER GASKET	
122-88	PUMP DISCHARGE CHECK PLUG	
136-37	Connector rod washer (Use with 115-67)	
146-174S	Bowl cover and strainer assembly	
150 62	Choke piston pin	
150A-10	PIN SPRING	(3)
150A-14	Pin spring	
156-12	Gas line elbow	
160-35	Choke piston	
160-67S	Vacuum piston and pin assembly	
170N-75S	Thermostatic housing and coil assembly	
172-22	CONNECTOR ROD RETAINER (Use with 115-147)	
181-150S	Fast idle cam assembly	
186-15	Coil housing baffle plate	
196 15	Pump plunger guide	

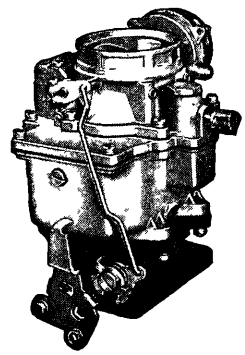
★Note Use rod marked with dot above the (C)

NOTE· Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.

MODELS

"61" - "62" - "60 Special"

"75" and "Commercial"



Casting No. 610 on Face of Flange

CADILLAC EIGHT 1949

(722S can also be used)

WCD Dual Down-Draft Climatic® Control Carbureter—**Model 682S**

CARBURETER SPECIFICATIONS

For Cadillac 8 Cylinder Engine: 3-13/16 Inch Bore, 3⅝ Inch Stroke

Dimensions: Flange size, 1¼ inch dual, 4 bolt type.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 19/32 inch I. D.
Main venturi, 1-3/16 inch I. D.

Float Level: Distance from seam of float (both sides—at top center) to lower edge of bowl cover, when needle is seated to be 9/64 inch. (Use gauge No. T109-160.)

Vents: (In air horn.) Outside, No. 30 drill—2 holes. Inside, No. 35 drill—2 holes.

Gasoline Intake: Square vertical needle. Size No. 38 drill in needle seat.

Low Speed Jet Tube: Jet size, No. 68 drill.
By-pass, size No. 57 drill.
Economizer, size No. 60 drill.
Idle bleed, size No. 56 drill.

Idle Ports: Upper port, length, .175 inch. Width, .030 inch.

Idle Port Opening: .115 to .121 inch above upper edge of valve with valve closed tight.

Lower Port (For Idle Adjustment Screw): Size .0615 to .0655 inch diameter.

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture turn screw out. Do not attempt to idle engine below 8 m.p.h.

Main Nozzle: In primary venturi, closed tip angle 49° from horizontal. Nozzle is installed permanently. Do not remove.

Metering Rod (Vacumeter Type): Economy step .065 inch diameter. Middle step tapers to .062 inch diameter. Power step .054 inch diameter. Length 3-41/64 inches.

Metering Rod Jet: .089 inch diameter.

Metering Rod Setting: Use gauge, part No. T109-163 (2.940 inches).

Accelerating Pump: Pressure type, delayed action (spring operated plunger).
Discharge jet (twin) size, No. 70 drill.
Intake ball check size, No. 32 drill.
Discharge (needle seat) size, No. 53 drill.

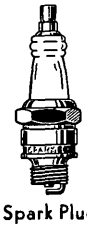
Pump Adjustment: "24" as indicated on T109-117S with throttle valve seated or 7/32" from top of pump shaft to the top of dust cover housing.

Choke: Carter Climatic® Control, set 1 point rich. Offset butterfly type. Choke heat suction hole, in bowl cover. Size No. 42 (.093") drill.

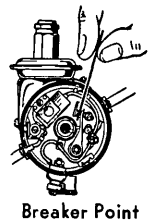
Vacuum Spark Port: Slot type .045 by .110 inch. Top of port .033 to .043 inch above valve.

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



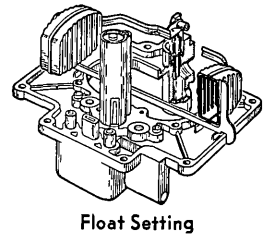
Spark Plug Gap
.033"-.038"



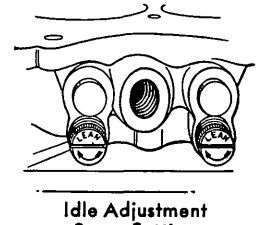
Breaker Point Setting
.012"-.018"



Ignition Timing Breaker Points to Open:
5° B. T. C..



Float Setting
9/64 Inch
(Use Gauge T109-160)



Idle Adjustment Screw Setting
½ t 1½
Turns Open

NOTE: These cars equipped with hydraulic valve lifters.—No adjustment.

CARBURETER ADJUSTMENTS

Float Adjustment: Two separate float adjustments must be made—lateral and vertical, as follows: With bowl cover assembly inverted, gasket removed, and float resting on seated needle, place gauge T109-160 (9/64") directly under float with notched portions of gauge fitted over machined surface of casting. Float should just touch vertical sides of gauge, and just clear horizontal portion. Adjust by bending arms of float. Remove gauge, install bowl cover gasket, then reinstall float.

Pump Adjustment: The total distance the plunger head (not shaft) moves from closed to wide open throttle position controls the amount of fuel discharged. Correct pump plunger travel is important and should be checked each time the carbureter is disassembled or when leaner than standard metering rods are installed. Procedure is as follows: Install pump connector link in pump arm, with ends extending toward countershaft arm. Back out throttle lever set screw until throttle valves seat in bores of carbureter. Be

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CARBURETER
TRADE MARK REG U. S PAT. OFF
MARCA REGISTRADA

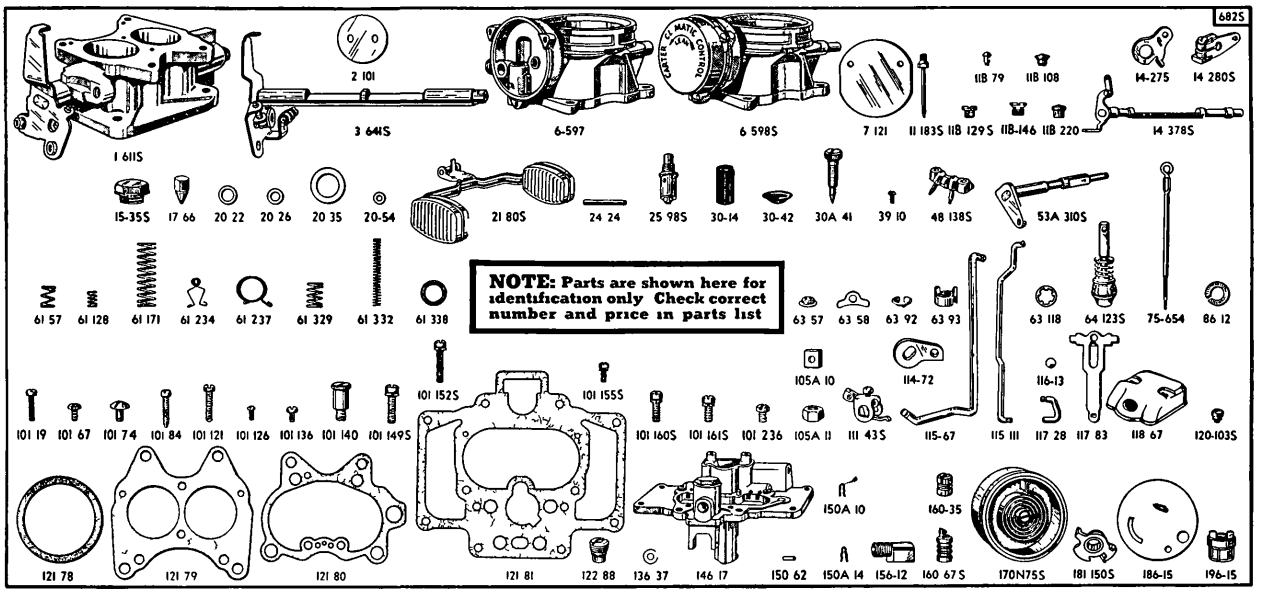
PRINTED IN U.S.A.

sure fast idle adjusting screw does not hold throttle open Place universal pump travel gauge T109-117S inverted on edge of dust cover boss of bowl cover Turn knurled nut of gauge until finger just touches upper end of plunger shaft Number indicated on gauge should be "24 Hold the gauge vertical to insure correct reading
Adjust by bending the throttle connector rod at upper angle Optional adjustment With throttle valves seated in bores of carbureter, the distance from the top of the plunger shaft to the top of the dust cover boss should be 7/32'
Adjust as mentioned above
Metering Rod Adjustment With throttle valves seated in bores of carbureter, insert one metering rod gauge T109 163 in place of either metering rod Press down lightly on vacuum piston link until lug of piston link contacts lip of metering rod arm There should be less than 005 clearance between metering rod bearing and shoulder in notch of gauge

Adjust by bending lip of metering rod arm (Tool T109-105)
Fast Idle Adjustment With choke valve tightly closed, tighten fast idle adjusting screw until there is 020 opening between throttle valve and bore of carbureter (side opposite idle port) Use gauge T109-29 Be sure fast idle adjusting screw is on high step of cam while making this adjustment
Unloader Adjustment Two adjustments are necessary

A Loosen choke lever clamp screw on choke shaft Insert 010" feeler gauge between lip of fast idle cam and boss of flange casting Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw

B With throttle wide open there should be 3/16' clearance between upper edge of choke valve and inner wall of air horn (gauge T109-28) Adjust by bending unloader lip on throttle shaft lever (T109-41)



Cadillac—1949—No. 682S

WHEN SERVICING, USE GASKET ASSORTMENT No 189; REPAIR PACKAGE No 1508A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-611S	Body flange assembly	
2-101	Throttle valve	(2)
3-641S	Throttle shaft and lever assembly	
6-597	Air horn and piston housing (Sup by 6-598S)	
6-598S	Air horn assembly	
7-121	Choke valve	
11-183S	LOW SPEED JET ASSEMBLY	(2)
11B-79	Rivet plug	(3)
11B-108	IDLE PORT RIVET PLUG	(2)
11B-129S	Pump discharge passage plug assembly	
11B-146	Level sight plug	
11B-220	NOZZLE PASSAGE PLUG	(2)
14-275	Cam trip lever	
14-280S	Choke lever and screw assembly	
14-378S	Choke lever and shaft assembly	
15-35S	Strainer nut assembly	
17-66	PUMP CHECK NEEDLE	
20 22	Needle seat gasket	
20-26	Pump check plug gasket	
20-35	Bowl strainer gasket	
20-54	Metering rod jet gasket	(2)
21-80S	Float and lever assembly	
24 24	Float lever pin	
25-98S	NEEDLE AND SEAT ASSEMBLY	
30-14	BOWL COVER STRAINER	
30-42	PUMP STRAINER	
30A 41	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
48-138S	Pump jet and housing assembly	
53A-310S	Pump operating lever and countershaft assembly	
61-57	Adjustment screw lock spring	(2)
61-128	Connector rod spring (Use with 115-67)	
61-157	Plunger spring	
61-171	PUMP SPRING (LOWER)	
61-234	METERING ROD SPRING	
61-237	Fast idle cam spring	
61 329	Pump spring (Upper)	
61-332	VACUUM PISTON SPRING	
61-338	Plunger spring (Sup by 61-157)	
63-57	INTAKE BALL CHECK RETAINER	
63-58	Coil housing retainer	(3)
63-92	Pump spring retainer	
63-93	Connector rod spring retainer (Use with 115-67)	
63-118	Throttle shaft retaining ring	
64-123S	PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
75-673	METERING ROD—STANDARD— 065"- 065" to 062"- 054"	(2)
86-12	Flange stud lock washer	

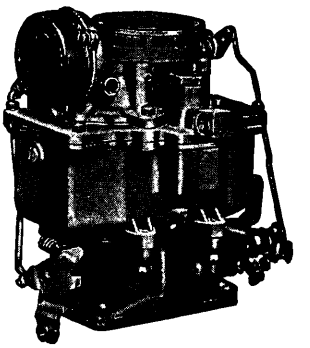
Part No.	PART NAME	
101-19	Choke lever clamp screw	
101-67	Pump retainer screw	
101-74	Throttle shaft screw	
101-84	Fast idle adjustment screw	
101-126	Throttle valve attaching screw	(4)
101-136	Coil housing attaching screw	(3)
101-140	Fast idle attaching screw	
101-148S	Dust cover screw and washer assembly	(2)
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	(4)
101-155S	Pump jet attaching screw and washer assembly	(2)
101-160S	Bowl cover attaching screw and washer assembly	(6)
101-161S	Dust cover attaching screw and washer assembly (Sup by 101-148S)	
101-236	Metering rod arm clamp screw	
101-246	Throttle adjusting screw	
105A-10	Choke lever clamp nut	
105A-11	Flange stud nut	
111-43S	Pump and metering rod arm assembly	
114-72	THROTTLE SHAFT ARM	
115-67	Throttle connector rod (Sup by 115-147)	
115-111	Fast idle connector rod	
115-147	THROTTLE CONNECTOR ROD	
116-13	PUMP INTAKE CHECK BALL	
117-28	Pump link	
117-83	Vacuum piston link	
118 67	Dust cover	
120-103S	METERING ROD JET ASSEMBLY	(2)
121-78	COIL HOUSING GASKET	
121-79	BODY FLANGE GASKET	
121 80	AIR HORN GASKET	
121-81	BOWL COVER GASKET	
122-88	PUMP DISCHARGE CHECK PLUG	
136-37	Connector rod washer	
146-174S	Bowl cover and strainer assembly	
150-62	Piston pin	
150A-10	PIN SPRING	(3)
150A-14	Pin spring	
156 12	Gas line elbow	
160-35	Choke piston	
160 67S	Vacuum piston and pin assembly	
170N-75S	Thermostatic housing and coil assembly	
172 22	THROTTLE CONNECTOR ROD RETAINER (Use with 115-127)	
181 150S	Fast idle cam assembly	
186-15	Baffle plate	
196 15	Pump plunger guide	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

CADILLAC 595S-595SA
August, 1946
Revised September, 1953

ALL MODELS



CADILLAC EIGHT 1946-47-48

Casting No. 456 on Face of Flange (595S)
Casting No. 552 on Face of Flange (595SA)

WCD Dual Down-Draft Climatic® Control Carbureters—**Models 595S-595SA**

CARBURETER SPECIFICATIONS

For Cadillac 8 Cylinder Engine: 3½ Inch Bore, 4½ Inch Stroke

Dimensions: Flange size, 1¼ inch dual, 4 bolt type.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 19/32 inch I. D.
Main venturi, 1-3/16 inch I. D.

Float Level: Distance from seam of float (both sides—at top center) to lower edge of bowl cover, when needle is seated to be 9/64 inch. (Use gauge No. T109-160.)

Vents: (In air horn.) Outside, No. 30 drill—2 holes.
Inside, No. 35 drill—2 holes.

Gasoline Intake: Square vertical needle. Size No. 38 drill in needle seat.

Low Speed Jet Tube: Jet size, No. 70 drill.
By-pass, size No. 55 drill.
Economizer, size No. 58 drill.
Idle bleed, size No. 56 drill.

Idle Ports: Upper port, length, .156 inch. Width, .030 inch, with .0635 inch diameter hole located .071 inch from top of port.

Idle Port Opening: .100 to .106 inch above upper edge of valve with valve closed tight.

Lower Port (For Idle Adjustment Screw): Size .0615 to .0655 inch diameter.

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture turn screw out. Do not attempt to idle engine below 8 m.p.h.

Main Nozzle: In primary venturi, closed tip angle 49° from horizontal. Nozzle is installed permanently. **Do not remove.**

Metering Rod (Vacumeter Type): Economy step .0695 inch diameter. Middle step tapers to .0605 inch diameter. Power step .054 inch diameter. Length 3-41/64 inches.

Metering Rod Jet: .089 inch diameter.

Metering Rod Setting: Use gauge, part No. T109-163 (2.940 inches).

Accelerating Pump: High pressure delayed action type (spring operated plunger)
Discharge jet (twin) size, No. 70 drill.
Intake ball check size, No. 40 drill (Early production).
Intake ball check size, No. 32 drill (Late production).
Discharge (needle seat) size, No. 53 drill.

Pump Adjustment: 27/64 inch plunger travel (full throttle position). Use gauge No. T109-117S.

Choke: Carter Climatic® Control, set at center index point. Offset butterfly type. Choke heat huction hole, in bowl cover. Size No. 42 (.093") drill.

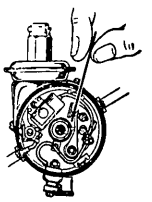
Vacuum Spark Port: .039 to .041 inch diameter. Top of port .033 to .037 inch above valve (Early production). Top of port .030 to .040 inch above valve (Late production).

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



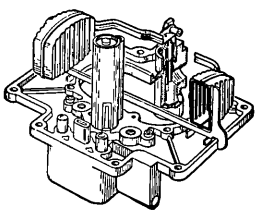
Spark Plug Gap
028"-.033"



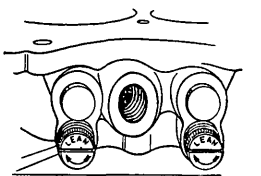
Breaker Point Setting
.0125"-.0175"



Ignition Timing
Breaker Points to Open:
5° B. T. C.



Float Setting
9/64 Inch
(Use Gauge T109-160)



Idle Adjustment Screw Setting
½ to 1½
Turns Open

NOTE: These cars equipped with hydraulic valve lifters.—No adjustment.

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT

Two separate float adjustments must be made—lateral and vertical

LATERAL ADJUSTMENT

With bowl cover assembly inverted bowl cover gasket removed and float bracket resting on seated needle place float gauge T109 160 directly under float with notched portions of gauge fitted over edges of casting Sides of floats should barely touch the vertical uprights of float gauge (A—Fig 1) Adjustment should be made by bending **arm** of float

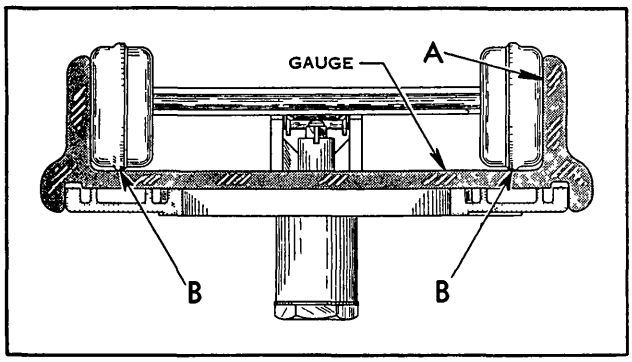


Figure 1
Float Adjustment

VERTICAL ADJUSTMENT

With float gauge in position shown floats should just clear the horizontal portion of gauge (B—Fig 1) Vertical distance between top of float and machined surface of casting should be 9/64 inch Adjustment can be made by bending **arm** of float Carefully remove float install bowl cover gasket and then reinstall float

Floats should have a free movement of 1/2" at free end of float Adjust by bending lip of float bracket

A fast check of the fuel level can be made on the car by removing the inspection hole plug in the side of carbureter body Fuel should just run out of the hole—with engine idling

PUMP ADJUSTMENT (Fig 2)

The accelerating pump has been designed to produce a uniform pump action The total distance the **plunger** (not shaft) moves from closed to wide open throttle controls the amount of fuel discharge Correct pump plunger travel is important and should be checked each time the carbureter is disassembled Procedure is as follows With pump connector link in place back out throttle lever set screw and fast idle adjustment screw to allow throttle valves to seat in bore of carbureter Support carbureter so throttle can be closed without levers dragging on bench top (wooden block will suffice) With air horn assembly removed place pump travel gauge T109 117S inverted on edge of dust cover boss of bowl cover Turn knurled nut on pump travel gauge until finger contacts upper surface of pump connector link where it extends through the plunger shaft (E) Take gauge reading

Open throttle slowly until plunger bottoms in pump cylinder (at approximately half throttle) This can be determined by the additional force necessary to continue to move throttle lever Relocate pump travel gauge and turn knurled nut until finger again touches link Observe number indicated on gauge Hold gauge vertical to insure correct pump stroke readings The difference in the two readings obtained should be 27 (27/64" plunger travel)

Adjust by bending throttle connector rod at lower angle (F)

FLANGE ASSEMBLY

The difference between 595S and 595SA is in the flange assembly The throttle centering screw 101 130 has been removed from flange 1 553S used on 595SA Throttle shaft and lever assembly 3 601S must be used with this flange as shaft is not grooved for the throttle centering screw but has additional length to accommodate throttle shaft retaining ring 63 118

To assemble flange 1 457S (with throttle centering screw) install throttle shaft and lever assembly and throttle centering screw then install throttle valves with c in circle **toward the idle port** when viewing the carbureter from the manifold side Center valves by tapping lightly and holding in place with fingers **before** tightening screws Always use new screws

To assemble flange 1 553S (without centering screw) install throttle shaft and turn to closed throttle position Push retaining ring **with prongs extending outward,** over end of throttle shaft until it is against casting (no endplay in shaft) Throttle valves should then be installed centering them as mentioned above with throttle lever in closed position and throttle lever set screw backed out

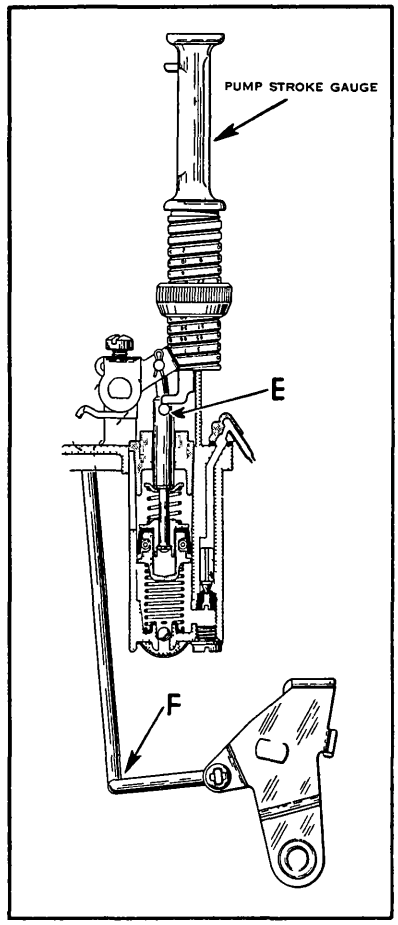


Figure 2
Pump Stroke Adjustment

Note It is advisable before taking pump gauge readings to practice opening throttle several times to find position at which increased throttle resistance indicates plunger bottoming in cylinder

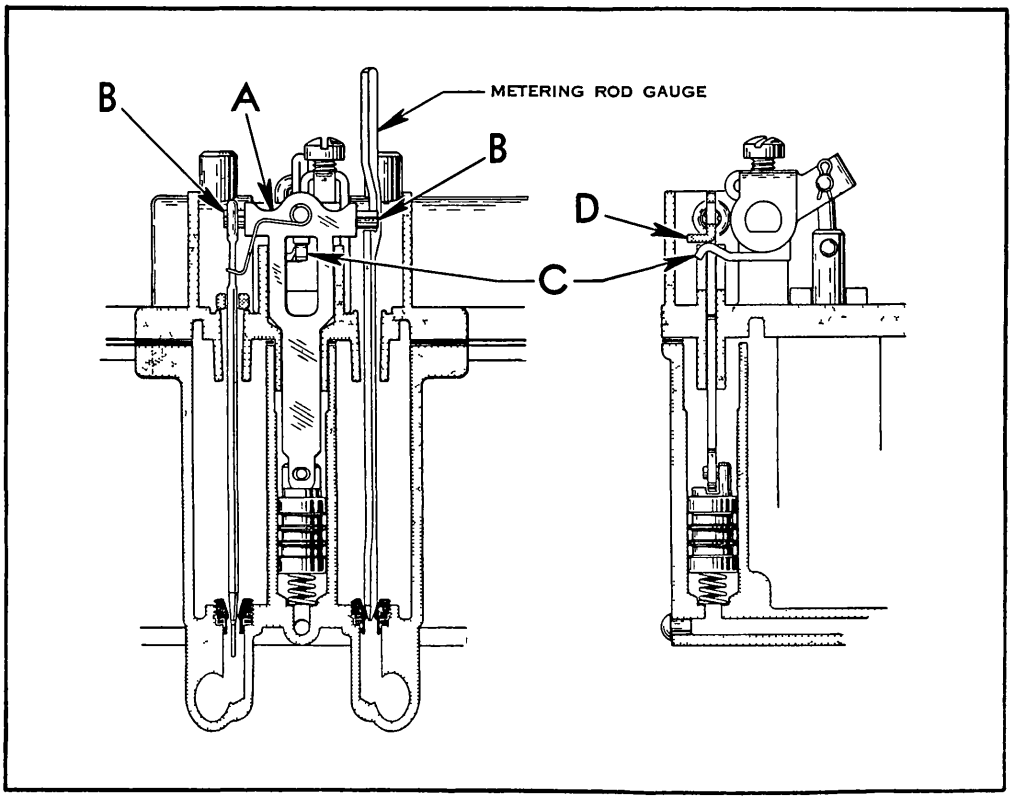


Figure 3
Metering Rod Adjustment

METERING ROD ADJUSTMENT (Fig. 3):

Correct setting of metering rod is important and should be made each time carbureter is disassembled or leaner than standard rods are installed. Procedure is as follows: Back out throttle lever adjusting screw until throttle valves seat in bores of carbureter. Insert one metering rod gauge T109-163 in place of either metering rod. Press down lightly on vacuum piston link (A) until lug of piston link (D) contacts lip of metering rod arm (C). There should be less than .005" clearance between metering rod bearing (B) and shoulder in notch of metering rod gauge with throttle valves seated. Adjustment should be made by bending lip of metering rod arm (C). Use bending tool T109-105.

UNLOADER ADJUSTMENT (Figs. 4 and 5):

Two adjustments are necessary for correct unloader setting:

A Loosen choke lever and screw assembly on choke shaft (G). Insert .010" feeler gauge (T109-71) between lip on fast idle cam and boss on flange casting (H). Hold choke valve tightly closed and take all slack out of linkage by pressing choke lever toward closed position — then tighten clamp screw.

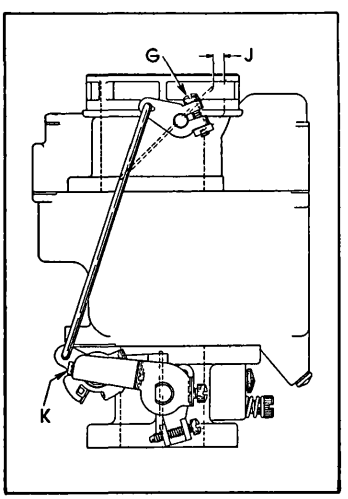


Figure 4
Unloader Setting

B Adjust unloader lip (K) on throttle shaft lever until there is 3/16" clearance between upper edge of choke valve and inner wall of air horn (J) **with throttle in wide open position.** Use gauge T109-28.

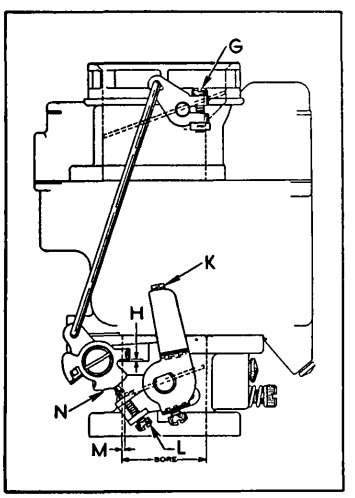
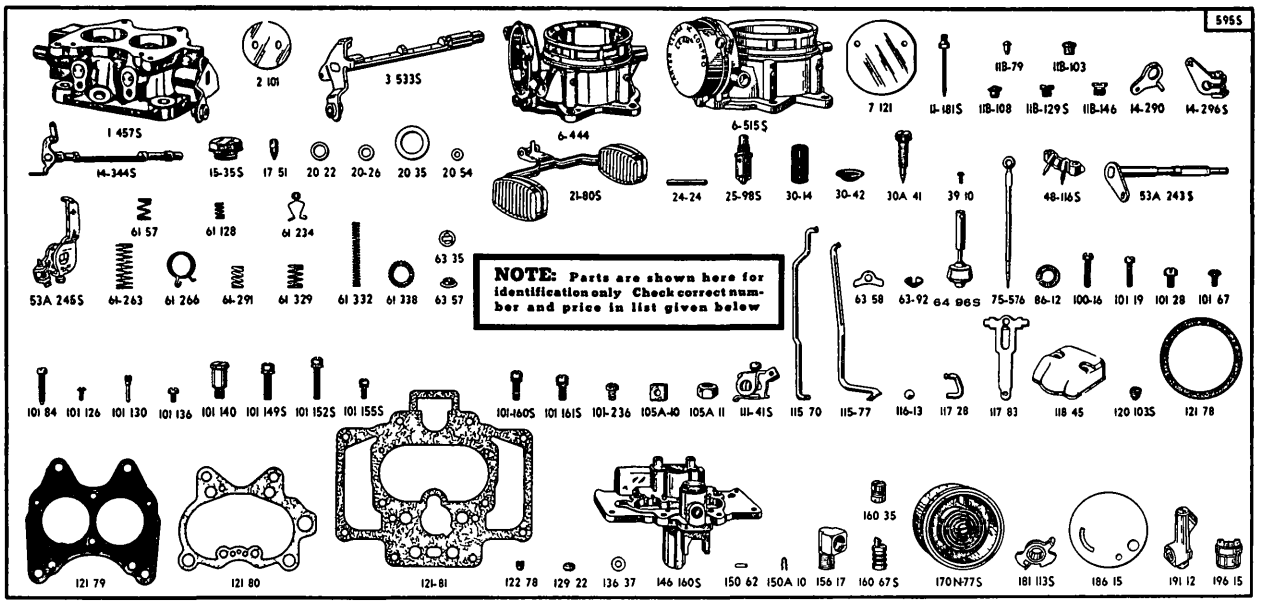


Figure 5
Fast Idle Setting

FAST IDLE ADJUSTMENT (Figs. 4 and 5):

With choke valve tightly closed, tighten fast idle set screw (L) until there is .018" (M) opening between throttle valve and bore of carbureter side opposite port. Use gauge T109-44. Be sure fast idle adjusting screw is on high step of cam (N) when making this adjustment.



Cadillac—1946-47-48—Nos. 595S-595SA

WHEN SERVICING USE GASKET ASSORTMENT No 189, REPAIR PACKAGE No 1363D

PART NAMES IN CAPITAL LETTERS LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-457S	Body flange assembly (Sup by 1 553S)	
1-553S	Body flange assembly	
2-101	Throttle valve	(2)
3-533S	Throttle shaft and lever assembly (Use with 1 457S only)	
3 601S	Throttle shaft and lever assembly (Use with 1 553S only)	
6-444	Air horn	
6-515S	Air horn and Climatic® control assembly	
7-121	Choke valve	
11-181S	LOW SPEED JET ASSEMBLY	(2)
11B-79	Rivet plug	(3)
11B 103	Nozzle passage plug (Sup by 11B 220)	
11B-108	IDLE PORT RIVET PLUG	(2)
11B 129S	Pump discharge passage plug assembly	
11B-146	Level sight plug	
11B-220	NOZZLE PASSAGE PLUG	(2)
14-290	Cam trip lever	
14-296S	Choke lever and screw assembly	
14 344S	Choke lever link and shaft assembly	
15 35S	Strainer nut assembly	
17 51	PUMP DISCHARGE CHECK NEEDLE	
20 22	Needle seat gasket	
20-26	Gasket (pump discharge passage plug)	
20 35	Strainer nut gasket	
20-54	Metering rod jet gasket	(2)
21-80S	Float and lever assembly	
24-24	Float lever pin	
25 98S	NEEDLE AND SEAT ASSEMBLY	
30 14	BOWL COVER STRAINER	
30-42	PUMP STRAINER	
30A-41	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
48 138S	Pump jet and housing assembly	
53A-243S	Pump operating lever and countershaft assembly	
53A-245S	Fast idle arm and screw assembly	
61-57	Idle adjusting screw lock spring	(2)
61-128	CONNECTOR ROD SPRING	
61-234	METERING ROD SPRING	
61-263	PUMP SPRING (LOWER)	
61-266	Fast idle cam spring	
61-291	Throttle adjusting screw spring	
61-329	Pump spring (upper)	
61-332	VACUUM PISTON SPRING	
61-338	Plunger spring	
63-35	SPRING RETAINER	
63-57	INTAKE BALL CHECK RETAINER	
63-58	Coil housing retainer	(3)
63 92	Pump spring retainer	
63 118	Throttle shaft retaining ring (Use with 1 553S only) (Install with prongs extending outward)	
64-96S	Pump plunger and shaft assembly (Sup by 64 109S)	
64 109S	PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY	

Part No.	PART NAME	
75-576	METERING ROD—STANDARD (.0695"-.0605"-.054")	(2)
75-597	Metering rod—1 size lean—.0705" .0705" to .062" .056"	(2)
75-598	Metering rod—2 sizes lean—.0715" .0715" to .0635"-.058"	(2)
86-12	Flange stud lock washer	
100-16	Throttle adjusting screw	
101-19	Choke lever clamp screw (Sup by 101 354S)	
101-28	Fast idle arm clamp screw	
101-67	Pump retainer screw	
101-84	Fast idle adjustment screw	
101-126	Throttle valve attaching screw	(4)
101-130	Throttle centering screw (Use with 1 457S)	
101-136	Coil housing attaching screw	(3)
101-140	Fast idle cam attaching screw	
101-148S	Dust cover attaching screw and washer assembly	(2)
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	(4)
101-155S	Pump jet housing attaching screw and washer assembly	(2)
101-160S	Bowl cover attaching screw and washer assembly	(6)
101-161S	Dust cover attaching screw and washer assembly (Sup by 101 148S)	(2)
101-236	Metering rod arm clamp screw	
101-354S	Choke lever clamp screw assembly	
105A-10	Choke lever clamp nut	
105A-11	Flange stud nut	
111-41S	Metering rod arm assembly	
115-70	Fast idle connector rod	
115-77	THROTTLE CONNECTOR ROD	
116-13	INTAKE CHECK BALL	
117-28	Pump link	
117-83	Vacuum piston link	
118-45	Dust cover	
120-103S	METERING ROD JET ASSEMBLY	(2)
121-78	COIL HOUSING GASKET	
121-79	BODY FLANGE GASKET	
121-80	AIR HORN GASKET	
121-81	BOWL COVER GASKET	
122-78	PUMP DISCHARGE CHECK PLUG	
129-22	Metering rod disk	(2)
136-37	CONNECTOR ROD WASHER	
146-160S	Bowl cover and strainer assembly	
150-62	Piston pin	
150A-10	PIN SPRING	(3)
156-17	Gas line elbow	
160-35	Choke piston	
160-67S	Vacuum piston and pin assembly	
170N-77S	Thermostatic coil and housing assembly	
181-113S	Fast idle cam and spring assembly	
186-15	Baffle plate	
191-12	Vent stack	
196-15	Pump plunger guide	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

CHAMPION OUTBOARD MOTOR

MODELS

(N-2439S)
6N-D and
6N-MS

(N-2440S)
"Voyager" V6NGS
"Majestic" M6NGS

Horizontal, Model N Type, **Carbureters Nos. N-2439S, N-2440S**

CARBURETER SPECIFICATIONS

For Champion 2 Cylinder Engine: 2½ Inch Bore, 2-1/32 Inch Stroke

Dimensions. Flange size 1 inch S A E (slotted)
Main venturi 15/16 inch I D
Float Level: Distance from top of float (at free end) opposite needle seat to outer edge of float chamber cover when needle is seated to be 3/32 inch plus or minus 1/32 inch
Vents. Inside None Outside No 50 (.070 inch) drill
Gasoline Intake: Size No 48 (.076 inch) drill in needle seat
Low Speed Jet Tube: Jet size No 70 (.028 inch) drill Auxiliary idle bleed, in side of tube 4—size No 74 (.0225 inch) drill
Idle Port. Round type .0287 .0317 inch diameter
Idle Port Opening: (N 2439S) Top of hole to be .015 to .019 inch above upper edge of valve with valve tightly closed (N 2440S) Bottom of hole to be .028 to .032 inch above upper edge of valve with valve tightly closed

Idle Screw Seat: In low speed passage, size No 46 (.081 inch) drill

Set Idle Adjustment Screw: ¼ to 1¾ turns open For richer mixture turn screw out

Main Nozzle: Inside diameter No 25 (.1495 inch) drill
Accelerating jets (in side of nozzle) 4—size No 62 (.038 inch) drill Nozzle bleeder tube, in body size (N-2439S) No 59 (.041 inch), (N-2440S) No 65 (.035 inch) drill

High Speed Adjusting Needle: Seat (in body), size No 35 (.110 inch) drill Setting see adjustments

Choke: Manual, butterfly type

Spark Plug Gap .030"	Breaker Point Setting .018"	Float Setting 3/32 Inch	Idle Adjustment Screw Setting ¼ to 1¾ Turns Open	High Speed Adj. Screw Setting ¼ to 1¾ Turns Open

SERVICE PROCEDURE

CAUTION: REMOVE HIGH SPEED NEEDLE BEFORE REMOVING BOWL

To Disassemble

1 Remove carbureter from engine

2 Remove high speed adjusting needle packing nut and packing (SCRIBE MARK ON BODY AND BOWL)

3 Remove bowl nut gasket and bowl

4 Remove float pin, float needle and needle seat Check float for dents, leaks and wear on float lip or in float pin holes

5 Remove bowl ring gasket

6 Remove idle adjustment screw and spring

7 Remove nozzle

8 Remove throttle valve screws valve and shaft and lever assembly

9 Clean all parts with solvent making sure all carbon accumulation is removed from bore, especially where throttle valve seats in casting Blow out all passages with compressed air Replace all worn and damaged parts Always use new gaskets

To Assemble

10 Install throttle shaft and valve Valve *must* be installed with trademark "C on side toward idle port when viewing from flange side Always use new screws With valve screws loose and throttle lever set screw backed out, seat valve by tapping lightly with a small screwdriver Hold in place while tightening screws

11 Install nozzle making sure it seats in casting

12 Install needle seat needle float and float pin

13 Set float level with carbureter casting inverted float resting lightly against needle in its seat There should be 3/32 inch clearance between outer surface of casting and free end of float (side opposite needle seat) Adjust by bending lip of float

14 Install bowl ring gasket, bowl (line up scribe marks), bowl nut gasket and bowl nut Tighten securely

15 Install high speed adjusting needle packing nut and new packing Turn needle in until it just seats in body then back out 1 turn

16 Install idle adjusting screw finger tight Back out approximately 1 turn Do not use pliers or screwdriver as it may damage idle screw

17 Install carbureter on engine and make idle and high speed adjustment as necessary

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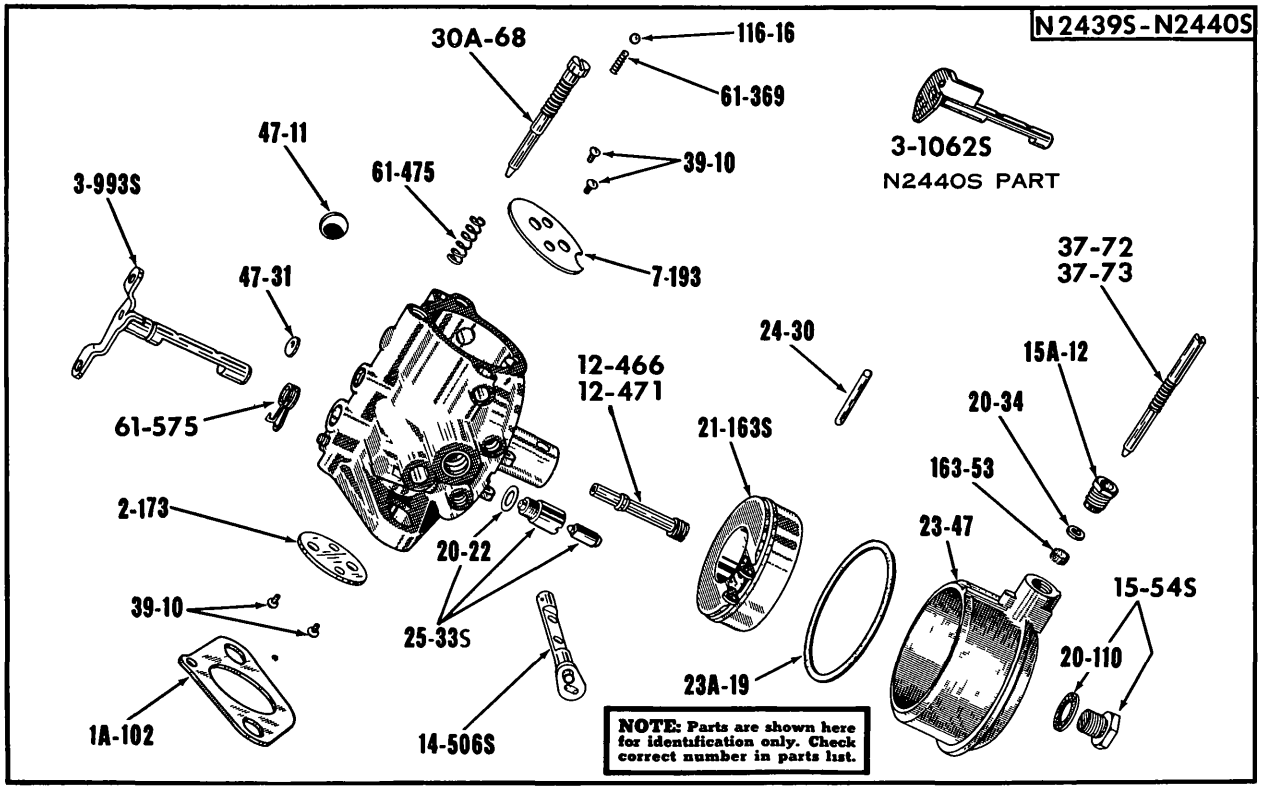
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HIGH SPEED AND IDLE SCREW ADJUSTMENT

After rebuilding and installation on engine is complete, the final high speed and idle screw adjustments must be made Turning the adjustable main metering screw clockwise produces a leaner high speed mixture, and turning the idle screw clockwise produces a leaner idle mixture

When adjusting the idle needle turn approximately 1/8 turn at a time then wait sufficient time for engine to respond to this adjustment



Champion—Carbureters Nos. N-2439S, N-2440S

Part No.	PART NAME
1A-102	Flange gasket
2-173	Throttle valve
3-993S	Throttle shaft and lever assembly (2439S)
3-1062S	—Throttle shaft and lever assembly (2440S)
7-193	Choke valve
12-466	—Nozzle (2349S)
12-471	—Nozzle (2440S)
14-506S	Choke lever and shaft assembly
15-54S	—Bowl nut assembly
15A-12	Packing nut
20-22	Needle seat gasket
20-34	Packing nut gasket
20-110	Bowl nut gasket
21-163S	Float and lever assembly
23-47	Bowl

Part No.	PART NAME	
23A-19	Bowl ring gasket	
24-30	Float lever pin	
25-33S	Needle and seat assembly	
30A-68	—Idle adjustment screw	
37-72	—High speed adjusting needle (2439S)	
37-73	—High speed adjusting needle (2440S)	
39-10	Choke and throttle valve attaching screw	(4)
47-11	Idle port welsh plug	
47-31	Idle passage welsh plug	
61-369	Choke shaft spring	
61-475	Idle adjustment screw spring	
61-575	—Throttle return spring	
116-16	Choke spring ball	
163-53	Main metering screw packing	

—Parts so marked are new and listed for the first time

NOTE· Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

CHAMPION

OUTBOARD MOTOR

MODELS

"6MMGS" & "6MSGS"

Horizontal, Model N Type, **Carbureter No. N-2273S**

CARBURETER SPECIFICATIONS

For Champion 2 Cylinder Engine 2½ Inch Bore 2-1/32 Inch Stroke

Dimensions Flange size 1 inch S A E (slotted) Main venturi 15/16 inch I D

Float Level Distance from top of float (at free end) opposite needle seat to outer edge of float chamber cover when needle is seated to be 3/32 inch plus or minus 1/64 inch

Vents Inside None Outside No 50 (070 inch) drill

Gasoline Intake Size No 48 (076 inch) drill in needle seat

Low Speed Jet Tube Jet size No 75 (021 inch) drill

Idle Port Round type 027 030 inch diameter

Idle Port Opening Top of port to be 018 to 022-inch above upper edge of valve with valve tightly closed

Idle Screw Seat In low speed passage size No 52 (0635 inch) drill

Set Idle Adjustment Screw ¼ to 2¾ turns open For richer mixture turn screw out

Main Nozzle Inside diameter No 36 (1065 inch) drill

High Speed Adjusting Needle Seat (in body) size No 44 (086 inch) drill Setting see adjustments

Choke Manual butterfly type

Spark Plug Gap 030"	Breaker Point Setting 018"	Float Setting 3/32 Inch	High Speed Adj Screw Setting ¼ to 1¾ Turns Open	Idle Adjustment Screw Setting ¼ to 2¾ Turns Open

SERVICE PROCEDURE

CAUTION REMOVE HIGH SPEED NEEDLE BEFORE REMOVING BOWL

To Disassemble

1 Remove carbureter from engine

2 Remove high speed adjusting needle packing nut and pack ing (SCRIBE MARK ON BODY AND BOWL)

3 Remove bowl nut gasket and bowl

4 Remove float p n float spring needle and needle seat Check float for dents leaks and wear on float lip or in float pin holes

5 Remove bowl ring gasket

6 Remove idle adjustment screw and spring

7 Remove nozzle
DO NOT REMOVE LOW SPEED JET TUBE

8 Remove throttle valve screws valve and shaft and lever assembly

9 Clean all parts with solvent making sure all carbon ac cumulation is removed from bore especially where throttle valve seats in casting Blow out all passages with com pressed air Replace all worn and damaged parts Always use new gaskets

To Assemble

10 Install throttle shaft and valve Valve must be install d with trademark C on side toward idle port when viewing from flange side Always use new screws With valve screws loose and throttle lever set screw backed out seat valve by tapping lightly with a small screwdriver Hold in place while tightening screws

11 Install nozzle making sure it seats in casting

12 Install needle seat spring needle float and float pin

13 Set float level with carbureter casting inverted float rest ing lightly against needle in its seat There should be 3/32 inch clearance between outer surface of casting and free end of float (side opposite needle seat) Adjust by bending lip of float

14 Install bowl ring gasket bowl (line up scribe marks) bowl nut gasket and bowl nut Tighten securely

15 Install high speed adjusting needle packing nut and new packing Turn needle in until it just seats in body then back out 1 turn

16 Install idle adjusting screw finger tight Back out approxi- mately 1¼ turns Do not use pliers or screwdriver as it may damage idle screw

17 Install carbureter on engine and make idle and high speed adjustment as necessary

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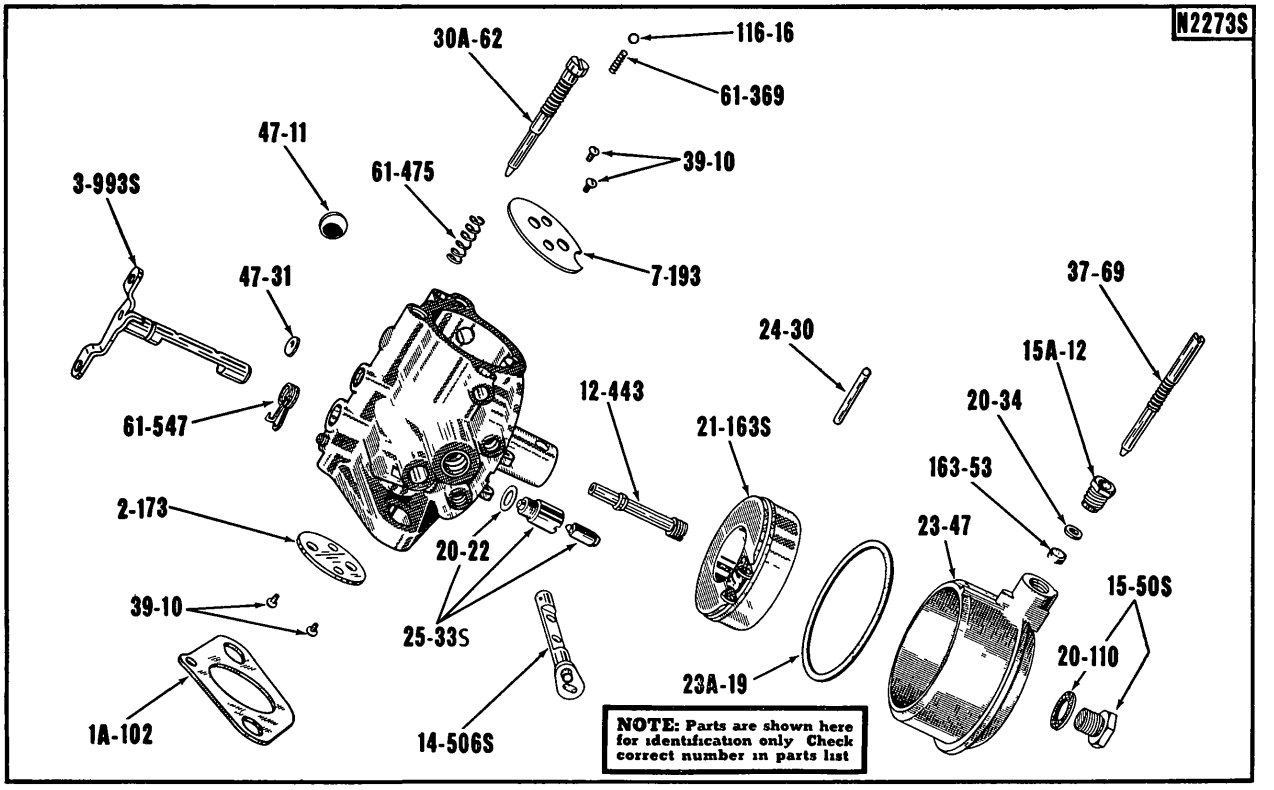
CARBURETER
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HIGH SPEED AND IDLE SCREW ADJUSTMENT

After rebuilding and nstallation on engine is complete the final high speed and idle screw adjustments must be made Turning the adjustable main metering screw clockwise produces a leaner high speed mixture and turning the idle screw clock wise produces a leaner idle mixture

When adjusting the idle needle turn approximately 1/8 turn at a time then wait sufficient time for engine to respond to this adjustment



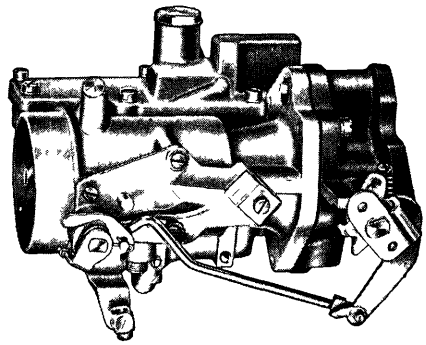
Champion—Carbureter No. N-2273S

Part No.	PART NAME
1A-102	Flange gasket
2-173	Throttle valve
3-993S	Throttle shaft and lever assembly
7-193	Choke valve
12 443	Nozzle
14-506S	Choke lever and shaft assembly
15-50S	Bowl nut assembly (Sup by 15 54S)
15-54S	Bowl nut assembly
15A-12	Packing nut
20-22	Needle seat gasket
20-34	Packing nut gasket
20-110	Bowl nut gasket
21-163S	Float and lever assembly
23-47	Bowl

Part No.	PART NAME	
23A-19	Bowl ring gasket	
24-30	Float lever pin	
25-33S	Needle and seat assembly	
30A-62	Idle adjustment screw	
37-69	High speed adjusting needle	
39-10	Choke and throttle valve attaching screw	(4)
47-11	Idle port welsh plug	
47-31	Idle passage welsh plug	
61-369	Choke shaft spring	
61-475	Idle adjustment screw spring	
61-547	Throttle return spring	
116-16	Choke spring ball	
163-53	Main meter ng screw packing	

NOTE Figures in parentheses indicate number f pieces used in one carbureter Where no figure is shown, only one is used

Three Carbureters
Per Engine



CHEVROLET
CORVETTE
1953-1955

Casting Number 1082 on Face of Flange

YH Horizontal **Carbureters Nos. 2066S-2066SA**

CARBURETER SPECIFICATIONS

For Chevrolet 6 Cylinder Engine: 3-9/16 Inch Bore, 3-15/16 Inch Stroke

Dimensions: Flange size, 1¼ inch 3 bolt.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 11/16 inch I. D.
Main venturi, 1-5/16 inch I. D.

Float Level: See adjustments.

Vents: Outside, none. Inside, balance vent tube to air horn ahead of choke valve.

Gasoline Intake: Spring loaded needle. Size No. 46 (.081 inch) drill in needle seat.

Low Speed Jet Tube: Jet, size No. 70 (.028 inch) drill. By-pass in body, size .0492 inch diameter. Economizer, in bowl cover, size No. 54 (.055 inch) drill. Idle bleed, in bowl cover, size No. 58 (.042 inch) drill.

Idle Port: Upper port, slot type, length .162 inch; width .030 inch.

Idle Port Opening: Top of port to be .124 to .128 inch above top edge of valve with valve tightly closed.

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture turn screw out. Idle engine at 450 r.p.m. gear shift lever in Drive position.

Main Nozzle: Nozzle is installed permanently. Do not remove.

Metering Rod: Economy step, .061 inch diameter. Power step, .058 inch diameter.

Metering Rod Jet: Size No. 45 (.082 inch) drill.

Metering Rod Setting: See adjustments.

Accelerating Pump: Diaphragm type, vacuum and mechanically operated. Pump discharges into nozzle passage. Intake check ball seat, size .115-.120 inch diameter. Discharge check ball seat, in body, size .115-.120 inch diameter. Pump bleed, in diaphragm housing, size No. 73 (.024 inch) drill. Vacuum passage restriction, in body, size No. 46 (.081 inch) drill. Vacuum bleed, to throttle bore, size No. 65 (.035 inch) drill. **Pump jet is permanently installed, do not remove.**

Pump Adjustment: None.

Choke: Manual, interconnected with throttle.

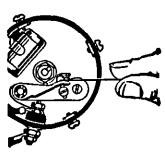
Vacuum Spark Port: Slot type, size .125 x .041 inch. (2066S-2066SA early prod.) Bottom of port to be .026 to .036; (2066SA late prod.). Top of port to be .016 to .026 inch above top edge of valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

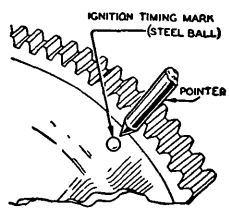
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



Spark Plug Gap .035"



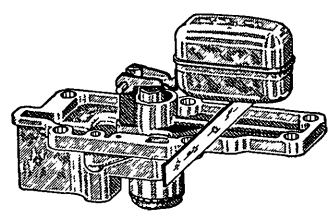
Breaker Point Setting .018"



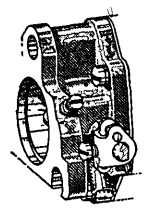
Ignition Timing Breaker Points to Open: T. D. C. (When Steel Ball on Flywheel is in Line with Pointer)



Valve Setting (Hot) Intake .010" Exhaust .020"



Float Setting ⅜ Inch (Use gauge T109-80)



Idle Adjustment Screw Setting ½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

Float Adjustment: With gasket removed, bowl cover assembly inverted and float resting on pin in seated needle, the distance from the bowl cover to the top of float should be ⅜ inch (gauge T109-80). Do not depress float lip against spring loaded pin in needle, but let float rest of its own weight. Adjust by bending float lever. Float setting must be checked with bowl cover held at eye height in a level position.

Float Drop: With bowl cover assembly held in upright position, the distance between float seam (at free end) and bowl cover should be 2". Adjust by bending stop tab on float arm.

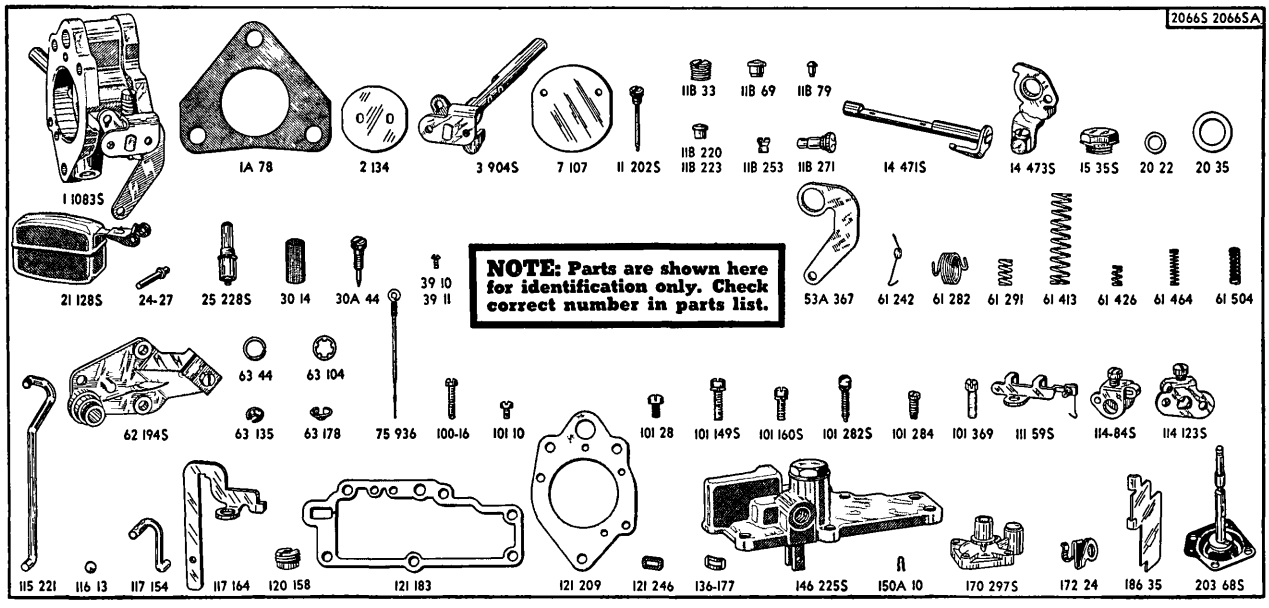
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Metering Rod Adjustment This adjustment is important and should be checked each time the carbureter is reassembled Insert gauge (Tool T109-104) in place of metering rod seating tapered end of gauge in metering rod jet Hold gauge vertical to insure seating in jet With throttle valve tightly closed, press down on diaphragm shaft until metering rod arm contacts lifter link at diaphragm stem With diaphragm shaft held in this position, metering rod pin must rest lightly on metering rod gauge To adjust, bend metering rod arm Use bending tool T109-22

Fast Idle Adjustment With choke valve held tightly closed, there should be 020 inch (gauge T109-29) clearance between throttle valve and bore of carbureter (side opposite idle port) Adjust by bending offset portion of choke connector link (use bending tool T109-213)



Chevrolet 1953-1955—Carbureters Nos. 2066S-2066SA

WHEN SERVICING, USE GASKET ASSORTMENT No 248, REPAIR PACKAGE No. 1771

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1083S	Body flange assembly	
1A-78	FLANGE GASKET	
2-134	Throttle valve	
3-858S	Throttle shaft and lever assy (2066S) (Sup by 3-904S)	
3-904S	Throttle shaft and lever assembly	
7-107	Choke valve	
11-202S	LOW SPEED JET ASSEMBLY	
11B-33	Pipe plug	
11B-69	Rivet plug	
11B-79	Rivet plug	(3)
11B-220	DIAPHRAGM HOUSING RIVET PLUG	
11B-223	Nozzle passage rivet plug	
11B-253	Pump discharge check plug	
11B-271	Idle port rivet plug	
14-471S	Choke shaft and lever assembly	
14-473S	Choke lever assembly	
15-35S	Strainer nut assembly	
20-22	Needle seat gasket	
20-35	BOWL STRAINER GASKET	
21-128S	Float and lever assembly	
24-27	Float lever pin	
25-228S	NEEDLE, PIN, SPRING AND SEAT ASS Y	
30-14	BOWL	
30A-44	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	Throttle valve attaching screw	(2)
53A-367	Fast idle arm	
61-242	Metering rod spring	
61-282	Choke spring	
61-291	Throttle lever adjusting screw spring	
61-413	PUMP DIAPHRAGM SPRING	
61-426	Idle adjustment screw spring	
61-464	PUMP DISCHARGE CHECK SPRING	
61-504	UPPER PUMP SPRING	
62-194S	Choke tube bracket assembly	
63-44	Choke lever retainer ring	
63-104	Throttle shaft retaining ring	

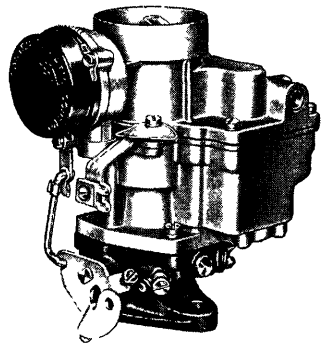
Part No.	PART NAME	
63-135	Upper pump spring retainer	
63 178	Diaphragm spring retainer	
75 936	METERING ROD—STANDARD	
100-16	Throttle lever adjusting screw	
101-10	Wire clamp screw	
101-28	Throttle shaft arm attaching screw	
101-149S	Body flange attaching screw and washer assembly	(3)
101 160S	Bowl cover attaching screw and washer assembly	(6)
101-282S	Diaphragm housing attaching screw and washer assembly	(4)
101-284	Choke tube bracket attaching screw	(3)
101 361	Choke tube clamp attaching screw (2066S) (Sup by 101-369)	
101-369	Choke tube clamp attaching screw	
111-59S	Metering rod arm assembly	
114-84S	THROTTLE SHAFT ARM ASSEMBLY	
114-123S	Throttle shaft arm assembly (For throttle linkage) (2066SA)	
115-221	Choke connector rod	
116-13	PUMP INTAKE AND DISCHARGE CHECK BALL	(2)
117-154	THROTTLE SHAFT ARM CONNECTOR LINK	
117-164	PUMP LIFTER LINK	
120-158	METERING ROD JET	
121-183	BOWL COVER GASKET	
121-209	BODY FLANGE GASKET	
121-246	PUMP LIFTER LINK GASKET	
136-177	Pump lifter link washer	
146-225S	Bowl cover and strainer assembly	
150A-10	Pin spring	(2)
170-297S	Pump diaphragm housing assembly	
172-24	Choke connector rod retainer	
186-35	Fuel bowl baffle plate	
203-53S	Pump diaphragm assembly (2066S) (Sup by 203-68S)	
203-68S	PUMP DIAPHRAGM ASSEMBLY	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.

STANDARD TRANSMISSION

(1¼ Inch Flange)

CLIMATIC® CONTROL



CHEVROLET 1937-1952 TRUCK (216 Cu. In. Eng.) 1953

Casting No. 728 on face of flange.

YF Down-Draft Climatic® Control **Carbureter No. 965S**

CARBURETER SPECIFICATIONS

Chevrolet 6 Cylinder Engine: 3½ Inch Bore, 3¾ Inch Stroke

Dimensions: Flange size, 1¼ inch S. A. E.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 11/16 inch I. D.
Main venturi, 1¼ inch I. D.

Float Setting: See Adjustments.

Vents: Outside, none. Inside balance vent to air horn above choke valve.

Gasoline Intake: Spring loaded needle. Size No. 46 (.081 inch) drill in needle seat.

Low Speed Jet Tube: Jet size No. 66 (.033 inch) drill. By-pass in body size .065 inch drill. Economizer size No. 54 (.055 inch) drill.

Idle Port: Upper port: slot type, length .195; width .030 inch.

Idle Port Opening: Top of port: .166 to .170 inch above top edge of valve with valve tightly closed.

Lower Port (For Idle Adjustment Screw): .0615 to .0655 inch diameter.

Set Idle Adjustment Screw: 1 to 2 turns open. For richer mixture, turn screw out. Do not idle engine below 420 RPM.

Main Nozzle: Nozzle is installed permanently. DO NOT REMOVE.

Metering Rod: Economy step .074 inch diameter. Middle step tapers to .058 inch diameter. Power step .047 inch diameter.

Metering Rod Jet: .098 inch diameter.

Metering Rod Setting: See Adjustments.

Accelerating Pump: Diaphragm type, vacuum and mechanically operated. Pump jet size No. 74 (.0225 inch) drill. Intake ball check seat (in diaphragm housing) size No. 40 (.098 inch) drill. Discharge ball check seat (in body) size No. 42 (.0935 inch) drill. Pump bleed (in diaphragm housing) size No. 70 (.028 inch) drill. Vacuum restriction (in flange) size No. 55 (.052 inch) drill. Vacuum passage (diaphragm bleed) size No. 65 (.035 inch) drill.

Pump Adjustment: See Adjustments.

Choke: Carter Climatic® Control, set 2 points rich. Offset, butterfly type. Choke heat suction hole in body size No. 36 (.1065 inch) drill.

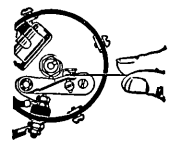
Vacuum Spark Port: Slot type, size .125 by .041 inch. Bottom of port .022 to .032 inch above top edge of valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

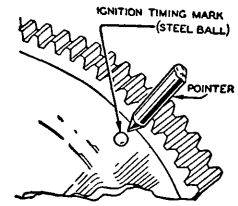
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



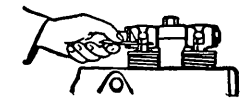
Spark Plug Gap .040" (1937-48) .035" (1949-53)



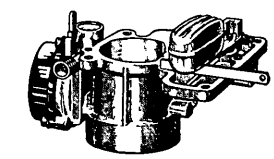
Breaker Point Setting .018"



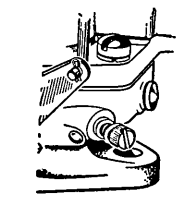
Ignition Timing Breaker Points to Open: When steel ball on flywheel is in line with Pointer



Valve Setting (Hot)
Intake .006"-.008"
Exhaust .013"-.015"



Float Setting 9/32" (Use Gauge T109-126)



Idle Adjustment Screw Setting 1 to 2 Turns Open

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CARBURETER
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CARBURETER ADJUSTMENTS

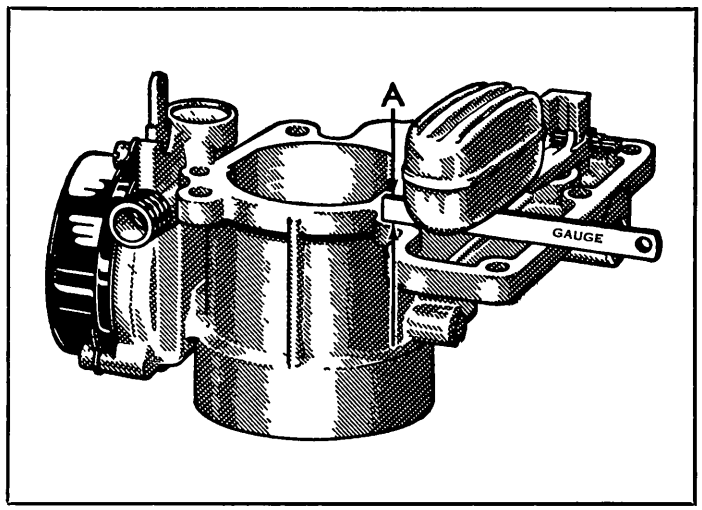


Figure 1
Float Adjustment

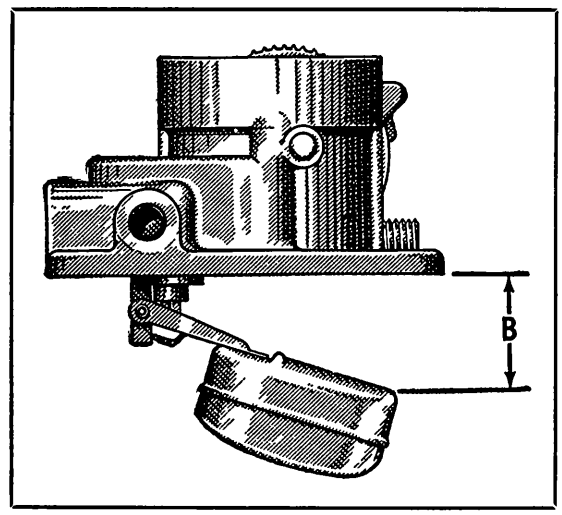


Figure 2
Float Drop

FLOAT ADJUSTMENT (Fig. 1)

With bowl cover assembly inverted and float resting on pin in seated needle and with gasket removed the distance (A) from the bowl cover to the top of float should be 9/32 inch (Gauge T109 126) Do not depress float lip against spring loaded pin in needle but let float rest of its own weight Adjust by bending lip of float not float arm Float setting must be checked with the bowl cover held at eye height in a level position

FLOAT DROP (Fig. 2)

With bowl cover assembly held in upright position the distance (B) between free end of float and bowl cover should be 1¼ inch Adjust by bending stop tabs on float arm

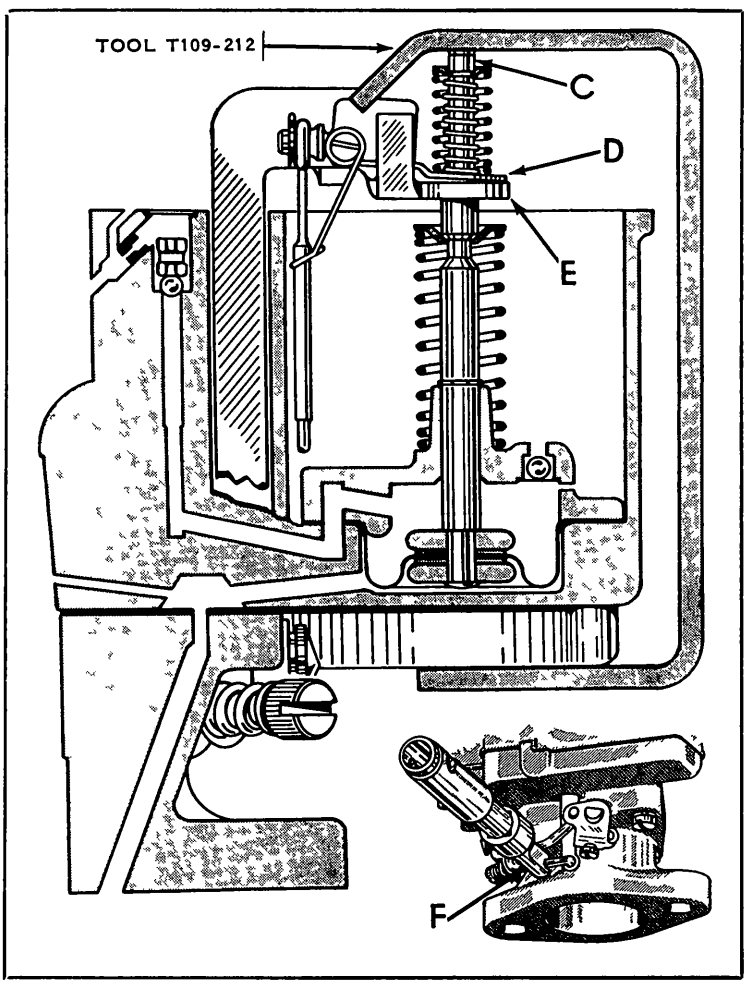


Figure 3
Pump Adjustm nt

PUMP ADJUSTMENT (Fig 3)

This adjustment should be made before the met ering rod adjustment and should be checked each time the carbureter is reassembled With throttle valve seated in the bore of carbureter press down on upper end of diaphragm shaft (C) until it reaches its bottom position (tool T109 212 may be used to hold diaphragm shaft down while checking pump adjustment) The metering rod arm (D) should now contact the pump lifter link (E) at the outer end nearest the springs Adjust by bending pump connector link (F) at its lower angle Use bending tool T109 213

CAUTION Bend connector rod only at its lower angle, as any other method may cause pump lifter link to bind

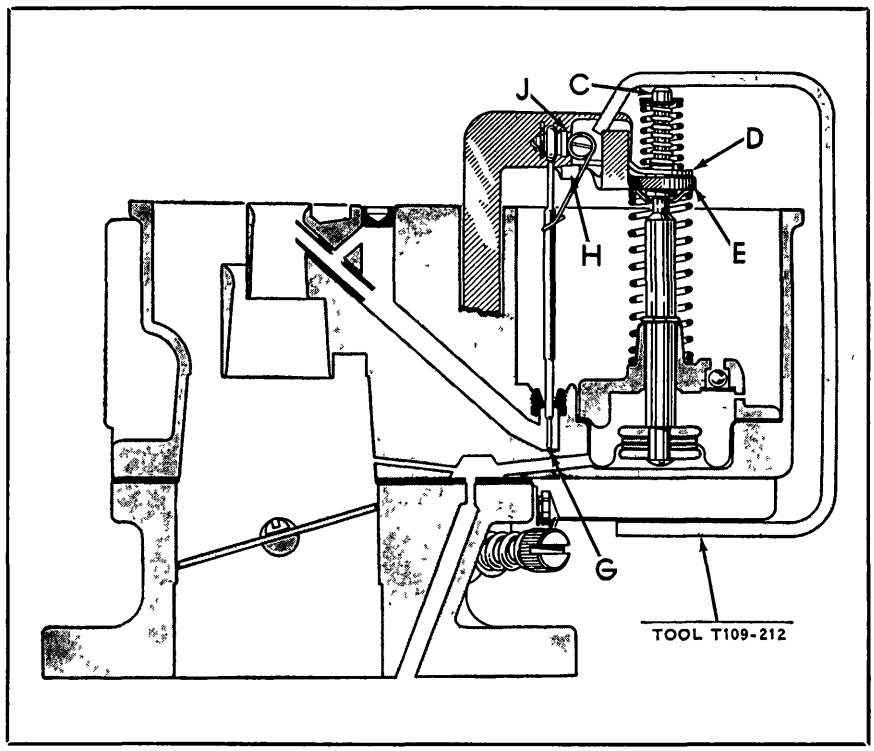


Figure 4
Metering Rod Adjustment

METERING ROD ADJUSTMENT (Fig. 4):

This adjustment is important and should be checked each time the carbureter is reassembled or lean rods are installed. With throttle valve seated in bore of carbureter, press down on upper end of diaphragm shaft (C) until diaphragm bottoms in vacuum chamber. Tool T109-212 may be used to hold diaphragm shaft down while adjusting metering rod. Metering rod should contact bottom of metering rod well (G), and metering rod arm (D) should contact lifter link (E) between springs and at supporting lug (H). Adjust by bending lip (J) of metering rod arm to which metering rod is attached, up or down.

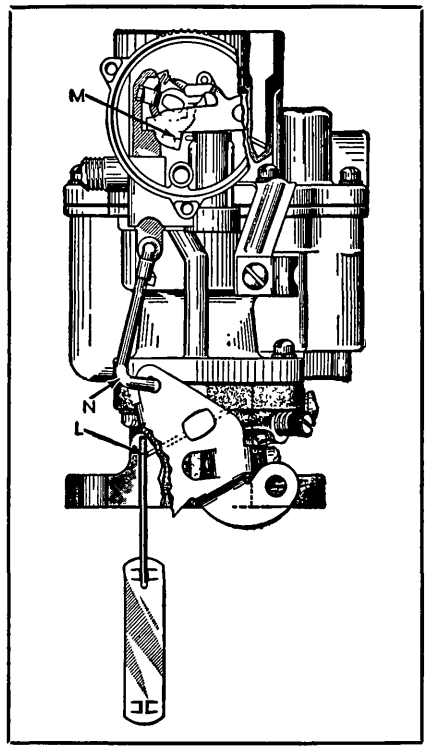


Figure 5
Fast Idle Adjustment

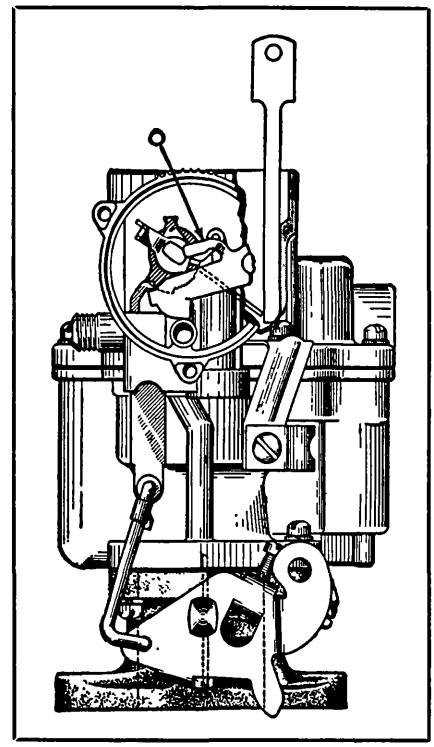


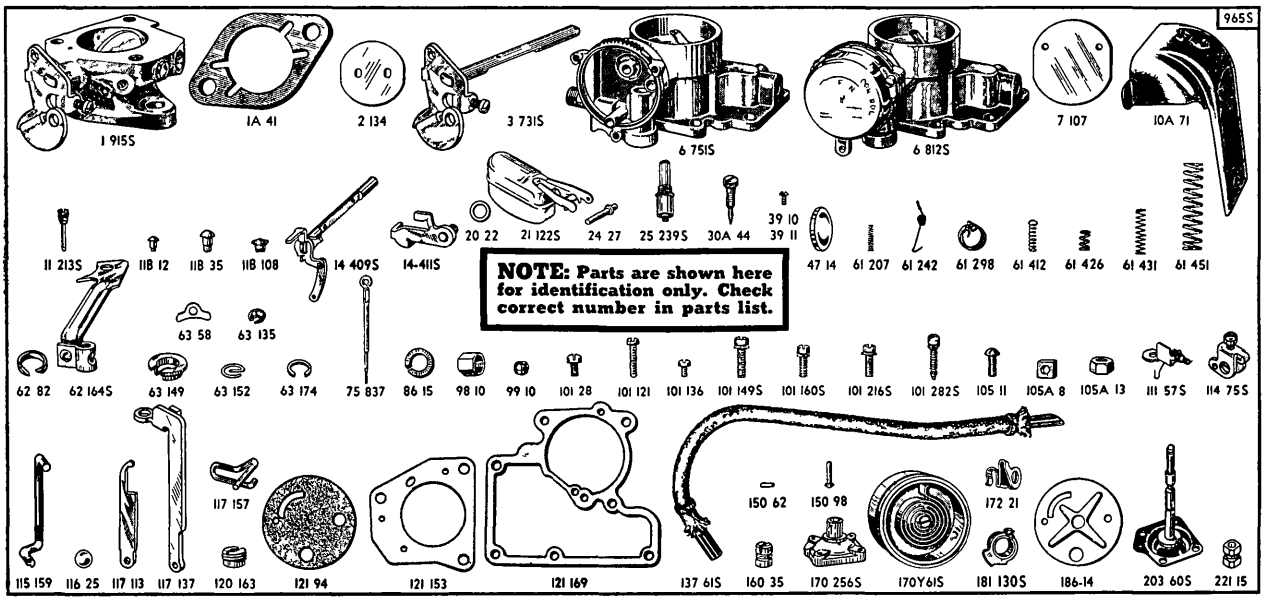
Figure 6
Unloader Adjustment

FAST IDLE ADJUSTMENT (Fig. 5):

Remove thermostatic coil housing, gasket and baffle plate. Crack throttle valve, and hold choke valve fully closed, then close throttle. This will allow fast idle cam (M) to revolve to fast idle position. With choke valve held tightly closed and slight tension on throttle lever, there should now be .067 inch clearance (L) (gauge T109-234) between throttle valve and bore of carbureter (side opposite idle port). Adjust by bending connector link at lower angle (N). Use bending tool T109-213.

UNLOADER ADJUSTMENT (Fig. 6):

This adjustment must be made after fast idle adjustment. Hold throttle valve in wide open position and close choke valve as far as possible without forcing. There should be 3/16 inch clearance between lower edge of choke valve and inner wall of air horn (gauge T109-28). Adjust by bending arm (O) of choke trip lever (Use tool T109-214).



Chevrolet—1937-1952—Carbureter No. 965S

WHEN SERVICING, USE GASKET ASSORTMENT No 208A, REPAIR PACKAGE No 1741

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

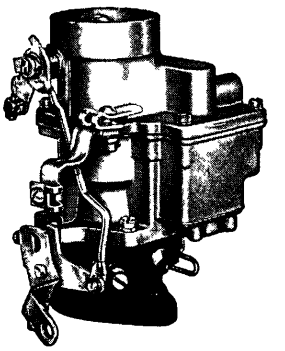
Part No	PART NAME	
1-915S	Body flange assembly	
1A-41	FLANGE GASKET	
2-134	Throttle valve	
3-731S	Throttle shaft and lever assembly	
6-751S	Air horn assembly	
6-812S	Air horn and Climatic ® control assembly	
7-107	Choke valve	
10A-71	Manifold stove	
11-213S	LOW SPEED JET ASSEMBLY	
11B-12	Flange passage plug	
11B-35	Nozzle passage rivet plug	
11B-79	Rivet plug (late prod)	(2)
11B-108	IDLE PORT RIVET PLUG	
14-409S	Choke piston lever and shaft assembly	
14-411S	Choke trip lever assembly	
20-22	Needle seat gasket	
21-122S	Float and lever assembly	
24-27	Float lever pin	
25-239S	NEEDLE PIN SPRING AND SEAT ASSEMBLY	
30A-44	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	THROTTLE VALVE ATTACHING SCREW	(2)
47-14	Welsh plug	
61-207	Intake needle spring	
61-242	Metering rod spring	
61-298	Fast idle cam spring	
61-412	UPPER PUMP SPRING (INNER)	
61-426	Idle adjustment screw spring	
61-431	UPPER PUMP SPRING (OUTER)	
61-451	PUMP DIAPHRAGM SPRING	
62-82	Heat tube covering clamp	(2)
62-164S	Tube clamp assembly	
63-58	Coil housing retainer	(3)
63-135	UPPER PUMP SPRING RETAINER	
63-149	PUMP DIAPHRAGM SPRING RETAINER	
63-152	PUMP INTAKE AND DISCHARGE BALL CHECK RETAINER RING (early prod —2) (late prod —1)	
63-174	PUMP STEM RETAINING RING	
63-202	Pump intake ball check retainer ring (late prod)	

Part No.	PART NAME	
75-837	METERING ROD—STANDARD	
75-871	Metering rod—1 size lean	
75-872	Metering rod—2 sizes lean	
86-15	Flange stud lock washer	(2)
98-10	Compression coupling nut	
99-10	Compression coupling cone	
101-28	Throttle shaft arm attaching screw	
101-121	Throttle lever adjustment screw	
101-136	Coil housing attaching screw	(3)
101-149S	Body flange attaching screw and washer assembly	(3)
101-160S	Air horn attaching screw and washer assembly	(5)
101-216S	Air horn attaching screw and washer assembly	(2)
101-282S	Diaphragm housing attaching screw and washer assembly	(4)
105-11	Tube clamp screw	
105A-8	Tube clamp nut	
105A-13	Flange nut	(2)
111-57S	Metering rod arm assembly	
114-75S	THROTTLE SHAFT ARM ASSEMBLY	
115-159	Choke connector rod	
116-25	PUMP DISCHARGE BALL CHECK	(2)
117-113	Fast idle link	
117-137	PUMP LIFTER LINK	
117-157	PUMP CONNECTOR LINK	
120-163	METERING ROD JET	
121-94	THERMOSTATIC COIL HOUSING GASKET	
121-153	BODY FLANGE GASKET	
121-169	BOWL COVER AND AIR HORN GASKET	
137-61S	Climatic control heat tube and cover assembly	
150-62	Choke piston pin	
150-98	Intake needle pin	
160-35	Choke piston	
170-256S	Pump diaphragm housing and ball check assembly	
170Y61S	Thermostatic coil and housing assembly	
172-21	Throttle connector rod retainer	
181-130S	Fast idle cam assembly	
186-14	Coil housing baffle plate	
203-60S	PUMP DIAPHRAGM ASSEMBLY	
221-15	Ball check weight	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

CARBURETER
TRADE MARK REG U S PAT FF
MARCA REGISTRADA

1¼ Inch Flange
STANDARD TRANSMISSION
(Manual Choke)



Casting No. 630 on face of flange.

CHEVROLET PASSENGER CARS 1937-1952

TRUCKS (216 Cu. In. Engine) 1937-1953

YF DOWN-DRAFT **CARBURETER No. 964S**

CARBURETER SPECIFICATIONS

For Chevrolet 6 Cylinder Engine: 3½ Inch Bore, 3¾ Inch Stroke

Dimensions: Flange size, 1¼ inch S. A. E.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 11/16 inch I. D.
Main venturi, 1¼ inch I. D.

Float Setting: See Adjustments.

Vents: Outside, none. Inside balance vent to air horn above choke valve.

Gasoline Intake: Spring loaded needle. Size No. 46 (.081 inch) drill in needle seat.

Low Speed Jet Tube: Jet size, No. 68 (.031 inch) drill. By-pass in body, size No. 51 (.067 inch) drill. Economizer size, No. 54 (.055 inch) drill.

Idle Port: Upper port: slot type, length .174 to .176 inch, width .040 inch.

Idle Port Opening: Top of port: .166 to .170 inch above top edge of valve with valve tightly closed.

Lower Port (For Idle Adjustment Screw): .0615 to .0655 inch diameter.

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture, turn screw out. Do not idle engine below 420 RPM.

Main Nozzle: Nozzle is installed permanently DO NOT REMOVE.

Metering Rod: Economy step .074 inch diameter. Middle step tapers to .058 inch diameter. Power step .047 inch diameter.

Metering Rod Jet: .098 inch diameter.

Metering Rod Setting: See Adjustments.

Accelerating Pump: Diaphragm type, vacuum and mechanically operated. Pump jet size No. 74 (.0225 inch) drill. Intake, ball check seat (in diaphragm housing) size No. 40 (.098 inch) drill. Discharge ball check seat (in body) size No. 42 (.0935 inch) drill. Pump bleed (in diaphragm housing) size No. 70 (.028 inch) drill. Vacuum restriction (in flange) size No. 55 (.052 inch) drill. Vacuum passage (diaphragm bleed) size No. 65 (.035 inch) drill.

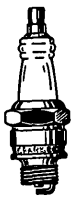
Pump Adjustment: See Adjustments.

Choke: Manual, interconnected with throttle. Valve, offset butterfly type.

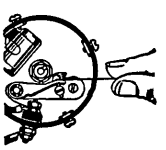
Vacuum Spark Port: Slot type, Size .125 by .041 inch. Bottom of port .022 to .032 inch above top edge of valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

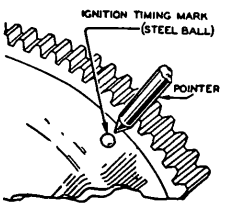
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



Spark Plug Gap .040" (1937-48) .035" (1949-53)



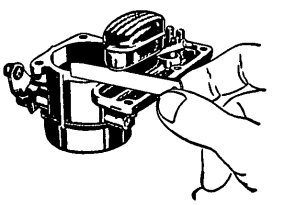
Breaker Point Setting .018"



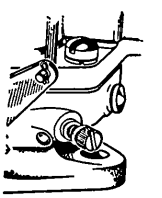
Ignition Timing Breaker Points to Open: When Steel Ball on Flywheel is in Line with Pointer



Valve Setting (Hot) Intake .006"-.008" Exhaust .013"-.015"



Float Setting 9/32 Inch (Use Gauge T109-126)



Idle Adjustment Screw Setting ½ to 1½ Turns Open

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CARBURETER ADJUSTMENTS

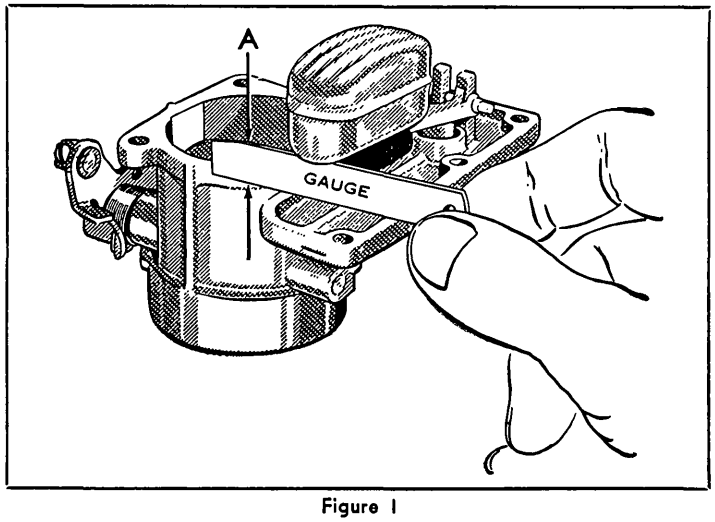


Figure 1
Float Adjustment

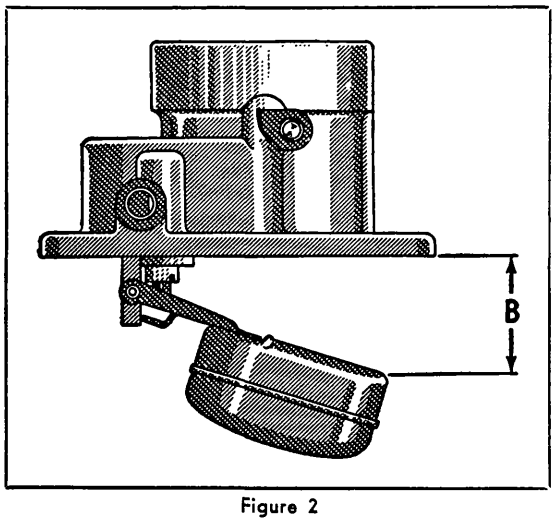


Figure 2
Float Drop

FLOAT ADJUSTMENT (Fig. 1):

With bowl cover assembly inverted and float resting on pin in seated needle, and with gasket removed, the distance (A) from the bowl cover to the top of float should be 9/32 inch (Gauge T109-126). Do not depress float lip against spring loaded pin in needle, but let float rest of its own weight. Adjust by bending lip of float, not float arm. Float setting must be checked with the bowl cover held at eye height in a level position.

FLOAT DROP (Fig. 2):

With bowl cover assembly held in upright position the distance (B) between free end of float and bowl cover should be 1¼ inch. Adjust by bending stop tabs on float arm.

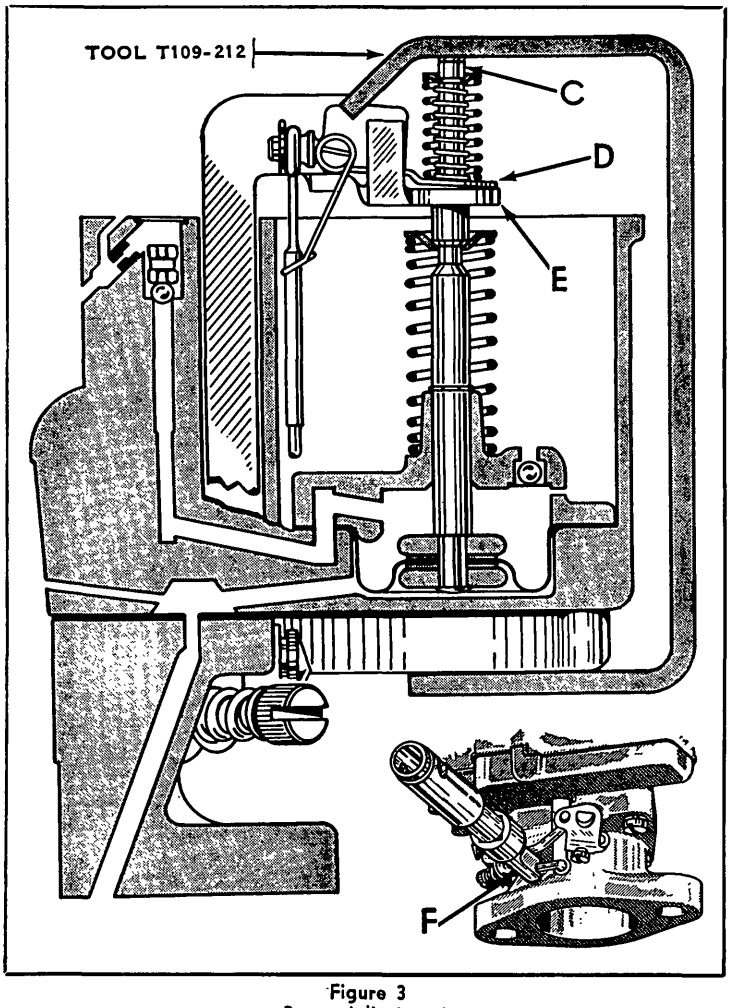


Figure 3
Pump Adjustment

PUMP ADJUSTMENT (Fig. 3):

This adjustment should be made before the metering rod adjustment and should be checked each time the carbureter is reassembled. With throttle valve seated in the bore of carbureter, press down on upper end of diaphragm shaft (C) until it reaches its bottom position (tool T109-212 may be used to hold diaphragm shaft down while checking pump adjustment). The metering rod arm (D) should now contact the pump lifter link (E) at the outer end nearest the springs. Adjust by bending pump connector link (F) at its lower angle. Use bending tool T109-213.

CAUTION: Bend connector rod only at its lower angle, as any other method may cause pump lifter link to bind.

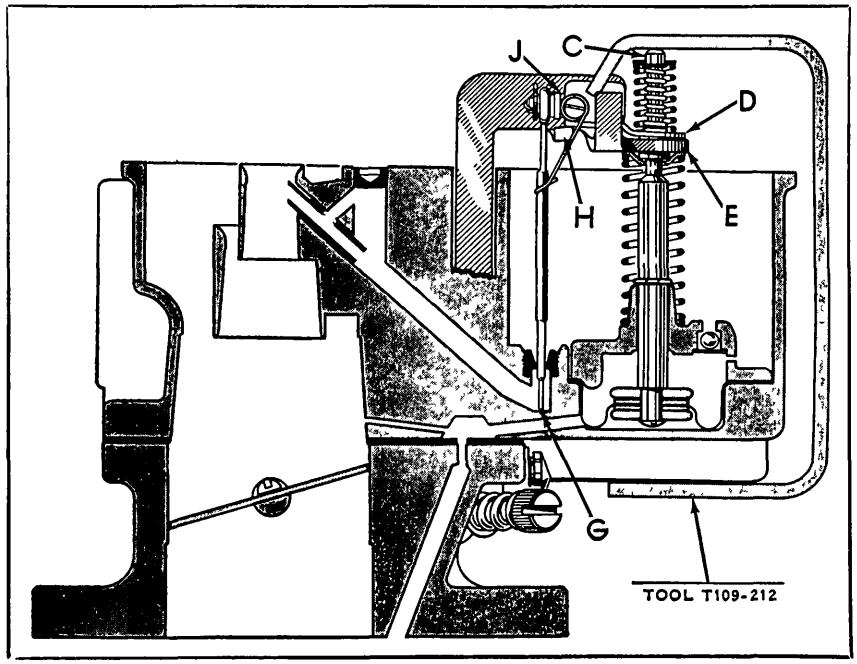


Figure 4
Metering Rod Adjustment

METERING ROD ADJUSTMENT (Fig. 4):

This adjustment is important and should be checked each time the carbureter is reassembled or lean rods are installed. With throttle valve seated in bore of carbureter, press down on upper end of diaphragm shaft (C) until diaphragm bottoms in vacuum chamber. Tool T109-212 may be used to hold diaphragm shaft down while adjusting metering rod. Metering rod should contact bottom of metering rod well (G) and metering rod arm (D) should contact lifter link (E) at the outer end nearest the springs and at supporting lug (H). Adjust by bending lip (J) of metering rod arm to which metering rod is attached, up or down.

FAST IDLE ADJUSTMENT (Fig. 5):

With choke held in wide open position, lip (K) of fast idle arm should contact boss on body casting. Adjust by bending at offset portion (L) of choke connector link.

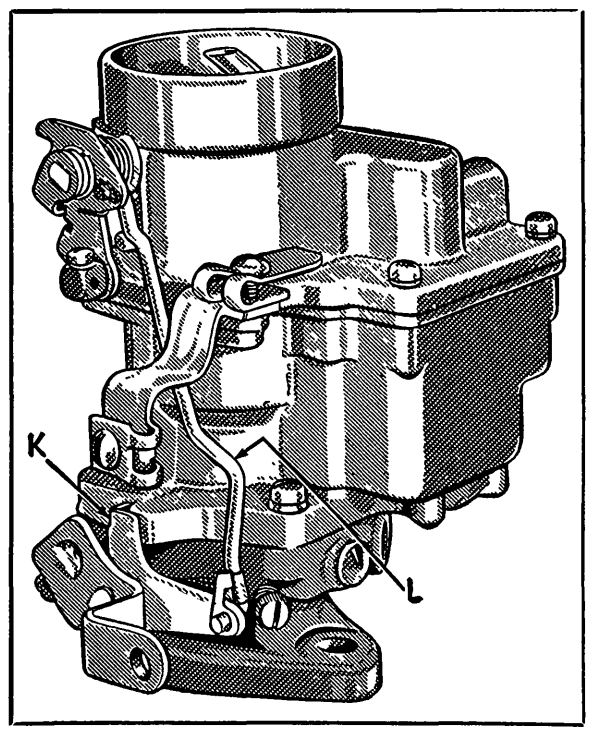
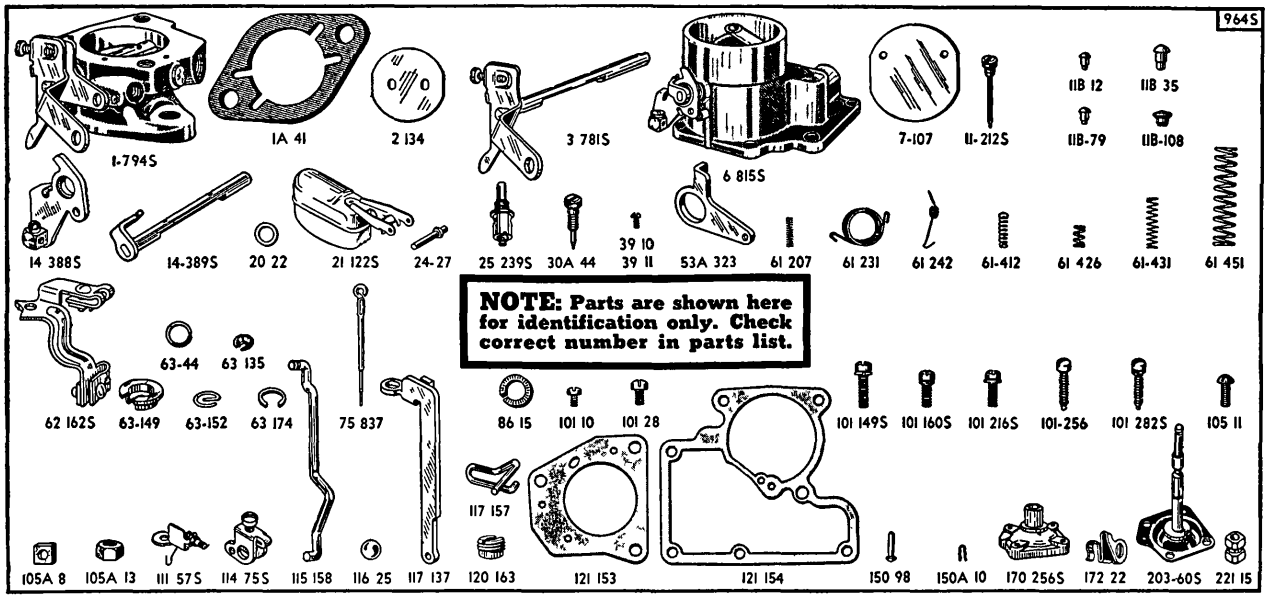


Figure 5
Fast Idle Adjustment



Chevrolet—1937-1953—Carbureter No. 964S

WHEN SERVICING, USE GASKET ASSORTMENT No 206A; REPAIR PACKAGE No. 1720

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-794S	Body flange assembly	
1A-41	FLANGE GASKET	
2-134	Throttle valve	
3-781S	Throttle shaft and lever assembly	
6-815S	Air horn assembly	
7-107	Choke valve	
11-212S	LOW SPEED JET ASSEMBLY	
11B-12	Rivet plug	
11B-35	Rivet plug	
11B-79	Rivet plug	(2)
11B-108	IDLE PORT RIVET PLUG	
14-388S	Choke lever assembly	
14-389S	Choke shaft and lever assembly	
20-22	Needle seat gasket	
21-122S	Float and lever assembly	
24-27	Float lever pin	
25-195S	Needle spring pin and seat assembly (Sup by 25 239S)	
25-239S	NEEDLE PIN SPRING AND SEAT ASSEMBLY	
30A-44	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	THROTTLE VALVE ATTACHING SCREW	(2)
53A-323	Fast idle arm	
61-207	Intake needle spring	
61-231	Choke lever spring	
61-242	Metering rod spring	
61-412	UPPER PUMP SPRING (INNER)	
61-426	Idle adjustment screw spring	
61-431	UPPER PUMP SPRING (OUTER)	
61-451	PUMP DIAPHRAGM SPRING	
62-162S	Choke tube clamp assembly	
63-44	Choke lever retaining ring	
63-135	UPPER PUMP SPRING RETAINER	
63 149	PUMP DIAPHRAGM SPRING RETAINER	

Part No.	PART NAME	
63-152	PUMP INTAKE AND DISCHARGE BALL CHECK RETAINER RING (early prod (2) (late prod (1)	
63-174	PUMP STEM RETAINING RING	
63-202	Pump intake ball check retainer ring (late prod)	
75-837	METERING ROD—STANDARD	
75-871	Metering rod—1 size lean	
75-872	Metering rod—2 sizes lean	
86-15	Flange stud lock washer	(2)
101-10	Wire clamp screw	
101-28	Throttle shaft arm attaching screw	
101-149S	Body flange attaching screw and washer assembly	(3)
101-160S	Air horn attaching screw and washer assembly	(5)
101-216S	Air horn attaching screw and washer assembly	(2)
101-256	Throttle lever adjusting screw	
101-282S	Diaphragm housing attaching screw and washer assembly	(4)
105-11	Tube clamp screw	(2)
105A-8	Tube clamp nut	(2)
105A-13	Flange stud nut	(2)
111-57S	Metering rod arm assembly	
114-75S	THROTTLE SHAFT ARM ASSEMBLY	
115-158	Choke connector rod	
116-25	PUMP INTAKE AND DISCHARGE BALL CHECK	(2)
117-137	PUMP LIFTER LINK	
117-157	PUMP CONNECTOR LINK	
120-163	METERING ROD JET	
121-153	BODY FLANGE GASKET	
121-154	BOWL COVER AND AIR HORN GASKET	
150-98	Intake needle pin	
150A-10	PIN SPRING	
170-256S	Pump diaphragm housing and ball check assembly	
172-22	Connector rod retainer	
203-60S	PUMP DIAPHRAGM ASSEMBLY	
221-15	Ball check weight	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

CARBURETER
TRADE MARK REG U S PAT FF.
MARCA REGISTRADA

CHEVROLET

FLEET ECONOMY — 1937-1952

1¼ Inch Flange — Standard Transmission

YF DOWN-DRAFT **CARBURETER No. 2008S**

(Connect Throttle Rod in Outer Hole of Throttle Lever for Maximum Economy)

CARBURETER SPECIFICATIONS

For Chevrolet Six Cylinder Engine 3½ Inch Bore, 3¾ Inch Stroke (1937 52)
For Chevrolet Six Cylinder Engine 3½ Inch Bore, 3¼ Inch Stroke (1946-48)
For Chevrolet Six Cylinder Engine 3 9/16 Inch Bore 3 15/16 Inch Stroke (1941 49)

Dimensions Flange size 1¼ inch S A E
Primary venturi 11/32 inch I D
Secondary venturi 11/16 inch I D
Main venturi 1¼ inch I D
Main ventur restrictor ring 1 1/16 inch I D

Float Setting See Adjustments

Vents Outside none Inside balance vent tube to a r horn above choke valve

Gasoline Intake Spring loaded needle Size No 46 (081 inch) drill in needle seat

Low Speed Jet Tube Jet size No 68 (031 inch) drill By pass (in body) size No 51 (067 inch) drill Economizer size No 54 (055 inch) drill

Idle Port Upper port slot type length 174 to 176 inch width 040 inch

Idle Port Opening Top of upper port 166 to 170 inch above top edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw) Size 0615 to 0655 inch diameter

Set Idle Adjustment Screw ¾ to 1¾ turns open For richer mixture turn screw out Do not idle engine below 420 RPM

Main Nozzle Nozzle is installed permanently DO NOT RE MOVE Anti percolator well bleed to bore size No 65 (035 inch) drill

Metering Rod Economy step 074 inch diameter
Middle step tapers to 058 inch diameter
Power step 047 inch diameter

Metering Rod Jet 098 inch diameter

Accelerating Pump Diaphragm type vacuum and mechanically operated
Pump jet size No 74 (0225 inch) dr ll
Intake ball check seat (in diaphragm housing) size No 40 (098 inch) drill
Discharge ball check seat (in body) size No 42 (0935 inch) drill
Pump bleed (in diaphragm housing) size No 70 (028 inch) drill
Vacuum restriction (in flange) size No 55 (052 inch) drill
Vacuum passage (diaphragm bleed) size No 65 (035 inch) drill

Pump Adjustment See Adjustments

Choke Manual interconnected with throttle Valve offset butterfly type

Vacuum Spark Port Slot type Size 125 by 041 inch Bottom of port 022 to 032 nch above top edge of valve with valve tightly closed

MOTOR TUNE-UP

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open When Steel Ball on Flywheel is in Line with Pointer	Valve Setting (Hot)	Float Setting	Idle Adjustment Screw Setting
040" (1937-48) 035" (1949 52)	018"		Intake 006" 008" Exhaust 013" 015"	9/32 Inch (Use Gauge T109 126)	¾ to 1¾ Turns Open

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: With bowl cover assembly inverted and float resting on pin in seated needle and with gasket removed, the distance from the bowl cover to the top of float should be 9/32' (Gauge T109-126) Do not depress float lip against spring loaded pin in needle, but let float rest of its own weight Adjust by bending lip of float, not float arm Float setting must be checked with the bowl cover held at eye height in a level position

FLOAT DROP With bowl cover assembly held in upright position the distance between free end of float and bowl cover should be 1¼' Adjust by bending stop tabs on float arm

PUMP ADJUSTMENT This adjustment should be made before the metering rod adjustment and should be checked each time the carbureter is reassembled With throttle valve seated in the bore of carbureter, press down on upper end of diaphragm shaft until it reaches its bottom position (tool T109-212 may be used to hold diaphragm shaft down while checking pump adjustment) The metering rod arm should now contact the pump lifter link at the outer end nearest the springs Adjust by bending pump connector link at its lower angle Use bending tool T109 213

CAUTION Bend connector rod only at its lower angle as any other method may cause pump lifter link to bind

METERING ROD ADJUSTMENT This adjustment is important and should be checked each time the carbureter is reassembled or leaner rods are installed With throttle valve seated in bore of carbureter press down on upper end of diaphragm shaft until diaphragm bottoms in vacuum chamber (tool T109 212 may be used to hold diaphragm shaft down while adjusting metering rod) Metering rod should contact bottom of metering rod well and metering rod arm should contact lifter link at the outer end nearest the springs and at supporting lug Adjust by bending lip of metering rod arm to which metering rod is attached up or down

FAST IDLE ADJUSTMENT With choke held in wide open position lip of fast idle arm should contact boss on body casting Adjust by bending at offset portion of choke connector rod

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PARTS LIST

WHEN SERVICING, USE GASKET ASSORTMENT No. 206A; REPAIR PACKAGE No. 1720

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1026S	Body flange assembly	
1A-41	FLANGE GASKET	
2-134	Throttle valve	
3-818S	Throttle shaft and lever assembly	
6-815S	Air horn assembly	
7-107	Choke valve	
11-212S	LOW SPEED JET ASSEMBLY	
11B-12	Rivet plug	
11B-35	Rivet plug	
11B-79	Rivet plug (late prod)	(2)
11B-108	IDLE PORT RIVET PLUG	
14-388S	Choke lever assembly	
14-389S	Choke shaft and lever assembly	
20-22	Needle seat gasket	
21-122S	Float and lever assembly	
24-27	Float lever pin	
25-195S	Needle, spring, pin and seat assembly (Sup. by 25 239S)	
25-239S	NEEDLE, PIN, SPRING AND SEAT ASSEMBLY	
30A-44	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	THROTTLE VALVE ATTACHING SCREW	(2)
53A-323	Fast idle arm	
61-207	Intake needle spring	
61-231	Choke lever spring	
61-242	Metering rod spring	
61-412	UPPER PUMP SPRING (INNER)	
61-426	Idle adjustment screw spring	
61-431	UPPER PUMP SPRING (OUTER)	
61-451	PUMP DIAPHRAGM SPRING	
62-162S	Choke tube clamp assembly	
63-44	Choke lever retaining ring	
63-135	UPPER PUMP SPRING RETAINER	
63-149	PUMP DIAPHRAGM SPRING RETAINER	
63-152	PUMP INTAKE AND DISCHARGE BALL CHECK RETAINER RING (Early Prod (2) (Late Prod (1)	

Part No.	PART NAME	
63-174	PUMP STEM RETAINING RING	
63-202	Pump intake ball check retainer ring (Late Prod.)	
75-837	METERING ROD—STANDARD	
75-871	Metering rod—1 size lean	
75-872	Metering rod—2 sizes lean	
86-15	Flange stud lock washer	(2)
101-10	Wire clamp screw	
101-28	Throttle shaft arm attaching screw	
101-121	Throttle lever adjusting screw	
101-149S	Body flange attaching screw and washer assembly	(3)
101-160S	Air horn attaching screw and washer assembly	(5)
101-216S	Air horn attaching screw and washer assembly	(2)
101-282S	Diaphragm housing attaching screw and washer assembly	(4)
105-11	Tube clamp screw	(2)
105A-8	Tube clamp nut	(2)
105A-13	Flange nut	(2)
111-57S	Metering rod arm assembly	
114-75S	THROTTLE SHAFT ARM ASSEMBLY	
115-158	Choke connector rod	
116-25	PUMP INTAKE AND DISCHARGE BALL CHECK	(2)
117-137	PUMP LIFTER LINK	
117-157	PUMP CONNECTOR LINK	
120-163	METERING ROD JET	
121-153	BODY FLANGE GASKET	
121-154	BOWL COVER AND AIR HORN GASKET	
150-98	Intake needle pin	
150A-10	PIN SPRING	
170-256S	Pump diaphragm housing and ball check assembly	
172-22	Connector rod retainer	
203-60S	PUMP DIAPHRAGM ASSEMBLY	
221-15	Ball check weight	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

CARBURETER
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CHEVROLET

FLEET ECONOMY — 1937-1952

1¼ Inch Flange — Standard Transmission

YF DOWN-DRAFT **CARBURETER No. 2008S**

(Connect Throttle Rod in Outer Hole of Throttle Lever for Maximum Economy)

CARBURETER SPECIFICATIONS

For Chevrolet Six Cylinder Engine 3½ Inch Bore 3¾ Inch Stroke (1937 52)
For Chevrolet Six Cylinder Engine 3½ Inch Bore, 3¼ Inch Stroke (1946-48)
For Chevrolet Six Cylinder Engine 3 9/16 Inch Bore 3-15/16 Inch Stroke (1941 49)

Dimensions Flange size 1¼ inch S A E
Primary venturi 11/32 inch I D
Secondary venturi 11/16 inch I D
Main venturi 1¼ inch I D
Ma n ventur restrictor ring 1 1/16 inch I D

Float Setting See Adjustments

Vents Outside none Inside balance vent tube to air horn above choke valve

Gasoline Intake Spring loaded needle Size No 46 (081 inch) drill in needle seat

Low Speed Jet Tube Jet size No 68 (031 inch) drill By pass (in body) size No 51 (067 inch) drill Economizer size No 54 (055 inch) drill

Idle Port Upper port slot type length 174 to 176 inch width 040 inch

Idle Port Opening Top of upper port 166 to 170 inch above top edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw) Size 0615 to 0655 inch diameter

Set Idle Adjustment Screw ¾ to 1¾ turns open For richer mixture turn screw out Do not idle engine below 420 RPM

Main Nozzle Nozzle is installed permanently DO NOT RE MOVE Anti percolator well bleed to bore size No 65 (035 inch) drill

Metering Rod Economy step 074 inch diameter
Middle step tapers to 058 inch diameter
Power step 047 inch diameter

Metering Rod Jet 098 inch diameter

Accelerating Pump Diaphragm type vacuum and mechanically operated
Pump jet size No 74 (0225 inch) drill
Intake ball check seat (in diaphragm housing) size No 40 (098 inch) drill
Discharge ball check seat (in body) size No 42 (0935 inch) drill
Pump bleed (in diaphragm housing) size No 70 (028 inch) drill
Vacuum restriction (in flange) size No 55 (052 inch) drill
Vacuum passage (diaphragm bleed) size No 65 (035 inch) drill

Pump Adjustment See Adjustments

Choke Manual interconnected with throttle Valve offset butterfly type

Vacuum Spark Port Slot type Size 125 by 041 inch Bottom of port 022 to 032 inch above top edge of valve with valve tightly closed

MOTOR TUNE-UP

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open When Steel Ball on Flywheel is in Line with Pointer	Valve Setting (Hot)	Float Setting	Idle Adjustment Screw Setting
040" (1937-48) 035" (1949 52)	018"		Intake 006" 008" Exhaust 013" 015"	9/32 Inch (Use Gauge T109 126)	¾ to 1¾ Turns Open

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: With bowl cover assembly inverted and float resting on pin in seated needle, and with gasket removed, the distance from the bowl cover to the top of float should be 9/32" (Gauge T109-126) Do not depress float lip against spring loaded pin in needle, but let float rest of its own weight Adjust by bending lip of float, not float arm Float setting must be checked with the bowl cover held at eye height in a level position

FLOAT DROP With bowl cover assembly held in upright position the distance between free end of float and bowl cover should be 1¼' Adjust by bending stop tabs on float arm

PUMP ADJUSTMENT This adjustment should be made before the metering rod adjustment and should be checked each time the carbureter is reassembled With throttle valve seated in the bore of carbureter, press down on upper end of diaphragm shaft until it reaches its bottom position (tool T109-212 may be used to hold diaphragm shaft down while checking pump adjustment) The metering rod arm should now contact the pump lifter link at the outer end nearest the springs Adjust by bending pump connector link at its lower angle Use bending tool T109 213

CAUTION Bend connector rod only at its lower angle as any other method may cause pump lifter link to bind

METERING ROD ADJUSTMENT This adjustment is important and should be checked each time the carbureter is reassembled or leaner rods are installed With throttle valve seated in bore of carbureter press down on upper end of diaphragm shaft until diaphragm bottoms in vacuum chamber (tool T109 212 may be used to hold diaphragm shaft down while adjusting metering rod) Metering rod should contact bottom of metering rod well and metering rod arm should contact lifter link at the outer end nearest the springs and at supporting lug Adjust by bending lip of metering rod arm to which metering rod is attached up or down

FAST IDLE ADJUSTMENT With choke held in wide open position lip of fast idle arm should contact boss on body casting Adjust by bending at offset portion of choke connector rod

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PARTS LIST

WHEN SERVICING, USE GASKET ASSORTMENT No 206A; REPAIR PACKAGE No. 1720

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

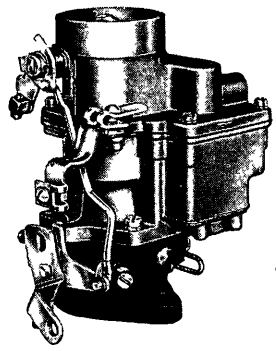
Part No.	PART NAME	
1-1026S	Body flange assembly	
1A-41	FLANGE GASKET	
2-134	Throttle valve	
3-818S	Throttle shaft and lever assembly	
6-815S	Air horn assembly	
7-107	Choke valve	
11-212S	LOW SPEED JET ASSEMBLY	
11B-12	Rivet plug	
11B-35	Rivet plug	
11B-79	Rivet plug (late prod)	(2)
11B 108	IDLE PORT RIVET PLUG	
14 388S	Choke lever assembly	
14-389S	Choke shaft and lever assembly	
20 22	Needle seat gasket	
21-122S	Float and lever assembly	
24-27	Float lever pin	
25-195S	Needle, spring, pin and seat assembly (Sup by 25 239S)	
25-239S	NEEDLE PIN, SPRING AND SEAT ASSEMBLY	
30A-44	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	THROTTLE VALVE ATTACHING SCREW	(2)
53A-323	Fast idle arm	
61-207	Intake needle spring	
61-231	Choke lever spring	
61-242	Metering rod spring	
61-412	UPPER PUMP SPRING (INNER)	
61-426	Idle adjustment screw spring	
61-431	UPPER PUMP SPRING (OUTER)	
61-451	PUMP DIAPHRAGM SPRING	
62-162S	Choke tube clamp assembly	
63-44	Choke lever retaining ring	
63-135	UPPER PUMP SPRING RETAINER	
63-149	PUMP DIAPHRAGM SPRING RETAINER	
63-152	PUMP INTAKE AND DISCHARGE BALL CHECK RETAINER RING (Early Prod (2) (Late Prod (1)	

Part No	PART NAME	
63-174	PUMP STEM RETAINING RING	
63-202	Pump intake ball check retainer ring (Late Prod)	
75-837	METERING ROD—STANDARD	
75-871	Metering rod—1 size lean	
75-872	Metering rod—2 sizes lean	
86-15	Flange stud lock washer	(2)
101-10	Wire clamp screw	
101-28	Throttle shaft arm attaching screw	
101-121	Throttle lever adjusting screw	
101-149S	Body flange attaching screw and washer assembly	(3)
101-160S	Air horn attaching screw and washer assembly	(5)
101-216S	Air horn attaching screw and washer assembly	(2)
101-282S	Diaphragm housing attaching screw and washer assembly	(4)
105-11	Tube clamp screw	(2)
105A-8	Tube clamp nut	(2)
105A-13	Flange nut	(2)
111-57S	Metering rod arm assembly	
114-75S	THROTTLE SHAFT ARM ASSEMBLY	
115-158	Choke connector rod	
116-25	PUMP INTAKE AND DISCHARGE BALL CHECK	(2)
117-137	PUMP LIFTER LINK	
117-157	PUMP CONNECTOR LINK	
120-163	METERING ROD JET	
121-153	BODY FLANGE GASKET	
121-154	BOWL COVER AND AIR HORN GASKET	
150-98	Intake needle pin	
150A-10	PIN SPRING	
170-256S	Pump diaphragm housing and ball check assembly	
172-22	Connector rod retainer	
203-60S	PUMP DIAPHRAGM ASSEMBLY	
221-15	Ball check weight	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

CARBURETER
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(1½ Inch Flange)
Manual Choke



Casting No. 788 on face of flange.

CHEVROLET POWER GLIDE AND TRUCK 1950-1952

YF DOWN-DRAFT **CARBURETER No. 966S**

CARBURETER SPECIFICATIONS

For Chevrolet 6 Cylinder Engine: 3-9/16 Inch Bore, 3-15/16 Inch Stroke

Dimensions: Flange size, 1½ inch S. A. E.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 11/16 inch I. D.
Main venturi, 1-5/16 inch I. D.

Float Setting: See adjustments.

Vents: Outside, none. Inside balance vent to air horn above choke valve.

Gasoline Intake: Spring loaded needle. Size No. 46 (.081 inch) drill in needle seat.

Low Speed Jet Tube: Jet size No. 67 (.032 inch) drill. By-pass in body, size No. 52 (.0635 inch) drill. Economizer size No. 55 (.052 inch) drill.

Idle Port: Upper port: slot type, length .189 to .191 inch; width .040 inch.

Idle Port Opening: Top of port .153 to .157 inch above top edge of valve with valve tightly closed.

Lower Port (For Idle Adjustment Screw): .0615 to .0655 inch diameter.

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture, turn screw out. Do not idle engine below 450 RPM.

Main Nozzle: Nozzle is installed permanently. DO NOT REMOVE. Anti-percolator: Drilled passage from anti-percolator well to nozzle.

Metering Rod: Economy step .073 inch diameter; middl step tapers to .059 inch diameter; power step .050 inch diameter.

Metering Rod Jet: .1015 inch diameter.

Metering Rod Setting: See adjustments.

Accelerating Pump: Diaphragm type vacuum and mechanically operated. Pump jet size No. 72 (.025 inch) drill. Intake, ball check seat (in diaphragm housing) size No. 40 (.098 inch) drill. Discharge ball check seat (in body) size No. 42 (.0935 inch) drill. Pump bleed (in diaphragm housing) size No. 73 (.024 inch) drill. Vacuum restriction (in flange) size No. 55 (.052 inch) drill. Vacuum passage (diaphragm bleed) size No. 65 (.035 inch) drill.

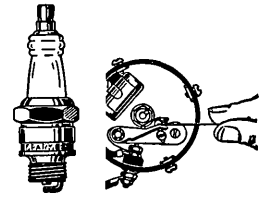
Pump Adjustment: See adjustments.

Choke: Manual, interconnected with throttle. Valve, offset butterfly type.

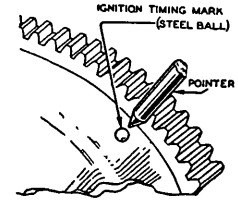
Vacuum Spark Port: Horizontal slot type, size .125 by .041 inch. Top of port (early prod.) .025 to .035 inch; (late prod.) .035 to .045 inch above top edge of valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carburet r.



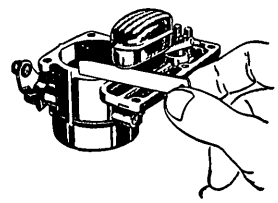
Spark Plug Gap .035"
Breaker Point Setting .018"



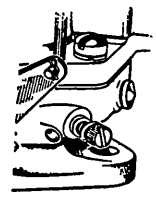
Ignition Timing
Breaker Points to Open:
When Steel Ball on Flywheel is in Line with Pointer



Valve Setting
(Hot)
Truck:
Int. .006"-.008"
Exh. .013"-.015"
Power Glide:
No Adjustment
Hydraulic Lifters



Float Setting
9/32 Inch
(Use Gauge T109-126)



Idle Adjustment Screw Setting
½ to 1½
Turns Op n

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CARBURETER ADJUSTMENTS

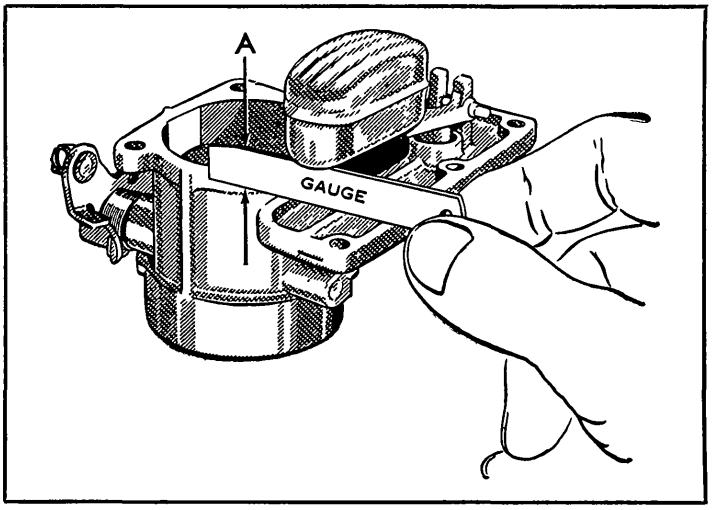


Figure 1
Float Adjustment

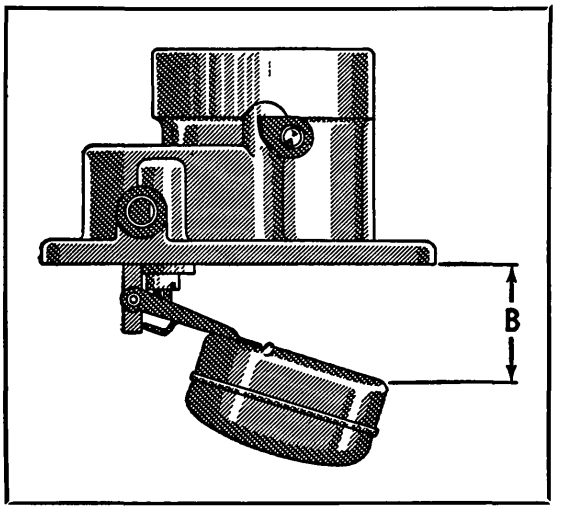


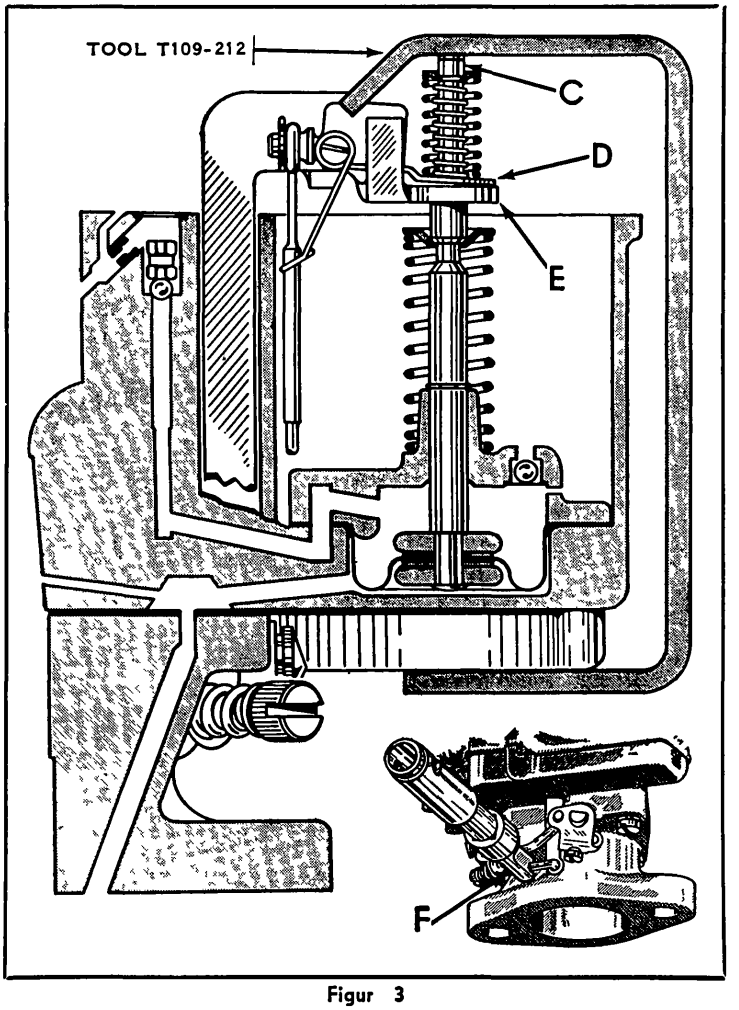
Figure 2
Float Drop

FLOAT ADJUSTMENT (Fig. 1):

With bowl cover assembly inverted and float resting on pin in seated needle, and with gasket removed, the distance (A) from the bowl cover to the top of float should be 9/32 inch (Gauge T109-126). Do not depress float lip against spring loaded pin in needle, but let float rest of its own weight. Adjust by bending lip of float, not float arm. Float setting must be checked with the bowl cover held at eye height in a level position.

FLOAT DROP (Fig. 2):

With bowl cover assembly held in upright position the distance (B) between free end of float and bowl cover should be 1¼ inch. Adjust by bending stop tabs on float arm.



Figur 3
Pump Adjustment

PUMP ADJUSTMENT (Fig. 3):

This adjustment should be made before the metering rod adjustment and should be checked each time the carbureter is reassembled. With throttle valve seated in the bore of carbureter, press down on upper end of diaphragm shaft (C) until it reaches its bottom position (tool T109-212 may be used to hold diaphragm shaft down while checking pump adjustment). The metering rod arm (D) should now contact the pump lifter link (E) at the outer end nearest the springs. Adjust by bending pump connector link (F) at its lower angle. Use bending tool T109-213

CAUTION: Bend connector rod only at its lower angle, as any other method may cause pump lifter link to bind.

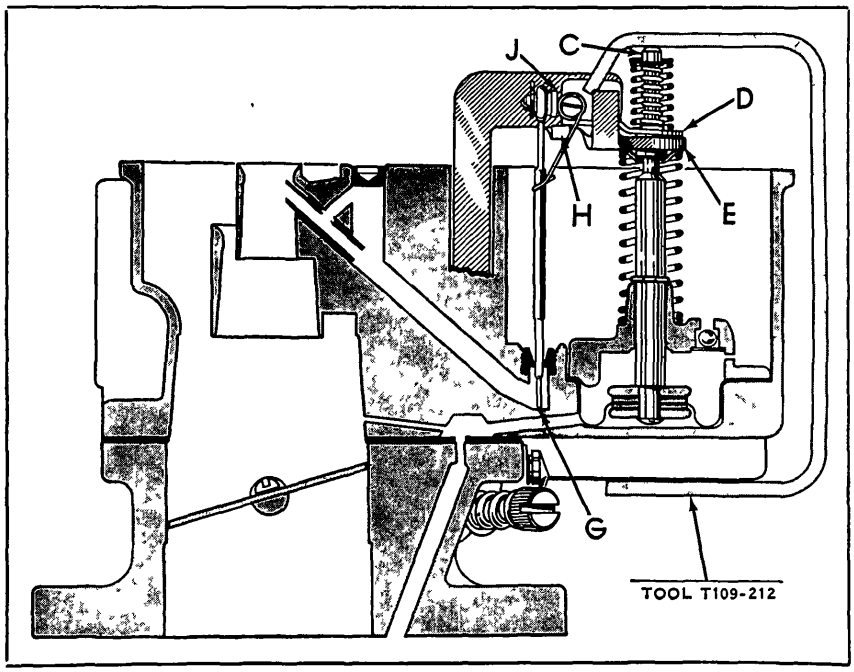


Figure 4
Metering Rod Adjustment

METERING ROD ADJUSTMENT (Fig. 4):

This adjustment is important and should be checked each time the carbureter is reassembled or lean rods are installed. With throttle valve seated in bore of carbureter, press down on upper end of diaphragm shaft (C) until diaphragm bottoms in vacuum chamber. Tool T109-212 may be used to hold diaphragm shaft down while adjusting metering rod. Metering rod should contact bottom of metering rod well (G) and metering rod arm (D) should contact lifter link (E) at the outer end nearest the springs and at supporting lug (H). Adjust by bending lip (J) of metering rod arm to which metering rod is attached, up or down.

FAST IDLE ADJUSTMENT (Fig. 5):

With choke held in wide open position, lip (K) of fast idle arm should contact boss on body casting. Adjust by bending at offset portion (L) of choke connector link.

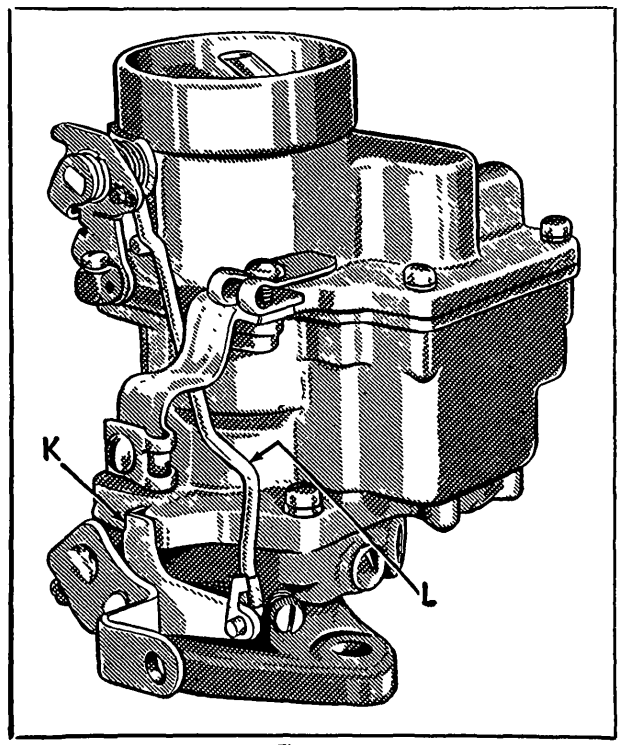
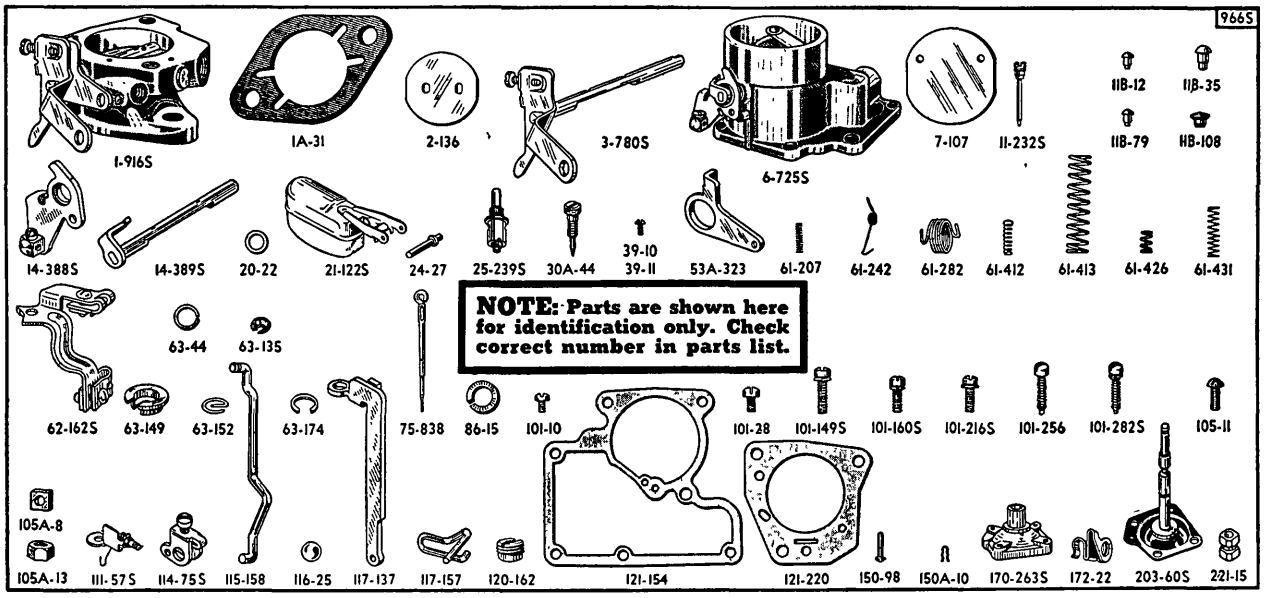


Figure 5
Fast Idle Adjustment



Chevrolet—1950-1952—Carbureter No. 966S

WHEN SERVICING, USE GASKET ASSORTMENT No. 210B; REPAIR PACKAGE No. 1721

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

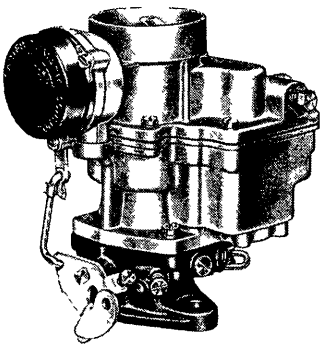
Part No.	PART NAME
1-916S	Body flange assembly
1A-31	FLANGE GASKET
2-136	Throttle valve
3-780S	Throttle shaft and lever assembly
6-725S	Air horn assembly
7-107	Choke valve
11-232S	LOW SPEED JET ASSEMBLY
11B-12	Rivet plug
11B-35	Rivet plug
11B-79	Rivet plug (2)
11B-108	IDLE PORT RIVET PLUG
14-388S	Choke lever assembly
14-389S	Choke shaft and lever assembly
20-22	Needle seat gasket
21-122S	Float and lever assembly
24-27	Float lever pin
25-195S	Needle, spring, pin and seat assembly (Sup. by 25-239S)
25-239S	NEEDLE, PIN, SPRING AND SEAT ASSEMBLY
30A-44	Idle adjustment screw
39-10	Choke valve attaching screw (2)
39-11	THROTTLE VALVE ATTACHING SCREW (2)
53A-323	Fast idle arm
61-207	Intake needle spring
61-242	Metering rod spring
61-282	Choke lever spring
61-412	UPPER PUMP SPRING (INNER)
61-413	PUMP DIAPHRAGM SPRING
61-426	Idle adjustment screw spring
61-431	UPPER PUMP SPRING (OUTER)
62-162S	Choke tube clamp assembly
63-44	Choke lever retaining ring
63-135	UPPER PUMP SPRING RETAINER
63-149	PUMP DIAPHRAGM SPRING RETAINER
63-152	PUMP INTAKE AND DISCHARGE BALL CHECK RETAINER RING (Early Prod. (2), (Late Prod. (1)
63-174	PUMP STEM RETAINING RING
63-202	Pump intake ball check retainer ring (Late Prod.)
75-838	METERING ROD—STANDARD
75-879	Metering rod (1 size lean)
75-880	Metering rod (2 sizes lean)
86-15	Flange stud lock washer (2)
101-10	Wire clamp screw
101-28	Throttle shaft arm attaching screw
101-149S	Body flange attaching screw and washer assembly (3)
101-160S	Air horn attaching screw and washer assembly (5)
101-216S	Air horn attaching screw and washer assembly (2)
101-256	Throttle lever adjustment screw
101-282S	Diaphragm housing attaching screw and washer assembly (4)
105-11	Tube clamp screw (2)
105A-8	Tube clamp nut (2)
105A-13	Flange stud nut (2)
111-57S	Metering rod arm assembly
114-75S	THROTTLE SHAFT ARM ASSEMBLY
115-158	Choke connector rod
116-25	PUMP INTAKE AND DISCHARGE BALL CHECK (2)
117-137	PUMP LIFTER LINK (Use with 117-157)
117-138	Pump connector link (Sup. by 117-157)
117-157	PUMP CONNECTOR LINK
117-158	Pump lifter link (Sup. by 117-137)
120-162	METERING ROD JET
121-154	BOWL COVER AND AIR HORN GASKET
121-220	BODY FLANGE GASKET
150-98	Intake needle pin
150A-10	PIN SPRING
170-263S	Pump diaphragm housing and ball check assembly
172-22	Connector rod retainer
203-60S	PUMP DIAPHRAGM ASSEMBLY
221-15	Ball check weight

NOTE: Figures in parentheses indicate number of pieces used in ne carbureter. Where n figure is sh wn, nly n is used.

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

CHEVROLET 967S
June, 1953
Revised April, 1955

(1½ Inch Flange)



Casting No. 791 on face of flange.

CHEVROLET
POWER GLIDE & TRUCK 1950-1952

YF DOWN-DRAFT CLIMATIC® CONTROL **CARBURETER No. 967S**

CARBURETER SPECIFICATIONS

Chevrolet 6 Cylinder Engine: 3-9/16 Inch Bore, 3-15/16 Inch Stroke

Dimensions: Flange size, 1½ inch S. A. E.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 11/16 inch I. D.
Main venturi, 1-5/16 inch I. D.

Float Setting: See adjustments.

Vents: Outside, none. Inside balance vent to air horn above choke valve.

Gasoline Intake: Spring loaded needle. Size No. 46 (.081 inch) drill in needle seat.

Low Speed Jet Tube: Jet size No. 67 (.032 inch) drill. By-pass in body, size No. 52 (.0635 inch) drill. Economizer, size No. 55 (.052 inch) drill.

Idle Port: Upper port: slot type, length .190 inch, width .040 inch.

Idle Port Opening: Top of port .143 to .147 inch above top edge of valve with valve tightly closed.

Lower Port (For Idle Adjustment Screw): .0615 to .0655 inch diameter.

Set Idle Adjustment Screw: 1 to 2 turns open. For richer mixture, turn screw out. Idle engine between 430-450 r.p.m. (Transmission in neutral).

Main Nozzle: Nozzle is installed permanently. DO NOT REMOVE. Anti-percolator; Drilled passage from anti-percolator well to nozzle.

Metering Rod: Economy step .073 inch diameter; middle step tapers to .059 inch diameter; power step .050 inch diameter

Metering Rod Jet: .1015 inch diameter.

Metering Rod Setting: See adjustments.

Accelerating Pump: Diaphragm type, vacuum and mechanically operated. Pump jet, size No. 72 (.025 inch) drill. Intake ball check seat (in diaphragm housing), size No. 40 (.098 inch) drill. Discharge ball check seat (in body), size No. 42 (.0935 inch) drill. Pump bleed (in diaphragm housing), size No. 73 (.024 inch) drill. Vacuum restriction (in flange), size No. 55 (.052 inch) drill. Vacuum passage (diaphragm bleed), size No. 65 (.035 inch) drill.

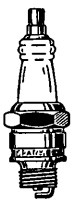
Pump Adjustment: See adjustments.

Choke: Carter Climatic® Control, set one point rich. Offset, butterfly type. Choke heat suction hole in body, size No. 36 (.1065 inch) drill.

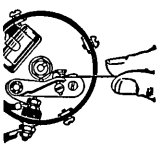
Vacuum Spark Port: Horizontal slot type, size .125 by .041 inch. Top of port (early prod.) .025 to .035 inch; (late prod.) .035 to .045 inch above top edge of valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

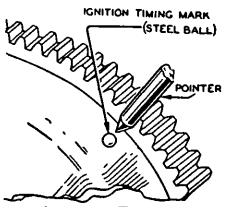
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



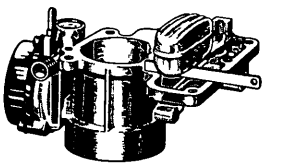
Spark Plug Gap .035"



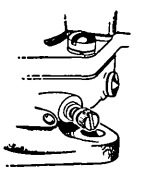
Breaker Point Setting .018"



Ignition Timing Breaker Points to Open: When Steel Ball on Flywheel is in Line with Pointer



Float Setting 9/32 Inch (Use Gauge T109-126)



Idle Adjustment Screw Setting 1 to 2 Turns Open

NOTE: These cars equipped with Hydraulic Valve Lifters. No adjustment.

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CARBURETER ADJUSTMENTS

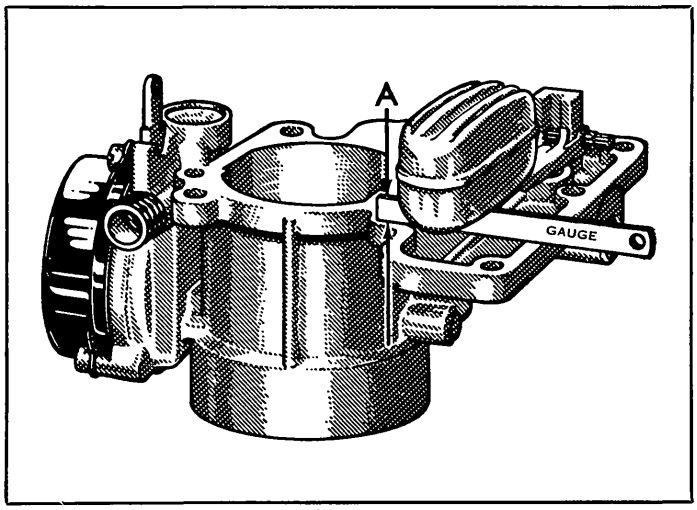


Figure 1
Float Adjustment

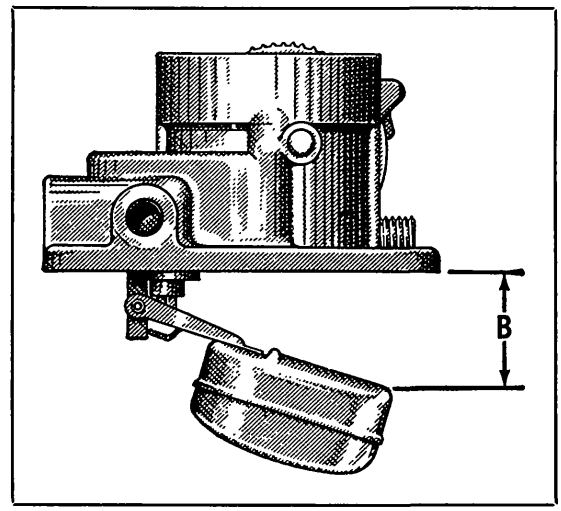


Figure 2
Float Drop

FLOAT ADJUSTMENT (Fig. 1):
With bowl cover assembly inverted and float resting on pin in seated needle, and with gasket removed, the distance (A) from the bowl cover to the top of float should be 9/32" (Gauge T109-126). Do not depress float lip against spring loaded pin in needle, but let float rest of its own weight. Adjust by bending lip of float, not float arm. Float setting must be checked with the bowl cover held at eye height in a level position.

FLOAT DROP (Fig. 2):
With bowl cover assembly held in upright position the distance (B) between free end of float and bowl cover should be 1¼". Adjust by bending stop tabs on float arm.

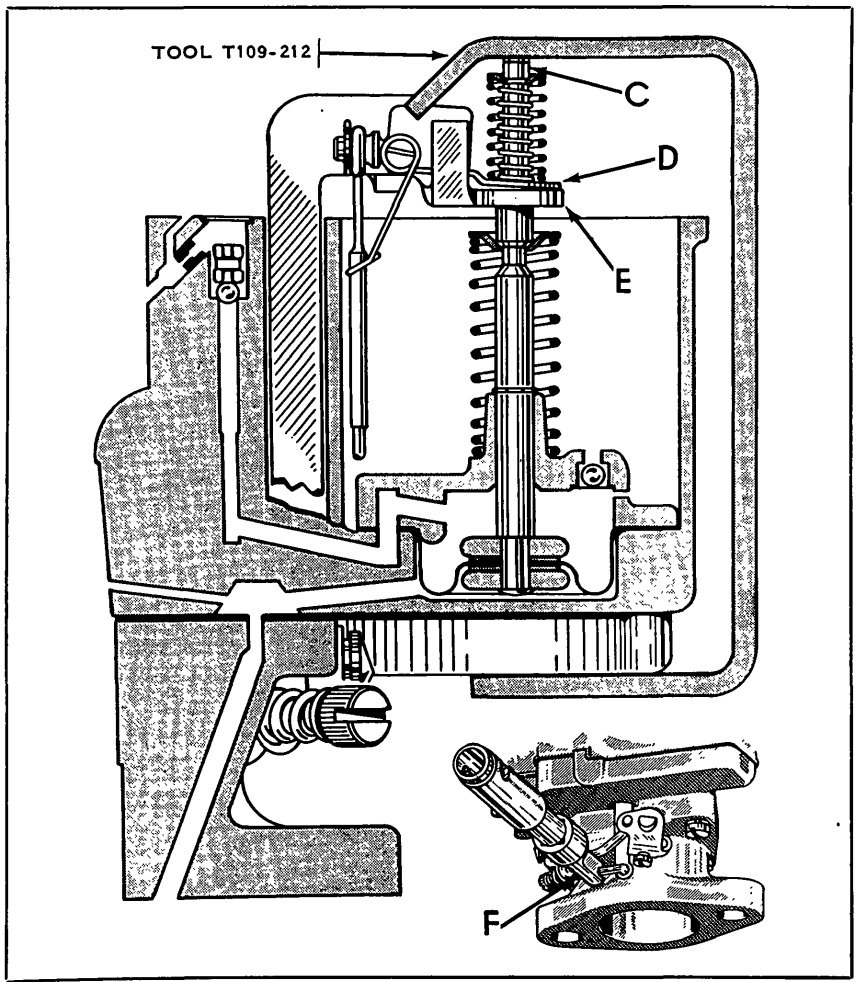


Figure 3
Pump Adjustment

PUMP ADJUSTMENT (Fig. 3):
This adjustment should be made before the metering rod adjustment and should be checked each time the carbureter is reassembled. With throttle valve seated in the bore of carbureter, press down on upper end of diaphragm shaft (C) until it reaches its bottom position (tool T109-212 may be used to hold diaphragm shaft down while checking pump adjustment). The metering rod arm (D) should now contact the pump lifter link (E) at the outer end nearest the springs. Adjust by bending pump connector link (F) at its lower angle (see illustration). Use bending tool T109-213.

CAUTION: Bend connector rod only at its lower angle with tool in position shown, as any other method may cause pump lifter link to bind.

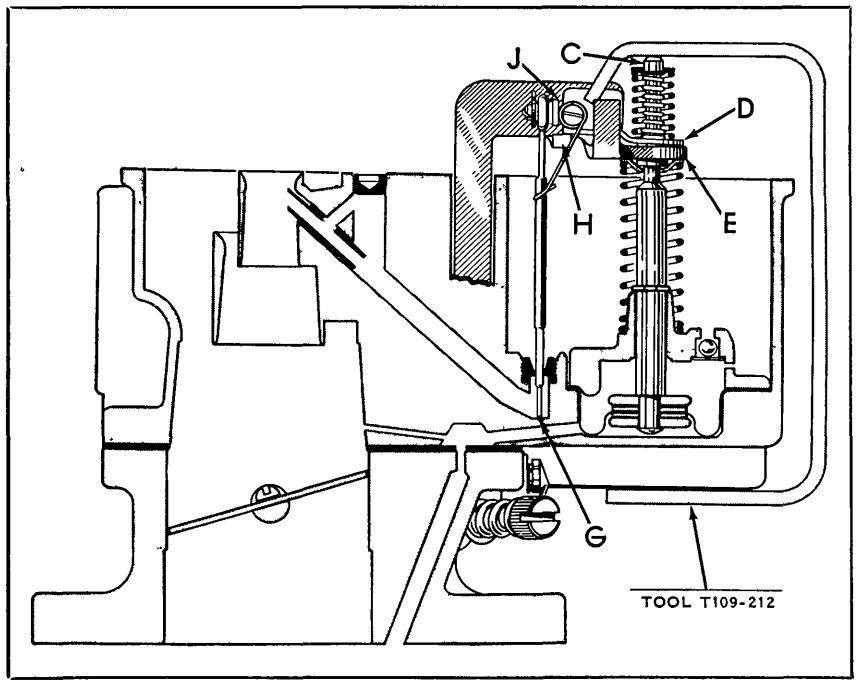


Figure 4
Metering Rod Adjustment

METERING ROD ADJUSTMENT (Fig. 4):

This adjustment is important and should be checked each time the carbureter is reassembled or lean rods installed. With throttle valve seated in bore of carbureter, press down on upper end of diaphragm shaft (C) until diaphragm bottoms in vacuum chamber. Tool T109-212 may be used to hold diaphragm shaft down while adjusting metering rod Metering rod should contact bottom of metering rod well (G) and metering rod arm (D) should contact lifter link (E) between springs and at supporting lug (H). Adjust by bending lip (J) of metering rod arm to which metering rod is attached, up or down.

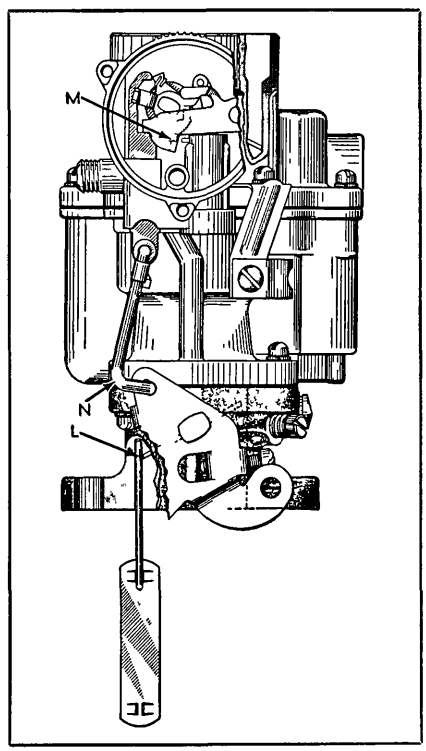


Figure 5
Fast Idle Adjustment

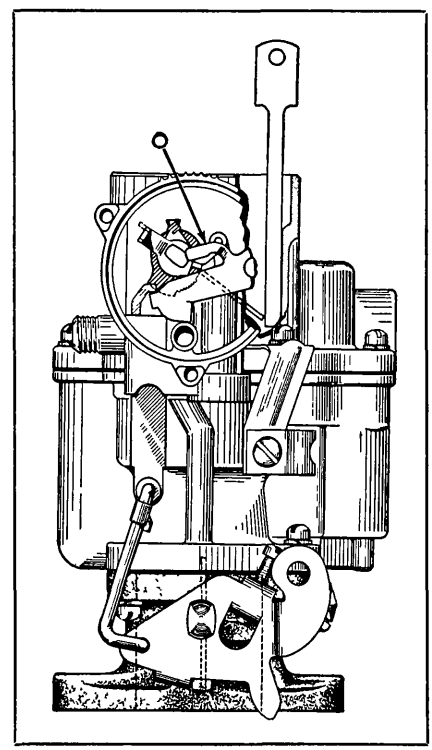


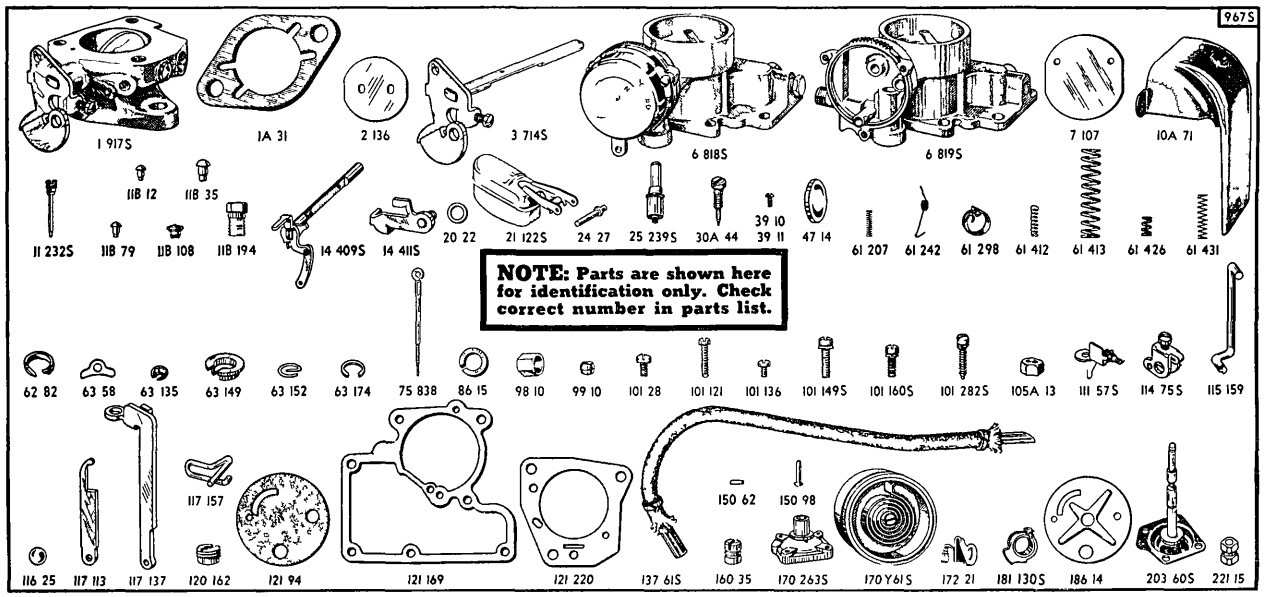
Figure 6
Unloader Adjustment

FAST IDLE ADJUSTMENT (Fig 5):

Remove thermostatic coil housing, gasket and baffle plate Crack throttle valve, and hold choke valve fully closed, then close throttle This will allow fast idle cam (M) to revolve to fast idle position. With choke valve held tightly closed and slight tension on throttle lever, there should now be .080 inch clearance (L) (Gauge T109-234) between throttle valve and bore of carbureter (side opposite idle port). Adjust by bending connector link at lower angle (N). Use bending tool T109-213.

UNLOADER ADJUSTMENT (Fig. 6):

This adjustment must be made after fast idle adjustment Hold throttle valve in wide open position and close choke valve as far as possible without forcing. There should be 3/16 inch clearance (Gauge T109-28) between lower edge of choke valve and inner wall of air horn. Adjust by bending arm (O) of choke trip lever (Use tool T109-214).



Chevrolet—1950-1952—Carbureter No. 967S

WHEN SERVICING, USE GASKET ASSORTMENT No 209B, REPAIR PACKAGE No 1742

PART NAMES IN CAPITAL LETTERS LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-917S	Body flange assembly	
1A-31	FLANGE GASKET	
2-136	Throttle valve	
3-714S	Throttle shaft and lever assembly	
6-818S	Air horn and Climatic ® control assembly	
6-819S	Air horn assembly	
7-107	Choke valve	
10A-71	Manifold stove	
11-232S	LOW SPEED JET ASSEMBLY	
11B-12	Flange passage plug	
11B-35	Nozzle passage rivet plug	
11B-79	Rivet plug	(2)
11B-108	IDLE PORT RIVET PLUG	
11B-194	Pipe plug	
14-409S	Choke piston lever and shaft assembly	
14-411S	Choke trip lever assembly	
20-22	Needle seat gasket	
21-122S	Float and lever assembly	
24-27	Float lever pin	
25-195S	Needle pin spring and seat assembly (Sup by 25 239S)	
25-239S	NEEDLE PIN SPRING AND SEAT ASSEMBLY	
30A-44	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	THROTTLE VALVE ATTACHING SCREW	(2)
47-14	Welsh plug	
61-207	Intake needle spring	
61-242	Metering rod spring	
61-298	Fast idle cam spring	
61-412	UPPER PUMP SPRING (INNER)	
61-413	PUMP DIAPHRAGM SPRING	
61-426	Idle adjustment screw spring	
61-431	UPPER PUMP SPRING (OUTER)	
62-82	Heat tube covering clamp	(2)
63-58	Coil housing retainer	(3)
63-135	UPPER PUMP SPRING RETAINER	
63-149	PUMP DIAPHRAGM SPRING RETAINER	
63-152	PUMP INTAKE AND DISCHARGE BALL CHECK RETAINER RING (Early Prod (2) (Late Prod (1)	

Part No	PART NAME	
63-174	PUMP STEM RETAINING RING	
63-202	Pump intake ball check retainer ring (Late Prod)	
75-838	METERING ROD—STANDARD	
75-879	Metering rod—1 size lean	
75-880	Metering rod—2 sizes lean	
86-15	Flange stud lock washer	(2)
98-10	Compression coupling nut	
99-10	Compression coupling cone	
101-28	Throttle shaft arm attaching screw	
101-121	Throttle lever adjustment screw	
101-136	Coil housing attaching screw	(3)
101-149S	Body flange attaching screw and washer assembly	(3)
101-160S	Air horn attaching screw and washer assembly	(7)
101-282S	Diaphragm housing attaching screw and washer assembly	(4)
105A-13	Flange nut	(2)
111-57S	Metering rod arm assembly	
114-75S	THROTTLE SHAFT ARM ASSEMBLY	
115-159	Choke connector rod	
116-25	PUMP INTAKE AND DISCHARGE BALL CHECK	(2)
117-113	Fast idle link	
117-137	PUMP LIFTER LINK	
117-157	PUMP CONNECTOR LINK	
120-162	METERING ROD JET	
121-94	THERMOSTATIC COIL HOUSING GASKET	
121-169	BOWL COVER AND AIR HORN GASKET	
121-220	BODY FLANGE GASKET	
137-61S	Climatic® control heat tube and covering assembly	
150-62	Choke piston pin	
150-98	Intake needle pin	
160-35	Choke piston	
170-263S	Pump diaphragm housing and ball check assembly	
170Y61S	Thermostatic coil and housing assembly	
172-21	Throttle connector rod retainer	
181-130S	Fast idle cam assembly	
186-14	Choke baffle plate	
203-60S	PUMP DIAPHRAGM ASSEMBLY	
221-15	Ball check weight	

NOTE *Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used*

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CARTER CARBURETOR

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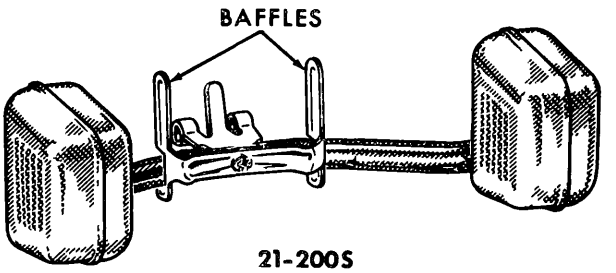
GENERAL BULLETIN

ALL CARBURETER ACCOUNTS

BULLETIN NO. 50 Chevrolet
DATE May 20, 1959

SUBJECT: 1959 CHEVROLET V8 283 & 348 CU. IN. ENGINES

NEW PRIMARY FLOAT ASSEMBLY 21-200S USED IN WCFB-2816S 2817S AND 2818S FOUR BORE CARBURETERS



21-200S

A new primary float assembly Carter part No. 21-200S recently went into production on these carbureters. The new floats have baffle tabs attached to the float arms which slow down the washing action of fuel in the bowl when the car is operated through severe left and right turns. The action of the baffle assures an adequate supply of fuel to cover both primary metering rod jets while going through the turn. The new float (21-200S) is completely interchangeable with the early production float part 21-198S and the float used on 1958 production part 21-143S.

The 21-200S floats may be helpful in eliminating turn complaints on other applications of the WCFB type carbureter.

The float level adjustment does not change when the new floats are used.

Carbureters that have had the new floats installed in production are code dated "D9" (April 1959) or later, also the identification tags will be colored as follows: 2816S Blue, 2817S Orange, 2818S Green.

Correct float level adjustment is important. Other factors that can contribute to a turn complaint are: Misaligned floats, nicked or dented gasket surfaces surrounding the bores or around the vacumeter cylinder. Check to be sure the choke vacuum passage bushing part 145-142 (General Bulletin 497) is in place in the body casting. Use a new bowl cover gasket and tighten the inner bowl cover screws (around the bores) first before final tightening of the outer screws.

The Chevrolet part number for Carter 21-200S is 3770179. The list price is $2.50. A limited initial stock shipment is being made to Central Distributors. Carter warranty is not involved.

R. J. Mullin
Service Manager

RJM/dg
cc: Personnel and extra copies - Canada and U.S.A.

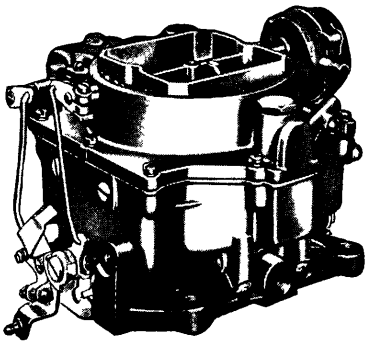
IMPORTANT THIS BULLETIN CONTAINS INFORMATION F VALUE T Y U AND WAS PREPARED AT C NSIDERABLE EXPENSE TO BE OF SERVICE TO YOU FAILURE TO USE THIS INFORMATION MAY COST YOU MONEY WE SUGGEST THAT YOU ISSUE COPIES OF IT TO TH SE F YOUR STAFF INTERESTED SO THAT THEY CAN BE FILED IN REGULAR CARTER SALES AND SERVICE MANUAL

CARBURETER
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PRINTED IN U.S.A.

180 Horsepower
and
Corvette

(Early Production—Used on cars with first type accelerator linkage)



Casting No. 1063 on face of flange

CHEVROLET "V-8" 1955

WCFB Four-Bore Down-Draft Climatic® Control **Carbureter No. 2218S**

CARBURETER SPECIFICATIONS

For Chevrolet 8 Cylinder Engine: 3¾ Inch Bore, 3 Inch Stroke

Dimensions: Flange size, 1⅛ inch. Four Bore—4 bolt type.
Primary venturi size, 11/32 inch I. D.
Main venturi (primary) size, 1-1/16 inch.
Main venturi (secondary) size, 15/16 inch I. D.

Float Level: See adjustments.

Vents: Outside, none. Inside, (2) on primary side, (3) on secondary side.

Gasoline Intake: Size No. 42 (.0935 inch) drill hole in needle seat.

Low Speed Jet Tube: (Primary side only).
Jet, size No. 68 (.031 inch) drill.
By-Pass, in body, size No. 52 (.0635 inch) drill.
Economizer, in screw plug, size (.049 inch) diameter.
Idle Bleed, in body, size No. 52 (.0635 inch) drill.

Idle Port: (Upper) slot type. Primary, length .174 inch; width .040 inch. Secondary, none.

Idle Port Opening: Primary, .113 to .119 inch above top edge of valve with valve tightly closed. Secondary, none.

Lower Port: Primary (for idle adjustment screw), size No. 53 (.0595 inch) drill. Secondary, none

Set Idle Adjustment Screw: ¼ to 1¼ turns open. For richer mixture turn screw out Do not idle engine below 400 r.p.m. (Automatic Transmission—in Drive Range), 450 r.p.m. (Standard and Overdrive Transmission).

Main Nozzle: Installed permanently. DO NOT REMOVE. Anti-percolating jet (primary, in plug) size No. 60 (.040 inch) drill, (secondary, in body) size No. 60 (.040 inch) drill.

Metering Rod: Primary, economy step .071 inch diameter. Middle step tapers to .065 inch diameter. Power step, .055 inch diameter. Secondary, none.

Metering Rod Jet: Primary, size .091 inch diameter (for metering rod).
Secondary, size .0512 inch diameter (no metering rod).

Metering Rod Setting: See adjustments.

Accelerating Pump: Discharge jet (twin) primary side only, size No. 73 (.024 inch) drill.
Intake ball check seat, size .115 to .120 inch diameter.
Discharge needle seat, size .070 inch diameter.

Pump Adjustment: See adjustments.

Choke: Carter Climatic® Control, set 2 points lean. Butterfly type—offset choke valve, primary side only. Choke heat suction hole, restriction in piston housing, size No. 43 (.089 inch) drill.

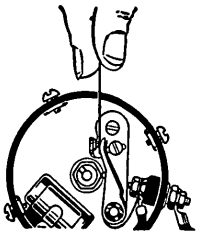
Vacuum Spark Port: Horizontal slot (round end) .045 x .110 inch. Top of port (early production) .018 to .028 inch, (late production) .023 to .033 inch above valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

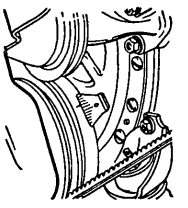
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



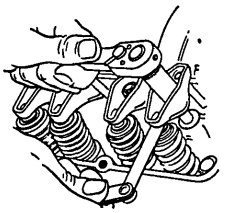
Spark Plug Gap .035"



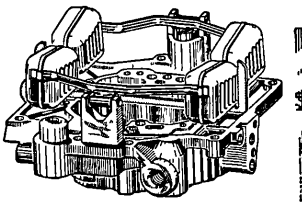
Breaker Point Setting .016"-.019"



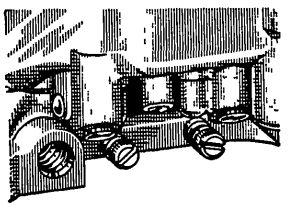
Ignition Timing Breaker Points to Open: 4° B.T.C.



Valve Setting (Hot)
Std. and O. D. Trans.
Intake .008"
Exhaust .016"
(Corvette)
Intake .008"
Exhaust .018"



Float Setting See Adjustments



Idle Adjustment Screw Setting ¼ to 1¼ Turns Open

NOTE: Power Glide Trans. equipped with hydraulic valves—no adjustment necessary.

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CARBURETER ADJUSTMENTS

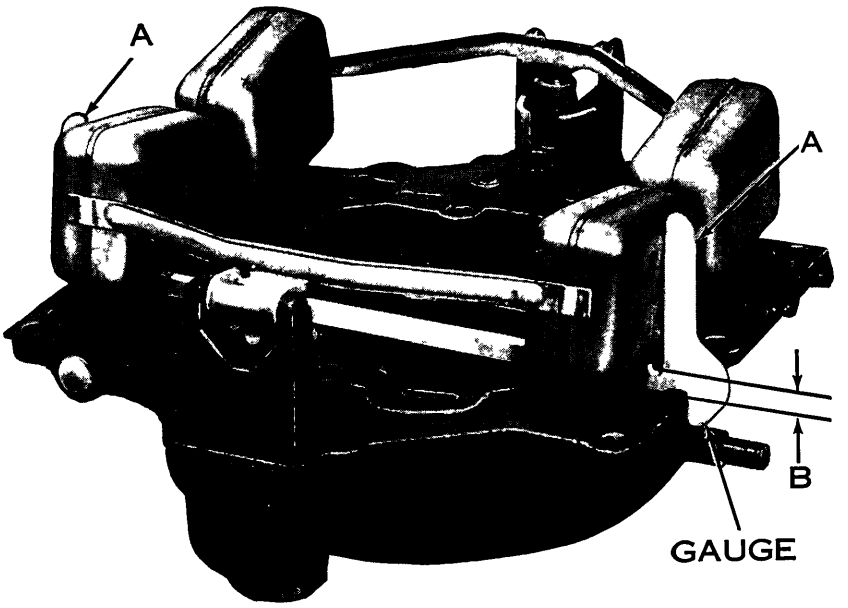


Figure 1
Float Adjustment

FLOAT ADJUSTMENT (Fig. 1):

Two separate float adjustments must be made—lateral and vertical

LATERAL ADJUSTMENT With bowl cover assembly inverted bowl cover gasket removed and float resting on seated needle place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting Side of floats should just clear the vertical uprights of float gauge (A) Adjustment should be made by bending arms of floats

VERTICAL ADJUSTMENT With float gauge in same position floats should just clear the horizontal portion of gauge Vertical distance (B) between top of float and machined surface of casting must be 1/8 inch (gauge T109 232) for primary floats and 1/4 inch (gauge T109 223) for secondary floats Adjust by bending float arms

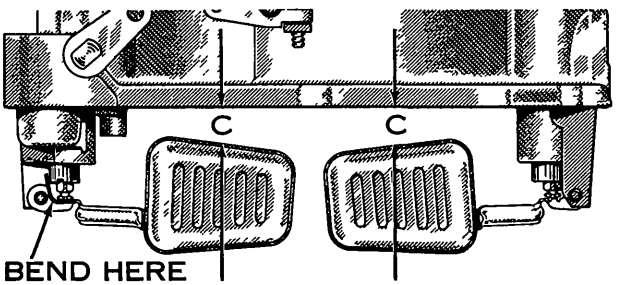


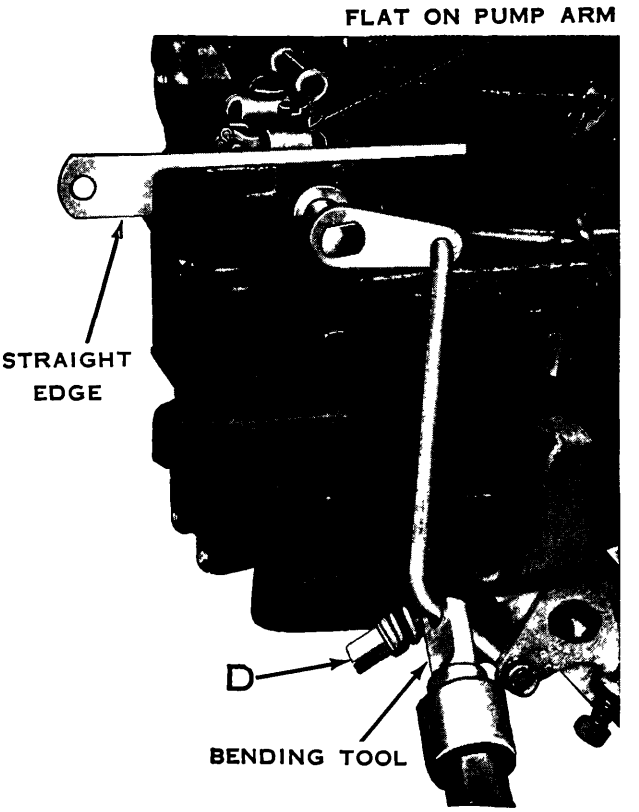
Figure 2
Float Drop Adjustment

FLOAT DROP ADJUSTMENT (Fig 2)

With bowl cover held in upright position and measuring from center of float the distance between top of floats (C) and bowl cover should be 5/8 inch for primary floats and 3/4 inch for secondary floats Adjust by bending stop tabs on float brackets

PUMP ADJUSTMENT (Fig. 3)

Install pump connector link in outer hole (long stroke) of pump arm with ends extending toward countershaft arm Back out throttle lever stop screw (D) until throttle valves seat in bores of carbureter Hold straight edge across top of dust cover boss at pump arm The flat on top of pump arm should be parallel to straight edge Adjust by bending throttle connector rod at lower angle (Use tool T109 213)



Figur 3
Pump Adjustment

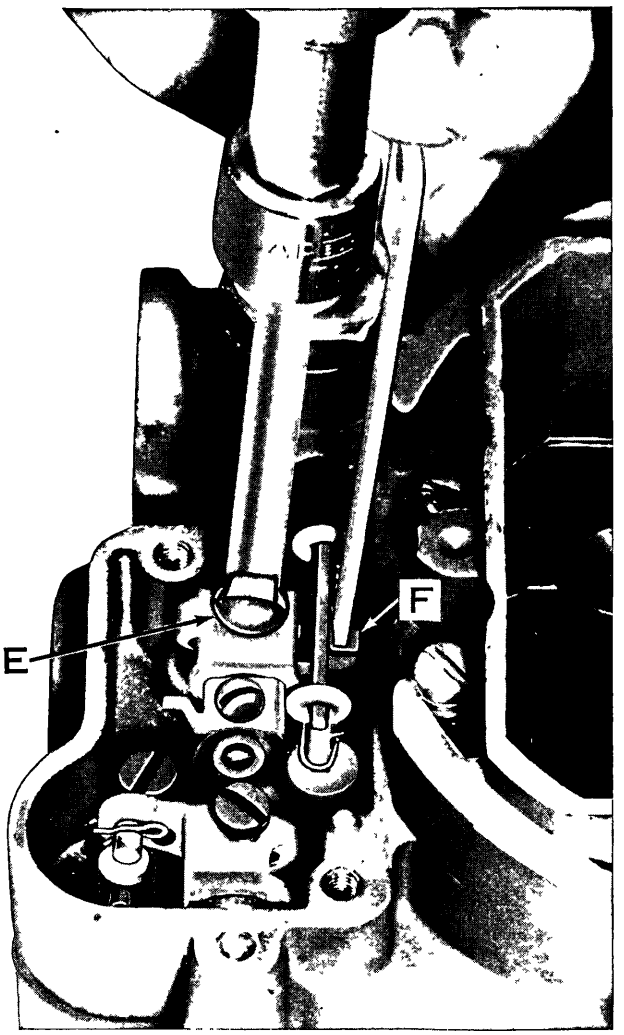


Figure 4
Metering Rod Adjustment

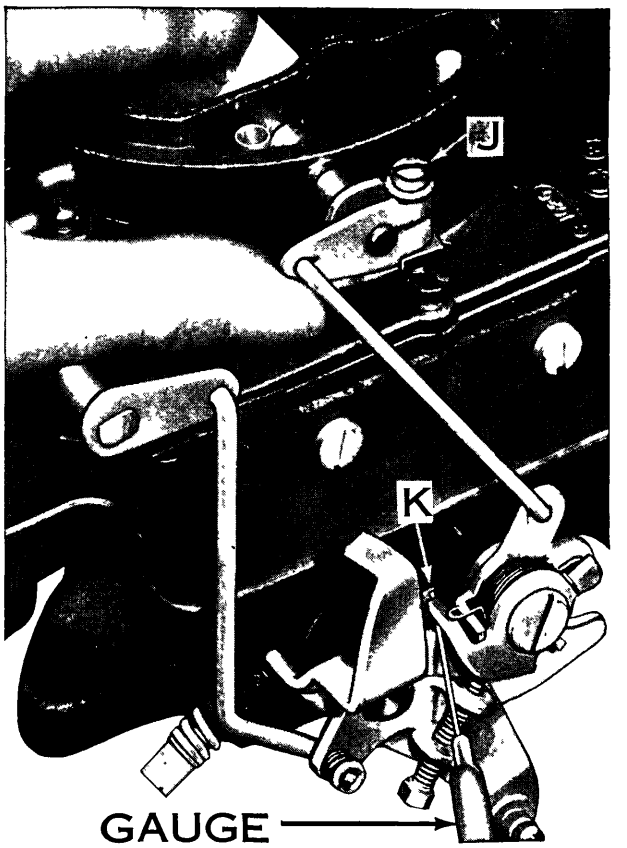


Figure 5A
Fast Idle Adjustment

METERING ROD ADJUSTMENT (Fig. 4):

Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows: 1. Back out throttle lever stop screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw (E). 2. With metering rods in place, press down on vacumeter link until metering rods bottom in carburetor body casting. 3. Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link (F). Hold in place and carefully tighten clamp screw (E).

FAST IDLE ADJUSTMENT (Fig. 5A and 5B):

(a) Loosen choke lever clamp screw (J) on choke shaft. Insert .020 inch feeler gauge (T109-29) between lip of fast idle cam and boss of flange casting (K). Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw (J). (b) With choke valve tightly closed tighten fast idle adjusting screw (L) until there is .015 inch (gauge T109-44) opening between throttle valve and bore of carbureter side opposite idle port. Be sure fast idle adjusting screw (L) is on high step of cam while making this adjustment.

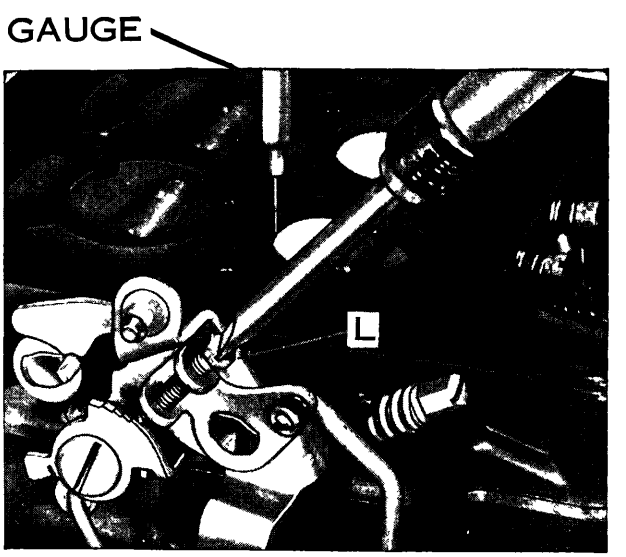


Figure 5B
Fast Idle Adjustment

Part N .	PART NAME	
101-324	Fast idle cam attaching screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attach ng screw	(4)
101-348	Primary throttle valve attaching screw	(4)
101-354S	Choke lever clamp screw and washer assembly	
101-363	Piston housing attaching screw (6 1031S (1) (6 1209S (2)	
101-376	Throttle lever adjusting screw	
101-382S	Body flange attaching screw and washer assembly	(3)
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
114-97	Throttle shaft arm (outer)	
114-118	Throttle shaft arm (inner)	
115-208	Throttle operating rod	
115-215	Choke connector rod	
115-216	THROTTLE CONNECTOR ROD	
116-13	PUMP INTAKE CHECK BALL	
117-162	Vacumeter piston link	
117-165	Pump arm link	
118-102S	Dust cover assembly	
120-155	PRIMARY METERING ROD JET	(2)

Part No	PART NAME	
120-187	SECONDARY METERING JET	(2)
121-78	COIL HOUSING GASKET	
121-208	DUST COVER GASKET	
121-241	PUMP JET HOUSING GASKET	
121-243	PISTON HOUSING GASKET (Use with 6 1031S)	
121-265	AIR HORN GASKET	
121-267	BODY FLANGE GASKET	
121-283	PISTON HOUSING GASKET (Use with 6 1209S)	
129-26	Metering rod disk	(2)
136-37	Throttle connector rod and operating rod washer	(5)
136-84	Spring washer	
136-159	Throttle shaft washer	
136-172	Secondary throttle shaft washer	
136-174	Throttle lever adjusting screw washer	
150-62	Choke piston pin	
150-186S	Pin and valve cap assembly	
150A-10	PIN SPRING	(5)
160-91	Choke piston	
160-110S	Vacuum piston and pin assembly	
170-372S	Piston housing and plug assembly (Use with 6 1031S)	
170-457S	Piston housing and plug assembly (Use with 6 1209S)	
170AB238S	Thermostatic coil and housing assembly	
181-194S	Fast idle cam and spring assembly	
186-34	Choke baffle plate	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.

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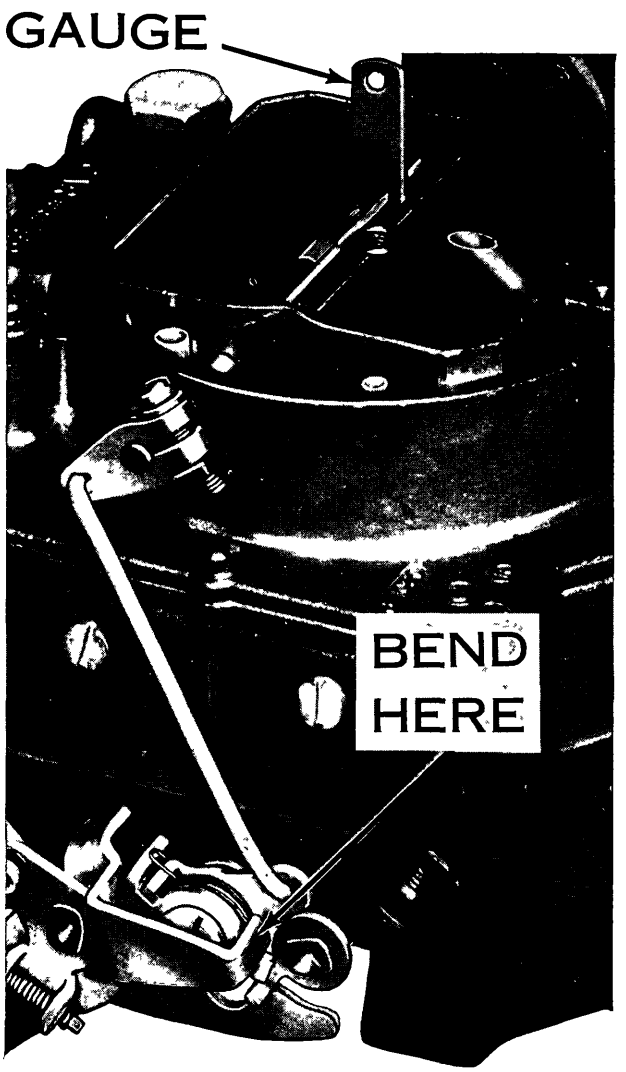


Figure 6
Unloader Adjustment

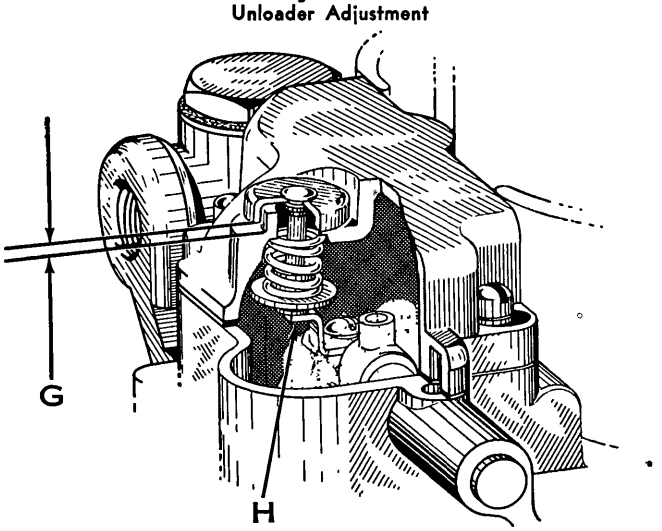


Figure 7
Bowl Vapor Vent Adjustment

BOWL VAPOR VENT ADJUSTMENT (Fig. 7):
This adjustment should be made after completing pump and metering rod adjustments. Install dust cover and dust cover gasket. Back out throttle lever stop screw to allow throttle valves to seat in bores of carburetor. There should be 1/16 inch (G) (gauge T109-197) between lower edge of bowl vapor vent valve and dust cover. To adjust, remove dust cover and bend vapor vent arm (H).

UNLOADER ADJUSTMENT (Fig. 6):
With throttle wide open there should be 3/16 inch (gauge T109-28) clearance between upper edge of choke valve and inner wall of air horn. Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41).

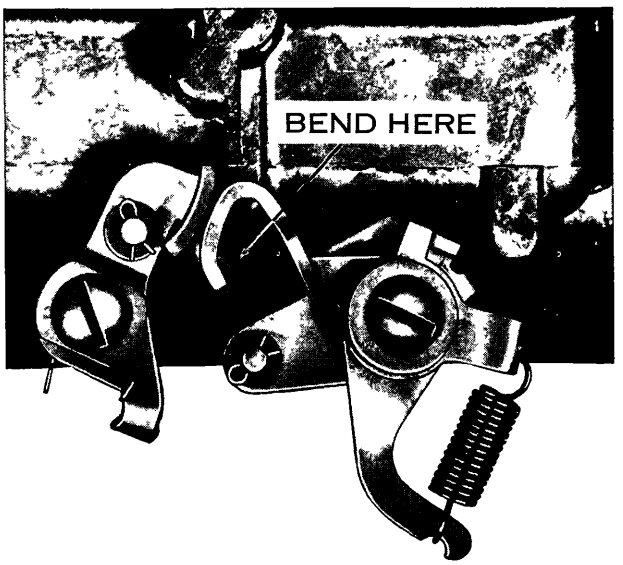


Figure 8
Secondary Throttle Lever Adjustment

SECONDARY THROTTLE LEVER ADJUSTMENT (Fig. 8):
Primary and secondary throttle valves should reach wide open position at the same time. To adjust, bend throttl operating rod at upper angle. (Use bending tool T109-213.)

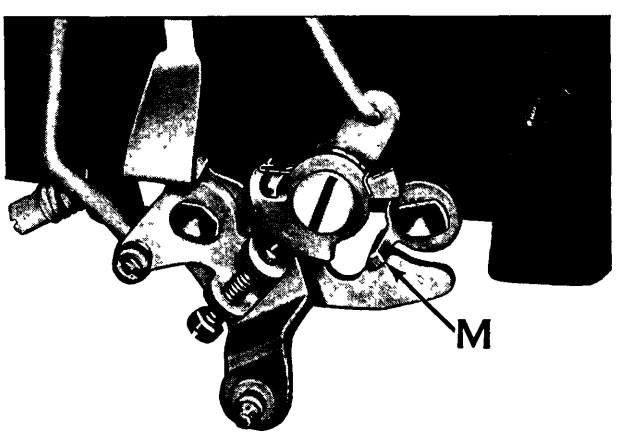
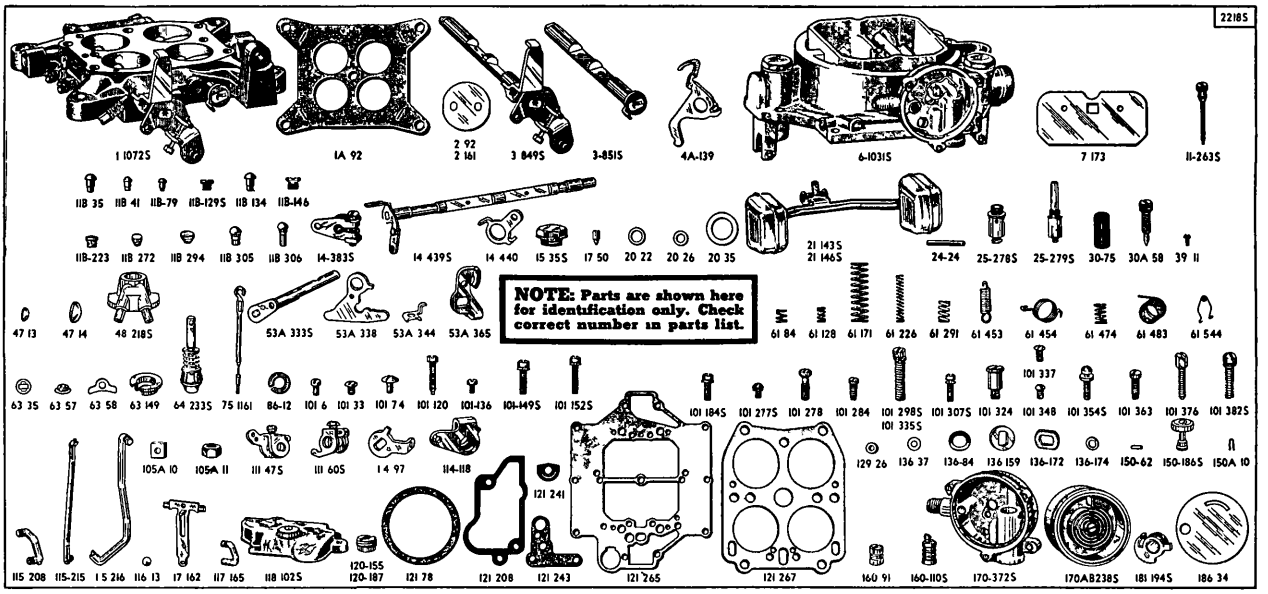


Figure 9
Secondary Throttle Lock-Out Adjustment

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT (Fig. 9):
This adjustment should be made after completing fast idle and secondary throttle lever adjustments. Crack throttle valves and manually open and close the choke valve. Tang (M) on secondary throttle lever should freely engage in notch of lock-out dog. If necessary to adjust, bend tang (M) on secondary throttle lever.



Chevrolet "V-8"—1955—Carbureter No. 2218S

WHEN SERVICING, USE GASKET ASSORTMENT No 261A, REPAIR PACKAGE No. 1784B

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1072S	Body flange assembly	
1A-92	Flange gasket (Sup by 1A 96)	
1A-96	FLANGE GASKET	
2-92	Primary throttle valve	(2)
2 161	Secondary throttle valve	(2)
3 849S	Primary throttle shaft and lever assembly	
3-851S	Secondary throttle shaft and dog assembly	
4A-139	Throttle shaft dog	
6-1031S	Air horn assembly (Casting No 6 1020) (Sup by 6 1209S)	
6-1209S	Air horn assembly (Casting No 6 1147)	
7 173	Choke valve	
11-263S	LOW SPEED JET ASSEMBLY	(2)
11B-35	Rivet plug	(4)
11B-41	Rivet plug (6 1031S (2) (6 1209S (1)	
11B-79	Rivet plug	(4)
11B-129S	PUMP DISCHARGE PASSAGE PLUG ASSEMBLY	
11B-134	Rivet passage plug	
11B-146	Level sight plug	(2)
11B-223	Nozzle passage rivet plug	(4)
11B-272	Rivet plug	(2)
11B-294	Idle port rivet plug	(2)
11B-305	Rivet plug (6 1031S (1) (6 1209S (2)	
11B-306	Rivet plug (6 1031S (2) (6 1209S (1)	
14-383S	Choke lever and screw assembly	
14-439S	Choke piston lever link and shaft assembly	
14-440	Cam trip lever	
15-35S	Strainer nut assembly	(2)
17-50	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	(2)
20-26	Pump passage plug gasket	
20-35	BOWL STRAINER GASKET	(2)
21-143S	Primary float and lever assembly	
21-146S	Secondary float and lever assembly	
24-24	Float lever pin	(2)
25-278S	PRIMARY NEEDLE AND SEAT ASSEMBLY	
25-279S	SECONDARY NEEDLE AND SEAT ASSEMBLY	
30-75	BOWL STRAINER	
30A-58	Idle adjustment screw	(2)
39-11	Choke valve attaching screw	(2)

Part No.	PART NAME	
47-13	Welsh plug (spark port)	
47-14	Welsh plug (choke housing)	
48-233S	Pump jet and housing assembly	
53A-333S	Pump operating lever and countershaft assembly	
53A-338	Lockout arm	
53A-344	Vent arm	
53A-365	Secondary operating lever	
61-84	Idle adjustment screw spring	(2)
61-128	Connector rod spring	
61-171	PUMP SPRING (LOWER)	
61-226	Vacuum piston spring (Sup by 61 332)	
61-291	Throttle lever adjusting screw spring	
61-332	VACUUM PISTON SPRING	
61-453	Throttle flex spring	
61-454	Fast idle cam spring	
61-474	Bowl vent spring	
61-483	SECONDARY THROTTLE RETURN SPRING	
61-544	METERING ROD SPRING	
63-35	CONNECTOR ROD SPRING RETAINER	
63-57	INTAKE CHECK BALL RETAINER	
63-58	Coil housing retainer	(3)
63-149	Bowl vent spring retainer	
64-165S	PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
75-1161	METERING ROD—STANDARD	(2)
75-1214	Metering rod—1 size lean	(2)
86-12	Flange stud lock washer	(4)
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	(2)
101-120	Fast idle adjustment screw	
101-136	Coil housing attaching screw	(3)
101-149S	Body flange attaching screw and washer assembly	
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-275	Piston housing attaching screw (Use with 6 1209S)	
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet and housing attaching screw	
101-284	Piston housing attaching screw (Use with 6-1031S)	(2)
101-298S	Body flange attaching screw and washer assembly	(2)
101-307S	Air horn attaching screw and washer assembly	(8)

CHEVROLET "V-8"

Corvette and Super Power Kit for Passenger Cars

(2362S) **Rear Carbureter**

1956

(2419S) **Front Carbureter**

WCFB Four-Bore Down-Draft Climatic® Control **Carbureters Nos. 2362S-2419S**

CARBURETER SPECIFICATIONS

For Chevrolet 8 Cylinder Engine 3¾ Inch Bore, 3 Inch Stroke

Dimensions Flange size 1⅛ inch Four Bore—4 bolt type
Primary venturi size 11/32 inch I D
Main venturi (primary) size 15/16 inch
Main venturi (secondary) size 1⅛ inch I D

Vents (2362S) Outside (4) in air horn (4) in flange Inside (7)
(2419S) Outside none Inside (7)

Gasoline Intake Size No 42 (0935 inch) drill hole in needle seat

Low Speed Jet Tube (Primary side only)
Jet size No 65 (035 inch) drill
By Pass in body size No 52 (0635 inch) drill
Economizer in screw plug size (049 inch) diameter
Idle Bleed in body size No 52 (0635 inch) drill

Idle Port (Upper) slot type Primary length 165 inch width 030 inch Secondary none

Idle Port Opening Primary 065 to 071 inch above top edge of valve with valve tightly closed Secondary none

Lower Port Primary (for idle adjustment screw) size No 53 (0595 inch) drill Secondary none

Set Idle Adjustment Screw ¼ to 1¼ turns open For richer mixture turn screw out Do not idle engine below 600 r p m (Power Glide in Drive Range)

Idle Air Adjusting Screw Seat size No 29 (136 inch) drill

Main Nozzle Installed permanently DO NOT REMOVE Anti percolating jet (primary in plug) size No 60 (040 inch) drill (secondary in body) size No 60 (040 inch) drill

Metering Rod (Vacumeter Type) See parts list for size

Metering Rod Jet Primary size 086 inch diameter (for metering rod)
Secondary size 051 inch diameter (no metering rod)

Accelerating Pump Discharge jet (twin) primary side only size No 73 (024 inch) drill
Intake ball check seat size 115 to 120 inch diameter
Discharge needle seat size 070 inch diameter

Discharge relief plug size No 75 (022 inch) drill

Choke (2362S only) Carter Climatic® Control set on index Butterfly type—offset choke valve primary side only Choke heat suction hole restriction in piston housing size No 43 (089 inch) drill

Vacuum Spark Port None

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter

Spark Plug Gap 035"	Breaker Point Setting .018"	Ignition Timing Breaker Points to Open 4° B T C or 12° B T.C at 1000 R.P.M.	Valve Setting (Hot) Intake 008" Exhaust 018"	Float Setting Primary ⅛ Inch (Use Gauge T109-232) Secondary ¼ Inch (Use Gauge T109-223)	Idle Adjustment Screw Setting ¼ to 1¼ Idle Engine at 600 R P M. Power Glide in Dr. Range

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: Two separate float adjustments must be made—lateral and vertical **LATERAL ADJUSTMENT** With oowl cover assembly inverted bowl cover gasket removed and float resting on seated needle place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting Side of floats should just clear the vertical uprights of float gauge Adjustment should be made by bending arms of floats **VERTICAL ADJUSTMENT.** With float gauge in same position, floats should just clear the horizontal portion of gauge Vertical distance between top of float and machined surface of casting must be 1/8 inch (gauge T109 232) for primary floats and 1/4 inch (gauge T109 223) for secondary floats Adjust by bending float arms

FLOAT DROP ADJUSTMENT: With bowl cover held in upright position and measuring from center of float, the distance be tween top of floats and bowl cover should be 5/8 inch for primary floats and 3/4 inch for secondary floats Adjust by bending stop tabs on float brackets

PUMP ADJUSTMENT· Install pump connector link in inner hole (short stroke) of pump arm, with ends extending toward counter shaft arm Back out throttle lever stop screw until throttle valves seat in bores of carbureter Hold straight edge across top of dust cover boss at pump arm The flat on top of pump arm should be parallel to straight edge Adjust by bending throttle connector rod at lower angle (Use tool T109 213)

METERING ROD ADJUSTMENT: Metering rod adjustment is important and must be made after completing the pump adjust ment No metering rod gauges are necessary Procedure s as follows 1 Back out throttle lever stop screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw 2 With metering rods in place press down on vacumeter link until metering rods bottom in carbureter body casting 3 Hold ng rods in downward position and throt tle valves seated revolve metering rod arm until finger on arm contacts lip of vacumeter link Hold in place and carefully tighten clamp screw

FAST IDLE ADJUSTMENT (2362S only) (a) Loosen choke lever clamp screw on choke shaft Insert 020 inch feeler gauge (T109 29) between lip of fast idle cam and boss of flange casting Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw (b) With choke valve tightly closed bend fast idle adjusting tang until there is 015 inch (gauge T109 44) opening between throttle valve and bore of carbureter side opposite idle port Be sure fast idle adjusting tang is on high step of cam while making this adjustment

UNLOADER ADJUSTMENT: (2362S only) With throttle wide open there should be 3/16 inch (gauge T109-28) clearance between upper edge of choke valve and inner wall of air horn Adjust by bending unloader lip on throttle shaft lever (use bending tool T109 41)

BOWL VAPOR VENT ADJUSTMENT: This adjustment should be made after completing pump and metering rod adjustments Install dust cover and dust cover gasket Back out throttle lever stop screw to allow throttle valves to seat in bores of carbureter There should be 1/16 inch (gauge T109-197) between lower edge of bowl vapor vent valve and dust cover To adjust, re move dust cover and bend vapor vent arm

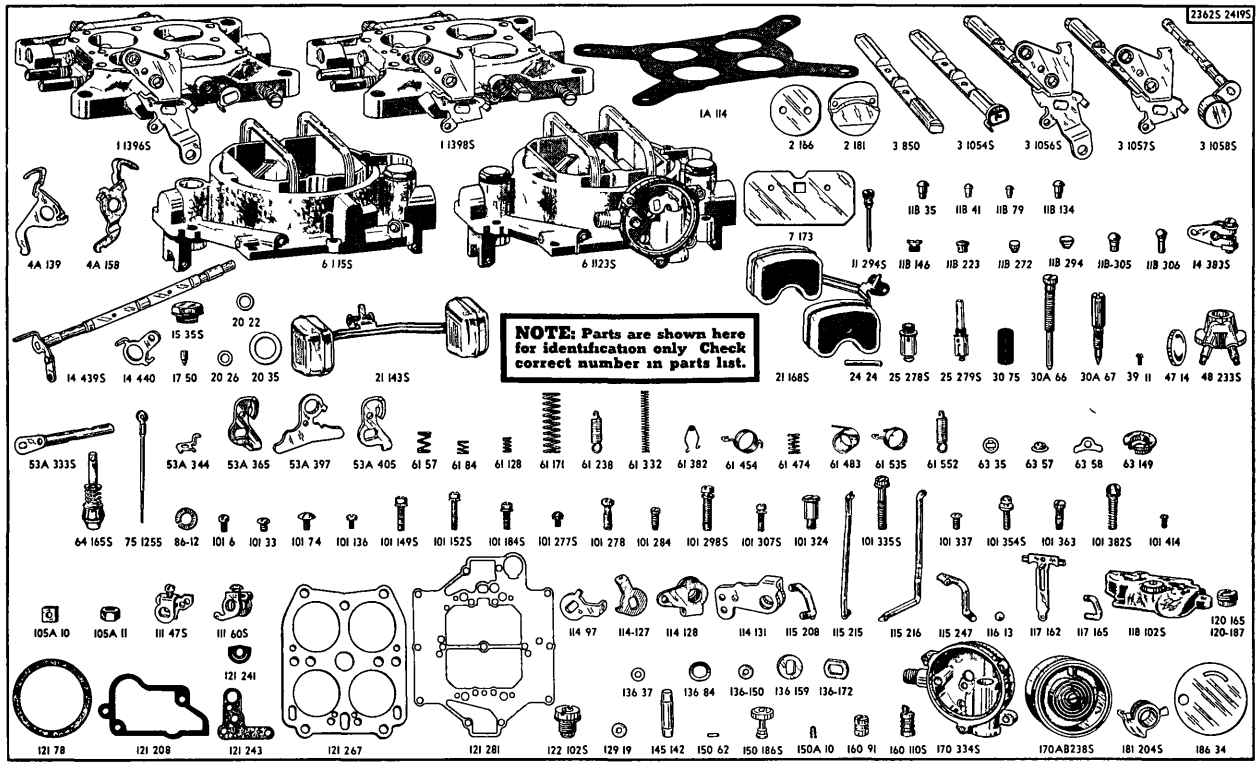
SECONDARY THROTTLE LEVER ADJUSTMENT: Primary and secondary throttle valves should reach wide open position at the same time NOTE Secondary throttle valves will be a few degrees from wide open To adjust, bend throttle operating rod at upper angle (Use bending tool T109-213) With primary and secondary throttle valves in tightly closed position there should be 017 022 inch (gauge T109 29) clearance between positive closing shoes on primary and secondary throttle levers To ad just, bend shoe on primary lever

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: (2362S only) This adjustment should be made after completing fast idle and secondary throttle lever adjustments Crack throttle valves and hold choke valve tightly closed Then close throttle Tang on secondary throttle lever should freely engage in notch of lock out dog If necessary to adjust bend tang on secondary throttle lever

IDLE SPEED AND MIXTURE ADJUSTMENT (NORMAL ENGINE TEMP.): In making the idle adjustment on the engine the air adjustment screw is used to adjust idle speed in a similar man ner as the throttle speed screw used previously Turning the air adjustment screw outward increases engine speed, but also leans the mixture supplied to the manifold which must be com pensated for by adjustment of the idle mixture adjusting screws

FAST IDLE ON CAR (2362S only) 1800 R P M hot engine with idle adjusting tang on high step of cam

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Chevrolet "V-8"—1956—Carbureters Nos. 2362S-2419S

WHEN SERVICING USE GASKET ASSORTMENT No 286A, REPAIR PACKAGE No 1850

PART NAMES IN CAPITAL LETTERS LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1396S	Body flange assembly (2362S)	
1-1398S	Body flange assembly (2419S)	
1A-114	FLANGE GASKET Supp by 1A1 ~3	
2-166	Primary and secondary throttle valve (Sup by 2 193)	(4)
2 181	Auxiliary throttle valve	(2)
2-193	Primary and secondary throttle valve	(4)
3-850	Secondary throttle shaft (2419S)	
3-1054S	Secondary throttle shaft and dog assembly (2362S)	
3-1056S	Primary throttle shaft and lever assembly (2362S)	
3-1057S	Primary throttle shaft and lever assembly (2419S)	
3-1058S	Auxiliary throttle shaft lever and weight assembly	
4A-139	Throttle shaft dog (2362S)	
4A-158	Throttle shaft dog (2419S)	
6 1115S	Air horn assembly (2419S) (Casting No 6 1114)	
6-1123S	Air horn assembly (2362S) (Casting No 6 1122)	
6-1179S	Air horn assembly (2362S) (Casting No 6 1156)	
6-1180S	Air horn assembly (2419S) (Casting No 6 1161)	
7-173	Choke valve (2362S)	
11-294S	LOW SPEED JET ASSEMBLY	(2)
11B-35	Rivet plug	(4)
11B-41	Rivet plug (2362S) (6 1123S (2), 6 1179S (1)	
11B-79	Rivet plug	(4)
11B-134	Rivet plug	
11B-146	Level sight plug	(2)
11B-223	Nozzle passage rivet plug	(4)
11B-272	Rivet plug	(2)

Part No.	PART NAME	
11B-294	Idle port rivet plug	(2)
11B-305	Rivet plug (6 1115S 6 1123S (1); (6 1179S 6 1180S (2)	
11B-306	Rivet plug (6 1115S 6 1123S (1), (6 1179S 6 1180S (2)	
14-383S	Choke lever and screw assembly (2362S)	
14-439S	Choke piston lever link and shaft assembly (2362S)	
14-440	Cam trip lever (2362S)	
15-35S	Strainer nut assembly (6 1115S 6 1179S 6 1180S (1) (6 1123S (2)	
17-50	PUMP CHECK NEEDLE	
20 22	Needle seat gasket	(2)
20-26	Pump relief plug gasket	
20-35	BOWL STRAINER GASKET (6 1115S 6 1179S 6 1180S (1) (6 1123S (2)	
21-143S	Primary float and lever assembly	
21 168S	Secondary float and lever assembly	
24-24	Float lever pin	(2)
25-278S	NEEDLE AND SEAT ASSEMBLY	(2)
25-279S	Secondary needle and seat assembly (2362S) (Sup by 25 278S)	
30-75	BOWL STRAINER	
30A-66	Idle air adjustment screw	
30A-67	Idle adjustment screw	(2)
39-11	Choke valve attaching screw (2362S)	(2)
47-14	Welsh plug (choke housing) (2362S)	
48-233S	Pump jet and housing assembly	

Part No.	PART NAME	
53A-333S	Pump operating lever and countershaft assembly	
53A-344	Vent arm	
53A-365	Secondary operating lever (2419S)	
53A-397	Lockout arm (2362S)	
53A-405	Secondary operating lever (2362S)	
61-57	Idle air adjustment screw spring	
61-84	Idle adjustment screw spring	(2)
61-128	Connector rod spring (2362S (2) (2419S (1)	
61-171	PUMP SPRING (LOWER)	
61-238	Throttle flex spring (2362S)	
61-291	Throttle adjusting screw spring (2362S)	
61-332	VACUUM PISTON SPRING	
61-382	METERING ROD SPRING	
61 454	Fast idle cam spring (2362S)	
61 474	Bowl vent spring	
61-483	SECONDARY THROTTLE RETURN SPRING	
61-535	Lockout arm spring (2362S)	
61-552	Throttle flex spring (2419S)	
63-35	CONNECTOR ROD SPRING RETAINER (2362S (2) (2419S (1)	
63 57	INTAKE CHECK BALL RETAINER	
63-58	Coil housing retainer (2362S)	(3)
63-149	Bowl vent spring retainer	
64 165S	PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
75 1255	METERING ROD—STANDARD—064" x 060" x 054"	(2)
86-12	Flange stud lock washer	(4)
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	(2)
101-136	Coil housing attaching screw (2362S)	(3)
101-149S	Body flange attaching screw and washer assembly	
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-275	Piston housing attaching screw (2362S) (Use with 6 1179S)	
101-277S	Vent arm attaching screw and washer assembly	
101 278	Pump jet housing attaching screw	
101 284	Piston housing attaching screw (2362S) (Use with 6 1123S)	(2)
101-298S	Body flange attaching screw and washer assembly	(2)
101-307S	Air horn attaching screw and washer assembly	(8)
101-324	Fast idle cam attaching screw (2362S)	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Primary and secondary throttle valve attaching screw	(8)
101-354S	Choke lever clamp screw and washer assembly (2362S)	
101-363	Piston housing attaching screw (2362S) (6 1123S (1) (6 1179S (2)	
101-376	Throttle adjusting screw (2362S)	

Part No	PART NAME	
101 382S	Body flange attaching screw and washer assembly	(3)
101 414	Auxiliary throttle valve attaching screw	(4)
105A 10	Choke lever clamp screw nut (2362S)	
105A 11	Flange stud nut	(4)
111 47S	Pump arm and screw assembly	
111 60S	Metering rod arm and screw assembly	
114 97	Throttle shaft arm (outer) (2362S)	
114-127	Throttle shaft arm (outer) (2419S)	
114-128	Throttle shaft arm (inner) (2419S)	
114-131	Throttle shaft arm (inner) (2362S)	
115 208	Throttle operating rod (2419S)	
115-215	Choke connector rod (2362S)	
115 216	THROTTLE CONNECTOR ROD	
115 247	Throttle operating rod (2362S)	
116-13	PUMP INTAKE CHECK BALL	
117-162	Vacumeter piston link	
117 165	Pump arm link	
118 102S	Dust cover assembly	
120 165	PRIMARY METERING ROD JET	(2)
120-187	SECONDARY METERING JET	(2)
121-78	COIL HOUSING GASKET (2362S)	
121-208	DUST COVER GASKET	
121 241	PUMP JET HOUSING GASKET	
121 243	PISTON HOUSING GASKET (2362S) (Use with 6 1123S)	
121 267	BODY FLANGE GASKET	
121 281	AIR HORN GASKET	
121-283	PISTON HOUSING GASKET (2362S) (Use with 6 1179S)	
122 102S	PUMP RELIEF PLUG ASSEMBLY	
129 19	Metering rod disk (upper)	(2)
136 37	Throttle operating rod washer (2362S (2) (2419S (5)	
136 84	Spring washer	
136 150	Metering rod disk (lower)	(2)
136 159	Throttle shaft washer	
136 172	Secondary throttle shaft washer	
136-174	Throttle adjusting screw washer (2362S)	
145 142	Choke vacuum passage stand pipe (2362S)	
145 148	Cross over bowl vent tube	(2)
150 62	Choke piston pin (2362S)	
150 186S	Pin and valve cap assembly	
150A 10	PIN SPRING	(4)
160 91	Choke piston (2362S)	
160 110S	Vacuum piston and pin assembly	
170 334S	Piston housing and plug assembly (2362S) (Use with 6 1123S)	
170 442S	Piston housing and plug assembly (2362S) (Use with 6 1179S)	
170AB 238S	Thermostatic coil and housing assembly (2362S)	
181 204S	Fast idle cam assembly (2362S)	
186 34	Choke baffle plate (2362S)	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

CHEVROLET

"V-8"

1956

WCFB Four-Bore Down-Draft Climatic® Control **Carbureters Nos. 2366S-2366SA**

CARBURETER SPECIFICATIONS

For Chevrolet 8 Cylinder Engine: 3¾ Inch Bore, 3 Inch Stroke

Dimensions: Flange size, 1⅛ inch. Four Bore—4 bolt type.
Primary venturi size, 11/32 inch I. D.
Main venturi (primary) size, 1-1/16 inch.
Main venturi (secondary) size, 15/16 inch I. D.

Vents: Outside, (4) in air horn, (4) in flange. Inside, (5) in air horn.

Gasoline Intake: Size No. 42 (.0935 inch) drill hole in needle seat.

Low Speed Jet Tube: (Primary side only).
Jet, size No. 68 (.031 inch) drill.
By-pass, in body, size No. 52 (.0635 inch) drill.
Economizer, in screw plug, size (.049 inch) diameter.
Idle Bleed, in body, size No. 52 (.0635 inch) drill.

Idle Port: (Upper) slot type. Primary, length .175 inch; width .030 inch. Secondary, none.

Idle Port Opening: Primary, .113 to .119 inch above top edge of valve with valve tightly closed. Secondary, none.

Lower Port: Primary (for idle adjustment screw), size No. 53 (.0595 inch) drill. Secondary, none.

Set Idle Adjustment Screw: ¼ to 1¼ turns open. For richer mixture turn screw out. Do not idle engine below 425 R.P.M. (Automatic Transmission—in Drive Range), 450 R.P.M. (Standard and Overdrive Transmission).

Main Nozzle: Installed permanently. DO NOT REMOVE. Anti-percolating bleed (primary, in plug) size No. 60 (.040 inch) drill; (secondary, in body) size No. 60 (.040 inch) drill.

Metering Rod: Primary, economy step .071 inch diameter. Middle step tapers to .065 inch diameter. Power step, .055 inch diameter. Secondary, none.

Metering Rod Jet: Primary, size .091 inch diameter (for metering rod). Secondary, size .054 inch diameter (no metering rod).

Accelerating Pump: Discharge jet (twin) primary side only, size No. 73 (.024 inch) drill.

Intake ball check seat, size .115 to .120 inch diameter.

Discharge needle seat, size .070 inch diameter.

Choke: Carter Climatic® Control, set on index. Butterfly type—offset choke valve, primary side only. Choke heat suction hole, restriction in piston housing, size (2366S) No. 43 (.089 inch; (2366SA) No. 40 (.098 inch) drill.

Vacuum Spark Port: Horizontal slot (round end) .045 x .110 inch. Top of port .028 to .038 inch above valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .018"	Ignition Timing Breaker Points to Open: 4° B.T.C. at Idle (12° at 1000 R.P.M. With Vacuum Line Disconnected)	Float Setting See Adjustments	Idle Adjustment Screw Setting ¼ t 1¼ Aut . Trans. 425 R.P.M. Std. & O'Drive 450 R.P.M.

NOTE: These cars are equipped with hydraulic valve lifters.—NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: Two separate float adjustments must be made—lateral and vertical. **LATERAL ADJUSTMENT:** With bowl cover assembly inverted, bowl cover gasket removed and float resting on seated needle, place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting. Side of floats should just clear the vertical uprights of float gauge. Adjustment should be made by bending arms of floats.

VERTICAL ADJUSTMENT: With float gauge in same position, floats should just clear the horizontal portion of gauge. Vertical distance between top of float and machined surface of casting must be 1/8 inch (gauge T109-232) for primary floats and 1/4 inch (gauge T109-223) for secondary floats. Adjust by bending float arms.

FLOAT DROP ADJUSTMENT: With bowl cover held in upright position and measuring from center of float, the distance between top of floats and bowl cover should be 5/8 inch for primary floats and 3/4 inch for secondary floats. Adjust by bending stop tabs on float brackets.

PUMP ADJUSTMENT: Install pump connector link in outer hole (long stroke) of pump arm, with ends extending toward countershaft arm. Back out throttle lever stop screw until throttle valves seat in bores of carbureter. Hold straight edge across top of dust cover boss at pump arm. The flat on top of pump arm should be parallel to straight edge. Adjust by bending throttle connector rod at lower angle. (Use tool T109-213.)

METERING ROD ADJUSTMENT: Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows: 1. Back out throttle lever stop screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw. 2. With metering rods in place, press down on vacumeter link until metering rods bottom in carbureter body casting. 3. Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link. Hold in place and carefully tighten clamp screw.

FAST IDLE ADJUSTMENT: (a) Loosen choke lever clamp screw on choke shaft. Insert .020 inch feeler gauge (T109-29) between lip of fast idle cam and boss of flange casting. Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw. (b) With choke valve tightly closed bend fast idle adjusting tang until there is .015 inch (gauge T109-44) opening between throttle valve and bore of carbureter side opposite idle port. Be sure fast idle adjusting tang is on high step of cam while making this adjustment.

FAST IDLE ON CAR: 1800 R.P.M. hot engine with idle adjusting tang on high step of cam.

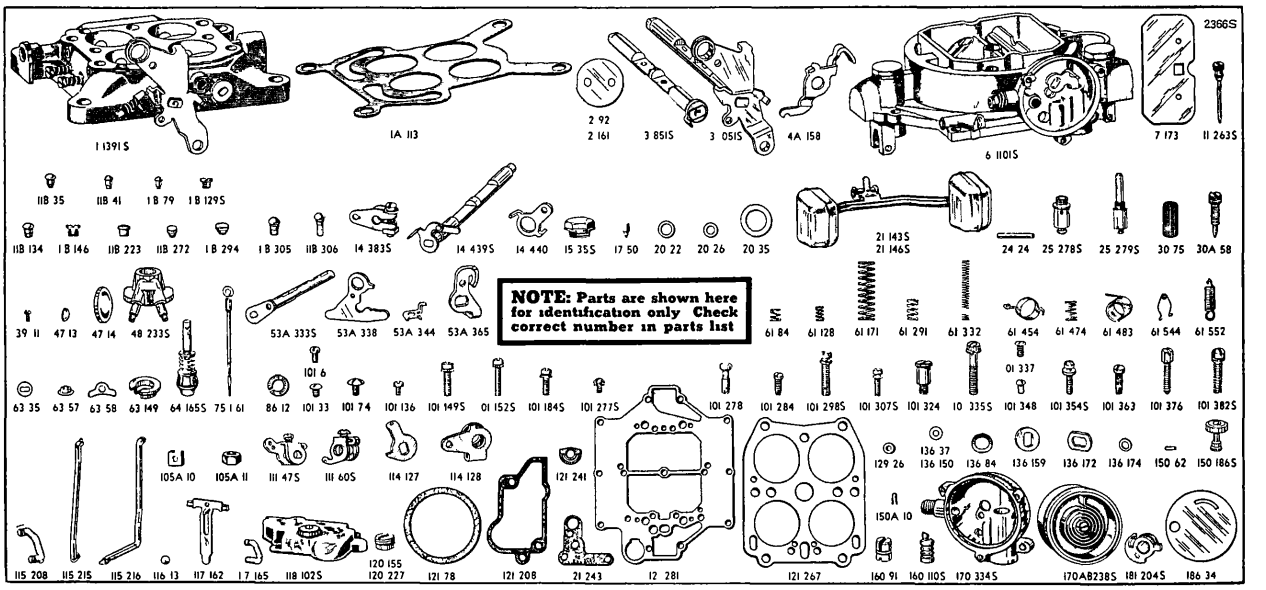
UNLOADER ADJUSTMENT: With throttle wide open there should be 3/16 inch (gauge T109-28) clearance between upper edge of choke valve and inner wall of air horn. Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41).

BOWL VAPOR VENT ADJUSTMENT: This adjustment should be made after completing pump and metering rod adjustments. Install dust cover and dust cover gasket. Back out throttle lever stop screw to allow throttle valves to seat in bores of carbureter. There should be 1/16 inch (gauge T109-197) between lower edge of bowl vapor vent valve and dust cover. To adjust, remove dust cover and bend vapor vent arm.

SECONDARY THROTTLE LEVER ADJUSTMENT: Primary and secondary throttle valves should reach wide open position at the same time. To adjust, bend throttle operating rod at upper angle. (Use bending tool T109-213.) With primary and secondary throttle valves in tightly closed position there should be .017-.022 inch (gauge T109-29) clearance between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on primary lever.

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: This adjustment should be made after completing fast idle and secondary throttle lever adjustments. Crack throttle valves and hold choke valve tightly closed. Then close throttle. Tang on secondary throttle lever should freely engage in notch of lockout dog. If necessary to adjust, bend tang on secondary throttle lever.

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Chevrolet "V-8"—1956—Carbureters Nos. 2366S-2366SA

WHEN SERVICING, USE GASKET ASSORTMENT No. 281A, REPAIR PACKAGE No. 1828B

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1391S	Body flange assembly	
1A-113	FLANGE GASKET	
2-92	Primary throttle valve	(2)
2-161	Secondary throttle valve	(2)
3-851S	Secondary throttle shaft and dog assembly	
3-1051S	Primary throttle shaft and lever assembly	
4A-158	Throttle shaft dog	
6-1101S	Air horn assembly (Casting No 6 1098) (2366S) (Sup by 6-1167S)	
6-1167S	Air horn assembly (Casting No 6 1098) (Sup by 6 1178S)	
6-1178S	Air horn assembly (Casting No 6 1151)	
7-173	Choke valve	
11-263S	LOW SPEED JET ASSEMBLY	(2)
11B-35	Rivet plug	(4)
11B-41	Rivet plug (6 1101S 6 1167S) (2) (6 1178S) (1)	
11B-79	Rivet plug (early prod (4) (late prod (3)	
11B-129S	PUMP DISCHARGE PASSAGE PLUG ASSEMBLY	
11B-134	Rivet passage plug	
11B-146	Level sight plug	(2)
11B-223	Nozzle passage rivet plug	(4)
11B-272	Rivet plug	(2)
11B-294	Idle port rivet plug	(2)
11B-305	Rivet plug (6 1101S 6 1167S) (1) (6 1178S) (2)	
11B-306	Rivet plug (6 1101S 6 1167S) (2) (6 1178S) (1)	
14-383S	Choke lever and screw assembly	
14-439S	Choke piston lever link and shaft assembly	
14-440	Cam trip lever	
15-35S	Strainer nut assembly (6 1101S 6 1167S) (2) (6 1178S) (1)	
17-50	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	(2)
20-26	Pump passage plug gasket	--

Part No.	PART NAME	
20-35	BOWL STRAINER GASKET (6 1101S 6 1167S) (2) (6 1178S) (1)	
21-143S	Primary float and lever assembly	
21-146S	Secondary float and lever assembly	
24-24	Float lever pin	(2)
25 278S	PRIMARY AND SECONDARY NEEDLE AND SEAT ASSEMBLY	(2)
25-279S	Secondary needle and seat assembly (6 1101S 6 1167S) (Sup by 25 278S)	
30-75	BOWL STRAINER	
30A-58	Idle adjustment screw	(2)
39-11	Choke valve attaching screw	(2)
47-13	Welsh plug (spark port)	
47-14	Welsh plug (choke housing) (2366S)	
47-30	Welsh plug (choke side) (2366SA)	
48-233S	Pump jet and housing assembly	
53A-333S	Pump operating lever and countershaft assembly	
53A-338	Lockout arm	
53A-344	VENT ARM	
53A-365	Secondary operating lever	
61-84	Idle adjustment screw spring	(2)
61-128	Connector rod spring	
61-171	PUMP SPRING (LOWER)	
61-291	Throttle lever adjusting screw spring	
61-332	VACUUM PISTON SPRING	
61-382	METERING ROD SPRING	
61-454	Fast idle cam spring	
61-474	Bowl vent spring	
61-483	SECONDARY THROTTLE RETURN SPRING	
61-544	Metering rod spring (Sup by 61 382)	
61-552	Throttle flex spring	
63-35	CONNECTOR ROD SPRING RETAINER	
63-57	INTAKE CHECK BALL RETAINER	
63-58	Coil housing retainer	(3)

Part N .	PART NAME	
63-149	Bowl vent spring retainer	
64-165S	PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
64-180S	Pump plunger rod spring and retainer assembly (Sup by 64 165S)	
75-1161	METERING ROD—STANDARD	(2)
75-1214	Metering rod—1 size lean	(2)
86-12	Flange stud lock washer	(4)
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	(2)
101-136	Coil housing attaching screw	(3)
101-149S	Body flange attaching screw and washer assembly	
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-275	Piston housing attaching screw (Use with 6 1178S)	
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet and housing attaching screw	
101-284	Piston housing attaching screw (6 1101S 6 1167S)	(2)
101-298S	Body flange attaching screw and washer assembly	(2)
101-307S	Air horn attaching screw and washer assembly	(8)
101-324	Fast idle cam attaching screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-348	Primary throttle valve attaching screw	(4)
101-354S	Choke lever clamp screw and washer assembly	
101-363	Piston housing attaching screw (6 1101S 6 1167S (1) (6 1178S (2)	
101-376	Throttle lever adjusting screw	
101-382S	Body flange attaching screw and washer assembly	(3)
103-14	Lead shot (late prod)	
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
114-127	Throttle shaft arm (outer)	
114-128	Throttle shaft arm (inner)	
115-208	Throttle operating rod	
115-215	Choke connector rod	
115-216	THROTTLE CONNECTOR ROD	
116-13	PUMP INTAKE CHECK BALL	

Part No.	PART NAME	
117-162	Vacumeter piston link	
117-165	Pump arm link	
118-102S	Dust cover assembly	...
120-155	PRIMARY METERING ROD JET	(2)
120-187	Secondary metering jet (Sup by 120 227)	(2)
120-227	SECONDARY METERING JET	(2)
121-78	COIL HOUSING GASKET	
121-208	DUST COVER GASKET	
121-241	PUMP JET HOUSING GASKET	
121-243	PISTON HOUSING GASKET (Use with 6 1101S 6 1167S)	
121-265	Air horn gasket (Sup by 121 281)	
121-267	BODY FLANGE GASKET	
121-281	AIR HORN GASKET	
121-283	PISTON HOUSING GASKET (Use with 6 1178S)	
129-19	Metering rod disk (upper)	(2)
129-26	Metering rod disk (Sup by 129 19)	(2)
136-37	Throttle connector rod and operating rod washer	(5)
136-84	Spring washer	
136-150	Metering rod washer (lower)	(2)
136-159	Throttle shaft washer	
136-172	Secondary throttle shaft washer	
136-174	Throttle lever adjusting screw washer	
150-62	Choke piston pin (2366S)	
150-186S	Pin and valve cap assembly	
150-190	Choke piston pin (2366SA)	
150A-10	PIN SPRING	(5)
160-91	Choke piston (2366S)	
160-110S	Vacuum piston and pin assembly	
160-117	Choke piston (2366SA)	
170-334S	Piston housing and plug assembly (2366S)	
170-372S	Piston housing and plug assembly (Sup by 170 334S)	
170-431S	Piston housing and plug assembly (2366SA) (Use with 6 1167S)	
170-449S	Piston housing and plug assembly (Use with 6 1178S)	
170AB238S	Thermostatic coil and housing assembly	
181-194S	Fast idle cam and spring assembly (Sup by 181 204S)	
181-204S	Fast idle cam and spring assembly	
186-34	Choke baffle plate	

NOTE **Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used.**

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CARTER CARBURETOR

DIVISION OF acf INDUSTRIES
INCORPORATED
ST. LOUIS 7, MO., U.S.A.

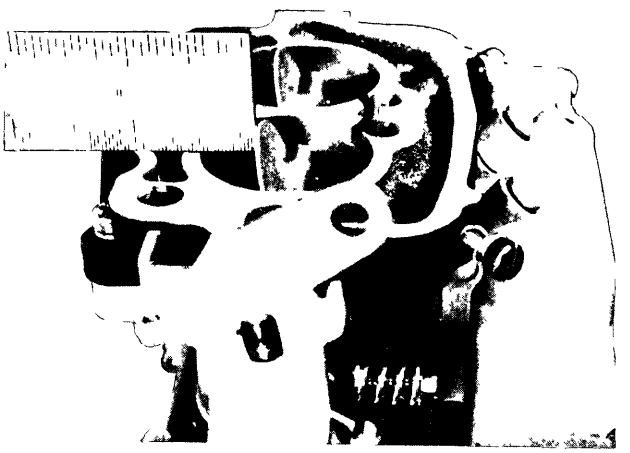
GENERAL BULLETIN

ALL CARBURETER ACCOUNTS

BULLETIN NO. 46-CHEVROLET
DATE November 5, 1956

SUBJECT: 1955-56 CHEVROLET "V-8"
CARTER WGD-2286S DUAL
REPLACEMENT CARBURETER

Servicemen have asked why the throttle valves on the WGD-2286S dual replacement carbureter do not travel to wide open position.



When this carbureter was in the engineering stage, it was found that the fuel mixture distribution through the intake manifold was improved by stopping the throttle valves a few degrees before wide open position. This improved top speed and performance.

When servicing a WGD-2286S carbureter, it is advisable to check to be certain that the wide open throttle stop (on the throttle lever) has not been bent in an attempt to move the throttle valves to wide open position. The position of the throttle valves can be checked by using a scale, as shown in the illustration. The dimension from the edge of the throttle valve to the bore of the carbureter should be 15/32".

V.F. Thompson
Service Manager

VFT/bk

cc- Personnel and Extra Copies -- Canada and U.S.A.

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FORM C-2914E

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CARTER CARBURETOR

DIVISION OF ACF INDUSTRIES
INCORPORATED
ST. LOUIS 7, MO., U.S.A.

GENERAL BULLETIN

ALL CARBURETER ACCOUNTS

BULLETIN NO. 48 Chevrolet

DATE April 7, 1958

SUBJECT: WGD-2286S DUAL CARBURETER FOR THE CHEVROLET V8

The Carter WGD-2286S carbureter has given an excellent account of itself on thousands of 1955 and 1956 V8 Chevrolets. We are pleased to announce that its application has been extended to cover 1957 and 1958 models. This extended coverage is now possible with the use of an adaptor ring unitized package part number 195-70U.

195-70U Contains:-

1 72-67 adaptor ring (to raise air cleaner to clear the choke housing and ignition coil).

1 121-300 air cleaner gasket

The original air cleaner gasket is placed on the carbureter air horn first, then the adaptor ring. The 121-300 gasket is used between the adaptor ring and the air cleaner. The original stud and wing nut is used to hold the air cleaner in place.

The 1955 and 1956 applications of the WGD-2286S carbureter do not require this unitized package.

An initial shipment is being made to Carter Central distributors of a limited number of the 195-70U units. Carter accounts should anticipate their requirements for part 195-70U and 2286S carbureters and place orders accordingly. There is a ready market for this carbureter.

We have received numerous requests from fleets as well as the motoring public for the 1957 and 1958 applications.

V. F. Thompson

V. F. Thompson, Manager
Distribution Sales

RJM:dg

cc: Personnel and Extra Copies U.S.A. and Canada

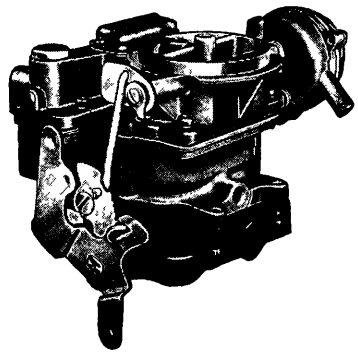
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CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

CHEVROLET 2286S
November, 1955
Revised January, 1957



CHEVROLET "V-8"

STANDARD and POWERGLIDE TRANSMISSION

1955-1956

WGD DUAL DOWN-DRAFT CLIMATIC® CONTROL **CARBURETER N . 2286S**

CARBURETER SPECIFICATIONS

For Chevrolet 8 Cylinder Engine: 3¾ Inch Bore, 3 Inch Stroke

Dimensions: Flange size 1¼ inch dual, 4 bolt type.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 21/32 inch I. D.
Main venturi, 1-3/16 inch I. D.

Vents: Outside, none. Inside, balance vent in air horn.

Gasoline Intake: Size No. 34 (.111 inch) drill in needle seat.

Low Speed Jet Tube: Jet, size .032 inch diameter. By-pass, in air horn, size No. 53 (.0595 inch) drill. Economizer, in air horn, size No. 55 (.052 inch) drill. Idle Bleed, in air horn, size No. 53 (.0595 inch) drill.

Idle Port: Upper, slot type, length .170 inch; width .030 inch.

Idle Port Opening: .119 to .125 inch above top edge of valve with valve tightly closed.

Lower Port (For Idle Adjustment Screw): Size No. 52 (.0635 inch) drill.

Set Idle Adjustment Screw: 1 to 2 turns open. For richer mixture turn screw out. Do not idle engine below 400 R.P.M. (Powerglide transmission — in Drive Range), 450 R.P.M. (Standard transmission).

Main Nozzle: Nozzle is installed permanently. (DO NOT REMOVE. Anti-percolating well bleed, in plug, size No. 65 (.035 inch) drill. Bleed (between idle well and anti-percolator well) size No. 72 (.025 inch) drill.

Metering Rod (Vacumeter Type): Economy step .067 inch diameter. Middle step tapers to .063 inch diameter. Power step .0565 inch diameter.

Meteirng Rod Jet: Size .091 inch diameter.

Accelerating Pump: Discharge jet (twin) size No. 73 (.024 inch) drill. Intake check seat (in body) size .115 to .120 inch diameter; also intake check ball in plunger shaft. Discharge (needle seat) size No. 50 (.070 inch) drill. Pump jet air bleed passage to outside ⅛ inch drill.

Choke: Carter Climatic® Control—set on index. Butterfly type, offset valve. Choke heat suction hole in air horn size No. 40 (.098 inch) drill.

Vacuum Spark Port: Horizontal slot type .110 by .045 inch. Top of port to be .023 to .033 inch above upper edge of valve with valve tightly closed.

NOTE: Throttle lever is designed so that throttle valves stop a few degrees before wide open position.

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open:	Valve Setting (Hot)	Float Setting	Idle Adjustment Screw Setting
.035"	.016"-.019"	4° B.T.D.C.	Standard Trans. Intake .008" Exhaust .016"	¼ Inch (Use Gauge T109-31)	1 to 2 Powerglide 400 R.P.M. Standard Trans. 450 R.P.M.

NOTE: Power Glide Trans. equipped with hydraulic valves—no adjustment necessary.

CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3659

Float Level: ¼" (Gauge T109-31) between top of float (at center) and bowl cover.
To adjust: bend float lever.

Float Alignment: Side of float parallel to edge of casting. Minimum clearance between lever and air horn lugs without binding.
To adjust: bend float lever.

Pump: Flat on pump arm should parallel straight edge on dust cover boss.
To adjust: bend connector rod.

Metering Rod: Metering rod should bottom with throttle valve seated.

Choke Lever Clearance: .005" (Gauge T109-237) between lug on outer choke shaft lever and stop on inner choke shaft lever.
To adjust: bend lug on outer choke shaft lever.

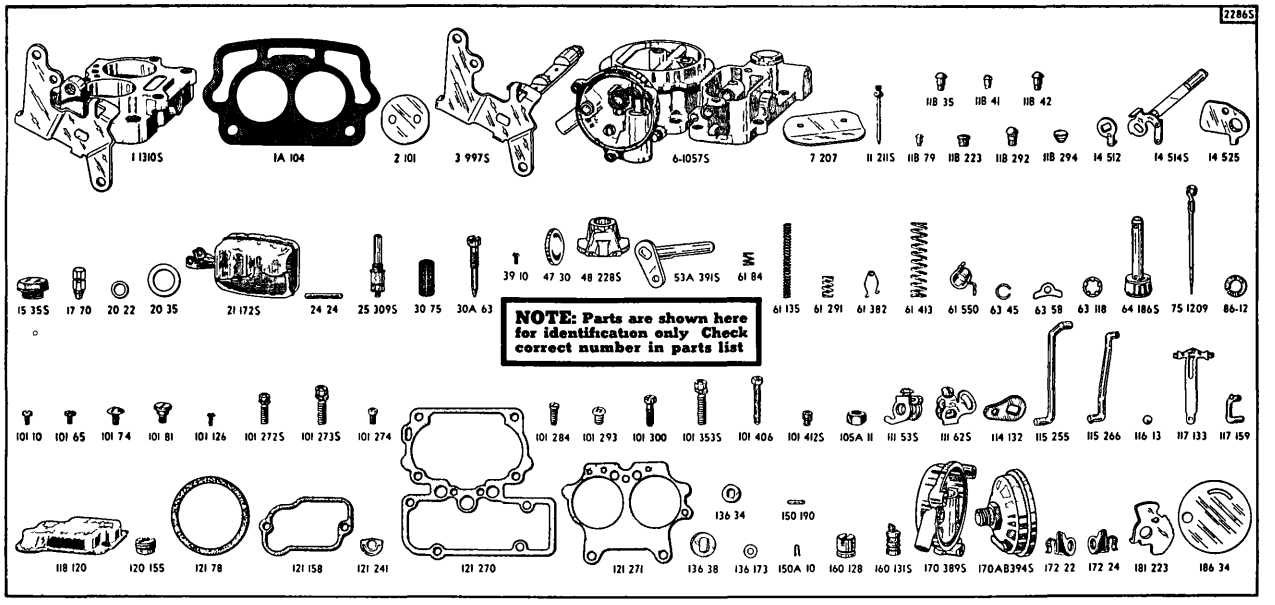
Fast Idle Throttle Valve Clearance: .015" (Gauge T109-44) between lower edge of valve and bore with adjusting tang on high step of cam.

Unloader: 7/32" (Gauge T109-106) between top edge of valve and inner wall of air horn.
To adjust: bend unloader arm on throttle lever

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Chevrolet "V-8"—1955-1956—Carbureter No. 2286S

WHEN SERVICING, USE GASKET ASSORTMENT No. 280 REPAIR PACKAGE No. 1827

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part N .	PART NAME	
1-1310S	Body flange assembly	
1A-104	FLANGE GASKET	
2-101	Throttle valve	(2)
3-997S	Throttle shaft and lever assembly	
6-1057S	Air horn assembly	
7-207	Choke valve	
11-211S	LOW SPEED JET ASSEMBLY	(2)
11B-35	Rivet plug	(3)
11B-41	Rivet plug	(2)
11B-42	Spark port rivet plug	
11B-79	Rivet plug	(3)
11B-223	Nozzle passage rivet plug	(2)
11B-292	Rivet Plug	
11B-294	Idle port rivet plug	(2)
14-512	Choke shaft lever	
14-514S	Choke piston lever link and shaft assembly	
14-525	Choke lever	
15-35S	Strainer nut assembly	
17-70	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	
20-35	BOWL STRAINER GASKET	
21-172S	Float and lever assembly	
24-24	Float lever pin	
25-309S	NEEDLE AND NEEDLE SEAT ASSEMBLY	
30-75	BOWL COVER STRAINER	
30A-63	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
47-30	Welsh plug	
48-228S	Pump jet housing assembly	
53A-391S	Pump operating lever and countershaft assembly	
61-84	Idle adjustment screw spring	(2)
61-135	VACUUM PISTON SPRING	
61-291	Throttle lever adjusting screw spring	
61-382	METERING ROD SPRING	
61-413	PUMP SPRING	
61-550	Pump operating lever spring	
63-45	Pump check ball retainer ring	
63-58	Coil housing retainer	(3)
63-118	Throttle shaft retaining ring	
64-186S	PUMP PLUNGER AND CHECK ASSEMBLY	
75-1209	METERING ROD—STANDARD	(2)
75-1286	Metering rod—1 size lean	(2)
75-1287	Metering rod—2 sizes lean	(2)
86-12	Flange stud lock washer	(4)
101-10	Pump arm attaching screw	

Part No.	PART NAME	
101-65	Choke lever screw	
101-74	Throttle shaft arm attaching screw	
101-81	Fast idle cam attaching screw	
101-126	Throttle valve attaching screw	(4)
101-272S	Air horn attaching screw and washer assy	(8)
101-273S	Body flange attaching screw and washer assy	(2)
101-274	Coil housing attaching screw	(3)
101-284	Piston housing attaching screw	(3)
101-293	Metering rod arm clamp screw	
101-300	Pump jet housing attaching screw	
101-353S	Body flange attaching screw and washer assy	(2)
101-406	Throttle lever adjustment screw	
101-412S	Dust cover attaching screw and washer assy	(2)
105A-11	Flange stud nut	(4)
111-53S	Metering rod arm and screw assembly	
111-62S	Pump arm and screw assembly	
114-132	Throttle shaft arm	
115-255	THROTTLE CONNECTOR ROD	
115-266	Choke connector rod	
116-13	Pump intake check ball	
117-133	Vacumeter piston link	
117-159	Pump connector link	
118-120	Dust cover	
120-155	METERING ROD JET	(2)
121-78	COIL HOUSING GASKET	
121-158	DUST COVER GASKET	
121-241	PUMP JET HOUSING GASKET	
121-270	AIR HORN GASKET	
121-271	BODY FLANGE GASKET	
136-34	Choke shaft washer	
136-38	Throttle shaft washer	
136-173	Pump connector link washer	(2)
150-190	Choke piston pin	
150A-10	Pin spring	(2)
160-128	Choke piston	
160-131S	Vacuum piston and pin assembly	
170-389S	Piston housing and plug assembly	
170AB-394S	Thermostatic coil and housing assembly	
172-22	Throttle connector rod retainer (lower)	
172-24	Throttle connector rod retainer (upper)	
172-30	Clevis clip (Use to attach accelerator rod to throttle lever on 1956 cars)	
181-223	Fast idle cam	
186-34	Choke baffle plate	

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

CARTER MODEL WGD CARBURETER FOR CHEVROLET
(SERVICE ADJUSTMENT PROCEDURE)

NOTE: The parts and specification pages referred to are catalog pages. These pages can be obtained from Carter Carburetor Corporation, Catalog Department, St. Louis (7), Missouri. Specify the carbureter number found on the brass identification tag, when requesting specification pages.

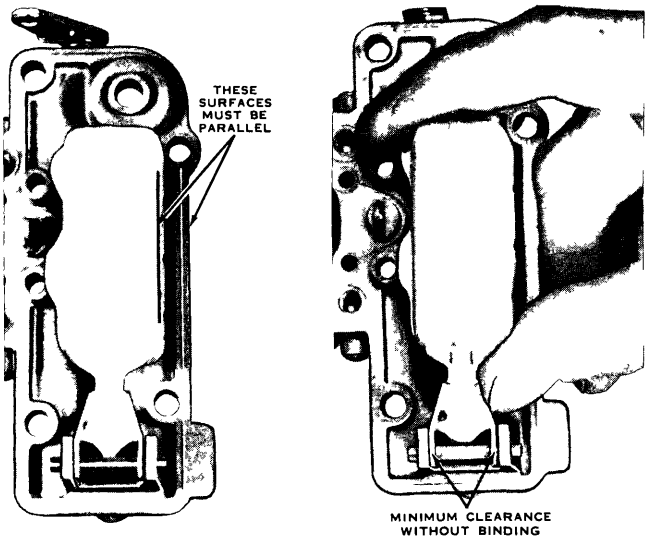


Figure 1

FLOAT ALIGNMENT ADJUSTMENT (Fig. 1)

1. Sight down the side of the float shell to determine if the side of the float is parallel to the outer edge of the air horn casting. TO ADJUST: Bend float lever by applying pressure to the end of the float shell with the fingers while supporting the float lever with the thumb.

   CAUTION: To avoid damaging the float, apply only enough pressure to bend float lever.

2. After aligning float, remove as much clearance as possible between arms of float lever and lugs on air horn by bending the float lever. Arms of float lever should be as parallel to the inner surfaces of lugs on air horn as possible.

   Float must operate freely without excess clearance on its hinge pin.

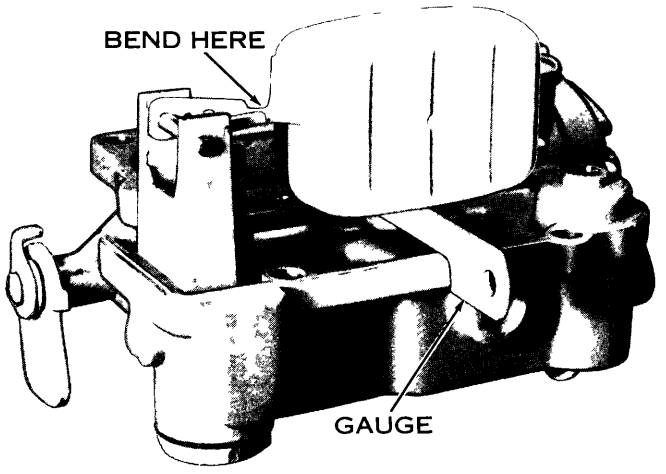


Figure 2

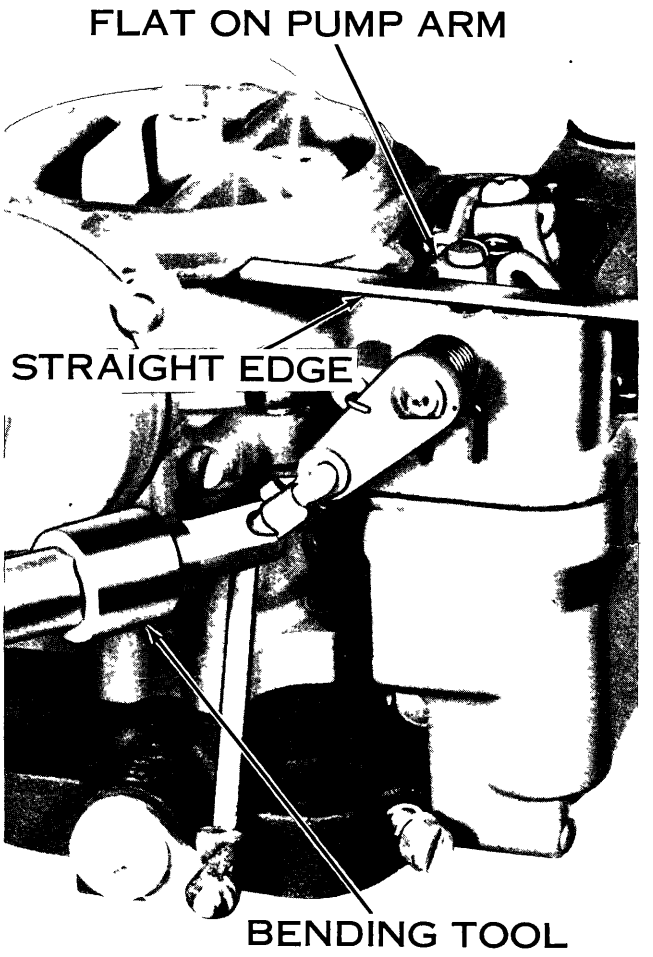


Figure 3

PUMP ADJUSTMENT (Fig. 3)

1. Back out idle speed screw until throttle valves seat in bores of carbureter. **NOTE:** Be sure choke is wide open so fast idle cam does not hold valve open.
2. Hold straight edge across top of dust cover boss at pump arm. Bend rod at upper angle until flat of pump arm is parallel with straight edg while throttle valves are seated. (Use bending tool T109-213.)

FLOAT LEVEL ADJUSTMENT (Fig. 2)

With air horn inverted and needle seated, adjust float arm so clearance between top center of float and air horn is as listed on carbureter specification page. Recheck float alignment.

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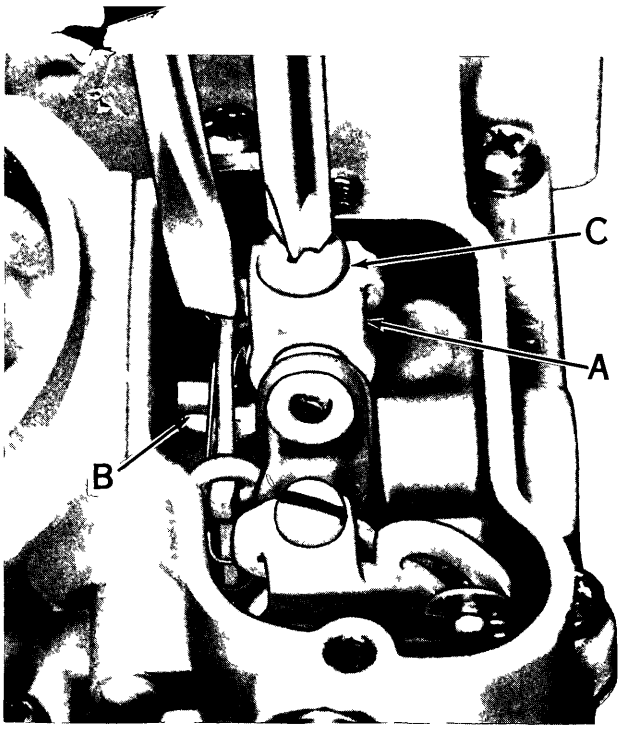


Figure 4

METERING ROD ADJUSTMENT (Fig. 4)

1. Back out idle speed screw until throttle valves seat. **NOTE:** Be sure choke is wide open so fast idle cam does not hold valve open.
2. Press down on vacumeter piston link until metering rods bottom in carbureter body.
3. Holding rods in this downward position and with throttle valves seated, revolve metering rod arm (A) until finger (B) on arm contacts lip of vacumeter link. Hold in place and carefully tighten clamp screw (C).

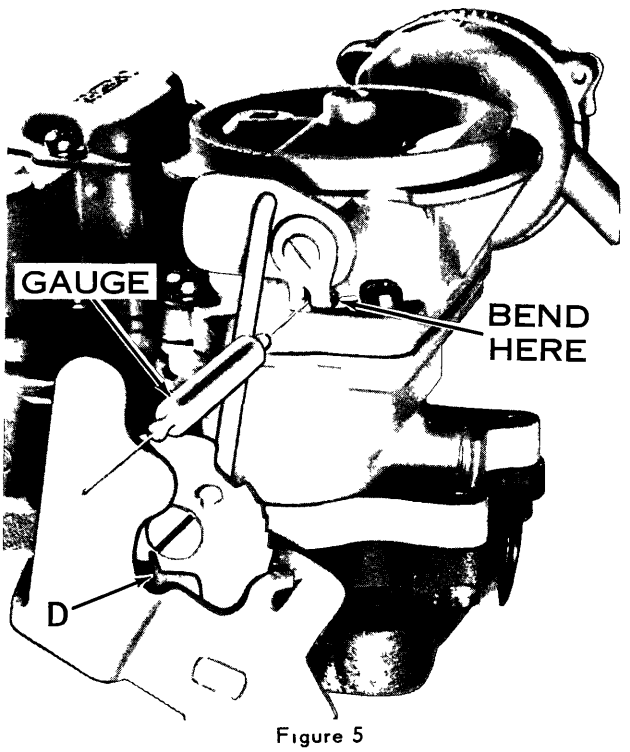


Figure 5

CHOKE SHAFT LEVER CLEARANCE ADJUSTMENT (Fig. 5)

1. H ld choke valve tightly closed.
2. Hold fast idle cam against stop on casting (D).
3. The clearance between lug on outer choke shaft lever and stop on inner choke shaft lever should be as list d on carbureter specification page. TO ADJUST: Bend lug on outer choke shaft lever. (Use bending tool T109-214.)

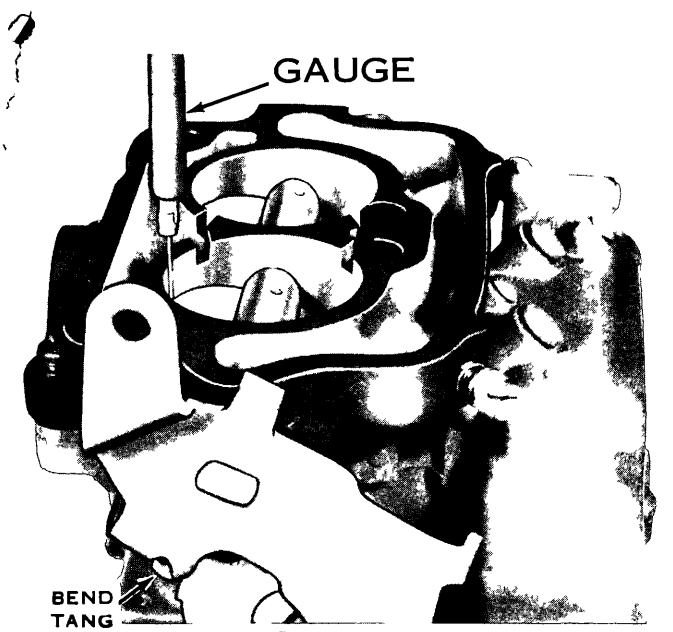


Figure 6

FAST IDLE THROTTLE VALVE CLEARANCE ADJUSTMENT (Fig. 6)

1. Be sure choke valve is closed.
2. Bend fast idle adjusting tang against high step of cam until the clearance between throttle valve (side opposite port) and bore is as listed on carbureter specification page.

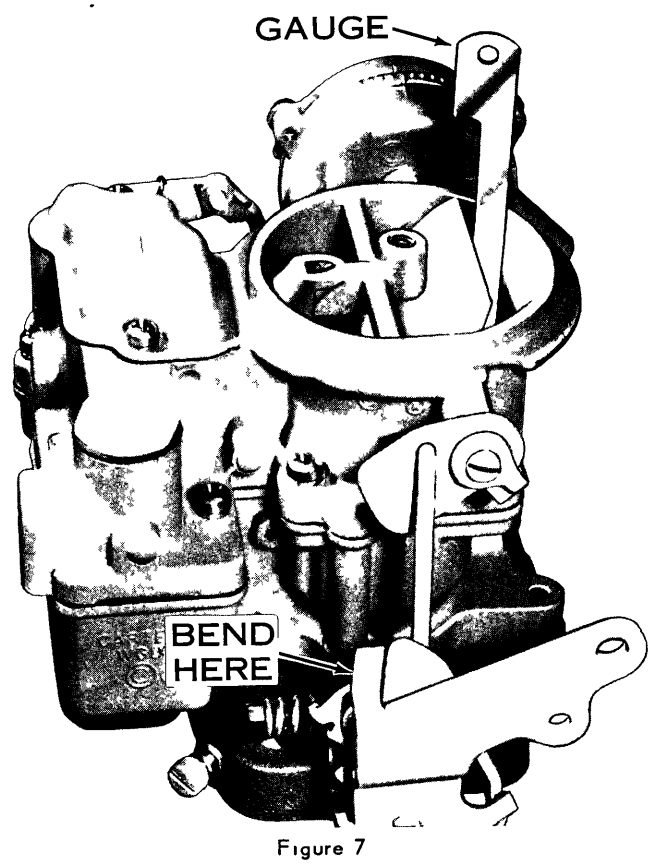


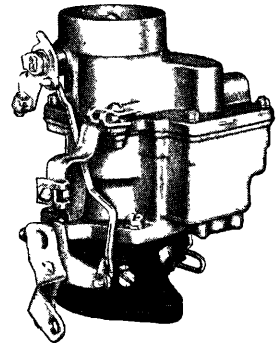
Figure 7

UNLOADER ADJUSTMENT (Fig. 7)

1. Hold throttle valves wide open.
2. Close choke valve as far as possibl without forcing.
3. Clearance between top edge of choke valve and inner wall of air horn should be as listed on carbureter specification page.
4. Adjust by bending choke unloader arm n throttle lever. (Use bending tool T109-41.)

This carbureter can also be used on 1953-1956 passenger cars by addition of a hand choke wire assembly, Carter bracket parts; (1) No. 180-71, (2) No. 101-12, (2) No. 86-10, (2) No. 105A-10 and (1) No. 156-17 fitting

(MANUAL CHOKE)



CHEVROLET TRUCK

(235 Cu. In. Engine Only)

1953-1956

Casting No 1127 on face of flange.

YF DOWN-DRAFT **CARBURETER No. 2100S**

CARBURETER SPECIFICATIONS

For Chevrolet 6 Cylinder Engine 3 9/16 Inch Bore, 3 15/16 Inch Stroke

Dimensions Flange size 1½ inch S A E
Primary venturi, 11/32 inch I D
Secondary venturi, 11/16 inch I D
Main venturi, 1-5/16 inch I. D

Float Setting: See adjustments

Vents Outside No 12 (.189 inch) drill
Inside balance vent size, No 42 (.0935 inch) drill in air horn

Gasoline Intake. Spring loaded needle Size No 46 (.081 inch) drill in needle seat

Low Speed Jet Tube Jet size No 70 (.028 inch) drill By pass in body, size No 51 (.067 inch) drill Economizer size No 54 (.055 inch) drill

Idle Port: Upper port, slot type, length .190 inch width .040 inch.

Idle Port Opening. Top of port .143 to .147 inch above top edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw). .0615 to .0655 inch diameter.

Set Idle Adjustment Screw: ½ to 1½ turns open For richer mixture turn screw out Idle engine 475 r p m

Main Nozzle. Nozzle is installed permanently DO NOT REMOVE Drilled passage from anti percolator passage to bore size No 59 (.041 inch) drill

Metering Rod Economy step .067 inch, middle step tapers to .060 inch power step .050 inch diameter

Metering Rod Jet Size .0945 inch diameter

Metering Rod Setting: See adjustments

Accelerating Pump. Diaphragm type vacuum and mechanically operated Pump jet size No 74 (.0225 inch) drill Intake ball check seat (in diaphragm housing) size No 40 (.098 inch) drill Discharge needle seat (in body) size No 42 (.0935 inch) drill Vacuum restriction (in flange) size No 55 (.052 inch) drill Vacuum passage (diaphragm bleed) size No 56 (.0465 inch) drill Pump bleed into bowl size No 75 (.021 inch) drill

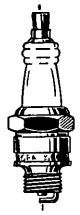
Pump Adjustment: See adjustments

Choke: Manual, interconnected with throttle Valve offset butterfly type.

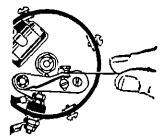
Vacuum Spark Port Horizontal slot type, size .125 by .041 inch Top of port (early prod.) .030 to .040 inch; (late prod.) .035 to .045 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

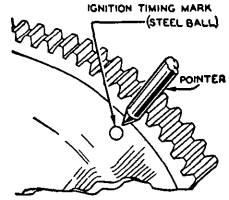
CAUTION. Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



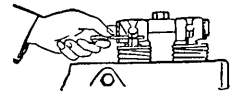
Spark Plug Gap
.033"-.038"



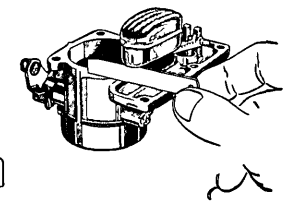
Breaker Point Setting
.016"-.021"



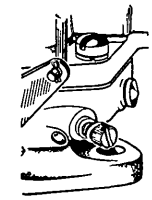
Ignition Timing
Breaker Points to Open
When steel ball on fly wheel is in line with pointer and Road set for light detonation on hard acceleration



Valve Setting (Hot)
Intake .006"-.008"
Exhaust .013"-.015"



Float Setting
(See Adjustments)



Idle Adjustment Screw Setting
½ to 1½
Turns Open

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CARBURETER ADJUSTMENTS

Float Adjustment With bowl cover assembly inverted and float resting on pin in seated needle and with gasket removed the distance from the bowl cover to the top of float should be 9/32 inch (Gauge T109 126) Do not depress float lip against spring loaded pin in needle but let float rest of its own weight Adjust by bending lip of float not float arm Float setting must be checked with the bowl cover held at eye height in a level position

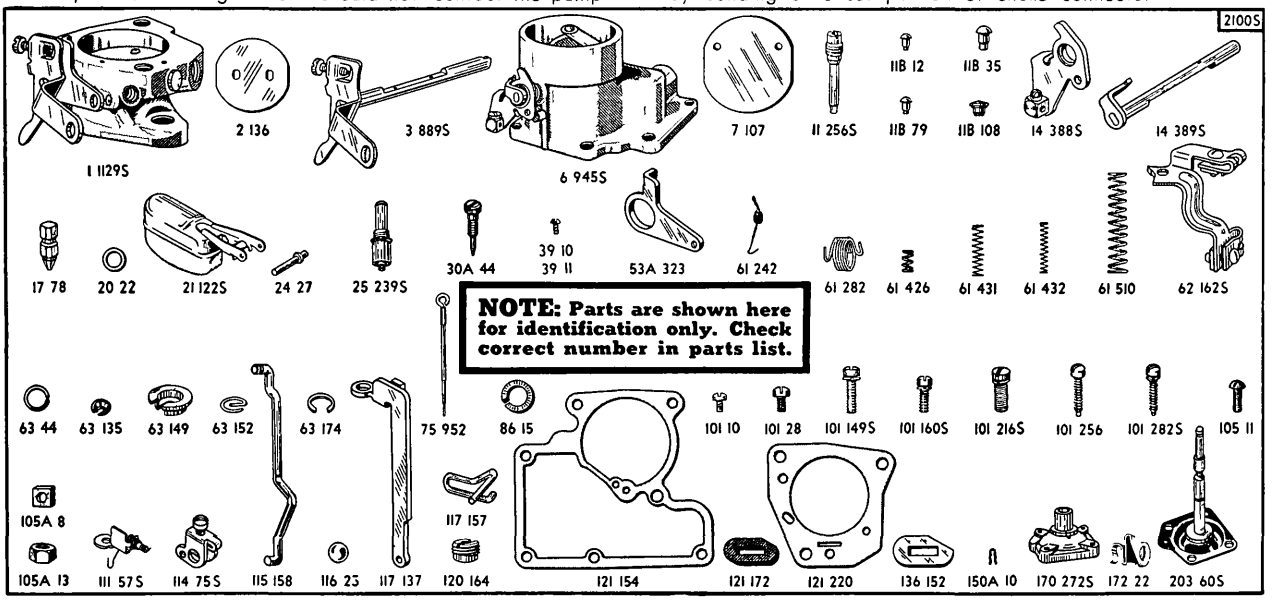
Float Drop With bowl cover assembly held in upright position the distance between free end of float and bowl cover should be 1¼ inches Adjust by bending stop tabs on float arm

Pump Adjustment This adjustment should be made before the metering rod adjustment and should be checked each time the carbureter is reassembled With throttle valve seated in the bore of carbureter press down on upper end of diaphragm shaft until it reaches its bottom position (tool T109 212 may be used to hold diaphragm shaft down while checking pump adjustment) The metering rod arm should now contact the pump lifter link at the outer end nearest the springs Adjust by bending pump connector link at its lower angle Use bending tool T109-213

Caution Bend connector rod only at its lower angle as any other method may cause pump lifter link to bind

Metering Rod Adjustment This adjustment is important and should be checked each time the carbureter is reassembled or lean rods are installed With throttle valve seated in bore of carbureter press down on upper end of diaphragm shaft until diaphragm bottoms in vacuum chamber Tool T109 212 may be used to hold diaphragm shaft down while adjusting metering rod Metering rod should contact bottom of metering rod well and metering rod arm should contact lifter link at the outer end nearest the springs and at supporting lug Adjust by bending lip of metering rod arm to which metering rod is attached up or down

Fast Idle Adjustment With choke held in wide open position lip of fast idle arm should contact boss on body casting Adjust by bending at offset portion of choke connector link



Chevrolet—1953-56—Carbureter No. 2100S

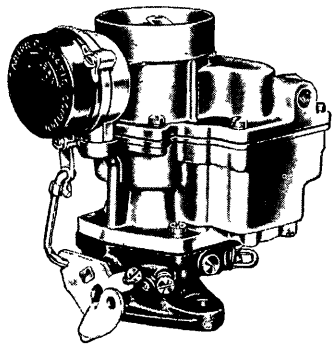
WHEN SERVICING USE GASKET ASSORTMENT No 241A REPAIR PACKAGE No 1762
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-1129S	Body flange assembly	
2 136	Throttle valve	
3 889S	Throttle shaft and lever assembly	
6 945S	Air horn assembly	
7 107	Choke valve	
11-256S	LOW SPEED JET ASSEMBLY	
11B-12	Rivet plug	
11B-35	Rivet plug	
11B-79	Rivet plug	
11B-108	IDLE PORT RIVET PLUG	
14-388S	Choke lever assembly	
14-389S	Choke shaft and lever assembly	
17-78	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	
21 122S	Float and lever assembly	
24 27	Float lever pin	
25 239S	NEEDLE PIN SPRING AND SEAT ASSEMBLY	
30A-44	Idle adjustment screw	
39 10	Choke valve attaching screw	(2)
39-11	THROTTLE VALVE ATTACHING SCREW	(2)
53A-323	Fast idle arm	
61 242	Metering rod spring	
61-282	Choke lever spring	
61 426	Idle adjustment screw spring	
61-431	UPPER PUMP SPRING (OUTER)	
61-432	UPPER PUMP SPRING (INNER)	
61 510	PUMP DIAPHRAGM SPRING	
62-162S	Choke tube clamp assembly	
63-44	Choke lever retaining ring	
63-135	UPPER PUMP SPRING RETAINER	
63-149	PUMP DIAPHRAGM SPRING RETAINER	
63-152	Pump intake check ball check retainer ring (early prod)	
63-174	PUMP STEM RETAINING RING	

Part No	PART NAME	
63 202	PUMP INTAKE CHECK BALL RETAINER RING (LATE PROD)	
75-952	METERING ROD—STANDARD	
75-1100	Metering rod — 1 size lean	
75-1101	Metering rod — 2 sizes lean	
86-15	Flange stud lock washer	(2)
101-10	Wire clamp screw	
101-28	Throttle shaft arm attaching screw	
101-149S	Body flange attaching screw and washer assembly	(3)
101-160S	Air horn attaching screw and washer assembly	(5)
101-216S	Air horn attaching screw and washer assembly	(2)
101-256	Throttle lever adjustment screw	
101-282S	Diaphragm housing attaching screw and washer assembly	(4)
105 11	Tube clamp screw	(2)
105A-8	Tube clamp nut	(2)
105A-13	Flange stud nut	(2)
111-57S	Metering rod arm assembly	
114-75S	THROTTLE SHAFT ARM ASSEMBLY	
115-158	Choke connector rod	
116-25	PUMP INTAKE CHECK BALL	
117-137	PUMP LIFTER LINK	
117-157	PUMP CONNECTOR LINK	
120-164	METERING ROD JET	
121-154	BOWL COVER AND AIR HORN GASKET	
121-172	PUMP LIFTER LINK GASKET	
121-220	BODY FLANGE GASKET	
136-152	Pump lifter link washer	
150A-10	PIN SPRING	
170-272S	Pump diaphragm housing and ball check assembly	
172-22	CHOKE CONNECTOR ROD RETAINER	
203 60S	PUMP DIAPHRAGM ASSEMBLY	

NOTE **Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used**

(1½ Inch Flange)
Climatic® Control



CHEVROLET PASSENGER CARS AND TRUCKS (235 CU. IN. ENGINE) 1953-1956

Casting No. 1121 on face of flange.

YF DOWN-DRAFT CLIMATIC® CONTROL **CARBURETER No. 2101S**

CARBURETER SPECIFICATIONS

Chevrolet 6 Cylinder Engine: 3-9/16 Inch Bore, 3-15/16 Inch Stroke

Dimensions: Flange size 1½ inch S. A. E.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 11/16 inch I. D.
Main venturi, 1-5/16 inch I. D.

Float Setting: See adjustments.

Vents: Outside, No. 12 (.189 inch) drill.
Inside balance vent size, No. 42 (.0935 inch) drill in air horn.

Gasoline Intake: Spring loaded needle. Size No. 46 (.081 inch) drill in needle seat.

Low Speed Jet Tube: Jet, size No. 70 (.028 inch) drill. By-pass in body, size .069 inch diameter. Economizer, size No. 53 (.0595 inch) drill.

Idle Port: Upper port, slot type, length .190 inch, width .040 inch.

Idle Port Opening: Top of port .143 to .147 inch above top edge of valve with valve tightly closed.

Lower Port (For Idle Adjustment Screw): .0615 to .0655 inch diameter.

Set Idle Adjustment Screw: 1 to 2 turns open. For richer mixture turn screw out. Do not idle engine below 425 r.p.m. (Power Glide Transmission—in Drive Range); 475 r.p.m. (Syncromesh Transmission).

Main Nozzle: Nozzle is installed permanently. DO NOT REMOVE. Drilled passage from anti-percolator passage to bore, size No. 59 (.041 inch) drill.

Metering Rod: Economy step .067 inch diameter; middle step tapers to .060 inch diameter; power step .050 inch diameter.

Metering Rod Jet: Size .0945 inch diameter.

Metering Rod Setting: See adjustments.

Accelerating Pump: Diaphragm type, vacuum and mechanically operated. Pump jet, size No. 74 (.0225 inch) drill. Intake ball check seat (in diaphragm housing), size No. 40 (.098 inch) drill. Discharge needle seat (in body), size No. 42 (.0935 inch) drill. Vacuum restriction (in flange), size No. 55 (.052 inch) drill. Vacuum passage (diaphragm bleed), size No. 56 (.0465 inch) drill. Pump bleed into bowl, size No. 75 (.021 inch) drill.

Pump Adjustment: See adjustments.

Choke: Carter Climatic® Control, set one point rich. Offset, butterfly type. Choke heat suction hole in body, size No. 36 (.1065 inch) drill.

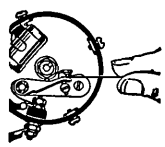
Vacuum Spark Port: Horizontal slot type, size .125 by .040 inch. Top of port (Early Prod.) .030 to .040 inch; (Late Prod.) .035 to .045 inch above top edge of valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

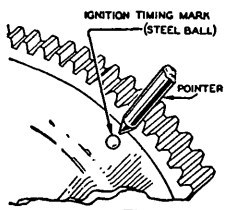
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



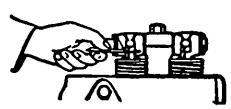
Spark Plug Gap .033"-.038"



Breaker Point Setting .016"-.021"



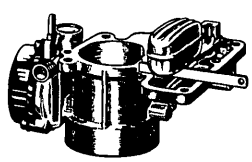
Ignition Timing
Breaker Points to Open: When steel ball on fly wheel is in line with pointer and
Road set for light detonation on hard acceleration.



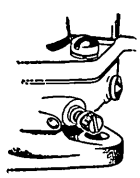
Valve Setting (Hot)
1953-55
Std. Trans. { Intake .006"-.008" / Exhaust .013"-.015"

Power Glide—No Adjustment

1956—No Adjustment



Float Setting (See Adjustments)



Idle Adjustment Screw Setting 1 to 2 Turns Open

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: With bowl cover assembly inverted and float resting on pin in seated needle, and with gasket removed, the distance from the bowl cover to the top of float should be 9/32 inch (Gauge T109-126). Do not repress float lip against spring loaded pin in needle, but let float rest of its own weight. Adjust by bending lip of float, not float arm. Float setting must be checked with the bowl cover held at eye height in a level position.

FLOAT DROP: With bowl cover assembly held in upright position the distance between free end of float and bowl cover should be 1¼ inches. Adjust by bending stop tabs on float arm.

PUMP ADJUSTMENT: This adjustment should be made before the metering rod adjustment and should be checked each time the carbureter is reassembled. With throttle valve seated in the bore of carbureter, press down on upper end

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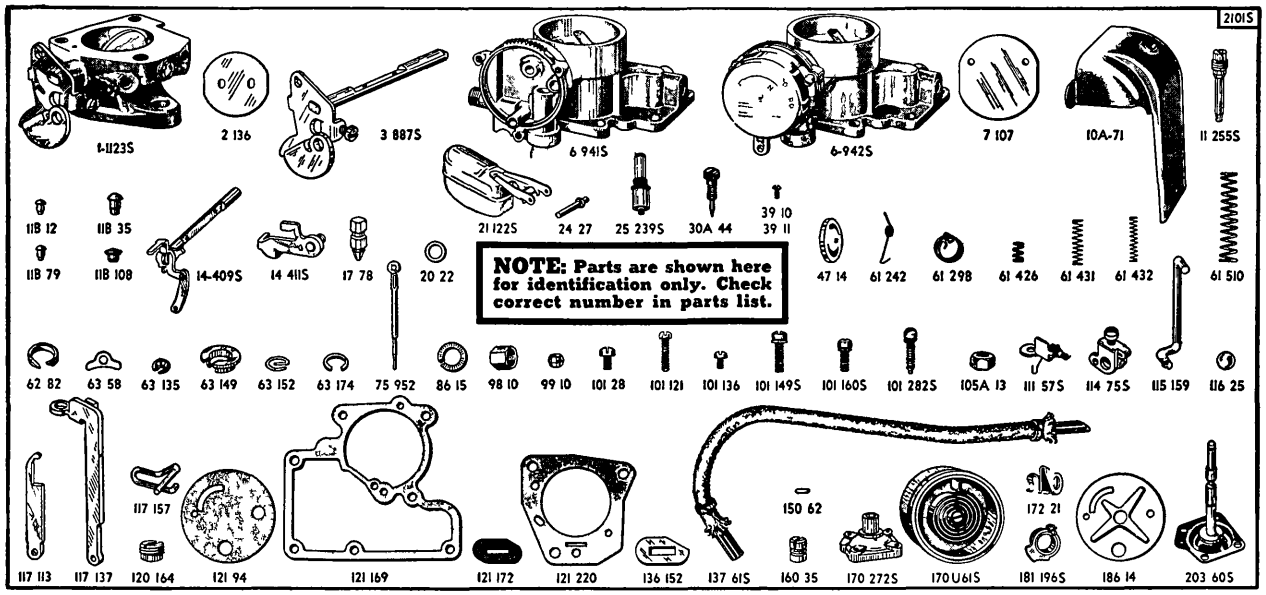
of diaphragm shaft until it reaches its bottom position (tool T109-212 may be used to hold diaphragm shaft down while checking pump adjustment) The metering rod arm should now contact the pump lifter link at the outer end nearest the springs Adjust by bending pump connector link at its lower angle Use bending tool T109-213

CAUTION Bend connector rod only at its lower angle, as any other method may cause pump lifter link to bind

METERING ROD ADJUSTMENT This adjustment is important and should be checked each time the carbureter is reassembled or lean rods installed With throttle valve seated in bore of carbureter press down on upper end of diaphragm shaft until diaphragm bottoms in vacuum chamber Tool T109-212 may be used to hold diaphragm shaft down while adjusting metering rod Metering rod should contact bottom of metering rod well and metering rod arm should contact lifter link between springs and at supporting lug Adjust by bending lip of metering rod arm to which metering rod is attached, up or down

FAST IDLE ADJUSTMENT: Remove thermostatic coil housing gasket and baffle plate Crack throttle valve, and hold choke valve fully closed then close throttle This will allow fast idle cam to revolve to fast idle position With choke valve held tightly closed and slight tension on throttle lever, there should now be 040 inch clearance (Gauge T109 193) between throttle valve and bore of carbureter (side opposite idle port) Adjust by bending connector link at lower angle Use bending tool T109-213

UNLOADER ADJUSTMENT This adjustment must be made after fast idle adjustment Hold throttle valve in wide open position and close choke valve as far as possible without forcing There should be ¼ inch clearance (Gauge T109-31) between lower edge of choke valve and inner wall of air horn Adjust by bending arm of choke trip lever (Use tool T109-214)



Chevrolet—1953-1956—Carbureter No. 2101S

WHEN SERVICING, USE GASKET ASSORTMENT No 240, REPAIR PACKAGE No. 1763

PART NAMES IN CAPITAL LETTERS LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-1123S	Body flange assembly	
2-136	Throttle valve	
3-887S	Throttle shaft and lever assembly	
6-941S	Air horn assembly	
6-942S	Air horn and Climatic® control assembly	
7-107	Choke valve	
10A-71	Manifold stove	
11-256S	LOW SPEED JET ASSEMBLY	
11B 12	Rivet plug	
11B-35	Rivet plug	
11B-79	Rivet plug	(2)
11B-108	IDLE PORT RIVET PLUG	
14-409S	Choke piston lever and shaft assembly	
14-411S	Choke trip lever and pin assembly	
17-78	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	
21-122S	Float and lever assembly	
24-27	Float lever pin	
25-239S	NEEDLE PIN SPRING AND SEAT ASSEMBLY	
30A-44	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	THROTTLE VALVE ATTACHING SCREW	(2)
47 14	Welsh plug	
61-242	Metering rod spring	
61-298	Fast idle cam spring	
61 426	Idle adjustment screw spring	
61-431	UPPER PUMP SPRING (OUTER)	
61-432	UPPER PUMP SPRING (INNER)	
61-510	PUMP DIAPHRAGM SPRING	
62-82	Heat tube covering clamp	(2)
62-164S	*Throttle tube clamp assembly	
63-58	Coil housing retainer	(3)
63-135	UPPER PUMP SPRING RETAINER	
63-149	PUMP DIAPHRAGM SPRING RETAINER	
63-174	PUMP STEM RETAINING RING	
63-202	INTAKE CHECK BALL RETAINER	
75-952	METERING ROD—STANDARD	

Part No.	PART NAME	
75-1100	Metering rod—1 size lean	
75-1101	Metering rod—2 sizes lean	
86-15	Flange stud lock washer	(2)
98-10	Compression coupling nut	
99-10	Compression coupling cone	
101-28	Throttle shaft arm attaching screw	
101-121	Throttle lever adjustment screw	
101-136	Coil housing attaching screw	(3)
101-149S	Body flange attaching screw and washer assembly	(3)
101-160S	Air horn attaching screw and washer assembly	(7)
101-282S	Diaphragm housing attaching screw and washer assembly	(4)
105A-13	Flange stud nut	(2)
111-57S	Metering rod arm assembly	
114-75S	THROTTLE SHAFT ARM ASSEMBLY	
115-159	Choke connector rod	
116-25	PUMP INTAKE BALL CHECK	
117-113	Fast idle link	
117-137	PUMP LIFTER LINK	
117-157	PUMP CONNECTOR LINK	
120 164	METERING ROD JET	
121-94	COIL HOUSING GASKET	
121-169	BOWL COVER AND AIR HORN GASKET	
121-172	PUMP LIFTER LINK GASKET	
121-220	BODY FLANGE GASKET	
136-152	Pump lifter link washer	
137 61S	Climatic® control heat tube and covering assembly	
150-62	Choke piston pin	
160-35	Choke piston	
170-272S	Pump diaphragm housing and ball check assembly	
170U61S	Thermostatic coil and housing assembly	
172-21	CONNECTOR ROD RETAINER	
181-196S	Fast idle cam assembly	
186-14	Choke baffle plate	
203-60S	PUMP DIAPHRAGM ASSEMBLY	

*This part must be used to install hand throttle on truck application

NOTE: Figures in parentheses indicate number f pieces used in on carbureter. Wher n figure is sh wn, only one is used.

CHEVROLET "V-8"
180 HORSEPOWER
1955

(Late Production used on cars with 2nd type accelerator linkage)

WCFB Four-Bore Down-Draft Climatic® Control Carbureter **No. 2351S**

CARBURETER SPECIFICATIONS

For Chevrolet 8 Cylinder Engine 3¾ Inch Bore, 3 Inch Stroke

Dimensions Flange size 1 1/8 inch Four Bore—4 bolt type
Primary venturi size 11/32 inch I D
Main venturi (primary) size 1 1/16 inch
Main venturi (secondary) size 15/16 inch I D

Float Level See adjustments

Vents Outside none Inside (2) on primary side (3) on secondary side

Gasoline Intake Size No 42 (0935 inch) drill hole in needle seat

Low Speed Jet Tube (Primary side only)
Jet size No 68 (031 inch) drill
By Pass in body size No 52 (0635 inch) drill
Economizer in screw plug size (049 inch) diameter
Idle Bleed in body size No 52 (0635 inch) drill

Idle Port (Upper) slot type Primary length 174 inch width 040 inch Secondary none

Idle Port Opening Primary 113 to 119 inch above top edge of valve with valve tightly closed Secondary none

Lower Port Primary (for idle adjustment screw) size No 53 (0595 inch) drill Secondary none

Set Idle Adjustment Screw ¼ to 1¼ turns open For richer mixture turn screw out Do not idle engine below 400 r p m (Automatic Transmission—in Drive Range) 450 r p m (Standard and Overdrive Transmission)

Main Nozzle Installed permanently DO NOT REMOVE Anti percolating jet (primary in plug) size No 60 (040 inch) drill (secondary in body) size No 60 (040 inch) drill

Metering Rod Primary economy step 071 inch diameter Middle step tapers to 065 inch diameter Power step 055 inch diameter Secondary none

Metering Rod Jet Primary size 091 inch diameter (for metering rod)
Secondary size 0512 inch diameter (no metering rod)

Metering Rod Setting See adjustments

Accelerating Pump Discharge jet (twin) primary side only size No 73 (024 inch) drill
Intake ball check seat size 115 to 120 inch diameter
Discharge needle seat size 070 inch diameter

Pump Adjustment See adjustments

Choke Carter Climatic® Control set 2 points lean Butterfly type—offset choke valve primary side only Choke heat suction hole restriction in piston housing size No 43 (089 inch) drill

Vacuum Spark Port Horizontal slot (round end) 045 x 110 inch Top of port 023 to 033 inch above valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open	Valve Setting (Hot) Std and O D Trans	Float Setting	Idle Adjustment Screw Setting
035"	016"-019"	4° B. T. C	Intake 008" Exhaust 016"	(See Adjustments)	¼ to 1¼ Auto Trans. 400 R P M. Std & O Drive 450 R P M

NOTE Power Glide Trans equipped with hydraulic valves—no adjustment necessary.

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT Two separate float adjustments must be made—lateral and vertical **LATERAL ADJUSTMENT** With bowl cover assembly inverted bowl cover gasket removed and float resting on seated needle place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting Side of floats should just clear the vertical uprights of float gauge Adjustment should be made by bending arms of floats
VERTICAL ADJUSTMENT With float gauge in same position, floats should just clear the horizontal portion of gauge Vertical distance between top of float and machined surface of casting must be ⅛ inch (gauge T109-232) for primary floats and ¼ inch (gauge T109 223) for secondary floats Adjust by bending float arms

FLOAT DROP ADJUSTMENT With bowl cover held in upright position and measuring from center of float the distance between top of floats and bowl cover should be ⅝ inch for primary floats and ¾ inch for secondary floats Adjust by bending stop tabs on float brackets

PUMP ADJUSTMENT Install pump connector link in outer hole (long stroke) of pump arm with ends extending toward countershaft arm Back out throttle lever stop screw until throttle valves seat in bores of carbureter Hold straight

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edge across top of dust cover boss at pump arm. The flat on top of pump arm should be parallel to straight edge. Adjust by bending throttle connector rod at lower angle. (Use tool T109-213.)

METERING ROD ADJUSTMENT: Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows: 1. Back out throttle lever stop screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw. 2. With metering rods in place, press down on vacumeter link until metering rods bottom in carbureter body casting. 3. Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link. Hold in place and carefully tighten clamp screw.

FAST IDLE ADJUSTMENT: (a) Loosen choke lever clamp screw on choke shaft. Insert .020 inch feeler gauge (T109-29) between lip of fast idle cam and boss of flange casting. Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw. (b) With choke valve tightly closed tighten fast idle adjusting tang until there is .015 inch (gauge T109-44) opening between throttle valve and bore of carbureter side opposite idle port. Be sure fast idle adjusting tang is on high step of cam while making this adjustment.

UNLOADER ADJUSTMENT: With throttle wide open there should be 3/16 inch (gauge T109-28) clearance between upper edge of choke valve and inner wall of air horn. Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41).

BOWL VAPOR VENT ADJUSTMENT: This adjustment should be made after completing pump and metering rod adjustments. Install dust cover and dust cover gasket. Back out throttle lever stop screw to allow throttle valves to seat in bores of carbureter. There should be 1/16 inch (gauge T109-197) between lower edge of bowl vapor vent valve and dust cover. To adjust, remove dust cover and bend vapor vent arm.

SECONDARY THROTTLE LEVER ADJUSTMENT: Primary and secondary throttle valves should reach wide open position at the same time. To adjust, bend throttle operating rod at upper angle. (Use bending tool T109-213.) With primary and secondary throttle valves in tightly closed position there should be .017-.022 inch (gauge T109-29) clearance between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on primary lever.

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: This adjustment should be made after completing fast idle and secondary throttle lever adjustments. Crack throttle valves and hold choke valve tightly closed. Then close throttle. Tang on secondary throttle lever should freely engage in notch of lock-out dog. If necessary to adjust, bend tang on secondary throttle lever.

Chevrolet "V-8"—1955—Carbureter No. 2351S

WHEN SERVICING, USE GASKET ASSORTMENT No. 261A, REPAIR PACKAGE No. 1784B

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME
1-1334S	Body flange assembly
1A-96	FLANGE GASKET
2-92	Primary throttle valve (2)
2-161	Secondary throttle valve (2)
3-851S	Secondary throttle shaft and dog assembly
3-1007S	Primary throttle shaft and lever assembly
4A-139	Throttle shaft dog
6-1031S	Air horn assembly (Casting No. 6-1020) (Sup. by 6-1209S)
6-1209S	Air horn assembly (Casting No. 6-1147)
7-173	Choke valve
11-263S	LOW SPEED JET ASSEMBLY (2)
11B-35	Rivet plug (4)
11B-41	Rivet plug (6-1031S (2), (6-1209S (1)
11B-79	Rivet plug (4)
11B-129S	PUMP DISCHARGE PASSAGE PLUG ASSEMBLY
11B-134	Rivet passage plug
11B-146	Level sight plug (2)
11B-223	Nozzle passage rivet plug (4)
11B-272	Rivet plug (2)
11B-294	Idle port rivet plug (2)
11B-305	Rivet plug (6-1031S (1), (6-1209S (2)
11B-306	Rivet plug (6-1031S (2), (6-1209S (1)
14-383S	Choke lever and screw assembly
14-439S	Choke piston lever, link and shaft assembly
14-440	Cam trip lever
15-35S	Strainer nut assembly (2)
17-50	PUMP CHECK NEEDLE
20-22	Needle seat gasket (2)
20-26	Pump passage plug gasket
20-35	BOWL STRAINER GASKET (2)
21-143S	Primary float and lever assembly
21-146S	Secondary float and lever assembly
24-24	Float lever pin (2)
25-278S	PRIMARY NEEDLE AND SEAT ASSEMBLY
25-279S	SECONDARY NEEDLE AND SEAT ASSEMBLY
30-75	BOWL STRAINER
30A-58	Idle adjustment screw (2)
39-11	Choke valve attaching screw (2)
47-13	Welsh plug (spark port)
47-14	Welsh plug (choke housing)
48-233S	Pump jet and housing assembly
53A-333S	Pump operating lever and countershaft assembly
53A-338	Lockout arm
53A-344	Vent arm
53A-365	Secondary operating lever
61-84	Idle adjustment screw spring (2)
61-128	Connector rod spring
61-171	PUMP SPRING (LOWER)
61-291	Throttle lever adjusting screw spring
61-332	VACUUM PISTON SPRING
61-453	Throttle flex spring
61-454	Fast idle cam spring
61-474	Bowl vent spring
61-483	SECONDARY THROTTLE RETURN SPRING
61-544	METERING ROD SPRING
63-35	CONNECTOR ROD SPRING RETAINER
63-57	INTAKE CHECK BALL RETAINER
63-58	Coil housing retainer (3)
63-149	Bowl vent spring retainer
64-165S	PUMP PLUNGER, ROD, SPRING AND RETAINER ASSEMBLY
75-1161	METERING ROD—STANDARD (2)
75-1214	Metering rod—1 size lean (2)
86-12	Flange stud lock washer (4)
101-6	Pump arm clamp screw
101-33	Metering rod arm clamp screw
101-74	Throttle shaft screw (2)
101-136	Coil housing attaching screw (3)
101-149S	Body flange attaching screw and washer assembly
101-152S	Air horn attaching screw and washer assembly
101-184S	Dust cover attaching screw and washer assy. (2)
101-275	Piston housing attaching screw (Use with 6-1209S)
101-277S	Vent arm attaching screw and washer assembly
101-278	Pump jet and housing attaching screw
101-284	Piston housing attaching screw (Use with 6-1031S) (2)
101-298S	Body flange attaching screw and washer assy. (2)
101-307S	Air horn attaching screw and washer assy. (8)
101-324	Fast idle cam attaching screw
101-335S	Air horn attaching screw and washer assy. (7)
101-337	Secondary throttle valve attaching screw (4)
101-348	Primary throttle valve attaching screw (4)
101-354S	Choke lever clamp screw and washer assembly
101-363	Piston housing attaching screw (6-1031S (1), (6-1209S (2)
101-376	Throttle lever adjusting screw
101-382S	Body flange attaching screw and washer assy. (3)
105A-10	Choke lever clamp screw nut
105A-11	Flange stud nut (4)
111-47S	Pump arm and screw assembly
111-60S	Metering rod arm and screw assembly
114-97	Throttle shaft arm (outer)
114-118	Throttle shaft arm (inner)
115-208	Throttle operating rod
115-215	Choke connector rod
115-216	THROTTLE CONNECTOR ROD
116-13	PUMP INTAKE CHECK BALL
117-162	Vacumeter piston link
117-165	Pump arm link
118-102S	Dust cover assembly
120-155	PRIMARY METERING ROD JET (2)
120-187	SECONDARY METERING JET (2)
121-78	COIL HOUSING GASKET
121-208	DUST COVER GASKET
121-241	PUMP JET HOUSING GASKET
121-243	PISTON HOUSING GASKET (Use with 6-1031S)
121-265	AIR HORN GASKET
121-267	BODY FLANGE GASKET
121-283	PISTON HOUSING GASKET (Use with 6-1209S)
129-26	Metering rod disk (2)
136-37	Throttle connector rod and operating rod washer (5)
136-84	Spring washer
136-159	Throttle shaft washer
136-172	Secondary throttle shaft washer
136-174	Throttle lever adjusting screw washer
150-62	Choke piston pin
150-186S	Pin and valve cap assembly
150A-10	PIN SPRING (5)
160-91	Choke piston
160-110S	Vacuum piston and pin assembly
170-372S	Piston housing and plug assembly (Use with 6-1031S)
170-457S	Piston housing and plug assembly (Use with 6-1209S)
170AB238S	Thermostatic coil and housing assembly
181-194S	Fast idle cam and spring assembly
186-34	Choke baffle plate

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

CHEVROLET

2816S
Automatic
Transmission

"V-8"
1959

2817S
Standard and Overdrive
Transmission

WCFB Four-Bore Down-Draft Climatic® Control **Carbs. Nos. 2816S-2817S**

CARBURETER SPECIFICATIONS

For Chevrolet 8 Cylinder 348 Cu. In. Engine: Vacuum at Idle 18 Inches

Dimensions: Flange size, 1¼ inch Four Bore—4 bolt type
Primary venturi size 11/32 inch I D
Main venturi (primary) size 1-1/16 inch
Main venturi (secondary) size 1¼ inch I D

Vents· Outside none Inside (4 drilled holes, 1 tube) in air horn

Low Speed Circuit: (Primary side only)
Jet, size No 68 (.031 inch) drill By pass in body size No 52 (.0635 inch) drill Economizer plug in body size No 55 (.052 inch) drill Idle bleed, in body, size No 52 (.0635 inch) drill Idle port (upper) slot type length .175 inch width .030 inch

Idle Port Opening: .113 to .119 inch above top edge of valve with valve tightly closed

Lower Port: (For idle adjustment screw) size No 53 (.0595 inch) drill

Set Idle Adjustment Screw: ½ to 2 turns open For richer mixture turn screw out Do not idle engine below 475 R P M for Std & O D Trans 450 R P M for Power Glide and Turbo Glide in drive range

Main Nozzle: Installed permanentlly DO NOT REMOVE Anti-percolating bleed (primary, in plug) size No 60 (.040 inch) drill (secondary in body) size No 66 (.033 inch) drill

Accelerating Pump: Discharge jet (twin) primary side only size No 73 (.024 inch) drill
Intake ball check seat size .115 to .120 inch diameter
Discharge needle seat size .070 inch diameter

Choke· Carter Climatic® Control set on index Butterfly type —offset choke valve primary side only Choke heat suction hole restriction in piston housing size No 40 (.098 inch) drill

Vacuum Spark Port· NONE—Spark passage open to manifold vacuum

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .018"	Ignition Timing Breaker Points to Open: 4° B. T. C. (With Distributor Vacuum Line Disconnected)	Float Setting Primary 5/32 Inch (Use Gauge T109-236) Secondary 9/32 Inch (Use Gauge T109-284)	Idle Adjustment Screw Setting ½ to 2 Auto. Trans. 450 R.P.M. Std. & O'Drive 475 R.P.M.

NOTE· These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENTS: Two separate float adjustments must be made—lateral and vertical. **LATERAL ADJUSTMENT:** With bowl cover assembly inverted, bowl cover gasket removed and float resting on seated needle, place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting. Side of floats should just clear the vertical uprights of float gauge. Adjustment should be made by bending arms of floats. **VERTICAL ADJUSTMENT:** With float gauge in same position, floats should just clear the horizontal portion of gauge. Vertical distance between top of float and machined surface of casting must be 5/32 inch (gauge T109-236) for primary floats and 9/32 inch (gauge T109-284) for secondary floats. Adjust by bending float arms.

FLOAT DROP ADJUSTMENT: With bowl cover held in upright position, bowl cover gasket removed and measuring from free end of floats, the distance between the bottom of the floats and bowl cover should be 2 inches, plus or minus 1/16 inch, for both primary and secondary floats. Adjust by bending stop tabs on float brackets.

PUMP ADJUSTMENT: Install pump connector link in outer hole (long stroke) of pump arm, with ends extending toward countershaft arm. Back out throttle lever stop screw until throttle valves seat in bores of carbureter. Hold straight edge across top of dust cover boss at pump arm. The flat on top of pump arm should be parallel to straight edge. Adjust by bending throttle connector rod at lower angle. (Use tool T109-213.)

METERING ROD ADJUSTMENT: Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows: 1. Back out throttle lever stop screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw. 2. With metering rods in place, press down on vacumeter link until metering rods bottom in carbureter body casting. 3. Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link. Hold in place and carefully tighten clamp screw.

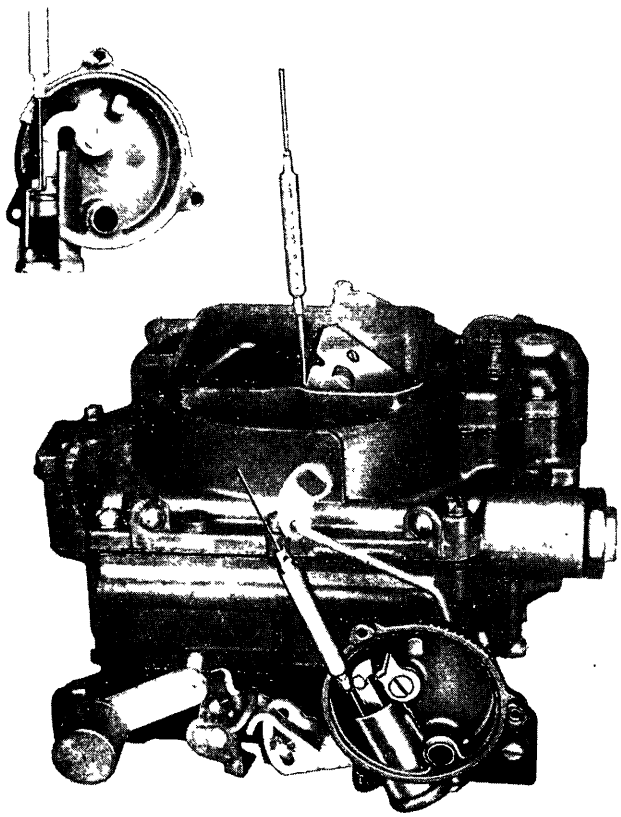


Fig. 1

CHOKE PISTON LEVER ADJUSTMENT: 1. Bend a .026" wire gauge (tool T109-189) at a 90° angle approximately 1/8" from its end (See Insert Fig. 1). 2. Remove the choke housing, gasket and baffle plate and block the throttle about half open so the fast idle cam does not contact its adjusting screw. 3. Open the choke valve and insert the wire gauge so that the bent portion is between the top of the slot in the choke piston cylinder and the bottom of the slot in the piston (See Insert Fig. 1). Hold the wire gauge in position and close the choke valve by pressing on the piston lever in the choke housing until resistance is felt. There should now be .080" (gauge T109-234) between the top of the choke valve and the air horn (See Fig. 1). 4. To adjust, bend choke connector rod.

FAST IDLE ADJUSTMENT: (a) Loosen choke lever clamp screw on choke shaft. Insert .020 inch wire gauge (T109-29) between lip of fast idle cam and boss of flange casting. Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw. (b) No adjustment is necessary for fast idle throttle valve clearance. This is determined by the normal idle position of the speed screw.

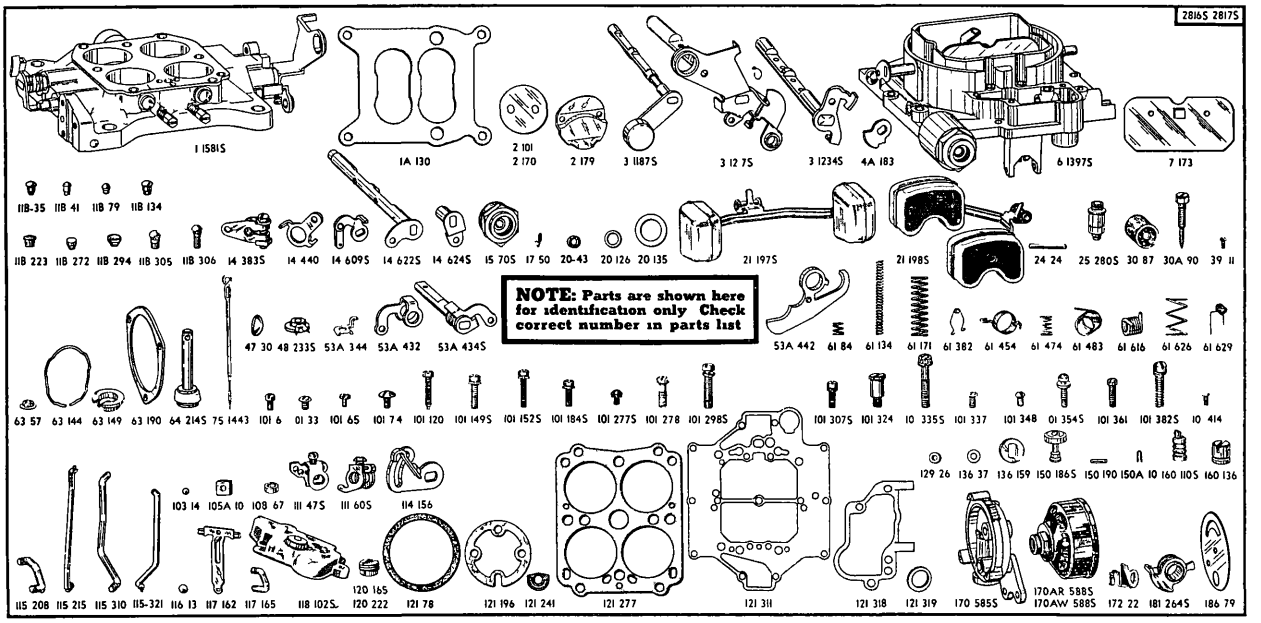
FAST IDLE ON CAR: 1600 to 1800 R.P.M. hot engine with idle speed screw on high step of cam. No adjustment necessary.

UNLOADER ADJUSTMENT: With throttle wide open there should be 3/16 inch (gauge T109-28) clearance between upper edge of choke valve and inner wall of air horn. Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41).

BOWL VAPOR VENT ADJUSTMENT: This adjustment should be made after completing pump and metering rod adjustment. Install dust cover gasket and dust cover tightly assembled against tabs on gasket. Back out throttle lever stop screw to allow throttle valves to seat in bores of carbuerter. There should be 3/32 inch (gauge T109-125) between lower edge of bowl vapor vent valve and dust cover. To adjust, remove dust cover and bend vapor vent arm.

SECONDARY THROTTLE LEVER ADJUSTMENT: 1. Block choke valve wide open. 2. Back out throttle lever stop screw so that primary valves seat in bores of carbureter. 3. With primary valves open 7/32" (gauge T109-106) secondary valves should just start to open. To adjust, bend throttle operating rod. NOTE: Secondary valves will be a few degrees from wide open, when primary valves are wide open. With primary and secondary valves tightly closed there should be .010" to .030" (gauge T109-29) between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on secondary throttle lever.

AUXILIARY THROTTLE LOCK-OUT ADJUSTMENT: Crack throttle valves and manually open and close choke valve. Tang on lock-out arm should freely engage in notch of auxiliary throttle shaft dog. To adjust, bend tang on lock-out arm.



Chevrolet "V-8"—1959—Carbureters Nos. 2816S-2817S

WHEN SERVICING, USE GASKET ASSORTMENT No. 329, RE-CARBURETION KIT No 1979N

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF RE-CARBURETION KIT

Part No.	PART NAME	
1-1581S	—Body flange assembly	
1A-130	FLANGE GASKET	
2-101	Primary throttle valve	(2)
2-170	Secondary throttle valve	(2)
2-179	Auxiliary throttle valve	(2)
3-1187S	Auxiliary throttle lever shaft and weight assembly	
3-1217S	—Primary throttle shaft and lever assembly	
3-1234S	—Secondary throttle shaft and dog assembly	
4A-183	Auxiliary throttle shaft dog	
6-1397S	—Air horn assembly	
7-173	Choke valve	
11B-35	Rivet plug	(4)
11B-41	Rivet plug	(2)
11B-79	Rivet plug	
11B-134	Rivet passage plug	
11B-223	Nozzle passage plug	(4)
11B-272	Rivet plug	(2)
11B-294	Idle port rivet plug	(2)
11B-305	Rivet plug	(2)
11B-306	Rivet plug	
14-383S	Choke lever and screw assembly	
14-440	Cam trip lever	
14-609S	Choke piston lever link and pin assembly	
14-622S	—Choke shaft and lever assembly	
14-624S	—Choke shaft and lever assembly (piston housing)	
15-70S	—Filter nut assembly	
17-50	Pump check needle	
20-43	Piston housing gasket	
20-126	Needle seat gasket	(2)
20-135	—Bowl filter gasket	
21-197S	—Secondary float and lever assembly	
21-198S	—Primary float and lever assembly	

Part No.	PART NAME	
24-24	Float lever pin	(2)
25 280S	PRIMARY AND SECONDARY NEEDLE AND SEAT ASSEMBLY (1015")	(2)
30-87	—Bowl filter	
30A-90	—Idle adjustment screw	(2)
39-11	Choke valve attaching screw	(2)
47-30	Welsh plug (choke side)	
48-233S	Pump jet and housing assembly	
53A-344	Vent arm	
53A-432	Pump operating lever	
53A-434S	Pump operating lever and countershaft assembly	
53A-442	—Lockout arm	
61-84	Idle adjustment screw spring	(2)
61-134	VACUUM PISTON SPRING	
61-171	Pump spring (lower)	
61-382	Metering rod spring	
61-454	Fast idle cam spring	
61-474	Bowl vent spring	
61-483	Secondary throttle return spring	
61-616	Pump operating lever spring	
61-626	—Filter spring	
61-629	—Secondary float spring	
63-57	Intake check ball retainer	
63-144	Delayer plate retainer ring	
63-149	Bowl vent spring retainer	
63-190	Coil housing retainer	
64-214S	PUMP PLUNGER AND ROD ASSEMBLY	
75-1443	—METERING ROD—STANDARD 068" x 0535" x 042"	(2)
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-65	Auxiliary throttle shaft dog attaching screw	

Part No.	PART NAME	
101-74	Throttle shaft screw	
101-120	Throttle lever adjusting screw	
101-149S	Body flange attaching screw and washer assembly	
101-152S	Air horn attaching screw and washer assembly	(3)
101-184S	Dust cover and piston housing attaching screw and washer assembly	(5)
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet and housing attaching screw	
101-298S	Body flange attaching screw and washer assembly	(2)
101-307S	Air horn attaching screw and washer assembly	(8)
101-324	Fast idle cam attaching screw	
101-335S	Air horn attaching screw and washer assembly	(5)
101-337	Secondary throttle valve attaching screw	(4)
101-348	Primary throttle valve attaching screw	(4)
101-354S	Choke lever clamp screw and washer assembly	
101-361	Coil housing attaching screw	(3)
101-382S	Body flange attaching screw and washer assembly	(3)
101-414	Auxiliary throttle valve attaching screw	(4)
103-14	Lead shot	(3)
105A-10	Choke lever clamp screw nut	
108-67	Spacer	
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
114-156	—Throttle shaft arm	
115-208	Throttle operating rod	
115-215	Choke connector rod	
115-310	Throttle connector rod	
115-321	—Fast idle connector rod	
116-13	Pump intake check ball	
117-162	Vacumeter piston link	
117-165	Pump arm link	
118-102S	Dust cover assembly	
120-165	PRIMARY METERING ROD JET (.086")	(2)
120-222	Secondary metering jet (.070")	(2)
121-78	COIL HOUSING GASKET	
121-196	Delayer plate gasket	
121-241	PUMP JET HOUSING GASKET	
121-277	BODY FLANGE GASKET	
121-311	AIR HORN GASKET	
121-318	—DUST COVER GASKET	
121-319	—FILTER GASKET	
129-26	Metering rod disk	(2)
136-37	Operating rod washer	(4)
136-159	Throttle shaft washer	
150-186S	Pin and valve cap assembly	
150-190	Choke piston pin	
150A-10	Pin spring	(6)
160-110S	Vacuum piston and pin assembly	
160-136	Choke piston	
170-585S	—Piston housing and plug assembly	
170AR-588S	—Thermostatic coil and housing assembly (2817S)	
170AW-588S	—Thermostatic coil and housing assembly (2816S)	
172-22	Throttle connector rod retainer	
181-264S	—Fast idle cam and spring assembly	
186-79	—Choke baffle plate	

—Parts so marked are new and listed for the first time

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used

CARBURETER
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CHEVROLET

STANDARD and OVERDRIVE

TRANSMISSION

1959

(Also used for replacement on Automatic Transmission)

WCFB Four-Bore Down-Draft Climatic® Control **Carbureter No. 2818S**

CARBURETER SPECIFICATIONS

For Chevrolet 8 Cylinder 283 Cu. In. Engine Vacuum at Idle 18 Inches

Dimensions: Flange size, 1 1/8 inch Four Bore—4 bolt type
Primary venturi size 11/32 inch I D
Main venturi (primary) size 1 inch
Main venturi (secondary) size, 1 1/8 inch I D

Vents· Outside none Inside (4 drilled holes 1 tube) in air horn

Low Speed Circuit· (Primary side only)
Jet size No 68 (.031 inch) drill By pass in body size No 52 (.0635 inch) drill Economizer plug in body, size No 55 (.052 inch) drill Idle bleed in body size No 52 (.0635 inch) drill Idle port (upper) slot type length .175 inch width .030 inch

Idle Port Opening: .113 to .119 inch above top edge of valve with valve tightly closed

Lower Port. (For idle adjustment screw) size No 53 (.0595 inch) drill

Set Idle Adjustment Screw: 1/2 to 2 turns open For richer mixture turn screw out Do not idle engine below 475 R P M for Std & O D Trans 450 R P M for Power Glide and Turbo Glide in drive range

Main Nozzle: Installed permanently DO NOT REMOVE Anti percolating bleed (primary, in plug) size No 60 (.040 inch) drill, (secondary in body) size No 66 (.033 inch) drill

Accelerating Pump: Discharge jet (twin) primary side only size No 73 (.024 inch) drill
Intake ball check seat size .115 to .120 inch diameter
Discharge needle seat size .070 inch diameter

Choke: Carter Climatic® Control set on index Butterfly type —offset choke valve primary side only Choke heat suction hole restriction in piston housing, size No 40 (.098 inch) drill

Vacuum Spark Port· NONE—Spark passage open to manifold vacuum

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .018"	Ignition Timing Breaker Points to Open: 4° B. T. C. (With Distributor Vacuum Line Disconnected)	Float Setting Primary 5/32 Inch (Use Gauge T109-236) Secondary 9/32 Inch (Use Gauge T109-284)	Idle Adjustment Screw Setting 1/2 to 2 Aut . Trans. 450 R.P.M. Std. & O'Drive 475 R.P.M

NOTE: These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENTS Two separate float adjustments must be made—lateral and vertical **LATERAL ADJUSTMENT** With bowl cover assembly inverted bowl cover gasket removed and float resting on seated needle place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting Side of floats should just clear the vertical uprights of float gauge Adjustment should be made by bending arms of floats **VERTICAL ADJUSTMENT** With float gauge in same position floats should ust clear the horizontal portion of guage Vertical distance between top of float and machined surface of casting must be 5/32 inch (gauge T109 236) for primary floats and 9/32 inch (gauge T109 284) for secondary floats Adjust by bending float arms

FLOAT DROP ADJUSTMENT With bowl cover held in upright position bowl cover gasket removed and measuring from free end of floats the distance between the bottom of the floats and bowl cover should be 2 inches plus or minus 1/16 inch for both primary and secondary floats Adjust by bending stop tabs on float brackets

PUMP ADJUSTMENT Install pump connector link in outer hole (long stroke) of pump arm with ends extending toward counter shaft arm Back out throttle lever stop screw until throttle valves seat in bores of carbureter Hold straight edge across top of dust cover boss at pump arm The flat on top of pump arm should be parallel to straight edge Adjust by bending throttle connector rod at lower angle (Use tool T109 213)

METERING ROD ADJUSTMENT Metering rod adjustment is important and must be made after completing the pump adjust ment No meter ng rod gauges are necessary Procedure is as follows 1 Back out throttle lever stop screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw 2 With metering rods in place press down on vacumeter link until metering rods bottom in carbureter body casting 3 Holding rods in downward position and throttle valves seated revolve metering rod arm until finger on arm contacts lip of vacumeter link Hold in place and carefully t ghten clamp screw

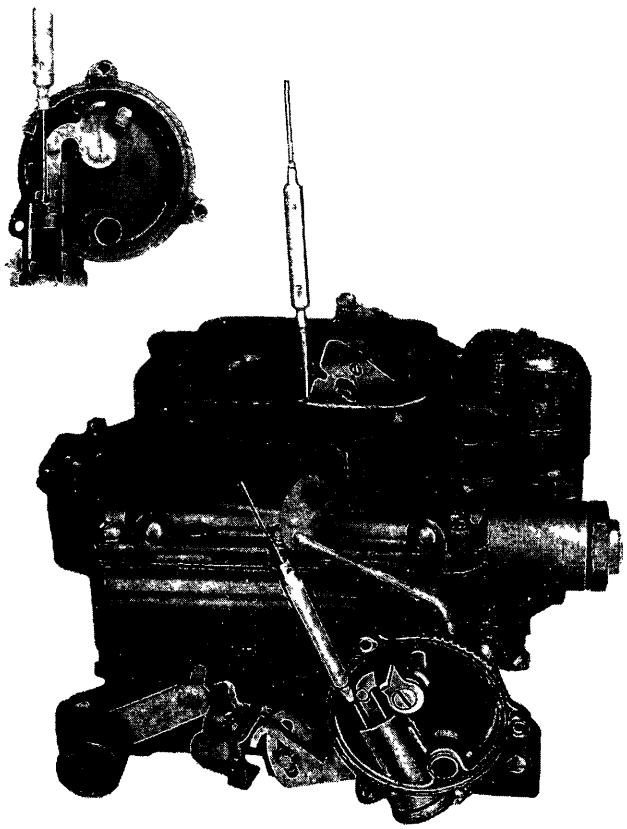


Fig 1

CHOKE PISTON LEVER ADJUSTMENT 1 Bend a 026" wire gauge (tool T109 189) at a 90° angle approximately 1/8" from its end (See Insert Fig 1) 2 Remove the choke housing gasket and baffle plate and block the throttle about half open so the fast idle cam does not contact its adjusting screw 3 Open the choke valve and insert the wire gauge so that the bent portion is between the top of the slot in the choke piston cylinder and the bottom of the slot in the piston (See Insert Fig 1) Hold the wire gauge in position and close the choke valve by pressing on the piston lever in the choke housing until resistance is felt There should now be 3/32" (gauge T109 125) between the top of the choke valve and the air horn (See Fig 1) 4 To adjust bend choke connector rod

FAST IDLE ADJUSTMENT (a) Loosen choke lever clamp screw on choke shaft Insert 020 inch wire gauge (T109 29) between lip of fast idle cam and boss of flange casting Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw (b) No adjustment is necessary for fast idle throttle valve clearance This is determined by the normal idle position of the speed screw

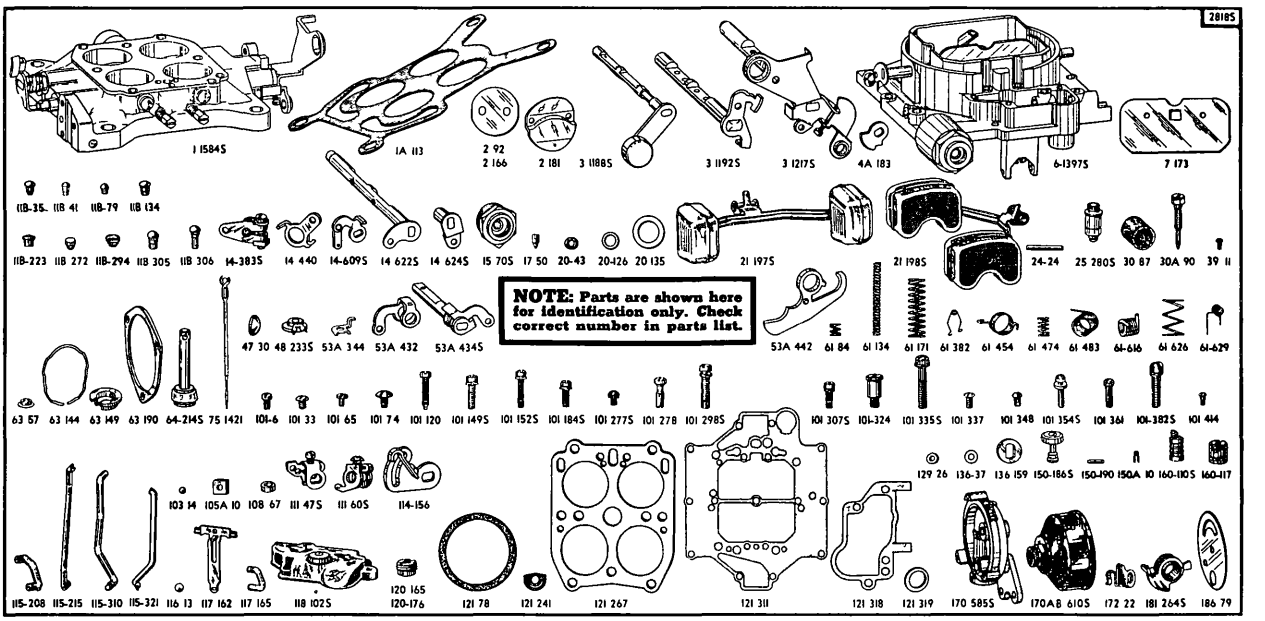
FAST IDLE ON CAR 1600 to 1800 R P M hot engine with idle speed screw on high step of cam No adjustment necessary

UNLOADER ADJUSTMENT With throttle wide open there should be 3/16 inch (gauge T109 28) clearance between upper edge of choke valve and inner wall of air horn Adjust by bending unloader lip on throttle shaft lever (use bending tool T109 41)

BOWL VAPOR VENT ADJUSTMENT This adjustment should be made after completing pump and meter ng rod adjustment Install dust cover gasket and dust cover tightly assembled against tabs on gasket Back out throttle lever stop screw to allow throttle valves to seat in bores of carbureter There should be 3/32 inch (gauge T109 125) between lower edge of bowl vapor vent valve and dust cover To adjust remove dust cover and bend vapor vent arm

SECONDARY THROTTLE LEVER ADJUSTMENT 1 Block choke valve wide open 2 Back out throttle lever stop screw so that primary valves seat in bores of carbureter 3 With primary valves open 11/64" (gauge T109 166) secondary valves should just start to open To adjust bend throttle operating rod NOTE Secondary valves will be a few degrees from wide open when primary valves are wide open With primary and sec ondary valves tightly closed there should be 010" to 030" (gauge T109 29) between positive closing shoes on primary and secondary throttle levers To adjust bend shoe on secondary throttle lever

AUXILIARY THROTTLE LOCK-OUT ADJUSTMENT Crack throttle valves and manually open and close choke valve Tang on lock out arm should freely engage in notch of auxiliary throttle shaft dog To adjust bend tang on lock out arm



Chevrolet "V-8"—1959—Carbureter No. 2818S

WHEN SERVICING, USE GASKET ASSORTMENT No. 327; RE-CARBURETION KIT No. 1969N

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF RE-CARBURETION KIT

Part No.	PART NAME	
1-1584S	—Body flange assembly	
1A-113	FLANGE GASKET	
2-92	Primary throttle valve	(2)
2-166	Secondary throttle valve	(2)
2-181	Auxiliary throttle valve	(2)
3-1188S	Auxiliary throttle lever, shaft and weight assembly	
3-1192S	Secondary throttle shaft and dog assembly	
3-1217S	—Primary throttle shaft and lever assembly	
4A-183	Auxiliary throttle shaft dog	
6-1397S	—Air horn assembly	
7-173	Choke valve	
11B-35	Rivet plug	(4)
11B-41	Rivet plug	(2)
11B-79	Rivet plug	
11B-134	Rivet passage plug	
11B-223	Nozzle passage plug	(4)
11B-272	Rivet plug	(2)
11B-294	Idle port rivet plug	(2)
11B-305	Rivet plug	(2)
11B-306	Rivet plug	
14-383S	Choke lever and screw assembly	
14-440	Cam trip lever	
14-609S	Choke piston lever, link and pin assembly	
14-622S	—Choke shaft and lever assembly	
14-624S	—Choke shaft and lever assembly (piston housing)	
15-70S	—Filter nut assembly	
17-50	Pump check needle	
20-43	Piston housing gasket	
20-126	Needle seat gasket	(2)
20-135	—Bowl filter gasket	
21-197S	—Secondary float and lever assembly	
21-198S	—Primary float and lever assembly	

Part No.	PART NAME	
24-24	Float lever pin	(2)
25-280S	PRIMARY AND SECONDARY NEEDLE AND SEAT ASSEMBLY (1015")	(2)
30-87	—Bowl filter	
30A-90	—Idle adjustment screw	(2)
39-11	Choke valve attaching screw	(2)
47-30	Welsh plug (choke side)	
48-233S	Pump jet and housing assembly	
53A-344	Vent arm	
53A-432	Pump operating lever	
53A-434S	Pump operating lever and countershaft assembly	
53A-442	—Lockout arm	
61-84	Idle adjustment screw spring	(2)
61-134	VACUUM PISTON SPRING	
61-171	Pump spring (lower)	
61-382	Metering rod spring	
61-454	Fast idle cam spring	
61-474	Bowl vent spring	
61-483	Secondary throttle return spring	
61-616	Pump operating lever spring	
61-626	—Filter spring	
61-629	—Secondary float spring	
63-57	Intake check ball retainer	
63-144	Delayer plate retainer ring	
63-149	Bowl vent spring retainer	
63-190	Coil housing retainer	
64-214S	PUMP PLUNGER AND ROD ASSEMBLY	
75-1421	METERING ROD—STANDARD 065" x 050"	(2)
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-65	Auxiliary throttle shaft dog attaching screw	
101-74	Throttle shaft screw	

Part No	PART NAME	
101-120	Throttle lever adjusting screw	
101-149S	Body flange attaching screw and washer assembly	
101-152S	Air horn attaching screw and washer assembly	(3)
101-184S	Dust cover and piston housing attaching screw and washer assembly	(5)
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet and housing attaching screw	
101-298S	Body flange attaching screw and washer assembly	(2)
101-307S	Air horn attaching screw and washer assembly	(8)
101-324	Fast idle cam attaching screw	
101-335S	Air horn attaching screw and washer assembly	(5)
101-337	Secondary throttle valve attaching screw	(4)
101-348	Primary throttle valve attaching screw	(4)
101-354S	Choke lever clamp screw and washer assembly	
101-361	Coil housing attaching screw	(3)
101-382S	Body flange attaching screw and washer assembly	(3)
101-414	Auxiliary throttle valve attaching screw	(4)
103-14	Lead shot	(3)
105A-10	Choke lever clamp screw nut	
108-67	Spacer	
111 47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
114-156	—Throttle shaft arm	
115 208	Throttle operating rod	
115-215	Choke connector rod	
115-310	Throttle connector rod	

Part No	PART NAME	
115-321	—Fast idle connector rod	
116-13	Pump intake check ball	
117-162	Vacumeter piston link	
117-165	Pump arm link	
118-102S	Dust cover assembly	
120-165	PRIMARY METERING ROD JET (.086")	(2)
120-176	Secondary metering jet (.0635")	(2)
121-78	COIL HOUSING GASKET	
121-241	PUMP JET HOUSING GASKET	
121-267	BODY FLANGE GASKET	
121-311	AIR HORN GASKET	
121-318	—DUST COVER GASKET	
121-319	—FILTER FITTING GASKET	
129-26	Metering rod disk	(2)
136-37	Operating rod washer	(4)
136-159	Throttle shaft washer	
150 186S	Pin and valve cap assembly	
150-190	Choke piston pin	
150A-10	Pin spring	(6)
160 110S	Vacuum piston and pin assembly	
160-117	Choke piston	
170-585S	—Piston housing and plug assembly	
170AB 610S	—Thermostatic coil and housing assembly	
172-22	Throttle connector rod retainer	
181-264S	—Fast idle cam and spring assembly	
186-79	—Choke baffle plate	

—Parts so marked are new and listed for the first time

NOTE **Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used**

CARBURETER
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CHEVROLET "V-8"

CORVETTE AND PASSENGER CARS 1957-1958

2613S
Front Carbureter

2614S
Rear Carbur ter

WCFB Four-Bore Down-Draft Climatic® Control **Carbureters Nos. 2613S-2614S**

CARBURETER SPECIFICATIONS

For Chevrolet 8 Cylinder 283 Cu. In. Engine· Vacuum at Idle 11.0 Inches with race cam

Dimensions: Flange size 1 1/8 inch Four Bore—4 bolt type
Primary venturi size, 11/32 inch I D
Main venturi (primary) size 15/16 inch
Main venturi (secondary) size 1 1/8 inch I D

Vents: (2614S) Outside, (4) in air horn (4) in flange Inside (7)
(2613S) Outside none Inside (7)

Low Speed Circuit: Primary side only
Jet size No 65 (.035 inch) drill
By pass in body, size No 53 (.0595 inch) drill
Economizer, in screw plug size No 56 (.0465 inch) drill.
Idle bleed, in body, size No 52 (.0635 inch) drill
Idle port, slot type, length .174 inch, width .030 inch

Idle Port Opening: Primary, .113 to .119 inch above top edge of valve with valve tightly closed

Lower Port: Primary (for idle adjustment screw) size No 53 (.0595 inch) drill

Set Idle Adjustment Screw: 1/8 to 1 1/4 turns open For richer mixture turn screw out Do not idle engine below 800 R P M

Main Nozzle: Installed permanently DO NOT REMOVE Anti percolating jet (primary in plug) size No 60 (.040 inch) drill (secondary in body) size No 60 (.040 inch) drill

Accelerating Pump: Discharge jet (twin) primary side only size No 73 (.024 inch) drill

Intake ball check seat size .115 to .120 inch diameter

Discharge needle seat size .070 inch diameter

Choke: (2614S only) Carter Climatic® Control set on index Butterfly type—offset choke valve primary side only Choke heat suction hole restriction in piston housing size No 43 (.089 inch) drill

Vacuum Spark Port: None

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .018"	Ignition Timing Breaker Points to Open: 14° B.T.C. at Idle or 18° B.T.C. at 1000 R.P.M.	Valve Setting (Hot) Intake .008" Exhaust .018"	Float Setting Primary 1/8 Inch (Use Gauge T109-232) Sec ndary 1/4 Inch (Use Gauge T109-223)	Idle Adjustment Screw Setting 1/8 to 1 1/4 Idle Engine at 800 /R.P.M.

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: Two separate float adjustments must be made — lateral and vertical **LATERAL ADJUSTMENT.** With bowl cover assembly inverted, bowl cover gasket removed and float resting on seated needle place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting Side of floats should just clear the vertical uprights of float gauge Adjustment should be made by bending arms of floats **VERTICAL ADJUSTMENT:** With float gauge in same position, floats should just clear the horizontal portion of gauge Vertical distance between top of float and machined surface of casting must be 1/8 inch (gauge T109-232) for primary floats and 1/4 inch (gauge T109 223) for secondary floats Adjust by bending float arms

FLOAT DROP ADJUSTMENT: With bowl cover held in upright position and measuring from center of float, the distance between top of floats and bowl cover should be 5/8 inch for primary floats and 3/4 inch for secondary floats Adjust by bending stop tabs on float brackets

PUMP ADJUSTMENT: Install pump connector link in inner hole (short stroke) of pump arm with ends extending toward countershaft arm Back out throttle lever stop screw until throttle valves seat in bores of carbureter Hold straight edge across top of dust cover boss at pump arm The flat on top of pump arm should be parallel to straight edge Adjust by bending throttle connector rod at lower angle (Use tool T109 213)

METERING ROD ADJUSTMENT: Metering rod adjustment is important and must be made after completing the pump adjustment No metering rod gauges are necessary Procedure is as follows 1 Back out throttle lever stop screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw 2 With metering rods in place press down on vacumeter link until metering rods bottom in carbureter body casting 3 Holding rods in downward position and throttle valves seated revolve metering rod arm until finger on arm contacts lip of vacumeter link Hold in place and carefully tighten clamp screw

FAST IDLE ADJUSTMENT: (2614S only) (a) Loosen choke lever clamp screw on choke shaft Insert 020 inch feeler gauge (T109 29) between lip of fast idle cam and boss of flange casting Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw (b) With choke valve tightly closed bend fast idle adjusting tang until there is 018 inch (gauge T109 44) opening between throttle valve and bore of carbureter side opposite idle port Be sure fast idle adjusting tang is on high step of cam while making this adjustment

FAST IDLE ON CAR: (2614S only) 1800 R P M hot engine with idle adjusting tang on high step of cam

UNLOADER ADJUSTMENT: (2614S only) With throttle wide open there should be 3/16 inch (gauge T109 28) clearance between upper edge of choke valve and inner wall of air horn Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41)

BOWL VAPOR VENT ADJUSTMENT· This adjustment should be made after completing pump and metering rod adjustments Install dust cover and dust cover gasket Back out throttle lever stop screw to allow throttle valves to seat in bores of carbureter There should be 1/16 inch (gauge T109 197) between lower edge of bowl vapor vent valve and dust cover To adjust remove dust cover and bend vapor vent arm

SECONDARY THROTTLE LEVER ADJUSTMENT: Primary and secondary throttle valves should reach wide open position at the same time NOTE Secondary throttle valves will be a few degrees from wide open To adjust bend throttle operating rod at upper angle (Use bending tool T109-213) With primary and secondary throttle valves in tightly closed position there should be 017 022 inch (gauge T109-29) clearance between positive closing shoes on primary and secondary throttle levers To adjust bend shoe on secondary lever

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: (2614S only) This adjustment should be made after completing fast idle and secondary throttle lever adjustments Crack throttle valves and hold choke valve tightly closed Then close throttle Tang on secondary throttle lever should freely engage in notch of lock out dog If necessary to adjust, bend tang on secondary throttle lever

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Chevrolet "V-8"—1957-1958—Carbureters Nos. 2613S-2614S

WHEN SERVICING, USE GASKET ASSORTMENT No. 307

Part No.	PART NAME	
1-1488S	—Body flange assembly (2614S)	
1-1504S	—Body flange assembly (2613S)	
1A-123	—Flange gasket	
2-181	Auxiliary throttle valve	(2)
2-193	Secondary throttle valve	(2)
2-204	—Primary throttle valve	(2)
3-850	Secondary throttle shaft (2613S)	
3-1054S	Secondary throttle shaft and dog assembly (2614S)	
3-1141S	—Primary throttle shaft and lever assembly (2613S)	
3-1142S	—Primary throttle shaft and lever assembly (2614S)	
3-1145S	Auxiliary throttle shaft lever and weight assembly	
4A-139	Throttle shaft dog (2614S)	
4A-158	Throttle shaft dog (2613S)	
6-1180S	Air horn assembly (2613S)	
6-1298S	—Air horn assembly (2614S)	
7-173	Choke valve (2614S)	
11-287S	Low speed jet assembly (.035")	(2)
11B-35	Rivet plug	(4)
11B-41	Rivet plug (2614S)	
11B-79	Rivet plug	
11B-129S	Pump discharge passage plug assembly	
11B-134	Rivet plug	
11B-146	Level sight plug	(2)
11B-223	Nozzle passage rivet plug	(4)
11B-272	Rivet plug	(2)
11B-294	Idle port rivet plug	(2)
11B-305	Rivet plug	(2)
11B-306	Rivet plug	
14-383S	Choke lever and screw assembly (2614S)	
14-439S	Choke piston lever link and shaft assembly (2614S)	
14-440	Cam trip lever (2614S)	
15-63S	Strainer nut assembly	
17-50	Pump check needle	
20-26	Pump relief plug gasket	
20-126	Needle seat gasket	(2)
20-127	Bowl strainer gasket	
21-143S	Primary float and lever assembly	
21-168S	Secondary float and lever assembly	
24-24	Float lever pin	(2)
25 278S	Needle and seat assembly	(2)
30-75	Bowl strainer	
30A-67	Idle adjustment screw	(2)
39-11	Choke valve attaching screw (2614S)	(2)
47-14	Welsh plug (choke housing) (2614S)	

Part No.	PART NAME	
48-233S	Pump jet and housing assembly	
53A-333S	Pump operating lever and countershaft assembly	
53A-344	Vent arm	
53A-365	Secondary operating lever (2613S)	
53A-397	Lockout arm (2614S)	
53A-405	Secondary operating lever (2614S)	
61-84	Idle adjustment screw spring	(2)
61-128	Connector rod spring (2613S (1) (2614S (2)	
61-166	Vacuum piston spring	
61-171	Pump spring (lower)	
61-238	Throttle flex spring (2614S)	
61-291	Throttle lever adjusting screw spring	
61-382	Metering rod spring	
61-454	Fast idle cam spring (2614S)	
61-474	Bowl vent spring	
61-483	Secondary throttle return spring	
61-535	Lockout arm spring (2614S)	
61-548	Throttle flex spring (2613S)	
63-35	Connector rod spring retainer (2613S (1) (2614S (2)	
63-57	Intake check ball retainer	
63-58	Coil housing retainer (2614S)	(3)
63-149	Bowl vent spring retainer	
64-165S	Pump plunger rod spring and retainer assembly	
75-1374	—Metering rod—standard (.071" x .050")	(2)
86-12	Flange stud lock washer	(4)
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	(2)
101-136	Coil housing attaching screw (2614S)	(3)
101-149S	Body flange attaching screw and washer assembly	
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-275	Piston housing attaching screw (2614S)	
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet housing attaching screw	
101-298S	Body flange attaching screw and washer assembly	(2)
101-307S	Air horn attaching screw and washer assembly	(8)
101-324	Fast idle cam attaching screw (2614S)	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-348	Primary throttle valve attaching screw	(4)
101-354S	Choke lever clamp screw and washer assembly (2614S)	

Part No.	PART NAME	
101-363	Piston housing attaching screw (2614S)	(2)
101-376	Throttle lever adjusting screw	
101-382S	Body flange attaching screw and washer assembly	(3)
101-414	Auxiliary throttle valve attaching screw	(4)
103-14	Lead shot	(3)
105A-10	Choke lever clamp screw nut (2614S)	
105A-11	Flange stud nut	(4)
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
114-97	Throttle shaft arm (outer) (2614S)	
114-127	Throttle shaft arm (outer) (2613S)	
114-128	Throttle shaft arm (inner) (2613S)	
114-131	Throttle shaft arm (inner) (2614S)	
115-208	Throttle operating rod (2613S)	
115-215	Choke connector rod (2614S)	
115-216	Throttle connector rod	
115-247	Throttle operating rod (2614S)	
116-13	Pump intake check ball	
117-162	Vacumeter piston link	
117-165	Pump arm link	
118-102S	Dust cover assembly	
120-171	Primary metering rod jet (1065")	(2)
120-186	Secondary metering jet (061")	(2)

Part No	PART NAME	
121-78	Coil housing gasket (2614S)	
121 208	Dust cover gasket	
121-241	Pump jet housing gasket	
121-267	Body flange gasket	
121-281	Air horn gasket	
121-298	Piston housing gasket (2614S)	
129-19	Metering rod disk (upper)	(2)
136-37	Throttle operating rod washer (2613S (5) (2614S (2)	
136-84	Spring washer	
136-150	Metering rod disk (lower)	(2)
136-159	Throttle shaft washer	
136-172	Secondary throttle shaft washer	
136-174	Throttle lever adjusting screw washer	
145 142	Choke vacuum passage stand pipe (2614S)	
145 148	Cross over bowl vent tube	(2)
150 62	Choke piston pin (2614S)	
150-186S	Pin and valve cap assembly	
150A-10	Pin spring	(4)
160-91	Choke piston (2614S)	
160-110S	Vacuum piston and pin assembly	
170-507S	Piston housing and plug assembly (2614S)	
170AB-238S	Thermostatic coil and housing assembly (2614S)	
181-204S	Fast idle cam assembly (2614S)	
186-34	Choke baffle plate (2614S)	

—Parts so marked are new and listed for the first time

NOTE **Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used**

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CHEVROLET

STANDARD and OVERDRIVE

TRANSMISSION

1958

(Also used for replacement on Power Glide and Turbo Glide)

WCFB Four-Bore Down-Draft Climatic® Control **Carbureter No. 2669S**

CARBURETER SPECIFICATIONS

For Chevrolet 8 Cylinder 283 Cu. In. Engine: Vacuum at Idle 18 Inches

Dimensions: Flange size 1-1/8 inch Four Bore—4 bolt type
Primary venturi size, 11/32 inch I D
Main venturi (primary) size 1 inch
Main venturi (secondary) size 1 1/8 inch I D

Vents: Outside none Inside (4 drilled holes 1 tube) in air horn

Low Speed Circuit: (Primary side only)
Jet size No 68 (031 inch) drill By pass in body, size No 52 (0635 inch) drill Economizer, plug in body size No 55 (052 inch) drill Idle bleed in body size No 52 (0635 inch) drill Idle port (upper) slot type length 175 inch width 030 inch

Idle Port Opening: 113 to 119 inch above top edge of valve with valve tightly closed

Lower Port: (For idle adjustment screw), size No 53 (0595 inch) drill

Set Idle Adjustment Screw: 1/4 to 1 3/4 turns open For richer mixture turn screw out Do not idle engine below 450 R P M for Std & O D Trans in neutral, 425 R P M for Power Glide 450 R P M for Turbo Glide in drive range

Main Nozzle: Installed permanently DO NOT REMOVE Anti percolating bleed (primary in plug) size No 60 (040 inch) drill (secondary in body) size No 66 (033 inch) drill

Accelerating Pump: Discharge jet (twin) primary side only size No 73 (024 inch) drill
Intake ball check seat size 115 to 120 inch diameter
Discharge needle seat size 070 inch diameter

Choke: Carter Climatic® Control set on index Butterfly type—offset choke valve primary side only Choke heat suction hole restriction in piston housing size No 40 (098 inch) drill

Vacuum Spark Port: Horizontal slot (round end) 045 x 110 inch
Top of port 028 to 038 inch above valve with valve tightly closed

Motor Tune-Up — Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .018"	Ignition Timing Breaker Points to Open: 4° B. T. C. At Vibration Damper	Float Setting Primary 1/8 Inch (Use Gauge T109-232) Secondary 1/4 Inch (Use Gauge T109-223)	Idle Adjustment Screw Setting See Specifications

NOTE: These cars are equipped with Hydraulic Valve Lifters — NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: Two separate float adjustments must be made—lateral and vertical. **LATERAL ADJUSTMENT:** With bowl cover assembly inverted, bowl cover gasket removed and float resting on seated needle, place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting. Side of floats should just clear the vertical uprights of float gauge. Adjustment should be made by bending arms of floats. **VERTICAL ADUSTMENT:** With float gauge in same position, floats should just clear the horizontal portion of gauge. Vertical distance between top of float and machined surface of casting must be 1/8 inch (gauge T109-232) for primary floats and 1/4 inch (gauge T109-223) for secondary floats. Adjust by bending float arms.

FLOAT DROP ADJUSTMENT: With bowl cover held in upright position and measuring from center of float, the distance between top of floats and bowl cover should be 5/8 inch for primary floats and 3/4 inch for secondary floats. Adjust by bending stop tabs on float brackets.

PUMP ADJUSTMENT: Install pump connector link in outer hole (long stroke) of pump arm, with ends extending toward countershaft arm. Back out throttle lever stop screw until throttle valves seat in bores of carbureter. Hold straight edge across top of dust cover boss at pump arm. The flat on top of pump arm should be parallel to straight edge. Adjust by bending throttle connector rod at lower angle. (Use tool T109-213.)

METERING ROD ADJUSTMENT: Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows: 1. Back out throttle lever stop screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw. 2. With metering rods in place, press down on vacumeter link until metering rods bottom in carbureter body casting. 3. Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link. Hold in place and carefully tighten clamp screw.

FAST IDLE ADJUSTMENT: (a) Loosen choke lever clamp screw on choke shaft. Insert .020 inch feeler gauge (T109-29) between lip of fast idle cam and boss of flange casting. Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw. (b) With choke valve tightly closed bend fast idle adjusting tang until there is .012 inch (gauge T109-200) opening between throttle valve and bore of carbureter side oposite idle port. Be sure fast idle adjusting tang is on high step of cam while making this adjustment.

FAST IDLE ON CAR: 1600 R. P. M. hot engine with idle adjusting tang on high step of cam.

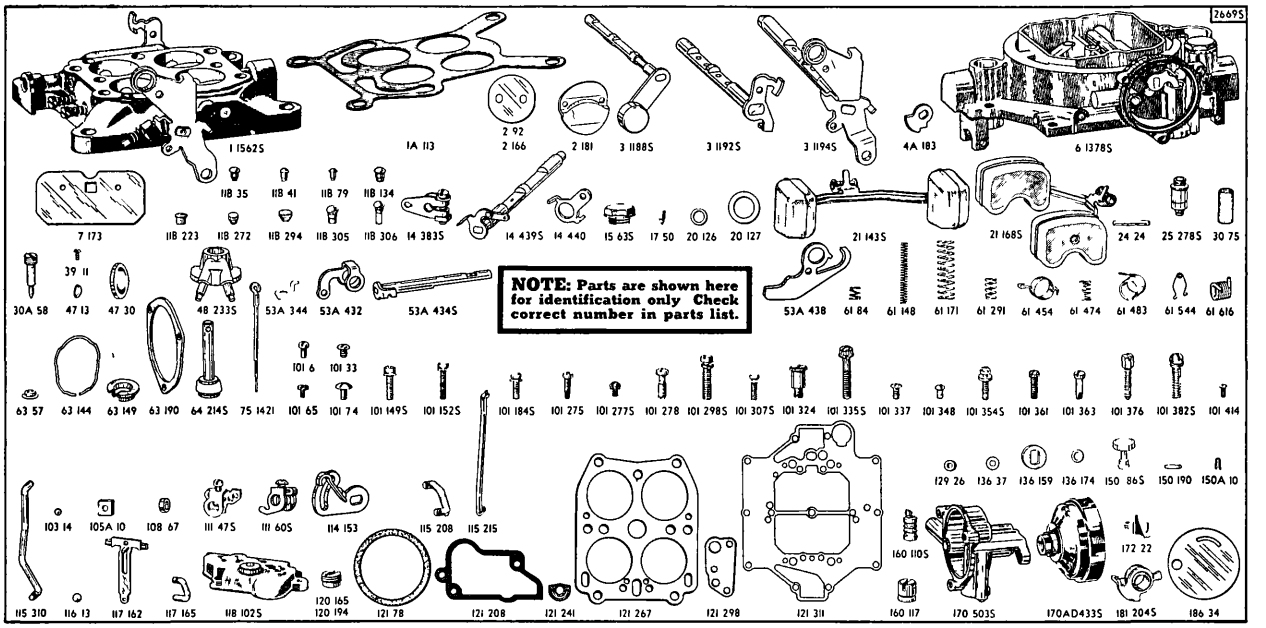
UNLOADER ADJUSTMENT: With throttle wide open there should be 3/16 inch (gauge T109-28) clearance between upper edge of choke valve and inner wall of air horn. Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41).

BOWL VAPOR VENT ADJUSTMENT: This adjustment should be made after completing pump and metering rod adjustments. Install dust cover and dust cover gasket. Back out throttle lever stop screw to allow throttle valves to seat in bores of carbureter. There should be 3/32 inch (gauge T109-125) between lower edge of bowl vapor vent valve and dust cover. To adjust, remove dust cover and bend vapor vent arm.

SECONDARY THROTTLE LEVER ADJUSTMENT: 1. Block choke valve wide open. 2. Back out throttle lever stop screw so that primary valves seat in bores of carbureter. 3. With primary valves open 11/64" (gauge T109-166) secondary valves should just start to open. To adjust, bend throttle operating rod. NOTE: Secondary valves will be a few degrees from wide open, when primary valves are wide open. With primary and secondary valves tightly closed there should be .010" to .030" (gauge T109-29) between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on secondary throttle lever.

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: Crack throttle valves and manually open and close choke valves. Tang on secondary throttle lever should freely engage in notch of lock-out dog. To adjust, bend tang on secondary throttle lever.

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Chevrolet "V-8"—1958—Carbureter No. 2669S

WHEN SERVICING, USE GASKET ASSORTMENT No. 321; RE-CARBURETION KIT No. 1937N

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF RE-CARBURETION KIT

Part No.	PART NAME	
1-1562S	—Body flange assembly	
1A-113	FLANGE GASKET	
2-92	Primary throttle valve	(2)
2-166	Secondary throttle valve	(2)
2-181	Auxiliary throttle valve	(2)
3-1188S	—Auxiliary throttle lever shaft and weight assembly	
3-1192S	—Secondary throttle shaft and dog assembly	
3-1194S	—Primary throttle shaft and lever assembly	
4A-183	—Auxiliary throttle shaft dog	
6-1378S	—Air horn assembly	
7-173	Choke valve	
11B-35	Rivet plug	(4)
11B-41	Rivet plug	
11B-79	Rivet plug	
11B-134	Rivet passage plug	
11B-223	Nozzle passage rivet plug	(4)
11B-272	Rivet plug	(2)
11B-294	Idle port rivet plug	(2)
11B-305	Rivet plug	(2)
11B-306	Rivet plug	
14-383S	Choke lever and screw assembly	
14-439S	Choke piston lever, link and shaft assembly	
14-440	Cam trip lever	
15-63S	Strainer nut assembly	
17-50	Pump check needle	
20-126	Needle seat gasket	(2)
20-127	Bowl strainer gasket	
21-143S	Primary float and lever assembly	
21-168S	Secondary float and lever assembly	

Part No.	PART NAME	
24-24	Float lever pin	(2)
25-280S	PRIMARY AND SECONDARY NEEDLE AND SEAT ASSEMBLY (1015")	(2)
30-75	Bowl strainer	
30A-58	Idle adjustment screw	(2)
39-11	Choke valve attaching screw	(2)
47-30	Welsh plug (choke side)	
47-33	Welsh plug (spark port)	
48-233S	Pump jet and housing assembly	
53A-344	Vent arm	
53A-432	—Pump operating lever	
53A-434S	—Pump operating lever and countershaft assembly	
53A-438	—Lockout arm	
61-84	Idle adjustment screw spring	(2)
61-148	VACUUM PISTON SPRING	
61-171	Pump spring (lower)	
61-291	Throttle lever adjusting screw spring	
61-454	Fast idle cam spring	
61-474	Bowl vent spring	
61-483	Secondary throttle return spring	
61-544	Metering rod spring	
61-616	—Pump operating lever spring	
63-57	Intake check ball retainer	
63-144	Delayer plate retainer ring	
63-149	Bowl vent spring retainer	
63-190	Coil housing retainer	
64-214S	—PUMP PLUNGER AND ROD ASSEMBLY	
75-1421	—METERING ROD—STANDARD 065" x 050"	(2)
101-6	Pump arm clamp screw	

Part No.	PART NAME	
101-33	Metering rod arm clamp screw	
101-65	Auxiliary throttle shaft dog attaching screw	
101-74	Throttle shaft screw	
101-149S	Body flange attaching screw and washer assembly	
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-275	Piston housing attaching screw	
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet and housing attaching screw	
101-298S	Body flange attaching screw and washer assembly	(2)
101-307S	Air horn attaching screw and washer assembly	(8)
101-324	Fast idle cam attaching screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-348	Primary throttle valve attaching screw	(4)
101-354S	Choke lever clamp screw and washer assembly	
101-361	Coil housing attaching screw	(3)
101-363	Piston housing attaching screw	(2)
101-376	Throttle lever adjusting screw	
101-382S	Body flange attaching screw and washer assembly	(3)
101-414	Auxiliary throttle valve attaching screw	(4)
103-14	Lead shot	(3)
105A-10	Choke lever clamp screw nut	
108-67	—Spacer	
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
115-208	Throttle operating rod	
115-215	Choke connector rod	
115-310	—Throttle connector rod	
116-13	Pump intake check ball	
117-162	Vacumeter piston link	
117-165	Pump arm link	
118-102S	Dust cover assembly	
120-165	PRIMARY METERING ROD JET (.086")	(2)
120-177	Secondary metering jet (.076")	(2)
120-194	Secondary metering jet (.0785") (Sup. by 120-177)	(2)
121-78	COIL HOUSING GASKET	
121-208	DUST COVER GASKET	
121-241	PUMP JET HOUSING GASKET	
121-267	BODY FLANGE GASKET	
121-298	Piston housing gasket	
121-311	—AIR HORN GASKET	
129-26	Metering rod disk	(2)
136-37	Throttle connector rod and operating rod washer	(4)
136-159	Throttle shaft washer	
136-174	Throttle lever adjusting screw washer	
150-186S	Pin and valve cap assembly	
150-190	Choke piston pin	
150A-10	Pin spring	(5)
160-110S	Vacuum piston and pin assembly	
160-117	Choke piston	
170-503S	Piston housing and plug assembly	
170AD-433S	Thermostatic coil and housing assembly	
172-22	Throttle connector rod retainer	
181-204S	Fast idle cam and spring assembly	
186-34	Choke baffle plate	

—Parts so marked are new and listed for the first time.

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

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CHEVROLET

2656S
Automatic
Transmission

"V-8"

1958

2657S
Standard and Overdriv
Transmission

(2656S can be used to replace 2657S)

WCFB Four-Bore Down-Draft Climatic® Control Carbs. Nos. 2656S-2657S

CARBURETER SPECIFICATIONS

For Chevrolet 8 Cylinder 348 Cu. In. Engine: Vacuum at Idle 18 Inches

Dimensions: Flange size, 1¼ inch Four Bore—4 bolt type
Primary venturi size 11/32 inch I D
Main venturi (primary) size 1-1/16 inch
Main venturi (secondary) size 1¼ inch I D

Vents: Outside none Inside (4 drilled holes 1 tube) in air horn

Low Speed Circuit: (Primary side only)
Jet size No 68 (031 inch) drill By pass in body, size No 52 (0635 inch) drill Economizer plug in body size No 55 (052 inch) drill Idle bleed in body size No 52 (0635 inch) drill. Idle port (upper) slot type length 175 inch width 030 inch

Idle Port Opening: 113 to 119 inch above top edge of valve with valve tightly closed

Lower Port (For idle adjustment screw), size No 53 (0595 inch) drill

Set Idle Adjustment Screw: ¼ to 1¾ turns open For richer mixture turn screw out Do not idle engine below 450 R P M for Std & O D Trans in neutral 425 R P M for Power Glide, 450 R P M for Turbo Glide in drive range

Main Nozzle: Installed permanently DO NOT REMOVE Anti-percolating bleed (primary in plug) size No 60 (040 inch) drill (secondary in body) size No 66 (033 inch) drill

Accelerating Pump: Discharge jet (twin) primary side only siz No 73 (024 inch) drill
Intake ball seat size 115 to 120 inch diameter
Discharge needle seat size 070 inch diameter

Choke: Carter Climatic® Control set on index. Butterfly type—offset choke primary side only Choke heat suction hole restriction in piston housing, size No 40 (098 inch) drill

Vacuum Spark Port: Horizontal slot (round end) 045 x 110 inch Top of port 038 to 048 inch above valve with valve tightly closed.

Motor Tune-Up — Be Accurate!

CAUTION· Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .018"	Ignition Timing Breaker Points to Open: 4° B. T. C	Float Setting Primary ⅛ Inch (Use Gauge T109-232) Secondary ¼ Inch (Use Gauge T109-223)	Idle Adjustment Screw Setting ¼ to 1¾ Turns Open (See Adjustments)

NOTE: These cars are equipped with Hydraulic Valve Lifters — NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENTS: Two separate float adjustments must be made—lateral and vertical. **LATERAL ADJUSTMENT:** With bowl cover assembly inverted, bowl cover gasket removed and float resting on seated needle, place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting. Side of floats should just clear the vertical uprights of float gauge. Adjustment should be made by bending arms of floats. **VERTICAL ADJUSTMENT:** With float gauge in same position, floats should just clear the horizontal portion of gauge. Vertical distance between top of float and machined surface of casting must be 1/8 inch (gauge T109-232) for primary floats and 1/4 inch (gauge T109-223) for secondary floats. Adjust by bending float arms.

FLOAT DROP ADJUSTMENT: With bowl cover held in upright position and measuring from center of float, the distance between top of floats and bowl cover should be 5/8 inch for primary floats and 3/4 inch for secondary floats. Adjust by bending stop tabs on float brackets.

PUMP ADJUSTMENT: Install pump connector link in outer hole (long stroke) of pump arm, with ends extending toward countershaft arm. Back out throttle lever stop screw until throttle valves seat in bores on carbureter. Hold straight edge across top of dust cover boss at pump arm. The flat on top of pump arm should be parallel to straight edge. Adjust by bending throttle rod at lower angle. (Use tool T109-213.)

METERING ROD ADJUSTMENT: Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows: 1. Back out throttle lever stop screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw. 2. With metering rods in place, press down on vacumeter link until metering rods bottom in carbureter body casting. 3. Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link. Hold in place and carefully tighten clamp screw.

FAST IDLE ADJUSTMENT: (a) Loosen choke lever clamp screw on choke shaft. Insert .020 inch feeler (gauge T109-29) between lip of fast idle cam and boss of flange casting. Hold choke valve tightly closed and take slack out of linkage by pressing choke lever toward closed position—hold in place and tighten clamp screw. (b) With choke valve tightly closed bend fast idle adjusting tang until there is (2656S) .018 inch, (2657S) .015 inch (gauge T109-44) opening between throttle valve and bore of carbureter side opposite idle port. Be sure fast idle adjustment tang is on high step of cam while making this adjustment.

FAST IDLE ON CAR: (2656S) 1800 R. P. M., (2657S) 1600 R. P. M. hot engine with idle adjusting tang on high step of cam.

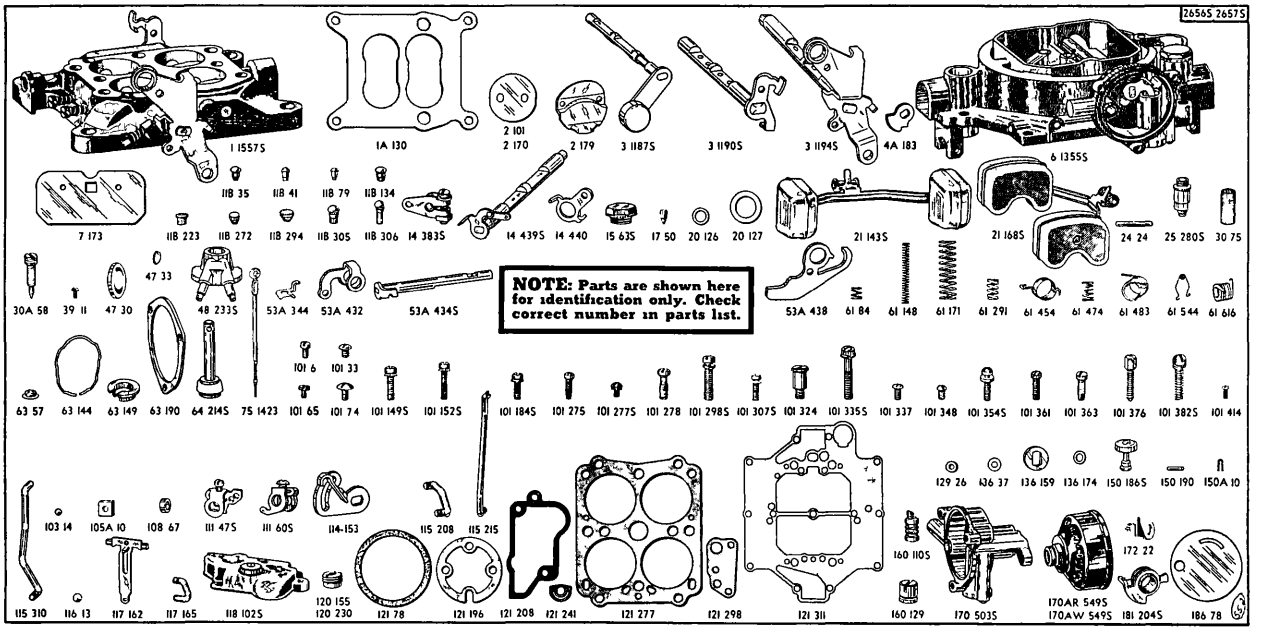
UNLOADER ADJUSTMENT: With throttle wide open there should be 3/16 inch (gauge T109-28) clearance between upper edge of choke valve and inner wall of air horn. Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41).

BOWL VAPOR VENT ADJUSTMENT: This adjustment should be made after completing pump and metering rod adjustments. Install dust cover and dust cover gasket. Back out throttle lever stop screw to allow throttle valves to seat in bores of carbureter. There should be 3/32 inch (gauge T109-125) between lower edge of bowl vapor vent valve and dust cover. To adjust, remove dust cover and bend vapor vent arm.

SECONDARY THROTTLE LEVER ADJUSTMENT: 1. Block choke valve wide open. 2. Back out throttle lever stop screw so that primary valves seat in bores of carbureter. 3. With primary valves open 3/16 inch (gauge T109-28) secondary valves should just start to open. To adjust, bend throttle operating rod. NOTE: Secondary valves will be a few degrees from wide open, when primary valves are wide open. With primary and secondary valves tightly closed there should be .010" to .030" (gauge T109-29) between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on secondary throttle lever.

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: Crack throttle valves and manually open and close choke valve. Tang on secondary throttle lever should freely engage in notch of lock-out dog. To adjust, bend tang on secondary throttle lever.

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Chevrolet "V-8"—1958—Carbureters Nos. 2656S-2657S

WHEN SERVICING, USE GASKET ASSORTMENT No. 322; RE-CARBURETION KIT No. 1938N

PART NAMES IN CAPITAL LETTERS, LISTED BELOW INDICATE CONTENTS OF RE-CARBURETION KIT

Part No.	PART NAME	
1-1557S	—Body flange assembly	
1A-130	—FLANGE GASKET	
2-101	Primary throttle valve	(2)
2-170	Secondary throttle valve	(2)
2-179	Auxiliary throttle valve	(2)
3-1187S	—Auxiliary throttle lever shaft and weight assembly	
3-1190S	—Secondary throttle shaft and dog assembly	
3-1194S	—Primary throttle shaft and lever assembly	
4A-183	—Auxiliary throttle shaft dog	
6-1355S	—Air horn assembly	
7-173	Choke valve	
11B-35	Rivet plug	(4)
11B-41	Rivet plug	
11B-79	Rivet plug	
11B-134	Rivet passage plug	
11B-223	Nozzle passage rivet plug	(4)
11B-272	Rivet plug	(2)
11B-294	Idle port rivet plug	(2)
11B-305	Rivet plug	(2)
11B-306	Rivet plug	
14-383S	Choke lever and screw assembly	
14-439S	Choke piston lever link and shaft assembly	
14-440	Cam trip lever	
15-63S	Strainer nut assembly	
17-50	Pump check needle	
20-126	Needle seat gasket	(2)
20-127	Bowl strainer gasket	
21-143S	Primary float and lever assembly	

Part No.	PART NAME	
21-168S	Secondary float and lever assembly	
24-24	Float lever pin	(2)
25-278S	SECONDARY NEEDLE AND SEAT ASSEMBLY (.0935")	
25-280S	PRIMARY NEEDLE AND SEAT ASSEMBLY (.1015")	
30-75	Bowl strainer	
30A-58	Idle adjustment screw	(2)
39-11	Choke valve attaching screw	(2)
47-30	Welsh plug (choke side)	
47-33	Welsh plug (spark port)	
48-233S	Pump jet and housing assembly	
53A-344	Vent arm	
53A-432	—Pump operating lever	
53A-434S	—Pump operating lever and countershaft assembly	
53A-438	—Lockout arm	
61-84	Idle adjustment screw spring	(2)
61-148	VACUUM PISTON SPRING	
61-171	Pump spring (lower)	
61-291	Throttle lever adjusting screw spring	
61-454	Fast idle cam spring	
61-474	Bowl vent spring	
61-483	Secondary throttle return spring	
61-544	Metering rod spring	
61-616	—Pump operating lever spring	
63-57	Intake check ball retainer	
63-144	Delayer plate retainer ring	
63-149	Bowl vent spring retainer	
63-190	Coil housing retainer	
64-214S	—PUMP PLUNGER AND ROD ASSEMBLY	

Part No.	PART NAME	
75-1423	Metering rod—Standard 0705" x 061" x 042" (Sup by 75 1424)	(2)
75-1424	—METERING ROD—STANDARD	
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-65	Auxiliary throttle shaft dog attaching screw	
101-74	Throttle shaft screw	
101-149S	Body flange attaching screw and washer assembly	
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-275	Piston housing attaching screw	
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet and housing attaching screw	
101-298S	Body flange attaching screw and washer assembly	(2)
101 307S	Air horn attaching screw and washer assembly	(8)
101-324	Fast idle cam attaching screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-348	Primary throttle valve attaching screw	(4)
101-354S	Choke lever clamp screw and washer assembly	
101-361	Coil housing attaching screw	(3)
101-363	Piston housing attaching screw	(2)
101-376	Throttle lever adjusting screw	
101-382S	Body flange attaching screw and washer assembly	(3)
101-414	Auxiliary throttle valve attaching screw	(4)
103-14	Lead shot	(3)
105A-10	Choke lever clamp screw nut	
108-67	—Spacer	
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
114-153	—Throttle shaft arm	
115-208	Throttle operating rod	
115-215	Choke connector rod	
115-310	—Throttle connector rod	
116-13	Pump intake check ball	
117-162	Vacumeter piston link	
117-165	Pump arm link	
118-102S	Dust cover assembly	
120-155	PRIMARY METERING ROD JET (.091")	(2)
120-158	—Secondary metering jet (.082")	(2)
121-78	COIL HOUSING GASKET	
121-196	Delayer plate gasket	
121-208	DUST COVER GASKET	
121-241	PUMP JET HOUSING GASKET	
121-277	BODY FLANGE GASKET	
121-298	Piston housing gasket	
121-311	—AIR HORN GASKET	
129-26	Metering rod disk	(2)
136-37	Throttle connector rod and operating rod washer	(4)
136-159	Throttle shaft washer	
136-174	Throttle lever adjusting screw washer	
150-186S	Pin and valve cap assembly	
150-190	Choke piston pin	
150A-10	Pin spring	(5)
160-110S	Vacuum piston and pin assembly	
160-129	Choke piston	
170-503S	Piston housing and plug assembly	
170AR-549S	—Thermostatic coil and housing assembly (2657S)	
170AW-549S	—Thermostatic coil and housing assembly (2656S)	
172-22	Throttle connector rod retainer	
181-204S	Fast idle cam and spring assembly	
186-78	—Choke baffle plate	

—Parts so marked are new and listed for the first time

NOTE: Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.

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CHEVROLET "V-8"

CORVETTE

1957

WCFB Four-Bore Down-Draft Climatic® Control **Carbureter No. 2655S**

CARBURETER SPECIFICATIONS

For Chevrolet 8 Cylinder 283 Cu In Engine Vacuum at Idle 18 Inches

Dimensions Flange size 1⅛ inch Four Bore—4 bolt type
Primary venturi size 11/32 inch I D
Main venturi (primary) size 1 inch
Main venturi (secondary) size 1⅛ inch I D

Vents Outside (4) in air horn (4) in flange Inisde (5) in air horn

Gasoline Intake Size No 42 (0935 inch) drill hole in needle seat

Low Speed Jet Tube (Primary side only)
Jet size No 68 (031 inch) drill
By pass in body size No 52 (0635 inch) drill
Economizer in screw plug size (049 inch) diameter
Idle Bleed in body size No 52 (0635 inch) drill

Idle Port (Upper) slot type Primary length 175 inch width 030 inch Secondary, none

Idle Port Opening Primary 113 to 119 inch above top edge of valve with valve tightly closed Secondary none

Lower Port Primary (for idle adjustment screw) size No 53 (0595 inch) drill Secondary none

Set Idle Adjustment Screw ½ to 1½ turns open For richer mixture turn screw out Do not idle engine below 425 R P M (Automatic Transmission—in Drive Range) 475 R P M (Standard Transmission)

Main Nozzle Installed permanently DO NOT REMOVE Anti percolating bleed (primary in plug) size No 60 (040 inch) drill (secondary in body) size No 66 (033 inch) drill

Metering Rod (Vacumeter type) see parts list for size

Metering Rod Jet Primary size 086 inch diameter (for metering rod)
Secondary size 061 inch diameter (no metering rod)

Accelerating Pump Discharge jet (twin) primary side only size No 73 (024 inch) drill
Intake ball check seat size 115 to 120 inch diameter
Discharge needle seat size 070 inch diameter

Choke Carter Climatic® Control set on index Butterfly type—offset choke valve primary side only Choke heat suction hole restriction in piston housing size No 40 (098 inch) drill

Vacuum Spark Port Horizontal slot (round end) 045 x 110 inch Top of port 028 to 038 inch above valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open	Float Setting	Idle Adjustment Screw Setting
035"	018"	4° B T C at Idle (10° B T C at 1000 R P M At Vibration Damper)	See Adjustments	½ to 1½ Auto Trans 425 R P M. Std Trans 475 R P.M.

NOTE These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: Two separate float adjustments must be made—lateral and vertical. **LATERAL ADJUSTMENT:** With bowl cover assembly inverted, bowl cover gasket removed and float resting on seated needle, place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting. Side of floats should just clear the vertical uprights of float gauge. Adjustment should be made by bending arms of floats. **VERTICAL ADJUSTMENT:** With float gauge in same position, floats should just clear the horizontal portion of gauge. Vertical distance between top of float and machined surface of casting must be 1/8 inch (gauge T109-232) for primary floats and 1/4 inch (gauge T109-223) for secondary floats. Adjust by bending float arms.

FLOAT DROP ADJUSTMENT: With bowl cover held in upright position and measuring from center of float, the distance between top of floats and bowl cover should be 5/8 inch for primary floats and 3/4 inch for secondary floats. Adjust by bending stop tabs on float brackets.

PUMP ADJUSTMENT: Install pump connector link in outer hole (long stroke) of pump arm, with ends extending toward countershaft arm. Back out throttle lever stop screw until throttle valves seat in bores of carbureter. Hold straight edge across top of dust cover boss at pump arm. The flat on top of pump arm should be parallel to straight edge. Adjust by bending throttle connector rod at lower angle. (Use tool T109-213.)

METERING ROD ADJUSTMENT: Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows: 1. Back out throttle lever stop screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw. 2. With metering rods in place, press down on vacumeter link until metering rods bottom in carbureter body casting. 3. Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link. Hold in place and carefully tighten clamp screw.

FAST IDLE ADJUSTMENT: (a) loosen choke lever clamp screw on choke shaft. Insert .020 inch feeler gauge (T109-29) between lip of fast idle cam and boss of flange casting. Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw. (b) With choke valve tightly closed bend fast idle adjusting tang until there is .015 inch (gauge T109-44) opening between throttle valve and bore of carbureter side opposite idle port. Be sure fast idle adjusting tang is on high step of cam while making this adjustment.

FAST IDLE ON CAR: 1800 R.P.M. hot engine with idle adjusting tang on high step of cam.

UNLOADER ADJUSTMENT: With throttle wide open there should be 3/16 inch (gauge T109-28) clearance between upper edge of choke valve and inner wall of air horn. Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41).

BOWL VAPOR VENT ADJUSTMENT: This adjustment should be made after completing pump and metering rod adjustments. Install dust cover and dust cover gasket. Back out throttle lever stop screw to allow throttle valves to seat in bores of carbureter. There should be 1/16 inch (gauge T109-197) between lower edge of bowl vapor vent valve and dust cover. To adjust, remove dust cover and bend vapor vent arm.

SECONDARY THROTTLE LEVER ADJUSTMENT: 1. Block choke valve wide open. 2. Back out throttle lever stop screw so that primary valves seat in bores of carbureter. 3. With primary valves open 3/16" (gauge T109-28) secondary valves should just start to open. To adjust, bend throttle operating rod. NOTE: Secondary valves will be a few degrees from wide open, when primary valves are wide open. With primary and secondary valves tightly closed there should be .017" to .022" (gauge T109-29) between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on primary throttle lever.

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: Crack throttle valves and manually open and close choke valve. Tang on secondary throttle lever should freely engage in notch of lock-out dog. To adjust, bend tang on secondary throttle lever.

Chevrolet "V-8"—1957—Carbureter No. 2655S

WHEN SERVICING, USE GASKET ASSORTMENT No. 296

Part No.	PART NAME	
1-1455S	Body flange assembly (Sup by 1 1534S)	
1-1534S	—Body flange assembly	
1A-113	Flange gasket	
2-92	Primary throttle valve	(2)
2-166	Secondary throttle valve	(2)
2-181	Auxiliary throttle valve	(2)
3-1051S	Primary throttle shaft and lever assembly	
3-1054S	Secondary throttle shaft and dog assembly	
3-1145S	Auxiliary throttle lever shaft and weight assembly	
4A-158	Throttle shaft dog	
6-1289S	Air horn assembly	
7-173	Choke valve	
11-302S	Low speed jet assembly	(2)
11B-35	Rivet plug	(4)
11B-41	Rivet plug	
11B-79	Rivet plug (early prod (4) (late prod (1)	
11B-134	Rivet passage plug	
11B-146	Level sight plug	(2)
11B-223	Nozzle passage rivet plug	(4)
11B-272	Rivet plug	(2)
11B-294	Idle port rivet plug	(2)
11B-305	Rivet plug	(2)
11B-306	Rivet plug	
14-383S	Choke lever and screw assembly	
14-439S	Choke piston lever link and shaft assembly	
14-440	Cam trip lever	
15-63S	Strainer nut assembly	
17-50	Pump check needle	
20-26	Pump passage plug gasket	
20-126	Needle seat gasket	(2)
20-127	Bowl strainer gasket	
21-143S	Primary float and lever assembly	
21-168S	Secondary float and lever assembly	
24-24	Float lever pin	(2)
25-278S	Primary and secondary needle and seat assembly	(2)
30-75	Bowl strainer	
30A-58	Idle adjustment screw	(2)
39-11	Choke valve attaching screw	(2)
47-13	Welsh plug (spark port)	
47-30	Welsh plug (choke side)	
48-233S	Pump jet and housing assembly	
53A-333S	Pump operating lever and countershaft assembly	
53A-344	Vent arm	
53A-365	Secondary operating lever	
53A-397	Lockout arm	

Part No.	PART NAME	
61-84	Idle adjustment screw spring	(2)
61-128	Connector rod spring	
61-148	Vacuum piston spring	
61-171	Pump spring (lower)	
61-291	Throttle lever adjusting screw spring	
61-382	Metering rod spring	
61-454	Fast idle cam spring	
61-474	Bowl vent spring	
61-483	Secondary throttle return spring	
61-552	Throttle flex spring	
63-35	Connector rod spring retainer	
63-57	Intake check ball retainer	
63-144	Delayer plate retainer ring	
63-149	Bowl vent spring retainer	
63-190	Coil housing retainer	
64-165S	Pump plunger rod spring and retainer assembly	
75-1385	—Metering rod—standard (.066" x .060" x .043")	(2)
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	(2)
101-149S	Body flange attaching screw and washer assembly	
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-275	Piston housing attaching screw	
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet and housing attaching screw	
101 298S	Body flange attaching screw and washer assembly	(2)
101-307S	Air horn attaching screw and washer assembly	(8)
101-324	Fast idle cam attaching screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-348	Primary throttle valve attaching screw	(4)
101-354S	Choke lever clamp screw and washer assembly	
101-361	Coil housing attaching screw	(3)
101-363	Piston housing attaching screw	(2)
101-376	Throttle lever adjusting screw	
101-382S	Body flange attaching screw and washer assembly	(3)
101-414	Auxiliary throttle valve attaching screw	(4)
103-14	Lead shot (late prod)	(3)
105A-10	Choke lever clamp screw nut	
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
114-127	Throttle shaft arm (outer)	

Part No.	PART NAME	
114-128	Throttle shaft arm (inner)	
115-208	Throttle operating rod	
115-215	Choke connector rod	
115-216	Throttle connector rod	
116-13	Pump intake check ball	
117-162	Vacumeter piston link	
117-165	Pump arm link	
118-102S	Dust cover assembly	
120-165	Primary metering rod jet	(2)
120-186	Secondary metering jet	(2)
121-78	Coil housing gasket	
121-208	Dust cover gasket	
121-229	Air cleaner gasket	
121-241	Pump jet housing gasket	
121-267	Body flange gasket	
121-281	Air horn gasket	
121-298	Piston housing gasket	
122-102S	Pump discharge relief plug assembly	
129-19	Metering rod disk (upper)	(2)
136-37	Throttle connector rod and operating rod washer	(5)
136-84	Spring washer	
136-150	Metering rod washer (lower)	(2)
136-159	Throttle shaft washer	
136-172	Secondary throttle shaft washer	
136-174	Throttle lever adjusting screw washer	
145-142	Choke vacuum passage standpipe	
150-186S	Pin and valve cap assembly	
150-190	Choke piston pin	
150A-10	Pin spring	(5)
160-110S	Vacuum piston and pin assembly	
160-117	Choke piston	
170-503S	Piston housing and plug assembly	
170AB-433S	Thermostatic coil and housing assembly	
181-204S	Fast idle cam and spring assembly	
186-34	Choke baffle plate	

—Parts so marked are new and listed for the first time

NOTE **Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used**

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CHEVROLET "V-8"

CORVETTE AND PASSENGER CARS 1957

(2626S) Front Carbureter

(2627S) Rear Carbureter

WCFB Four-Bore Down-Draft Climatic® Control **Carbureters Nos. 2626S-2627S**

CARBURETER SPECIFICATIONS

For Chevrolet 8 Cylinder Engine: 3⅞ Inch Bore, 3 Inch Stroke

Dimensions: Flange size 1⅛ inch Four Bore—4 bolt type
Primary venturi size 11/32 inch I D
Main venturi (primary) size 15/16 inch
Main venturi (secondary) size 1⅛ inch I D

Vents· (2627S) Outside (4) in air horn (4) in flange Inside (7)
(2626S) Outside none Inside (7)

Gasoline Intake. Size No 42 (0935 inch) drill hole in needle seat

Low Speed Jet Tube: (Primary side only)
Jet size No 68 (031 inch) drill
By pass in body size (049 inch) diameter
Economizer in screw plug size (049 inch) diameter
Idle bleed, in body size No 52 (0635 inch) drill

Idle Port: (Upper) slot type Primary length 174 inch width 030 inch Secondary none

Idle Port Opening· Primary 113 to 119 inch above top edge of valve with valve tightly closed Secondary none

Lower Port: Primary (for idle adjustment screw) size No 53 (0595 inch) drill Secondary none

Set Idle Adjustment Screw: ¼ to 1¼ turns open For richer mixture turn screw out Do not idle engine below 600 r p m (Power Glide in Drive Range)

Main Nozzle Installed permanently DO NOT REMOVE Anti percolating jet (primary in plug) size No 60 (040 inch) drill, (secondary in body) size No 60 (040 inch) drill

Metering Rod (Vacumeter Type). See parts list for size

Metering Rod Jet. Primary size 0935 inch diameter (for metering rod)
Secondary size 053 inch diameter (no metering rod)

Accelerating Pump Discharge jet (twin) primary side only size No 73 (024 inch) drill
Intake ball check seat size 115 to 120 inch diameter
Discharge needle seat size 070 inch diameter

Choke. (2627S only) Carter Climatic® Control set on index Butterfly type—offset choke valve, primary side only Choke heat suction hole, restriction in piston housing size No 43 (089 inch) drill

Vacuum Spark Port None

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .018"	Ignition Timing Breaker Points to Open 12° B.T.C. at Idle or 18° B.T.C. at 1000 R.P.M.	Float Setting Primary ⅛ Inch (Use Gauge T109-232) Secondary ¼ Inch (Use Gauge T109-223)	Idle Adjustment Screw Setting ¼ to 1¼ Idle Engine at 600 R.P.M. Power Glide in Dr. Range

NOTE. These cars equipped with Hydraulic Valve Lifters. NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT Two separate float adjustments must be made — lateral and vertical **LATERAL ADJUSTMENT** With bowl cover assembly inverted bowl cover gasket removed and float resting on seated needle place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting Side of floats should just clear the vertical uprights of float gauge Adjustment should be made by bending arms of floats **VERTICAL ADJUSTMENT** With float gauge in same position floats should just clear the horizontal portion of gauge Vertical distance between top of float and machined surface of casting must be 1/8 inch (gauge T109 232) for primary floats and 1/4 inch (gauge T109 223) for secondary floats Adjust by bending float arms

FLOAT DROP ADJUSTMENT With bowl cover held in upright position and measuring from center of float the distance be tween top of floats and bowl cover should be 5/8 inch for primary floats and 3/4 inch for secondary floats Adjust by bending stop tabs on float brackets

PUMP ADJUSTMENT Install pump connector link in inner hole (short stroke) of pump arm with ends extending toward counter shaft arm Back out throttle lever stop screw until throttle valves seat in bores of carbureter Hold straight edge across top of dust cover boss at pump arm The flat on top of pump arm should be parallel to straight edge Adjust by bending throttle connector rod at lower angle (Use tool T109 213)

METERING ROD ADJUSTMENT Metering rod adjustment is important and must be made after completing the pump ad ust ment No metering rod gauges are necessary Procedure is as follows 1 Back out throttle lever stop screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw 2 With metering rods in place press down on vacumeter link until metering rods bottom in carbureter body casting 3 Holding rods in downward position and throttle valves seated revolve metering rod arm until finger on arm contacts lip of vacumeter link Hold in place and carefully tighten clamp screw

FAST IDLE ADJUSTMENT (2627S only) (a) Loosen choke lever clamp screw on choke shaft Insert 020 inch feeler gauge (T109 29) between lip of fast idle cam and boss of flange casting Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw (b) With choke valve tightly closed bend fast idle adjusting tang until there is 018 inch (gauge T109 44) opening between throttle valve and bore of carbureter side opposite idle port Be sure fast idle adjusting tang is on high step of cam while making this adjustment

FAST IDLE ON CAR (2627S only) 1800 R P M hot engine with idle adjusting tang on high step of cam

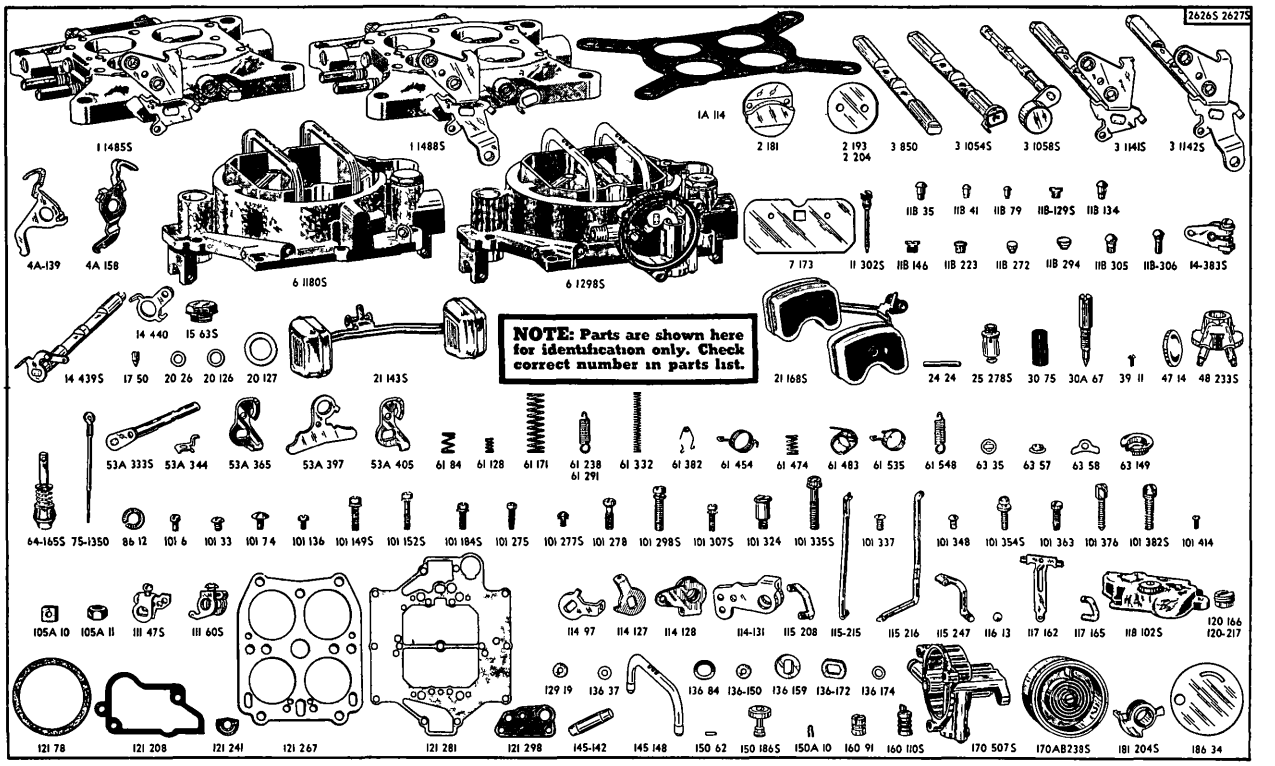
UNLOADER ADJUSTMENT (2627S only) With throttle wide open there should be 1/8 inch (gauge T109 36) clearance between upper edge of choke valve and inner wall of air horn Adjust by bending unloader lip on throttle shaft lever (use bending tool T109 41)

BOWL VAPOR VENT ADJUSTMENT This adjustment should be made after completing pump and metering rod adjustments Install dust cover and dust cover gasket Back out throttle lever stop screw to allow throttle valves to seat in bores of carbureter There should be 1/16 inch (gauge T109 197) between lower edge of bowl vapor vent valve and dust cover To adjust remove dust cover and bend vapor vent arm

SECONDARY THROTTLE LEVER ADJUSTMENT Primary and secondary throttle valves should reach wide open position at the same time NOTE Secondary throttle valves will be a few degrees from wide open To adjust bend throttle operating rod at upper angle (Use bending tool T109 213) With primary and secondary throttle valves in tightly closed position there should be 017 022 inch (gauge T109 29) clearance between positive closing shoes on primary and secondary throttle levers To adjust bend shoe on primary lever

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT (2627S only) This adjustment should be made after completing fast idle and secondary throttle lever adjustments Crack throttle valves and hold choke valve tightly closed Then close throttle Tang on secondary throttle lever should freely engage in notch of lock out dog If necessary to adjust bend tang on secondary throttle lever

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Chevrolet "V-8"—1957—Carbureters Nos. 2626S-2627S

WHEN SERVICING, USE GASKET ASSORTMENT No. 307; REPAIR PACKAGE No. 1870

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1485S	—Body flange assembly (2626S)	
1-1488S	—Body flange assembly (2627S)	
1A-114	Flange gasket (Sup by 1A 123)	
1A-123	—Flange gasket	
2-181	Auxiliary throttle valve	(2)
2-193	Secondary throttle valve	(2)
2-204	—Primary throttle valve	(2)
3-850	Secondary throttle shaft (2626S)	
3-1054S	Secondary throttle shaft and dog assembly (2627S)	
3-1058S	Auxiliary throttle shaft lever and weight assembly (Sup by 3 1147S)	
3-1141S	—Primary throttle shaft and lever assembly (2626S)	
3-1142S	—Primary throttle shaft and lever assembly (2627S)	
3-1147S	—Auxil ary throttle shaft lever and weight assembly	
4A-139	Throttle shaft dog (2627S)	
4A-158	Throttle shaft dog (2626S)	
6-1179S	Air horn assembly (2627S) (Casting No 6 1156) (Sup by 6 1298S)	
6-1180S	Air horn assembly (2626S)	
6-1298S	—Air horn assembly (2627S) (Casting No 6 1296)	
7-173	Choke valve (2627S)	
11-302S	—LOW SPEED JET ASSEMBLY	(2)
11B-35	Rivet plug	(4)
11B-41	Rivet plug (2627S)	
11B-79	Rivet plug	(4)
11B-129S	Pump discharge passage plug assembly	
11B-134	Rivet plug	
11B-146	Level sight plug	(2)

Part No.	PART NAME	
11B-223	Nozzle passage rivet plug	(4)
11B-272	Rivet plug	(2)
11B-294	Idle port rivet plug	(2)
11B-305	Rivet plug	(2)
11B-306	Rivet plug	
14-383S	Choke lever and screw assembly (2627S)	
14-439S	Choke piston lever link and shaft assembly (2627S)	
14-440	Cam trip lever (2627S)	
15-63S	Strainer nut assembly	
17-50	PUMP CHECK NEEDLE	
20-26	PUMP RELIEF PLUG GASKET	
20-126	Needle seat gasket	(2)
20-127	BOWL STRAINER GASKET	
21-143S	Primary float and lever assembly	
21-168S	Secondary float and lever assembly	
24-24	Float lever pin	(2)
25-278S	NEEDLE AND SEAT ASSEMBLY	(2)
30-75	BOWL STRAINER	
30A-67	Idle adjustment screw	(2)
39-11	Choke valve attaching screw (2627S)	(2)
47-14	Welsh plug (choke housing) (2627S)	
48-233S	Pump jet and housing assembly	
53A-333S	Pump operating lever and countershaft assembly	
53A-344	Vent arm	
53A-365	Secondary operating lever (2626S)	

Part No.	PART NAME	
53A-397	Lockout arm (2627S)	
53A-405	Secondary operating lever (2627S)	
61-84	Idle adjustment screw spring	(2)
61-128	Connector rod spring (2626S (1) (2627S (2)	
61-171	PUMP SPRING (LOWER)	
61-238	Throttle flex spring (2627S)	
61-291	Throttle lever adjusting screw spring (2627S)	
61-332	VACUUM PISTON SPRING	
61-382	METERING ROD SPRING	
61-454	Fast idle cam spring (2627S)	
61-474	Bowl vent spring	
61-483	SECONDARY THROTTLE RETURN SPRING	
61-535	Lockout arm spring (2627S)	
61-548	Throttle flex spring (2626S)	
63-35	CONNECTOR ROD SPRING RETAINER (2626S (1) (2627S (2)	
63-57	INTAKE CHECK BALL RETAINER	
63-58	Coil housing retainer (2627S)	(3)
63-149	Bowl vent spring retainer	
64-165S	PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
75-1350	—METERING ROD—STANDARD—077 x 0715 x 068	(2)
86-12	Flange stud lock washer	(4)
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	(2)
101-136	Coil housing attaching screw (2627S)	(3)
101-149S	Body flange attaching screw and washer assembly	
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-275	Piston housing attaching screw (2627S)	
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet housing attaching screw	
101-298S	Body flange attaching screw and washer assembly	(2)
101-307S	Air horn attaching screw and washer assembly	(8)
101-324	Fast idle cam attaching screw (2627S)	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-348	Primary throttle valve attaching screw	(4)
101-354S	Choke lever clamp screw and washer assembly (2627S)	
101-363	Piston housing attaching screw (2627S)	(2)
101-376	Throttle lever adjusting screw (2627S)	

Part No.	PART NAME	
101-382S	Body flange attaching screw and washer assembly	(3)
101-414	Auxiliary throttle valve attaching screw	(4)
105A-10	Choke lever clamp screw nut (2627S)	
105A-11	Flange stud nut	(4)
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
114-97	Throttle shaft arm (outer) (2627S)	
114-127	Throttle shaft arm (outer) (2626S)	
114-128	Throttle shaft arm (inner) (2626S)	
114-131	Throttle shaft arm (inner) 2627S)	
115-208	Throttle operating rod (2626S)	
115-215	Choke connector rod (2627S)	
115-216	THROTTLE CONNECTOR ROD	
115-247	Throttle operating rod (2627S)	
116-13	PUMP INTAKE CHECK BALL	
117-162	Vacumeter piston link	
117-165	Pump arm link	
118-102S	Dust cover assembly	
120-166	PRIMARY METERING ROD JET	(2)
120-217	SECONDARY METERING JET	(2)
121-78	COIL HOUSING GASKET (2627S)	
121-208	DUST COVER GASKET	
121-241	PUMP JET HOUSING GASKET	
121-267	BODY FLANGE GASKET	
121-281	AIR HORN GASKET	
121-298	—PISTON HOUSING GASKET (2627S)	
129-19	Metering rod disk (upper)	(2)
136-37	Throttle operating rod washer (2626S (5) (2627S	(2)
136-84	Spring washer	
136-150	Metering rod disk (lower)	(2)
136-159	Throttle shaft washer	
136-172	Secondary throttle shaft washer	
136-174	Throttle lever adjusting screw washer (2627S)	
145-142	Choke vacuum passage stand pipe (2627S)	
145-148	—Cross over bowl vent tubes	(2)
150-62	Choke piston pin (2627S)	
150-186S	Pin and valve cap assembly	
150A-10	PIN SPRING	(4)
160-91	Choke piston (2627S)	
160-110S	Vacuum piston and pin assembly	
170-442S	Piston housing and plug assembly (2627S) (Use with 6 1179S)	
170 507S	—Piston housing and plug assembly (2627S) (Use with 6 1298S)	
170AB-238S	Thermostatic coil and housing assembly (2627S)	
181-204S	Fast idle cam assembly (2627S)	
186 34	Choke baffle plate (2627S)	

—Parts so marked are new and listed for the first time

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

CHEVROLET

2505S-2505SA
Power Glide
Transmission

"V-8"

1957

2555S
Standard
Transmission

(2505SA with choke set one point lean can be used to replace 2555S)

WCFB Four-Bore Down-Draft Climatic® Control **Carbs. Nos. 2505S-2505SA-2555S**

CARBURETER SPECIFICATIONS

For Chevrolet 8 Cylinder Engine 3 7/8 Inch Bore, 3 Inch Stroke

Dimensions Flange size 1 1/8 nch Four Bore—4 bolt type
Primary venturi size 11/32 inch I D
Main venturi (primary) size 1 inch
Main venturi (secondary) size 1 1/8 inch I D

Vents Outside (4) n air horn (4) in flange Inside (5) in air horn

Gasoline Intake Size No 42 (0935 inch) drill hole in needle seat

Low Speed Jet Tube (Primary side only)
Jet size No 68 (031 inch) drill
By pass in body size No 52 (0635 inch) drill
Economizer in screw plug size (049 inch) diameter
Idle Bleed in body size No 52 (0635 inch) drill

Idle Port (Upper) slot type Primary length 175 inch width 030 nch Secondary none

Idle Port Opening Primary 113 to 119 inch above top edge of valve with valve tightly closed Secondary none

Lower Port Primary (for idle adjustment screw) size No 53 (0595 inch) drill Secondary none

Set Idle Adjustment Screw 3/4 to 1 3/4 turns open For richer mixture turn screw out Do not idle engine below 425 R P M (Automatic Transmission—in Drive Range) 450 R P M (Standard and Overdrive Transmission)

Main Nozzle Installed permanently DO NOT REMOVE Anti percolating bleed (primary in plug) size No 60 (040 inch) drill (secondary in body) size No 66 (033 inch) drill

Metering Rod (Vacumeter type) see parts list for size

Metering Rod Jet Primary size 086 inch diameter (for metering rod)
Secondary size 076 inch diameter (no metering rod)

Accelerating Pump Discharge jet (twin) primary side only, size No 73 (024 inch) drill
Intake ball check seat size 115 to 120 inch diameter
Discharge needle seat size 070 inch diameter

Choke Carter Climatic® Control set on index Butterfly type —offset choke valve primary side only Choke heat suction hole restriction in piston housing size No 40 (098 inch) drill

Vacuum Spark Port Horizontal slot (round end) 045 x 110 inch Top of port 028 to 038 inch above valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap 035"	Breaker Point Setting 018"	Ignition Timing Breaker Points to Open 4° B T C at Idle (10° B T C. at 1000 R P M With Vacuum Line Disconnected)	Float Setting See Adjustments	Idle Adjustment Screw Setting 3/4 to 1 3/4 Auto Trans 425 R P M Std & O Drive 450 R P M

NOTE These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: Two separate float adjustments must be made—lateral and vertical. **LATERAL ADJUSTMENT:** With bowl cover assembly inverted, bowl cover gasket removed and float resting on seated needle, place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting. Side of floats should just clear the vertical uprights of float gauge. Adjustment should be made by bending arms of floats. **VERTICAL ADJUSTMENT:** With float gauge in same position, floats should just clear the horizontal portion of gauge. Vertical distance between top of float and machined surface of casting must be 1/8 inch (gauge T109-232) for primary floats and 1/4 inch (gauge T109-223) for secondary floats. Adjust by bending float arms.

FLOAT DROP ADJUSTMENT: With bowl cover held in upright position and measuring from center of float, the distance between top of floats and bowl cover should be 5/8 inch for primary floats and 3/4 inch for secondary floats. Adjust by bending stop tabs on float brackets.

PUMP ADJUSTMENT: Install pump connector link in outer hole (long stroke) of pump arm, with ends extending toward countershaft arm. Back out throttle lever stop screw until throttle valves seat in bores of carbureter. Hold straight edge across top of dust cover boss at pump arm. The flat on top of pump arm should be parallel to straight edge. Adjust by bending throttle connector rod at lower angle. (Use tool T109-213.)

METERING ROD ADJUSTMENT: Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows: 1. Back out throttle lever stop screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw. 2. With metering rods in place, press down on vacumeter link until metering rods bottom in carbureter body casting. 3. Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link. Hold in place and carefully tighten clamp screw.

FAST IDLE ADJUSTMENT: (a) Loosen choke lever clamp screw on choke shaft. Insert .020 inch feeler gauge (T109-29) between lip of fast idle cam and boss of flange casting. Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position — hold in place and tighten clamp screw. (b) With choke valve tightly closed bend fast idle adjusting tang until there is .015 inch (gauge T109-44) opening between throttle valve and bore of carbureter side opposite idle port. Be sure fast idle adjusting tang is on high step of cam while making this adjustment.

FAST IDLE ON CAR: (2505S-SA) 1800 (2555S) 1600 R.P.M. hot engine with idle adjusting tang on high step of cam.

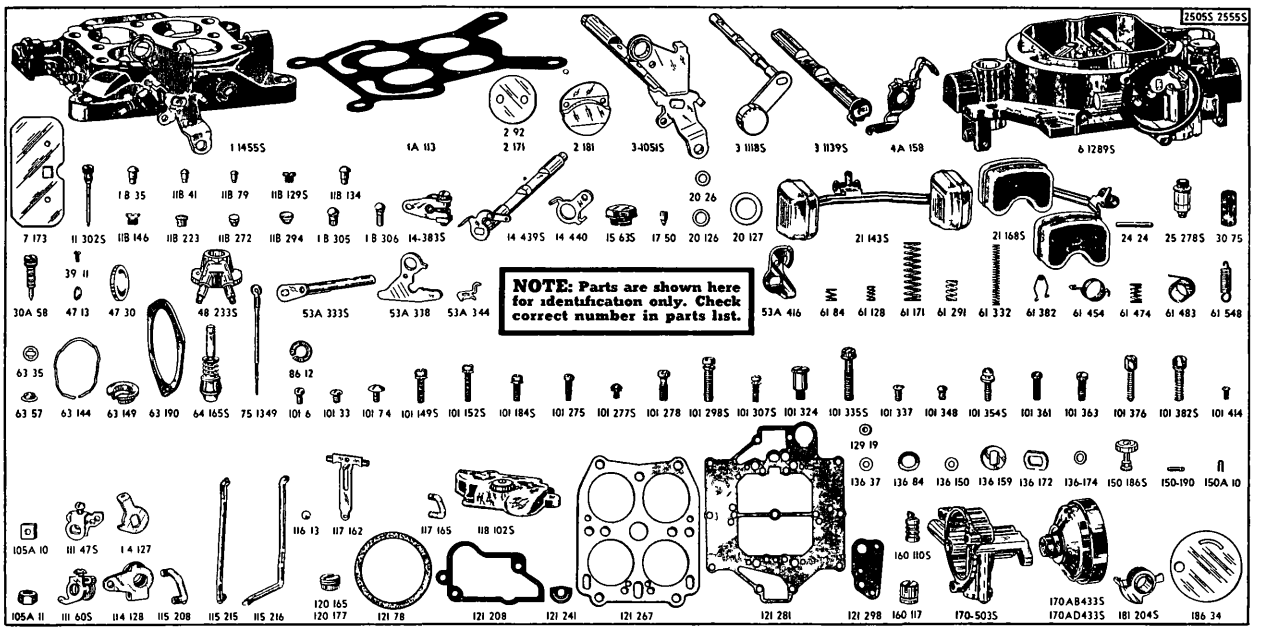
UNLOADER ADJUSTMENT: With throttle wide open there should be 3/16 inch (gauge T109-28) clearance between upper edge of choke valve and inner wall of air horn. Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41).

BOWL VAPOR VENT ADJUSTMENT: This adjustment should be made after completing pump and metering rod adjustments. Install dust cover and dust cover gasket. Back out throttle lever stop screw to allow throttle valves to seat in bores of carbureter. There should be 1/16 inch (gauge T109-197) between lower edge of bowl vapor vent valve and dust cover. To adjust, remove dust cover and bend vapor vent arm.

SECONDARY THROTTLE LEVER ADJUSTMENT: 1. Block choke valve wide open. 2. Back out throttle lever stop screw so that primary valves seat in bores of carbureter. 3. With primary valves open 3/16" (gauge T109-28) secondary valves should just start to open. To adjust, bend throttle operating rod. NOTE: Secondary valves will be a few degrees from wide open, when primary valves are wide open. With primary and secondary valves tightly closed there should be .017" to .022" (gauge T109-29) between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on primary throttle lever.

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: Crack throttle valves and manually open and close choke valve. Tang on secondary throttle lever should freely engage in notch of lock-out dog. To adjust, bend tang on secondary throttle lever.

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Chevrolet "V-8"—1957—Carbureters Nos. 2505S-2505SA-2555S

WHEN SERVICING, USE GASKET ASSORTMENT No. 296, REPAIR PACKAGES No. 1856 (2505S-SA), No 1875 (2555S)

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1455S	Body flange assembly (2505S 2555S) (Sup by 1 1534S)	
1-1534S	Body flange assembly	
1A-113	FLANGE GASKET	
2-92	Primary throttle valve	(2)
2-166	Secondary throttle valve	(2)
2-171	Secondary throttle valve (Sup by 2 166)	(2)
2-181	Auxiliary throttle valve	(2)
3-1051S	Primary throttle shaft and lever assembly	
3-1054S	Secondary throttle shaft and dog assembly	
3-1118S	Auxiliary throttle lever shaft and weight assembly (Sup by 3 1145S)	
3-1139S	Secondary throttle shaft and dog assembly (Sup by 3 1054S)	
3-1145S	Auxiliary throttle lever shaft and weight assembly	
4A-158	Throttle shaft dog	
6-1289S	Air horn assembly	
7-173	Choke valve	
11-302S	LOW SPEED JET ASSEMBLY	(2)
11B-35	Rivet plug	(4)
11B-41	Rivet plug	
11B-79	Rivet plug (early prod (4) (late prod (1)	
11B-129S	PUMP DISCHARGE PASSAGE PLUG ASSEMBLY	
11B-134	Rivet passage plug	
11B-146	Level sight plug	(2)
11B-223	Nozzle passage rivet plug	(4)
11B-272	Rivet plug	(2)
11B-294	Idle port rivet plug	(2)
11B-305	Rivet plug	(2)
11B-306	Rivet plug	
14-383S	Choke lever and screw assembly	
14-439S	Choke piston lever link and shaft assembly	
14-440	Cam trip lever	
15-63S	Strainer nut assembly	
17-50	PUMP CHECK NEEDLE	
20-26	Pump passage plug gasket	

Part No.	PART NAME	
20-126	Needle seat gasket	(2)
20-127	BOWL STRAINER GASKET	
21-143S	Primary float and lever assembly	
21-168S	Secondary float and lever assembly	
24-24	Float lever pin	(2)
25-278S	PRIMARY AND SECONDARY NEEDLE AND SEAT ASSEMBLY	(2)
30-75	BOWL STRAINER	
30A-58	Idle adjustment screw	(2)
39-11	Choke valve attaching screw	(2)
47-13	Welsh plug (spark port)	
47-30	Welsh plug (choke side)	
48 233S	Pump jet and housing assembly	
53A-333S	Pump operating lever and countershaft assembly	
53A-338	Lockout arm (Sup by 53A 397)	
53A-344	VENT ARM	
53A-365	Secondary operating lever	
53A-397	Lockout arm	
53A-416	Secondary operating lever (Sup by 53A 365)	
61-84	Idle adjustment screw spring	(2)
61-128	Connector rod spring	
61-148	VACUUM PISTON SPRING (2555S)	
61-171	PUMP SPRING (LOWER)	
61-291	Throttle lever adjusting screw spring	
61 332	VACUUM PISTON SPRING (2505S SA) (Sup by 61 148 on 2555S)	
61-382	METERING ROD SPRING	
61-454	Fast idle cam spring	
61-474	Bowl vent spring	
61-483	SECONDARY THROTTLE RETURN SPRING	
61 548	Throttle flex spring	
63-35	CONNECTOR ROD SPRING RETAINER	
63-57	INTAKE CHECK BALL RETAINER	
63 144	Delayer plate retainer ring	
63-149	Bowl vent spring retainer	
63-190	Coil housing retainer	

Part No.	PART NAME	
64-165S	PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
75-1349	METERING ROD—STANDARD (067" x 064" x 046") (2505S SA) (Sup by 75 1386 on 2555S)	(2)
75-1386	METERING ROD—STANDARD (066" x 0595" x 046") (2555S)	
75-1402	Metering rod 068" x 065" x 049" 1 size lean (2505S SA)	(2)
75-1415U	Metering rod and jet unit (consists of 2—75 1403 and 2—120 175) 2 sizes lean (2505S SA)	
75-1419	Metering rod 0665" x 0605" x 049" 1 size lean (2555S)	(2)
75-1420	Metering rod 067" x 062" x 052" 2 sizes lean (2555S)	(2)
86-12	Flange stud lock washer	(4)
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	(2)
101-149S	Body flange attaching screw and washer assembly	
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-275	Piston housing attaching screw	
101-277S	Vent arm attaching screw and washer assembly	
101-278S	Pump jet and housing attaching screw	
101-298S	Body flange attaching screw and washer assembly	(2)
101-307S	Air horn attaching screw and washer assembly	(8)
101-324	Fast idle cam attaching screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-348	Primary throttle valve attaching screw	(4)
101-354S	Choke lever clamp screw and washer assembly	
101-361	Coil housing attaching screw	(3)
101-363	Piston housing attaching screw	(2)
101-376	Throttle lever adjusting screw	
101 382S	Body flange attaching screw and washer assembly	(3)
101-414	Auxiliary throttle valve attaching screw	(4)
101-447U	★Unitized package (consists of 1—38A-113 and 1—101 446S) (2505S)	
103-14	Lead shot (late prod)	(3)

Part No.	PART NAME	
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
114-127	Throttle shaft arm (outer)	
114-128	Throttle shaft arm (inner)	
115-208	Throttle operating rod	
115-215	Choke connector rod	
115 216	THROTTLE CONNECTOR ROD	
116-13	PUMP INTAKE CHECK BALL	
117-162	Vacumeter piston link	
117 165	Pump arm link	
118 102S	Dust cover assembly	
120-165	PRIMARY METERING ROD JET	(2)
120-177	SECONDARY METERING JET	(2)
121-78	COIL HOUSING GASKET	
121-208	DUST COVER GASKET	
121-241	PUMP JET HOUSING GASKET	
121-267	BODY FLANGE GASKET	
121 281	AIR HORN GASKET	
121-298	PISTON HOUSING GASKET	
129-19	Metering rod disk (upper)	(2)
136-37	Throttle connector rod and operating rod washer	(5)
136-84	Spring washer	
136-150	Metering rod washer (lower)	(2)
136-159	Throttle shaft washer	
136-172	Secondary throttle shaft washer	
136-174	Throttle lever adjusting screw washer	
150-186S	Pin and valve cap assembly	
150-190	Choke piston pin	
150A-10	PIN SPRING	(5)
160-110S	Vacuum piston and pin assembly	
160-117	Choke piston	
170-503S	Piston housing and plug assembly	
170AB-433S	Thermostatic coil and housing assembly (2505S SA)	
170AD-433S	Thermostatic coil and housing assembly (2555S)	
181-204S	Fast idle cam and spring assembly	
186-34	Choke baffle plate	

★To prevent gas leaking into vacuum line to Turbo Glide Trans

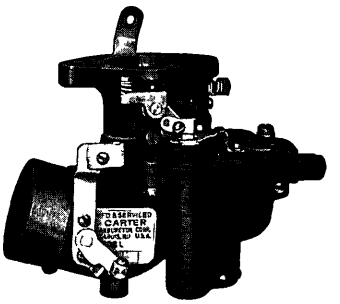
NOTE **Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used**

MODELS

745S
3700, 3900, 5000 (235 Cu. In. Eng.)
1950

871S-SA-SB-SC
3700, 3900 (235 Cu. In. Eng.) 1951-57
5000 (235 Cu. In. Eng.) 1951-53

2075S
5000 (235 and 261 Cu. In. Eng.) 1954



CHEVROLET

CAB-OVER-ENGINE TRUCK & FORWARD CONTROL DELIVERY

1950-1957

871SC can be used in place of 745S

BB UP-DRAFT **CARBURETERS—Nos. 745S-871S-871SA-871SB-871SC-2075S**

CARBURETER SPECIFICATIONS

For Chevrolet Six Cylinder Engine (235 Cu In) 3 9/16 Inch Bore 3 15/16 Inch Stroke
For Chevrolet Six-Cylinder Engine (261 Cu In) 3¾ Inch Bore 3 15/16 Inch Stroke

Dimensions Flange size 1½ inch S A E
Throttle bore (745S 871S SA SB SC) 1 9/16 inch (2075S) 1 11/16 inch
Main venturi 1 3/16 inch I D
Air bleed through venturi to idle passage 0886 to 0906 inch diameter drill

Float Setting Top of float 0 to 1/32 inch below top surface of lower body

Vent Balance vent tube in air horn

Gasoline Intake Size No 38 (1015 inch) drill in needle seat

Idle Jet Tube Jet size No 68 (031 inch) drill

Idle Port Lower 062 to 064 inch diameter

Idle Port Opening Top of port located 005 to 009 inch below lower edge of valve

Upper Port (For Idle Adjustment Screw) 053 to 057 inch diameter

Set Idle Adjustment Screw ½ to 1½ turns open For richer mixture turn screw out Do not idle engine below 450 r p m

Main Metering Screw (745S 871S SA SB SC) Calibrated to flow 339 to 343 cc per minute (2075S) Calibrated to flow 366 to 370 cc per minute (Do not gauge for size If in doubt replace with new part)

Nozzle Inside diameter 150 152 inch

Accelerating Jets (12 344) 4—038 inch 2—055 inch diameter (12 505 early) 6—038 inch 4—055 inch (12 505 late) 6—040 inch 4—055 inch diameter

Air Bleed to Nozzle Vent tube size No 55 (052 inch) drill

Step Up Jet Power orifice size (745S 871S SA SB SC) No 64 (036 inch) drill (2075S) No 60 (040 inch) drill

Accelerating Pump Pump intake check ball size ⅛ inch diameter Pump discharge retainer (in pump valve cage assembly) size 0635 inch diameter
Inner hole—short stroke
Outer hole—long stroke

Choke Butterfly type with poppet valve

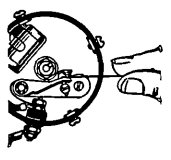
Vacuum Spark Port Slot type 041 x 125 inch Top of port 000 to 004 inch below valve with valve tightly closed

Motor Tune-Up—Be Accurate!

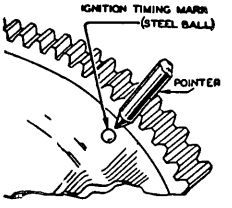
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



Spark Plug Gap
035 '



Breaker Point Setting
018"

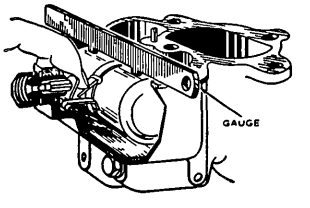


Ignition Timing Breaker Points to Open
5° B T D C

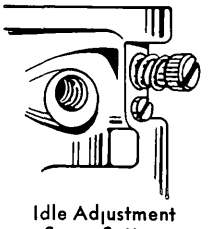


Valve Setting (Hot)
1950 57 (235 Cu In Eng)
Intake 006" to 008"
Exhaust 013" to 015"

1954 (261 Cu In Eng)
Intake 010"
Exhaust 020"



Float Setting (Use Gauge)
0 to 1/32 Inch



Idle Adjustment Screw Setting
½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

To Secure a Good Idle Set throttle lever adjusting screw so motor runs approximately 450 rpm Then set idle adjustment screw so motor fires evenly Correct setting will be found between ½ and 1½ turns open A richer mixture is obtained by backing out adjustment screw—a leaner mixture by turning screw in If motor stalls while idling remove idle passage tube and idle jet tube and clean with compressed air

To Improve Acceleration Examine pump link setting For winter driving link screw should be set in outer hole giving long stroke for hot weather in high altitudes pump link should be connected in inner hole giving short stroke If this does not give desired results the main metering jet pump metering jet check valve assembly and pump valve assembly should be removed and cleaned with compressed air

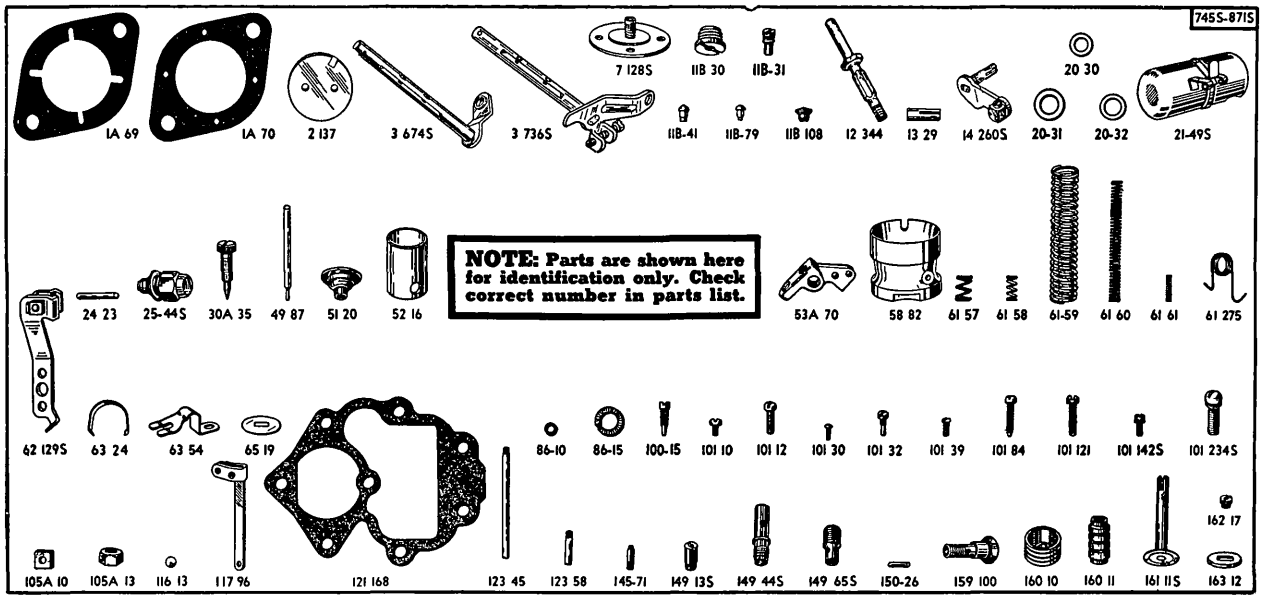
If Motor Loads—Check Float Level Wear on lip of float lever will raise float level from factory setting causing carbureter to load up To lower float level bend lip of float lever toward needle To raise float level bend lip away from needle A very slight bend is sufficient Be sure to bend lip of float not bracket

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CARBURETER
TRADE MARK REG U S PAT OFF
MARCA REG STRADA

PRINTED IN U S A

Economy (a) Maximum economy is secured only when breaker points, spark plugs valves and motor timing are set to manufacturer s specifications
(b) Float level must be set as instructed above
(c) Step-up valve cage assembly should be examined Ball check in this assembly must seat and move freely When reassembling, valve cage must be screwed in tight against seat
(d) Step-up push rod must move freely in upper and lower guides
(e) Step-up piston in upper casting should not bind and must be free from dirt



Chevrolet Six Trucks—1950-57—Carbureters 745S-871S-871SA-871SB-871SC-2075S

WHEN SERVICING, USE GASKET ASST No. 202 (745S-871S-SA-SB-SC), GASKET ASST. No. 245 (2075S)
REPAIR PACKAGE No 1539A (745S-871S-SA-SB-SC), REPAIR PACKAGE No 1797 (2075S)
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME
1A-69	FLANGE GASKET (FOR USE WITHOUT GOVERNOR)
1A-70	FLANGE GASKET (FOR USE WITH GOVERNOR)
2-137	Throttle valve (745S 871S SA SB SC)
2-162	Throttle valve (2075S)
3-674S	Throttle shaft and lever assembly (745S)
3-736S	Throttle shaft and lever assembly (871S SA SB SC)
3 864S	Throttle shaft and lever assembly (2075S)
7 128S	Choke valve assembly
11B-30	Step up piston plug
11B-31	Idle port plug
11B-41	Rivet plug (2)
11B-79	Rivet plug
11B 108	Idle port rivet plug
12-344	Nozzle (745S 871S SA SB 2075S)
12-505	Nozzle (871SC)
13-29	Choke shaft stub
14-260S	Choke shaft and lever assembly (745S 871S SA)
14-474S	Choke shaft and lever assembly (2075S) (Sup by 14 541S on 871SB)
14-541S	Choke shaft and lever assembly (871SB SC)
20-30	NOZZLE GASKET
20-31	Needle seat gasket
20-32	METERING SCREW GASKET
21-49S	Float and lever assembly
24 23	FLOAT LEVER PIN
25-44S	NEEDLE AND SEAT ASSEMBLY (745S 871S SA SB SC)
25-63S	NEEDLE AND SEAT ASSEMBLY (2075S) (Sup by 25 235S)
25-235S	NEEDLE AND SEAT ASSEMBLY (2075S)
30A-35	Idle adjustment screw
49-87	STEP UP PUSH ROD
51-20	Pump collar
52-16	Pump sleeve
53A-70	Pump arm (745S)
58 82	Venturi (745S 871S SA SB SC)
58-95	Venturi (2075S)
61-57	Idle adjustment screw spring
61-58	Throttle lever adjusting screw spring (745S)
61-59	PUMP SPRING
61 60	STEP UP PISTON SPRING
61-61	Step up valve spring
61-275	Choke pull back spring
62-129S	Choke tube bracket assembly (745S 871S SA)
62-192S	Choke tube bracket assy (871SB) (Sup by 62 217S)
62-195S	Choke tube bracket assembly (2075S)
62-217S	Choke tube bracket assembly (871SB SC)
63-24	FLOAT LEVER PIN RETAINER

Part No.	PART NAME
63-54	Packing retainer
65-19	Pump link cover plate (2)
86-10	Lock washer
86-15	Flange stud lock washer (2)
100-15	Throttle shaft dog set screw (745S 871S SA SB SC)
101-10	Wire clamp screw
101-12	Choke bracket clamp screw
101-30	Choke valve attaching screw (2)
101-32	PUMP LINK SCREW
101-39	Throttle valve screw (2)
101-84	Throttle lever adjusting screw (745S)
101-121	Throttle lever adjusting screw (871S SA SB SC 2075S)
101-142S	Attaching screw and washer assembly (3)
101-234S	Body attaching screw and washer assembly (6)
105A-10	Choke bracket clamp nut
105A-13	Flange nut (2)
116-13	Pump check ball (2)
117-96	Pump link
121-168	BODY GASKET (745S 871S SA SB SC)
121-245	BODY GASKET (2075S)
123-45	Idle passage tube
123-58	IDLE ORIFICE TUBE
145-71	VENT TUBE
149-13S	CHECK VALVE CAGE ASSEMBLY
149-44S	Step up valve cage assembly (745S 871S) (Sup by 149 112S)
149-65S	PUMP VALVE CAGE ASSEMBLY
149-112S	STEP UP VALVE CAGE ASSEMBLY (745S 871S SA SB SC)
149-115S	STEP-UP VALVE CAGE ASSEMBLY (2075S)
150-26	Pump collar pin
150-29	Venturi pin
159-35	Main metering screw (2 sizes lean) (745S 871S SA SB SC)
159-98	MAIN METERING SCREW (STANDARD) (2075S)
159-99	Main metering screw (1 size rich) (745S 871S SA SB SC)
159-100	MAIN METERING SCREW (STANDARD) (745S 871S SA SB SC)
159-129	Main metering screw (1 size lean) (745S 871S SA SB SC)
160-10	Pump piston
160-11	STEP UP PISTON
161-11S	Pump rod plate and rod assembly
162-17	Power orifice (745S 871S) (Sup by 162 27)
162-27	Power orifice (745S 871S SA SB SC) (Sup by 149 112S)
162-28	Power orifice (2075S) (Sup by 149 115S)
163-12	FELT PACKING

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

Form 4820P

CARTER CARBURETOR CHEVROLET 745S-871S-871SA-871SB-871SC-2075S
DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

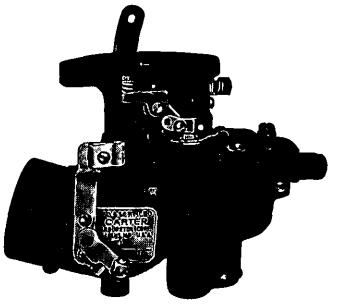
March, 1950
Revised July, 1957

MODELS

745S
3700, 3900, 5000 (235 Cu. In. Eng.)
1950

871S-SA-SB-SC
3700, 3900 (235 Cu. In. Eng.) 1951-57
5000 (235 Cu. In. Eng.) 1951-53

2075S
5000 (235 and 261 Cu. In. Eng.) 1954



CHEVROLET

CAB-OVER-ENGINE TRUCK & FORWARD CONTROL DELIVERY

1950-1957

871SC can be used in place of 745S

BB UP-DRAFT **CARBURETERS—Nos. 745S-871S-871SA-871SB-871SC-2075S**

CARBURETER SPECIFICATIONS

For Chevrolet Six-Cylinder Engine (235 Cu. In.): 3-9/16 Inch Bore, 3-15/16 Inch Stroke
For Chevrolet Six-Cylinder Engine (261 Cu. In.): 3¾ Inch Bore, 3-15/16 Inch Stroke

Dimensions: Flange size 1½ inch S A E
Throttle bore, (745S 871S-SA-SB SC) 1-9/16 inch; (2075S) 1-11/16 inch
Main venturi 1-3/16 inch I D
Air bleed through venturi to idle passage 0886 to .0906 inch diameter drill

Float Setting: Top of float 0 to 1/32 inch below top surface of lower body.

Vent: Balance vent tube in air horn.

Gasoline Intake: Size No. 38 (.1015 inch) drill in needle seat

Idle Jet Tube: Jet, size No. 68 (.031 inch) drill.

Idle Port: Lower, .062 to .064 inch diameter

Idle Port Opening: Top of port located .005 to .009 inch below lower edge of valve

Upper Port (For Idle Adjustment Screw): .053 to .057 inch diameter.

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture turn screw out. Do not idle engine below 450 r p m

Main Metering Screw: (745S 871S-SA SB SC) Calibrated to flow 339 to 343 cc per minute (2075S) Calibrated to flow 366 to 370 cc per minute (Do not gauge for size If in doubt replace with new part)

Nozzle: Inside diameter .150-.152 inch

Accelerating Jets: (12 344) 4—.038 inch 2—.055 inch diameter (12 505 early) 6—.038 inch, 4—.055 inch, (12-505 late) 6—.040 inch 4—.055 inch diameter

Air Bleed to Nozzle: Vent tube, size No 55 (.052 inch) drill.

Step-Up Jet: Power orifice size (745S-871S SA-SB-SC) No 64 (.036 inch) drill (2075S) No 60 (.040 inch) drill

Accelerating Pump: Pump intake check ball size ⅛ inch diameter Pump discharge retainer (in pump valve cage assembly) size .0635 inch diameter
Inner hole—short stroke
Outer hole—long stroke

Choke: Butterfly type, with poppet valve.

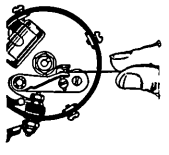
Vacuum Spark Port: Slot type, .041 x .125 inch Top of port .000 to .004 inch below valve with valve tightly closed

Motor Tune-Up—Be Accurate!

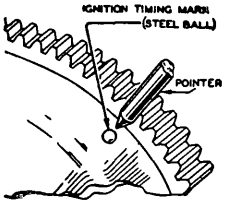
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter



Spark Plug Gap .035"



Breaker Point Setting .018"

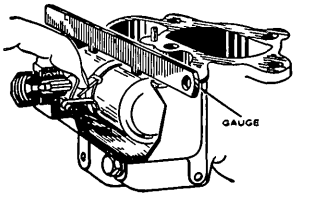


Ignition Timing Breaker Points to Open: 5° B.T.D.C.

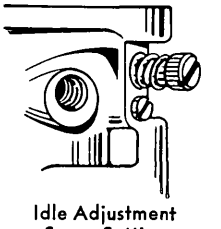


Valve Setting (Hot)
1950-57 (235 Cu. In. Eng.)
Intake .006" to .008"
Exhaust .013" to .015"

1954 (261 Cu. In. Eng.)
Intake .010"
Exhaust .020"



Float Setting (Use Gauge) 0 to 1/32 Inch



Idle Adjustment Screw Setting ½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

To Secure a Good Idle: Set throttle lever adjusting screw so motor runs approximately 450 rpm Then set idle adjustment screw so motor fires evenly Correct setting will be found between ½ and 1½ turns open A richer mixture is obtained by backing out adjustment screw—a leaner mixture by turning screw in If motor stalls while idling, remove idle passage tube and idle jet tube and clean with compressed air

To Improve Acceleration: Examine pump link setting For winter driving, link screw should be set in outer hole, giving long stroke, for hot weather, in high altitudes, pump link should be connected in inner hole, giving short stroke If this does not give desired results, the main metering jet, pump metering jet, check valve assembly and pump valve assembly should be removed and cleaned with compressed air.

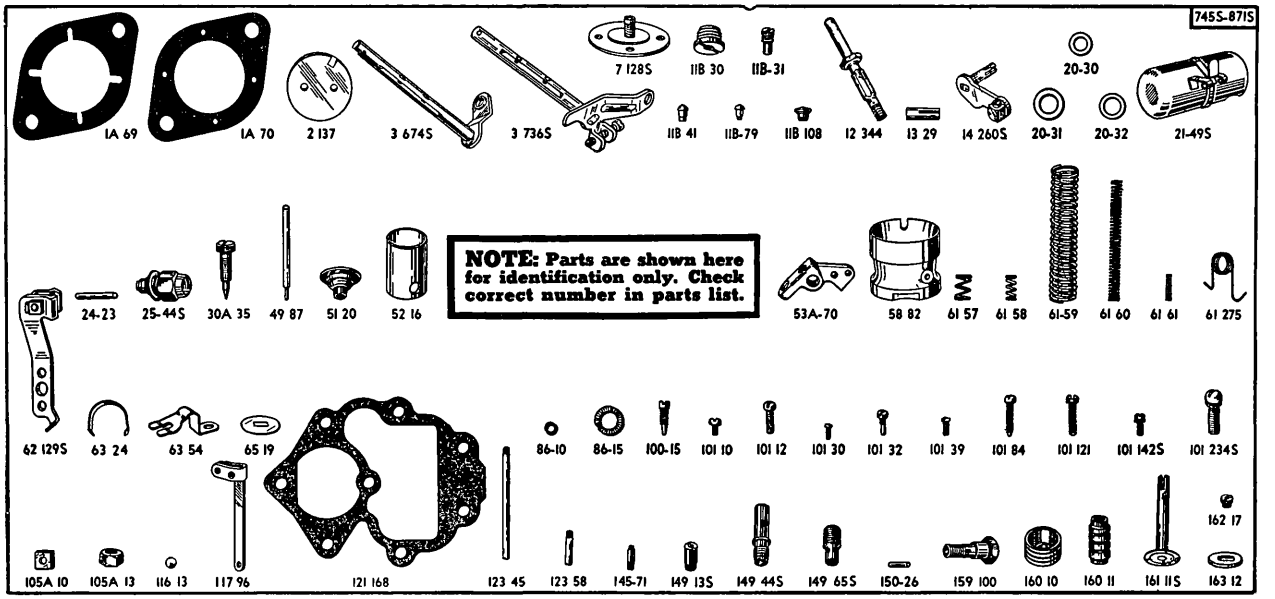
If Motor Loads—Check Float Level: Wear on lip of float lever will raise float level from factory setting, causing carbureter to load up To lower float level, bend lip of float lever toward needle To raise float level, bend lip away from needle. A very slight bend is sufficient Be sure to bend lip of float, not bracket.

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CARBURETER
TRADE MARK REG U S PAT OFF.
MARCA REGISTRADA

PRINTED IN U.S.A.

Economy
(a) Maximum economy is secured only when breaker points, spark plugs valves and motor timing are set to manufacturer s specifications
(b) Float level must be set as instructed above
(c) Step-up valve cage assembly should be examined Ball check in this assembly must seat and move freely When reassembling, valve cage must be screwed in tight against seat
(d) Step-up push rod must move freely in upper and lower guides
(e) Step-up piston in upper casting should not bind and must be free from dirt



Chevrolet Six Trucks—1950-57—Carbureters 745S-871S-871SA-871SB-871SC-2075S

WHEN SERVICING, USE GASKET ASST. No 202 (745S-871S-SA-SB-SC), GASKET ASST. No. 245 (2075S), REPAIR PACKAGE No 1539A (745S-871S-SA-SB SC), REPAIR PACKAGE No 1797 (2075S)

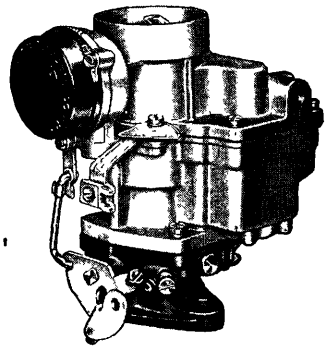
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME
1A-69	FLANGE GASKET (FOR USE WITHOUT GOVERNOR)
1A-70	FLANGE GASKET (FOR USE WITH GOVERNOR)
2-137	Throttle valve (745S 871S SA SB SC)
2-162	Throttle valve (2075S)
3 674S	Throttle shaft and lever assembly (745S)
3-736S	Throttle shaft and lever assembly (871S SA SB SC)
3-864S	Throttle shaft and lever assembly (2075S)
7-128S	Choke valve assembly
11B-30	Step up piston plug
11B-31	Idle port plug
11B-41	Rivet plug (2)
11B-79	Rivet plug
11B-108	Idle port rivet plug
12-344	Nozzle (745S 871S SA SB 2075S)
12-505	Nozzle (871SC)
13-29	Choke shaft stub
14-260S	Choke shaft and lever assembly (745S 871S SA)
14-474S	Choke shaft and lever assembly (2075S) (Sup by 14 541S on 871SB)
14-541S	Choke shaft and lever assembly (871SB SC)
20-30	NOZZLE GASKET
20-31	Needle seat gasket
20-32	METERING SCREW GASKET
21-49S	Float and lever assembly
24-23	FLOAT LEVER PIN
25-44S	NEEDLE AND SEAT ASSEMBLY (745S 871S SA SB SC)
25-63S	NEEDLE AND SEAT ASSEMBLY (2075S) (Sup by 25 235S)
25-235S	NEEDLE AND SEAT ASSEMBLY (2075S)
30A-35	Idle adjustment screw
49-87	STEP UP PUSH ROD
51-20	Pump collar
52-16	Pump sleeve
53A-70	Pump arm (745S)
58 82	Venturi (745S 871S SA SB SC)
58-95	Venturi (2075S)
61-57	Idle adjustment screw spring
61-58	Throttle lever adjusting screw spring (745S)
61-59	PUMP SPRING
61-60	STEP UP PISTON SPRING
61-61	Step up valve spring
61-275	Choke pull back spring
62-129S	Choke tube bracket assembly (745S 871S SA)
62-192S	Choke tube bracket assy (871SB) (Sup by 62 217S)
62-195S	Choke tube bracket assembly (2075S)
62-217S	Choke tube bracket assembly (871SB SC)
63-24	FLOAT LEVER PIN RETAINER
63-54	Packing retainer
65-19	Pump link cover plate (2)
86-10	Lock washer
86-15	Flange stud lock washer (2)
100-15	Throttle shaft dog set screw (745S 871S SA SB SC)
101-10	Wire clamp screw
101-12	Choke bracket clamp screw
101-30	Choke valve attaching screw (2)
101-32	PUMP LINK SCREW
101-39	Throttle valve screw (2)
101-84	Throttle lever adjusting screw (745S)
101-121	Throttle lever adjusting screw (871S SA SB SC 2075S)
101-142S	Attaching screw and washer assembly (3)
101-234S	Body attaching screw and washer assembly (6)
105A-10	Choke bracket clamp nut
105A-13	Flange nut (2)
116-13	Pump check ball (2)
117-96	Pump link
121-168	BODY GASKET (745S 871S SA SB SC)
121-245	BODY GASKET (2075S)
123-45	Idle passage tube
123-58	IDLE ORIFICE TUBE
145-71	VENT TUBE
149-13S	CHECK VALVE CAGE ASSEMBLY
149-44S	Step up valve cage assembly (745S 871S) (Sup by 149 112S)
149-65S	PUMP VALVE CAGE ASSEMBLY
149-112S	STEP UP VALVE CAGE ASSEMBLY (745S 871S SA SB SC)
149-115S	STEP-UP VALVE CAGE ASSEMBLY (2075S)
150-26	Pump collar pin
150-29	Venturi pin
159-35	Main metering screw (2 sizes lean) (745S 871S SA SB SC)
159-98	MAIN METERING SCREW (STANDARD) (2075S)
159-99	Main metering screw (1 size rich) (745S 871S SA SB SC)
159-100	MAIN METERING SCREW (STANDARD) (745S 871S SA SB SC)
159-129	Main metering screw (1 size lean) (745S 871S SA SB SC)
160-10	Pump piston
160-11	STEP UP PISTON
161-11S	Pump rod plate and rod assembly
162-17	Power orifice (745S 871S) (Sup by 162 27)
162-27	Power orifice (745S 871S SA SB SC) (Sup by 149 112S)
162-28	Power orifice (2075S) (Sup by 149 115S)
163-12	FELT PACKING

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

756S-SA—(1937-52)
(1¼ Inch Flange)
STANDARD TRANSMISSON

789S-SA—1950-1952 {Power Glide, Truck
(1½ Inch Flange)



Cut shows YF-756S carbureter

CHEVROLET CARBURETERS CLIMATIC® CONTROL 1937-1952

(965S can be used in place of 756S-SA)
(967S can be used in place of 789S-SA)

756SA-789SA carbureters can be identified by part number stamped on flat horizontal surface of body just above flange.

YF Down-Draft Climatic® Control Carbs. **Nos. 756S-756SA-789S-789SA**

CARBURETER SPECIFICATIONS

(756S-756SA) Chevrolet 6 Cylinder Engine: 3½ Inch Bore, 3¾ Inch Stroke

(789S-789SA) Chevrolet 6 Cylinder Engine: 3-9/16 Inch Bore, 3-15/16 Inch Stroke

Dimensions: Flange size, (756S-SA) 1¼ inch S. A. E.
(789S-SA) 1½ inch S. A. E.
Primary venturi, 11/32 inch (8.73 mm) I. D.
Secondary venturi, 11/16 inch (17.46 mm) I. D.
Main venturi, (756S-SA) 1¼ inch (31.75 mm) I. D.
(789S-SA) 1-5/16 inch (33.34 mm) I. D.

Float Settings: See Float Adjustment (Fig. 1) and Float Drop (Fig. 2) Page 2.

Vents: Outside, none. Inside balance vent to air horn above choke valve.

Gasoline Intake: Spring loaded needle. Size No. 46 (.081 inch) (2.06 mm) drill in needle seat.

Low Speed Jet Tube: Jet size, No. 66 (.033 inch) (.84 mm) drill. By-pass in body, size (756S-SA) .065 inch (1.65 mm), (789S-SA) No. 53 (.0595 inch) (1.51 mm) drill. Economizer size (756S-SA) No. 54 (.055 inch) (1.40 mm) drill, (789S-SA) No. 55 (.052 inch) (1.32 mm) drill.

Idle Ports: Upper port: (756S-SA) slot type, length .185 inch (4.70 mm); width .040 inch (1.02 mm). (789S-SA) keyhole type, length .190 inch (4.83 mm); width .040 inch (1.02 mm); .086 (2.18 mm) diameter hole at top.
Lower port size (for idle adjusting screw): .0615 to .0655 inch (1.56 to 1.66 mm) diameter.

Idle Port Opening: Top of port (756S-SA) .166 to .170 inch (4.22 to 4.32 mm), (789S-SA) .143 to .147 inch (3.64 to 3.74 mm), above top edge of valve with valve tightly closed.

Set Idle Adjustment Screw: 1 to 2 turns open. For richer mixture, turn screw out. Do not idle engine below 350 r.p.m. (1941-48) or 450 r.p.m. (1949-51 standard transmission). On Power Glide set idle between 430 and 450 r.p.m. with transmission control in neutral position.

Main Nozzle: Nozzle is installed permanently. **DO NOT REMOVE.** Anti-percolator: drilled passage from anti-percolator well to nozzle.

Metering Rod: (756S-789S) Economy step .068 inch (1.73 mm) diameter; power step .052 inch (1.32 mm) diameter. (This rod is designed with flats on economy step). (756SA) Economy step .066 inch (1.68 mm) diameter; middle step tapers to .063 inch (1.60 mm) diameter, power step .043 inch (1.09 mm) diameter. (789SA) Economy step .073 inch (1.85 mm) diameter; power step .044 inch (1.12 mm) diameter.

Metering Rod Jet: (756S-SA) .091 inch (2.31 mm), (789S) .095 inch (2.41 mm) diameter. (789SA) .1015 (2.58 mm) diameter.

Metering Rod Setting: See adjustments, Fig. 3, Page 2.

Accelerating Pump: Diaphragm type, vacuum and mechanically operated. Pump jet size (756S-789S) No. 72 (.64 mm) drill, (756SA-789SA) No. 75 (.53 mm) drill. Intake passage (in diaphragm housing) size No. 75 (.53 mm) drill. Vacuum restriction (in flange) size No. 55 (1.32 mm) drill. Vacuum passage (diaphragm bleed) size No. 65 (.89 mm) drill.

Pump Stroke: No adjustment.

Choke: Carter Climatic® Control—set one point lean. Valve, offset butterfly type. Choke heat suction in body, size No. 36 (.1065 inch) drill.

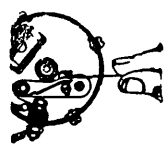
Vacuum Spark Port: Slot type. Size .125 by .041 inch (3.18 by 1.04 mm). Bottom of port (756S-SA) .022 to .032 (.56 to .81 mm) above top edge of valve with valve tightly closed. Top of port (789S-SA) .025 to .035 inch (.64 to .89 mm) above top edge of valve with valve tightly closed.

Motor Tune-Up—Be Accurate! Always Use Feeler Gauges!

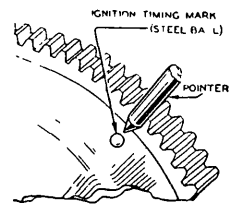
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



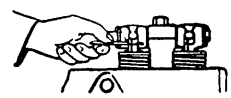
Spark Plug Gap
.040" (1937-48)
.035" (1948-52)



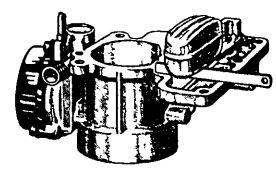
Breaker Point Setting
.018"



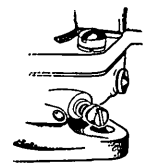
Ignition Timing
Breaker Points to Open:
5° B.T.D.C.



Valve Setting
(216.5 Cubic Inch Engine)
(Hot)
Intake .006"-.008"
Exhaust .013"-.015"
(235.5 Cubic Inch Engine)
No adjustment. Equipped with hydraulic lifters



Float Setting
(Use Gauge)
5/16 Inch



Idle Adjustment Screw Setting
1 to 2
Turns Open

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CARBURETER ADJUSTMENTS

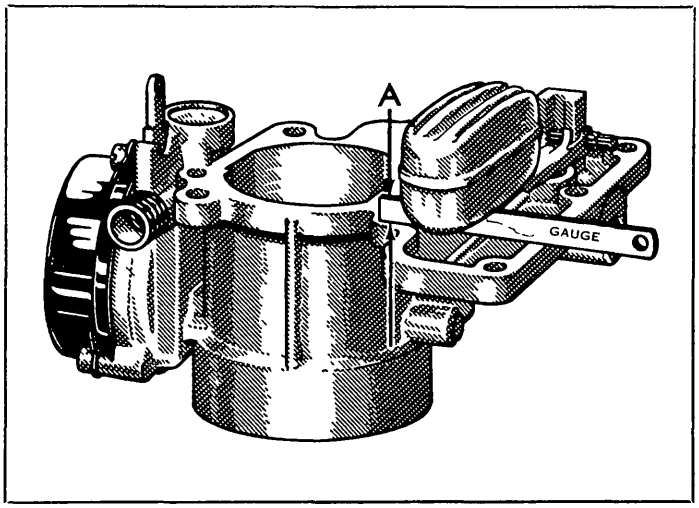


Figure 1
Float Adjustment

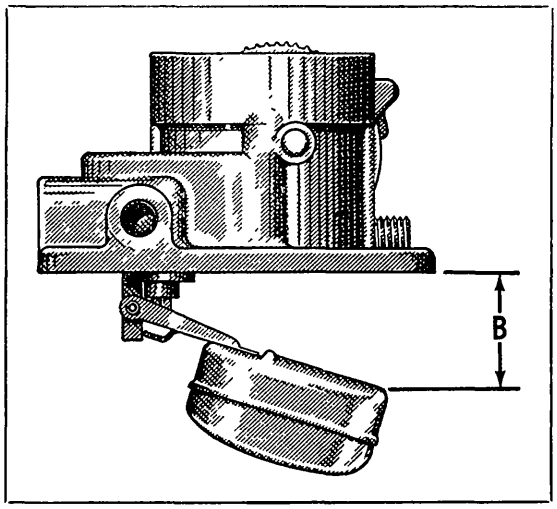


Figure 2
Float Drop

FLOAT ADJUSTMENT (Fig. 1):

With gasket removed, bowl cover assembly inverted and float resting on pin in seated needle, the distance (A) from the bowl cover to the top of float should be 5/16" (Gauge T109-107). Do not depress float lip against spring loaded pin in needle, but let float rest of its own weight. Adjust by bending lip of float, not float arm. Float setting must be checked with bowl cover held at eye height in a level position.

FLOAT DROP (Fig. 2):

With bowl cover assembly held in upright position, the distance (B) between free end of float and bowl cover should be 1¼ inch. Adjust by bending stop tabs on float arm.

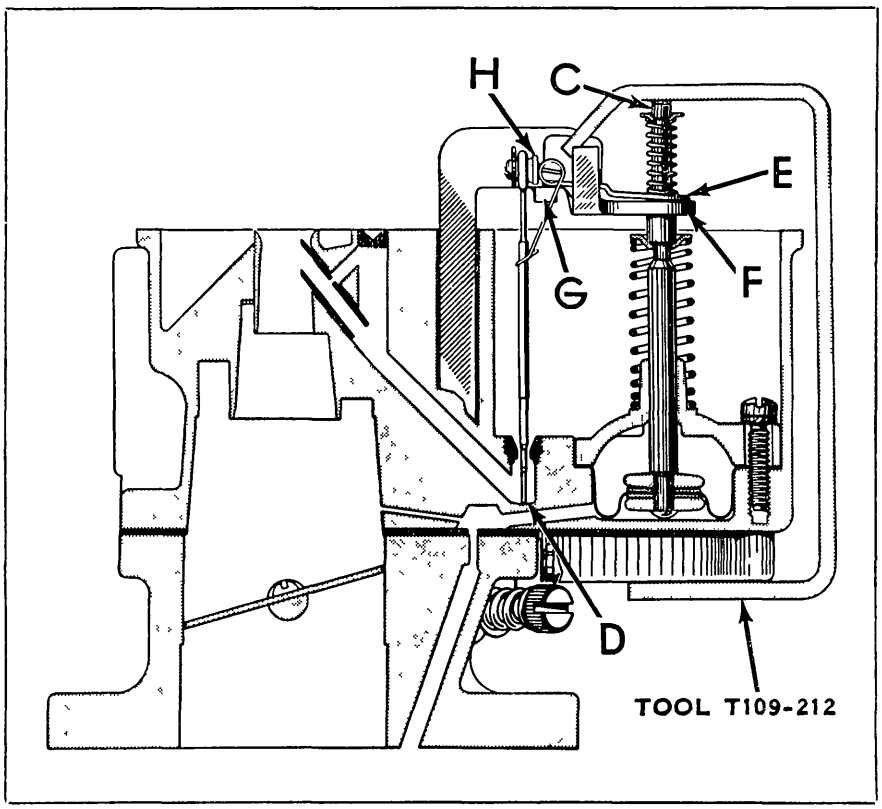


Figure 3
Metering Rod Adjustment

METERING ROD ADJUSTMENT (Fig. 3):

This adjustment is important and should be checked each time the carbureter is reassembled or lean rods are installed. With throttle valve seated in bore of carbureter, press down on upper end of diaphragm shaft (C) until diaphragm bottoms in vacuum chamber. (Tool T109-212 may be used to hold diaphragm shaft down while adjusting metering rod).

Metering rod should contact bottom of metering rod well (D), and metering rod arm (E) should contact lifter link (F) between springs and at supporting lug (G). Adjust by bending lip (H) up or down.

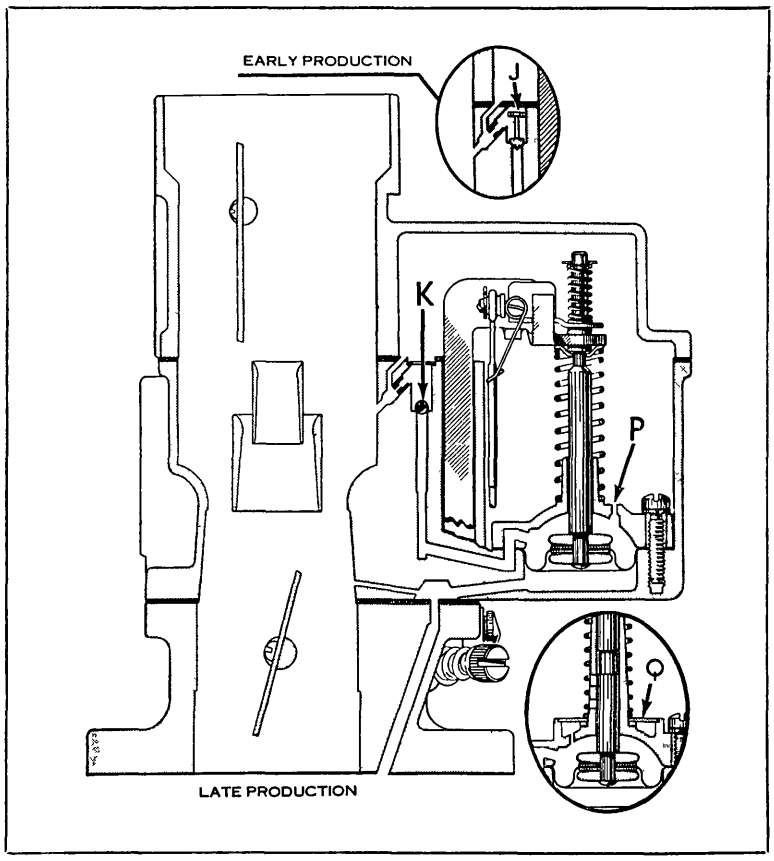


Figure 4
Accelerating Pump

ACCELERATING PUMP (Fig 4)

If acceleration is not satisfactory remove aluminum pump discharge check needle (J) or aluminum pump d scharge check ball (K) Then remove pump diaphragm assembly Check diaphragm for wear or damage Be sure inlet hole (P) is not clogged with lint or foreign matter Intake screen (Q, if so equipped) should be removed in service

If carbureter is equipped with needle type pump discharge check replace with alum num ball check Unitized package (Part No 116 26U) consisting of (1) 1/8 steel ball (1) 1/8 aluminum ball and (1) 63 152 retainer should be used Complete instructions for th s convers on are conta ned in the package If the discharge ball or seat in late produc tion carbureters originally equ pped with the aluminum ball check appear damaged 116 26U should be used Inspect and replace all worn or damaged parts and clean and blow out all passages w th compressed a r Make sure discharge check seats in casting as a leak at this point will result in poor ac celeration

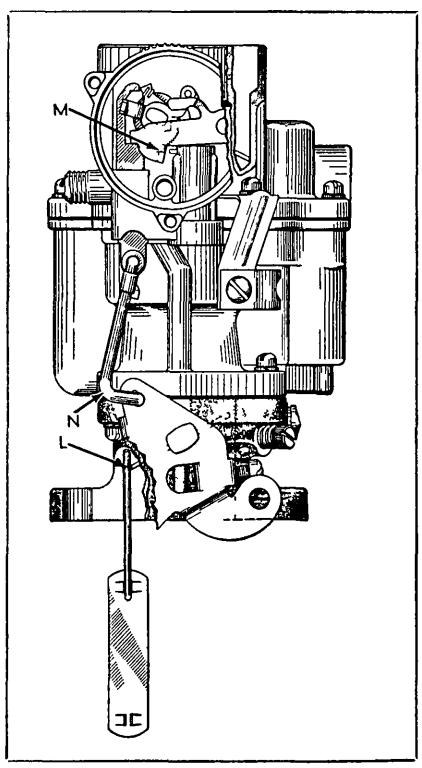


Figure 5
Fast Idle Adjustment

FAST IDLE ADJUSTMENT (Fig 5)

Crack throttle valve and hold choke valve closed With throttle valve closed choke trip lever should be on high step of fast idle cam (M) There should now be (756S SA) 076" (789S SA) 086" clearance (L) between throttle valve and bore of carbureter (side opposite idle port) Adjust by bending the choke connector rod at lower angle (N)

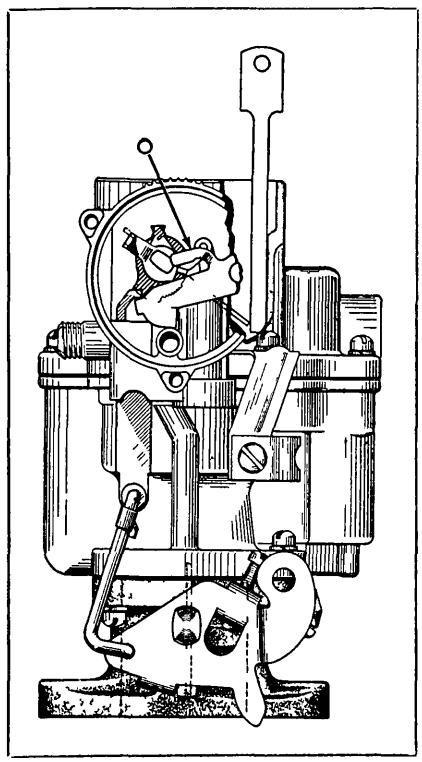
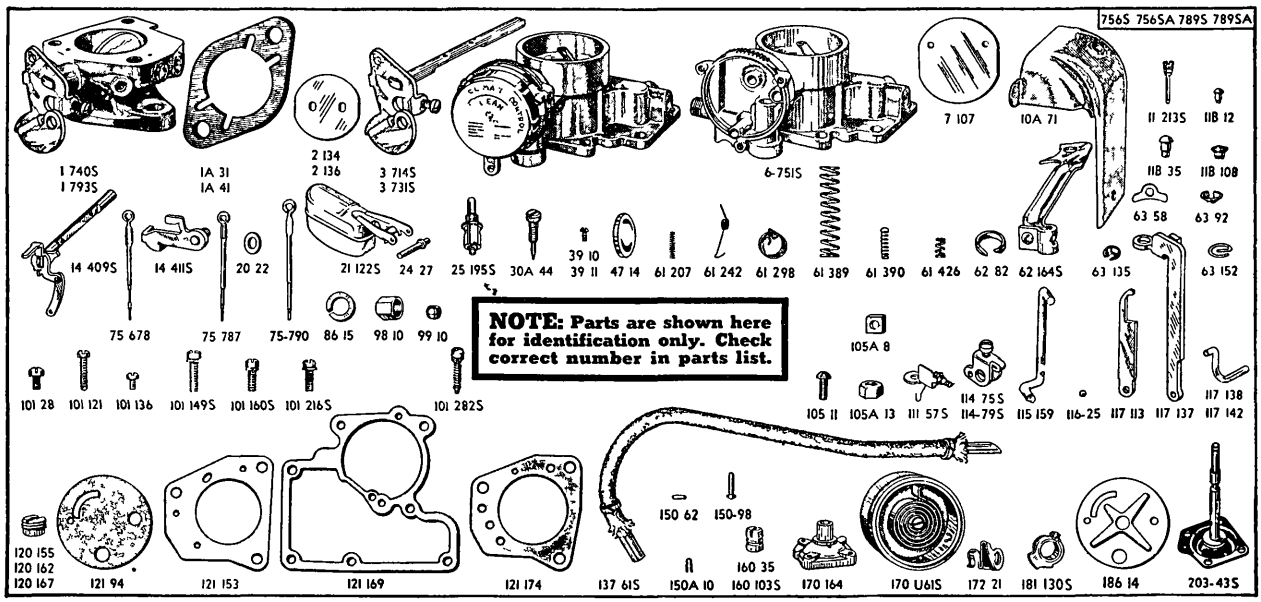


Figure 6
Unloader Adjustment

UNLOADER ADJUSTMENT (Fig 6)

This adjustment must be made after the fast idle adjust ment With the thermostatic coil housing gasket and baffle plate removed hold throttle valve w de open and close choke valve as far as poss ble w thout forc ng there should now be 3/16" (Gauge T109 28) clearance between lower edge of choke valve and inner wall of a r horn Adjust by bending arm (O) on choke tr p lever (tool T109 187)



Chevrolet Carbureters Nos. 756S-756SA-789S-789SA

DO NOT ATTEMPT TO BUILD THE 756S AND 789S TO THE SA SPECIFICATIONS

WHEN SERVICING, USE GASKET ASSORTMENT No. 208A (756S-SA); No. 209B (789S-SA);

REPAIR PACKAGE No. 1707 (756S-SA); No 1709 (789S-SA)

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-740S	Body flange assembly (756S-SA)	
1-793S	Body flange assembly (789S-SA)	
1A-31	FLANGE GASKET (789S-SA)	
1A-41	FLANGE GASKET (756S-SA)	
2-134	Throttle valve (756S-SA)	
2-136	Throttle valve (789S-SA)	
3-731S	Throttle shaft and lever assembly (756S-SA)	
3-714S	Throttle shaft and lever assembly (789S-SA)	
6-669S	Air horn and Climatic® control assembly	
6-751S	Air horn assembly	
7-107	Choke valve	
10A-71	Manifold stove	
11-213S	LOW SPEED JET ASSEMBLY	
11B-12	Flange passage plug	
11B-35	Nozzle passage rivet plug	
11B-108	IDLE PORT RIVET PLUG	
14-409S	Choke piston lever and shaft assembly	
14-411S	Choke trip lever assembly	
17-80	Pump check needle (756S-789S) (Sup by 116-26U)	
20-22	Needle seat gasket	
21-122S	Float and lever assembly	
24-27	Float lever pin	
25-195S	NEEDLE AND SEAT ASSEMBLY	
30-62	Pump intake strainer (756S-789S) (Discontinued)	
30A-44	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	THROTTLE VALVE ATTACHING SCREW	(2)
47-14	Welsh plug	
61-207	Intake needle spring	
61-242	Metering rod spring	
61-298	Fast idle cam spring	
61-389	PUMP DIAPHRAGM SPRING	
61-390	Upper pump spring	
61-426	Idle screw spring	
62-82	Heat tube covering clamp	(2)
62-164S	Tube clamp assembly	
63-58	Coil housing retainer	(3)
63-92	DIAPHRAGM SPRING RETAINER	
63-135	UPPER PUMP SPRING RETAINER	
63-152	Pump discharge ball check retainer ring	
75-678	METERING ROD STANDARD (756S-789S)	
75-736	Metering rod, 1 size lean (756S-789S)	
75-737	Metering rod, 2 sizes lean (756S-789S)	
75-787	METERING ROD, STANDARD (756SA)	
75-788	Metering rod, 1 size lean (756SA)	
75-789	Metering rod, 2 sizes lean (756SA)	
75-790	METERING ROD, STANDARD (789SA)	
75-795	Metering rod, 1 size lean (789SA)	
75-796	Metering rod, 2 sizes lean (789SA)	
86-15	Flange stud lock washer	(2)
98-10	Compression coupling nut	

Part No	PART NAME	
99-10	Compression coupling cone	
101-28	Throttle shaft arm attaching screw	
101-121	Throttle lever adjustment screw	
101-136	Coil housing attaching screw	(3)
101-149S	Body flange attaching screw and washer assembly	(3)
101-160S	Air horn attaching screw and washer assembly	(5)
101-216S	Air horn attaching screw and washer assembly	(2)
101-282S	Diaphragm housing attaching screw and washer assembly	(4)
105-11	Tube clamp screw	
105A-8	Tube clamp nut	
105A-13	Flange nut	(2)
111-57S	Metering rod arm assembly	
114-75S	THROTTLE SHAFT ARM ASSEMBLY	
114-79S	Throttle shaft assembly (for velocity governor installation)	
115-159	Choke connector rod	
116-25	Pump discharge ball check	
116-26U	UNITIZED PACKAGE (Consists of (1) 116 11, (1) 116-25, (1) 63-152)	
117-113	Fast idle link	
117-137	PUMP LIFTER LINK	
117-138	PUMP CONNECTOR LINK	
117-142	Pump connector link (for velocity governor installation)	
120-155	METERING ROD JET (756S-SA)	
120-162	METERING ROD JET (789SA)	
120-167	METERING ROD JET (789S)	
121-94	THERMOSTATIC COIL HOUSING GASKET	
121-153	BODY FLANGE GASKET (756S-SA)	
121-169	BOWL COVER AND AIR HORN GASKET	
121-174	Body flange gasket (789S-SA) (Sup by 121-220)	
121-180	Bowl cover and air horn gasket (Sup by 121-169)	
121-220	BODY FLANGE GASKET (789S-789SA)	
137-61S	Climatic® control heat tube and covering assembly	
150-62	Choke piston pin	
150-98	Intake needle pin	
150A-10	PIN SPRING (756S-789S)	
160-35	†Choke piston (756SA-789SA) (Sup by 160-103S on 756S-789S)	
160-103S	†Choke piston assembly (756S 789S)	
170-164	Pump diaphragm housing	
170AA-61S	Thermostatic housing and coil assembly	
170U-61S	Thermostatic housing and coil assembly (Sup by 170AA-61S)	
172-21	Throttle connector rod retainer	
181-130S	Fast idle cam assembly	
186-14	Coil housing baffle plate	
203-43S	DIAPHRAGM ASSEMBLY	

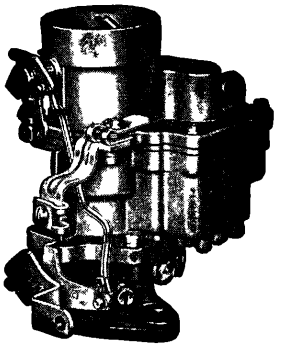
†160-35 is superseded by 160-103S choke piston only on carbureters with early production air horn assemblies (756S-789S)

160-35 choke piston must be used with late production air horn assemblies (756SA-789SA) Identify late production air horn by "R" after Trademark ©

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

787S-SA-SB—(1937-1952)
(1¼ Inch Flange)
STANDARD TRANSMISSION

788S-SA—1950-1952 Truck
(1½ Inch Flange)



Cut shows YF 787S Carbureter

CHEVROLET CARBURETERS MANUAL CHOKE 1937-1952

(964S can be used in place of 787S SA-SB
966S can be used in place of 788S-SA)

YF Down-Draft **Carbureters Nos. 787S-787SA-787SB-788S-788SA**

CARBURETER SPECIFICATIONS

(787S SA SB) Chevrolet 6 Cylinder Engine 3½ Inch Bore 3¾ Inch Stroke

(788S-SA) Chevrolet 6 Cylinder Engine 3-9/16 Inch Bore 3 15/16 Inch Stroke

Dimensions (787S SA SB) Flange size 1¼ inch S A E (788S 788SA) Flange size 1½ inch S A E Primary venturi 11/32 inch (8 73 mm) I D Secondary venturi 11/16 inch (17 46 mm) I D (787S SA SB) Main venturi 1¼ inch (31 75 mm) I D (788S 788SA) Main venturi 1 5/16 inch (33 34 mm) I D

Float Settings See Float Adjustment (Fig 1) and Float Drop (Fig 2) on Page 2

Vents Outside none Inside balance vent to air horn above choke valve

Gasoline Intake (787S) size No 48 (1 93 mm) drill in needle seat (787SA SB 788S SA) spring loaded needle Size No 46 (2 06 mm) drill in needle seat

Low Speed Jet Tube Jet size (787S SA SB) No 68 (79 mm) drill (788S 788SA) No 66 (84 mm) drill (787S SA SB) By pass in air horn size No 52 (1 61 mm) drill (788S 788SA) By pass in body size No 53 (1 51 mm) drill Economizer size (787S SA SB) No 54 (1 40 mm) drill (788S 788SA) No 55 (1 32 mm) drill

Idle Ports Upper port (787S SA SB) slot type length 174 to 176 inch (4 42 to 4 47 mm) width 040 inch (1 02 mm) (788S SA) keyhole type length 190 inch (4 83 mm) width 040 inch (1 02 mm) 086 inch (2 18 mm) diameter hole at top Lower port size (for idle adjusting screw) (787S SA SB) 053 to 057 inch (1 35 to 1 45 mm) diameter (788S SA) 0615 to 0655 inch (1 56 to 1 66 mm) diameter

Idle Port Opening Top of port (787S SA SB) 166 to 170 inch (4 22 to 4 32 mm) (788S SA) 153 to 157 inch (3 89 to 3 99 mm) above top edge of valve with valve tightly closed

Set Idle Adjustment Screw 1 to 2 turns open For richer mixture turn screw out Do not idle engine below 350 RPM (1941 48) or 450 RPM (1949 51)

Main Nozzle Nozzle is installed permanently **DO NOT REMOVE** Anti percolator Drilled passage from anti percolator well to inside tip nozzle

Metering Rod (787S SA 788S) Economy step 068 inch (1 73 mm) diameter power step 052 inch (1 32 mm) diameter (This rod is designed with flats on economy step) (787SB) Economy step 066 inch (1 68 mm) diameter middle step tapers to 063 inch (1 60 mm) diameter power step 043 inch (1 09 mm) diameter (788SA) Economy step 073 inch (1 85 mm) diameter power step 044 inch (1 12 mm) diameter

Metering Rod Jet (787S SA SB) 091 inch (2 31 mm) (788S) 095 inch (2 41 mm) (788SA) 1015 inch (2 58 mm) diameter

Metering Rod Setting See adjustments (Fig 3) Page 2

Accelerating Pump Diaphragm type vacuum and mechanically operated Pump jet size (787S SA 788S) No 72 (64 mm) drill (787SB 788SA) No 75 (53 mm) drill Intake passage (in diaphragm housing) size No 75 (53 mm) drill Vacuum restriction (in flange) size No 55 (1 32 mm) drill Vacuum passage (diaphragm bleed) size No 65 (89 mm) drill

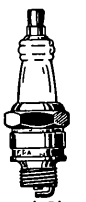
Pump Stroke No adjustment

Choke Manual interconnected with throttle Valve offset butterfly type

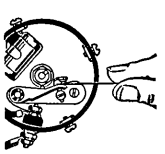
Vacuum Spark Port Slot type Size 125 by 041 inch (3 18 by 1 04 mm) Bottom of port (787S SA SB) 022 to 032 inch (56 to 81 mm) above top edge of valve with valve tightly closed Top of port (788S SA) 025 to 035 inch (64 to 89 mm) above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

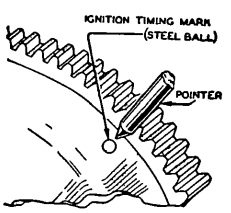
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



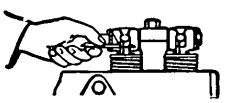
Spark Plug Gap
040"
(1937-48)
035"
(1949-52)



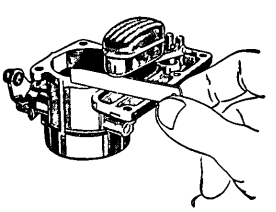
Breaker Point Setting
018"



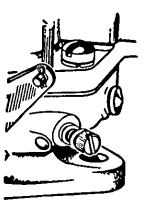
Ignition Timing
Breaker Points to Open
5° B T D C



Valve Setting
(216 5 Cubic Inch Engine)
(Hot)
Intake 006' - 008'
Exhaust 013"- 015'
(235 5 Cubic Inch Engine)
No adjustment Equipped with hydraulic lifters



Float Setting
(Use Gauge)
½ Inch (787S)
5/16 Inch
(787SA SB-788S-SA)



Idle Adjustment Screw Setting
1 to 2
Turns Open

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MARCA REGISTRADA

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CARBURETER ADJUSTMENTS

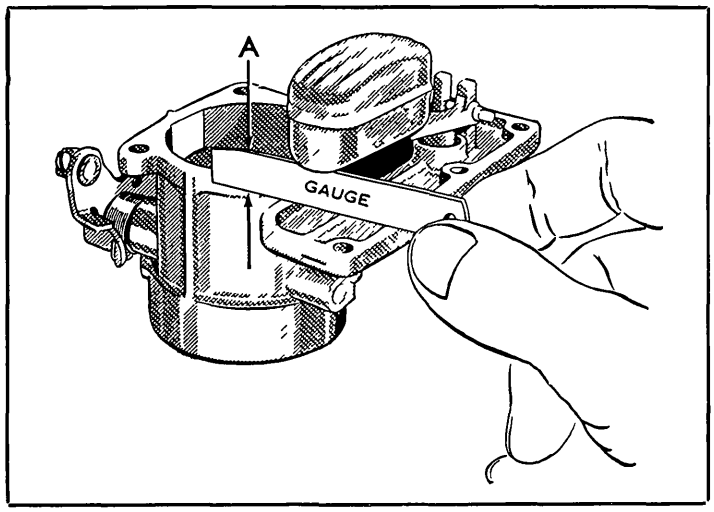


Figure 1
Float Adjustment

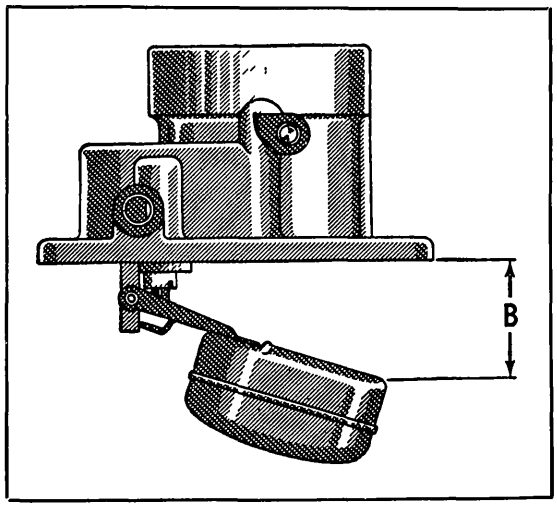


Figure 2
Float Drop

FLOAT ADJUSTMENT (Fig 1)

(787S) With gasket removed bowl cover assembly inverted and float resting on seated needle the distance (A) from the bowl cover to the top of float should be 1/2" (gauge T109 83) Adjust by bending lip of float not float arm

(787SA SB 788S SA) With bowl cover assembly inverted and float resting on pin in seated needle and with gasket removed the distance (A) from the bowl cover to the top of float should be 5/16" (gauge T109 107) Do not depress float lip against spring loaded pin in needle but let float rest of its own weight Adjust by bending lip of float not float arm Float setting must be checked with the bowl cover held at eye height in a level position

FLOAT DROP (Fig 2)

With bowl cover assembly held in upright position the distance (B) between free end of float and bowl cover should be 1 1/4" Adjust by bending stop tabs on float arm

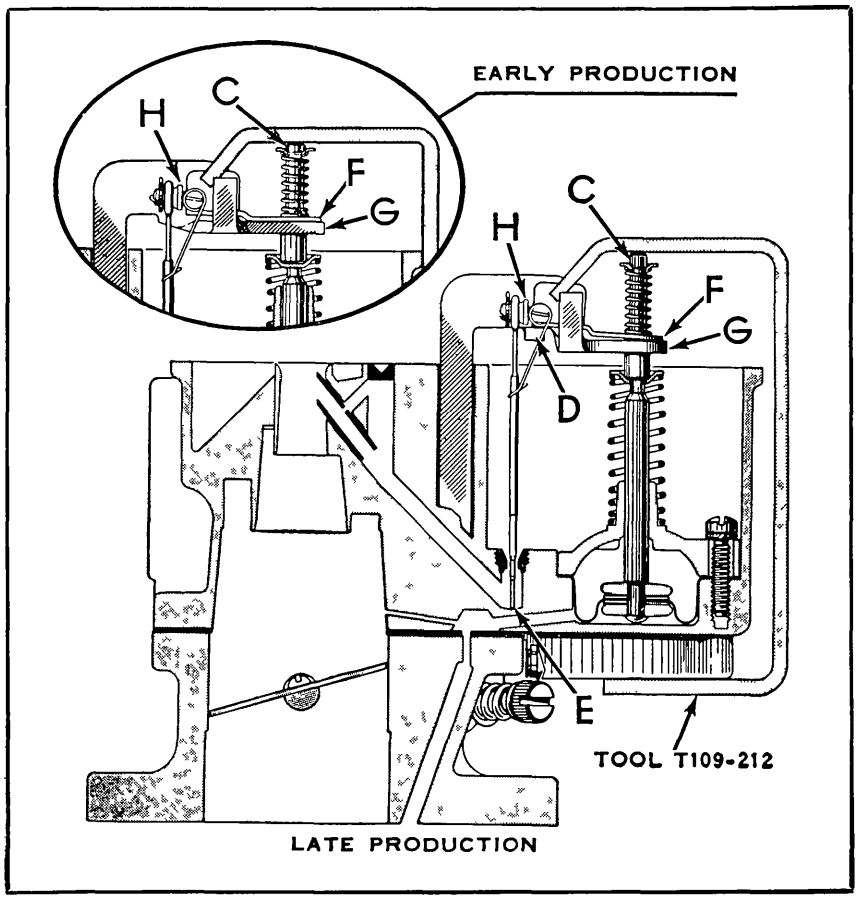


Figure 3
Metering Rod Adjustment

METERING ROD ADJUSTMENT (Fig 3)

This adjustment is important and should be checked each time the carbureter is reassembled or lean rods are installed With throttle valve seated in bore of carbureter press down on upper end of diaphragm shaft (C) until diaphragm bottoms in vacuum chamber (Tool T109 212 may be used to hold diaphragm shaft down while adjusting metering rod)

On late production 787S carbureters and 787SA 787SB 788S 788SA carbureters which have projection (D) on pump lifter link, metering rod should contact bottom of metering rod well (E) and metering rod arm (F) should contact lifter link (G) between springs and at supporting lug (D) Adjust by bending lip (H) up or down

On early production 787S carbureters, which **do not have** projection (D) on pump lifter link metering rod should bottom in metering rod well (E) and flat of metering rod arm (F) should make parallel contact with flat of pump lifter link (G) Adjust by bending lip (H) up or down

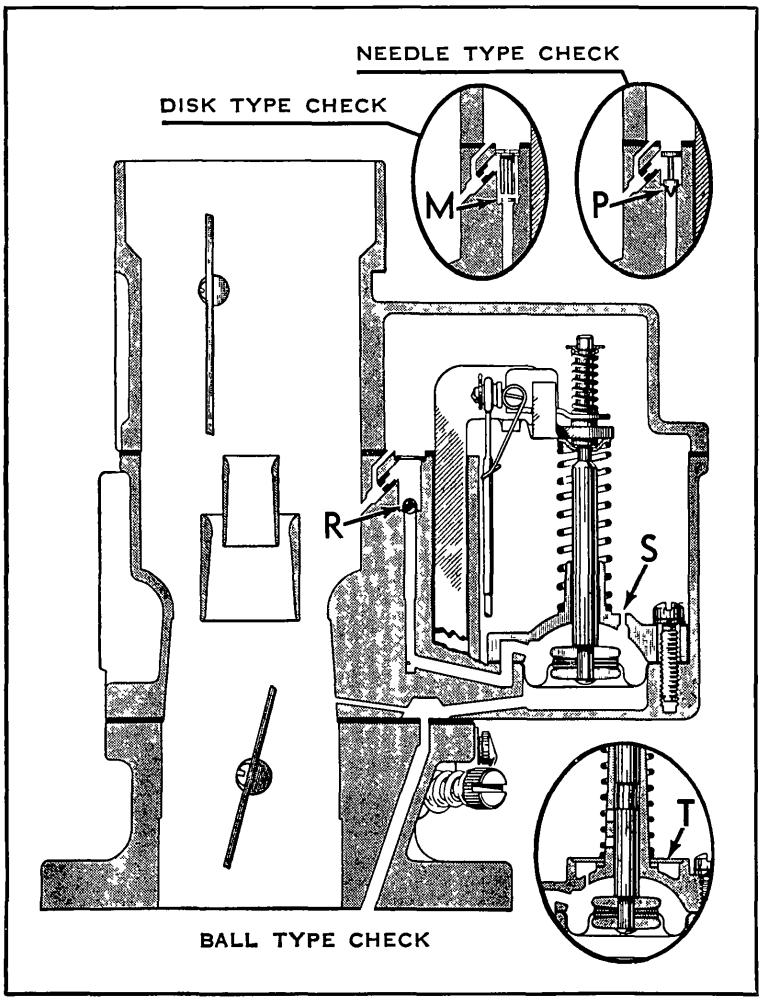


Figure 4
Accelerating Pump

ACCELERATING PUMP (Fig. 4):

If acceleration is not satisfactory, remove pump check retainer and pump check disk (M) (787S), aluminum pump discharge check needle (P) or aluminum pump discharge check ball (R). Then remove pump diaphragm assembly. Check diaphragm for wear or damage. Be sure inlet hole (S) is not clogged with lint or foreign matter. Intake screen (T) (if so equipped) should be removed in service.

If carbureter is equipped with disk or needle type pump discharge check, replace with aluminum ball check. Unitized package (Part No. 116-26U), consisting of (1) 1/8" steel ball, (1) 1/8" aluminum ball and (1) 63-152 retainer should be used. Complete instructions for this conversion are contained in the package. If the discharge ball or seat in late production carbureters, originally equipped with the aluminum ball check, appear damaged, 116-26U should be used.

Inspect and replace all worn or damaged parts and clean and blow out all passages with compressed air. Make sure discharge check seats in casting as a leak at this point will result in poor acceleration.

FAST IDLE ADJUSTMENT (Fig. 5):

With choke held in wide open position, lip (K) of fast idle arm should contact boss on body casting. Adjust by bending at offset (L) of fast idle link.

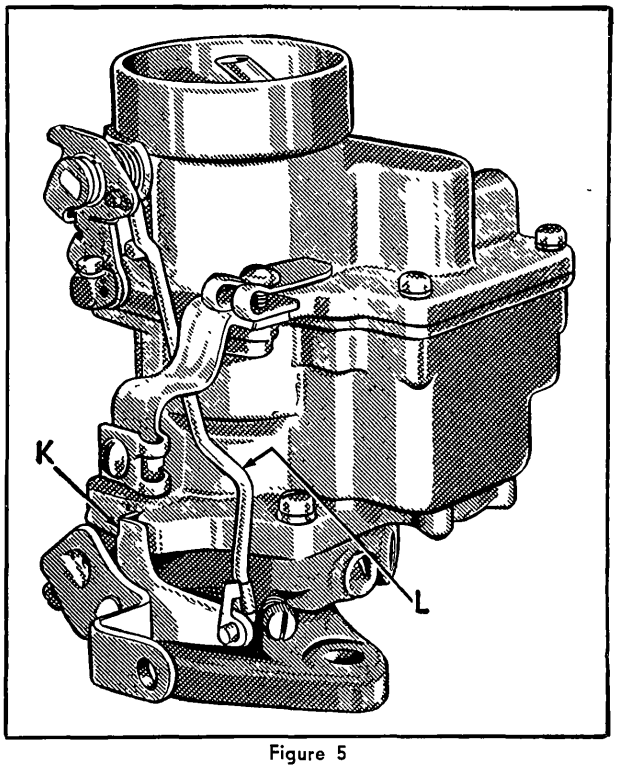
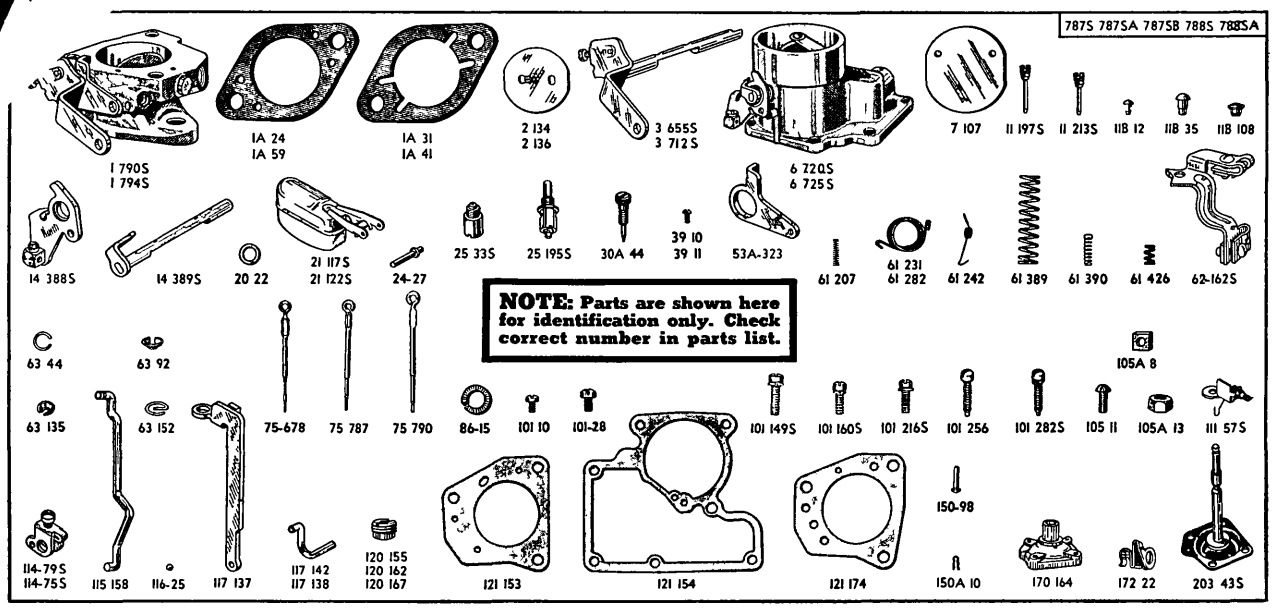


Figure 5
Fast Idle Adjustment



Chevrolet Carbureters Nos. 787S-787SA-787SB-788S-788SA

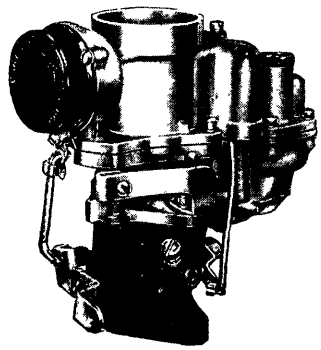
WHEN SERVICING, USE GASKET ASSORTMENT No 206A (787S SA SB) No 210B (788S-SA),
REPAIR PACKAGE No 1706 (787S SA SB), No 1708 (788S SA)

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME
1-790S	Body flange assembly (788S-788SA)
1-794S	Body flange assembly (787S-787SA-787SB)
1A-24	Flanget gasket (for use with governor) (788S-788SA)
1A-31	FLANGE GASKET (for use without governor) (788S-788SA)
1A-41	FLANGE GASKET (for use without governor) (787S-787SA-787SB)
1A-59	Flange gasket (for use with governor) (787S-787SA-787SB)
2-134	Throttle valve (787S-787SA-787SB)
2-136	Throttle valve (788S-788SA)
3-655S	Throttle shaft and lever assembly (787S-787SA-787SB) (Sup by 3-781S)
3-712S	Throttle shaft and lever assembly (788S-788SA) (Sup by 3-780S)
3-780S	Throttle shaft and lever assy (788S-788SA)
3-781S	Throttle shaft and lever assembly (787S-787SA-787SB)
6-720S	Air horn assembly (787S-787SA-787SB)
6-725S	Air horn assembly (788S-788SA)
7-107	Choke valve
11-197S	LOW SPEED JET ASSEMBLY (787S-787SA-787SB)
11-213S	LOW SPEED JET ASSEMBLY (788S-788SA)
11B-12	Flange passage plug
11B 35	Nozzle passage rivet plug
11B-108	IDLE PORT RIVET PLUG
14-388S	Choke lever assembly
14-389S	Choke shaft and lever assembly
17-80	Pump discharge check needle (787SA-788S) (Sup by 116-26U)
20-22	Needle seat gasket
21-117S	Float and lever assembly (787S)
21-122S	Float and lever assembly (787SA-787SB-788S-788SA)
24-27	Float lever pin
25-33S	NEEDLE AND SEAT ASSEMBLY (787S)
25-195S	NEEDLE SPRING, PIN AND SEAT ASSEMBLY (787SA-787SB-788S-788SA)
30-62	Pump intake strainer (787S-787SA-788S) (Discontinued)
30A-44	Idle adjustment screw
39-10	Choke valve attaching screw (2)
39-11	THROTTLE VALVE ATTACHING SCREW (2)
53A-323	Fast idle arm
61-84	Idle screw spring (787S) (Sup by 61-426)
61-207	Intake needle spring (787SA-787SB-788S-788SA)
61-231	Choke lever spring (787S-787SA-787SB)
61-242	Metering rod spring
61-282	Choke lever spring (788S-788SA)
61-389	PUMP DIAPHRAGM SPRING
61-390	Upper pump spring
61-426	Idle screw spring
62-162S	Choke tube clamp assembly
63-44	Choke lever retaining ring
63-92	DIAPHRAGM SPRING RETAINER
63-134	Pump disk retainer (787S) (Sup by 116-26U)
63-135	UPPER PUMP SPRING RETAINER
63-138	Pump disk retainer ring (787S) (Sup by 63-152)
63-139	Pump disk retainer (787S) (Sup by 116-26U)
63-152	Pump discharge ball check retainer ring (787S-787SB-788SA)
75-678	METERING ROD, STANDARD (787S-787SA-788S)
75-736	Metering rod, 1 size lean (787S-787SA-788S)
75-737	Metering rod 2 sizes lean (787S-787SA-788S)
75-787	METERING ROD, STANDARD (787SB)
75-788	Metering rod, 1 size lean (787SB)
75-789	Metering rod, 2 sizes lean (787SB)
75-790	METERING ROD, STANDARD (788SA)
75-795	Metering rod, 1 size lean (788SA)
75-796	Metering rod, 2 sizes lean (788SA)
86-15	Flange stud lock washer (2)
101-10	Wire clamp screw
101-28	Throttle shaft arm attaching screw
101-149S	Body flange attaching screw and washer assembly (3)
101-160S	Air horn attaching screw and washer assembly (5)
101-216S	Air horn attaching screw and washer assembly (2)
101-256	Throttle lever adjustment screw
101-282S	Diaphragm housing attaching screw and washer assembly (4)
105-11	Tube clamp screw (2)
105A-8	Tube clamp nut (2)
105A-13	Flange nut (2)
111-57S	Metering rod arm assembly
114-75S	THROTTLE SHAFT ARM ASSEMBLY
114-79S	Throttle shaft arm assembly (for velocity governor installation)
115-158	Fast idle connector rod
116-25	Pump discharge ball check
116-26U	UNITIZED PACKAGE (consists of (1) 116-11, (1) 116-25 and (1) 63-152)
117-137	PUMP LIFTER LINK
117-138	PUMP CONNECTOR LINK
117-142	Pump connector link (for velocity governor installation)
120-155	METERING ROD JET (787S-SA-SB)
120-162	METERING ROD JET (788SA)
120-167	METERING ROD JET (788S)
121-153	BODY FLANGE GASKET (787S-787SA-787SB)
121-154	BOWL COVER AND AIR HORN GASKET
121-174	Body flange gasket (788S-788SA) (Sup by 121-220)
121-184	Bowl cover and air horn gasket (788S) (Sup by 121-154)
121-220	BODY FLANGE GASKET (788S-788SA)
150-98	Intake needle pin (787SA-787SB-788S-788SA)
150A-10	PIN SPRING (2)
169-22	Pump check disk (787S) (Sup by 116-26U)
170-150	Pump diaphragm housing (787S) (Sup by 170-164)
170 164	Pump diaphragm housing
172-22	Connector rod retainer
203-43S	PUMP DIAPHRAGM ASSEMBLY

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

CARBURETER
TRADE MARK REG U S PAT OFF
MARCA REGISTRADA



Casting No. 620 on face of flange

CLIMATIC® CONTROL CARBURETER FOR CHEVROLET 730S—1941-1949

WE Down-Draft **Carbureter 730S** With Climatic® Control

CARBURETER SPECIFICATIONS

For Chevrolet Six Cylinder Engine: 3½ Inch Bore, 3¾ Inch Stroke

For Chevrolet Six Cylinder Engine: 3-9/16 Inch Bore, 3-15/16 Inch Stroke

Dimensions: Flange size 1¼ inch S A E
Primary venturi 11/32 inch I D
Secondary venturi 11/16 inch I D
Main venturi, 1¼ inch I D

Float Level: Distance from seam of float (at free end) to tip on lower edge of float chamber cover, when needle is seated to be ⅜ inch

Vents: Outside, No 10 drill Inside none

Gasoline Intake: Square vertical needle Size No 46 drill hole in needle seat

Low Speed Jet Tube: Jet size, No 69 drill (early production); No 68 drill (late production)
By-pass, size No 54 drill
Economizer, 059-060 inch diameter
Idle bleed size No 55 drill

Idle Port: Length, 165 inch width, 030 inch

Idle Port Opening: Top of port 112 116 inch above top edge of valve with valve tight closed

Idle Screw Seat: No 46 drill

Set Idle Adjustment Screw: ½ to 1½ turns open For richer mixture turn screw out Idle engine 450 r p m

Main Nozzle: In primary venturi, angle 45° Closed tip
Inside diameter No 30 drill
Upper hole 035 inch diameter on 45° angle
Lower hole 089 inch diameter on 60° angle

Metering Rod (Vacumeter Type): Economy step 072 inch diameter, middle step tapers to 061 inch diameter, power step 042 inch diameter Length 3-9/64 inches

Metering Rod Jet: 095 inch diameter

Metering Rod Setting: Use gauge, part No T109 102 (2 468 inches)

Accelerating Pump: Pressure type (spring operated lever) with non-adjustable stroke
Pump discharge jet, size No 73 drill (early production), No 71 drill (late production)
Relief passage (to outside), size No 42 drill
Intake ball check seat size No 40 drill
Discharge ball check seat, size No 32 drill

Pump Adjustment: 14/64 inch plunger travel full throttle position Use gauge No T109-117S

Choke: Carter Climatic® Control, set at index Butterfly type offset valve Choke heat suction hole in body, size No 36 (.1065") drill

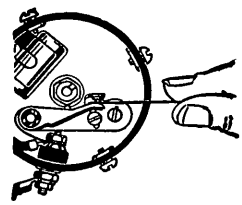
Vacuum Spark Port: 1005 to 1025 inch diameter Top of port 060 to 070 inch above top edge of valve

Motor Tune-Up—Be Accurate!

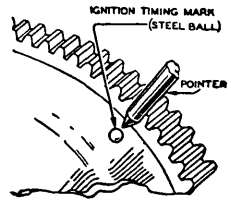
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



Spark Plug Gap .040"



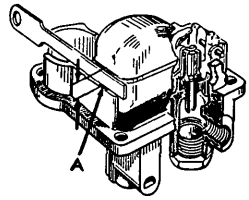
Breaker Point Setting .018"



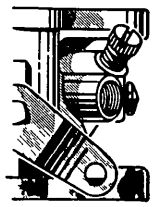
Ignition Timing Breaker Points to Open: 5° B.T.D.C.



Valve Setting HOT
Intake .006"-.008"
Exhaust .013"-.015"



Float Setting (Use Gauge) ⅜ Inch (Measure from point "A" to top of float seam)



Idle Adjustment Screw Setting ½ to 1½ Turns Open

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THE 730S CLIMATIC® CONTROL
WE CARBURETER

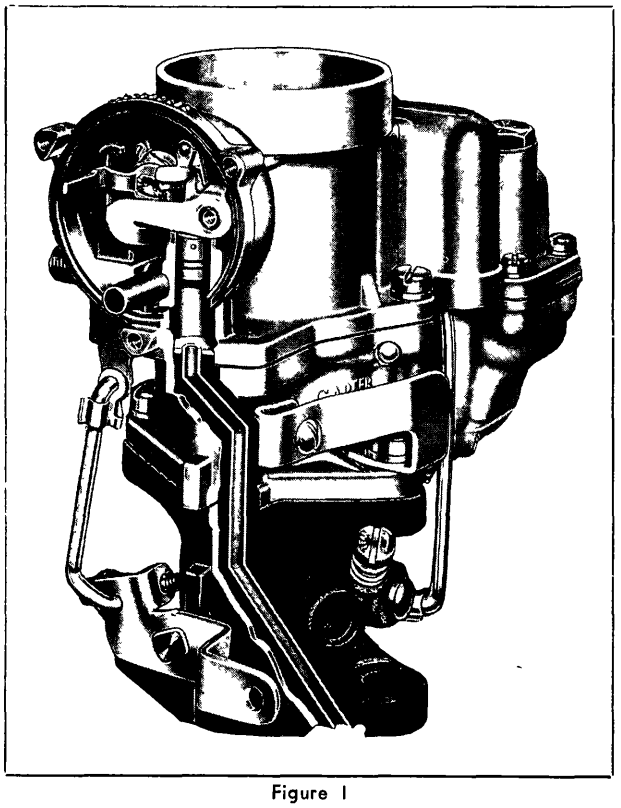


Figure 1

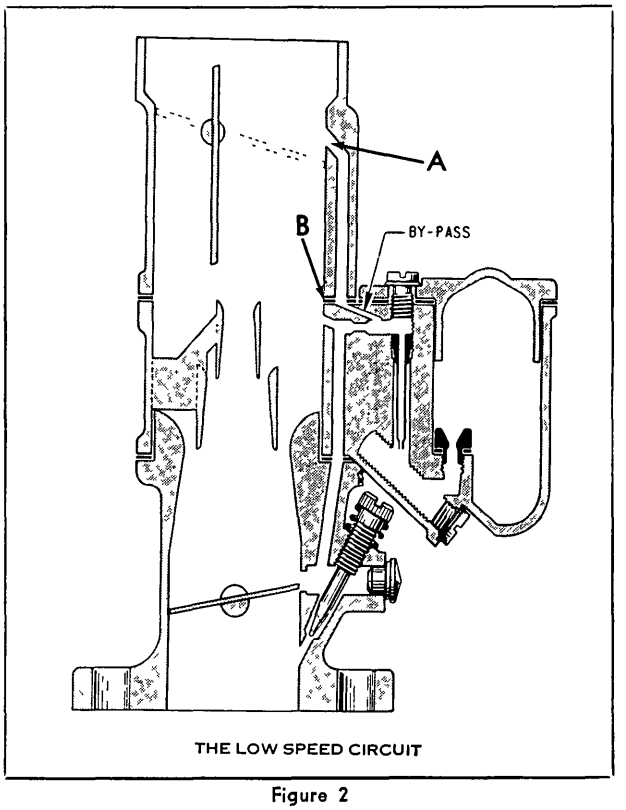


Figure 2

The Carter WE Carbureter is essentially the same as the Carter WA-1. However, there are several changes in the location of parts in the Climatic® control mechanism. The fast idle cam assembly, choke trip lever, unloader mechanism, etc., are located in the Climatic® control housing. In this way all these parts are protected from dirt and other foreign matter. (Fig. 1)

The by-pass of the low speed circuit (Fig. 2) is extended to a point above the closed choke valve (a). This produces a more uniform mixture for part throttle operation while the choke is closed or partly closed. Check to see that the air horn gasket does not leak at this point (b) and the calibrated by-pass in the upper surface of the body is clean.

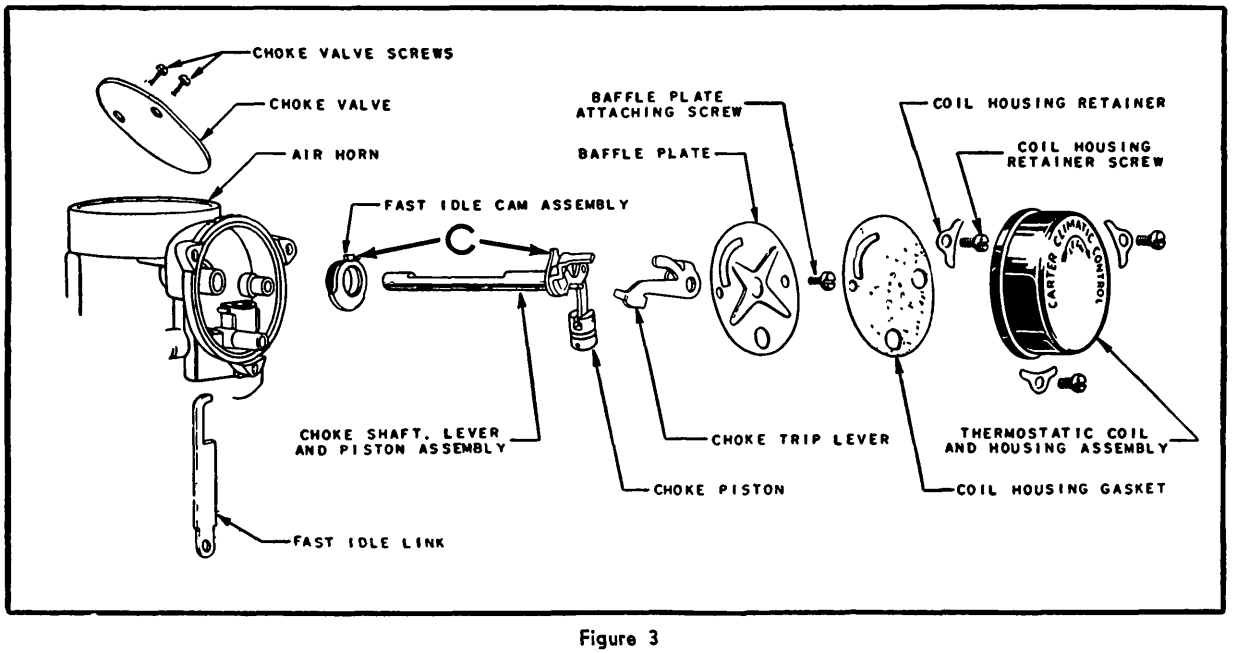


Figure 3

CLIMATIC® CONTROL ASSEMBLY

Slide fast idle cam assembly onto choke shaft Install choke shaft into air horn and revolve cam to allow piston to slide freely into cylinder Then lock fast idle cam spring ends around nib (c) of cam and projecting nib (c) of choke shaft assembly (Fig 3)

Install choke valve with trademark to top seating valve before tightening screws Valve must not bind in any position but fall free of its own weight Install fast idle link and choke trip lever Install choke connector rod in throttle lever before attaching to fast idle link Then install connector rod retainer

Fast idle and unloader adjustments should be made at this point before the balance of Climatic® control is assembled (Fig 4 and 5) Install baffle plate and attaching screw Install coil housing gasket With choke wide open hold coil housing with notch revolved one quarter turn clockwise from index mark on housing Place against housing and revolve counter clockwise to center index mark Lock in place with screws and retainer

CARBURETER ADJUSTMENTS

FLOAT SETTING

With bowl cover inverted and float lip resting on seated needle distance from soldered seam of float to small projection on machined surface of bowl cover should be 3/8" (use gauge T109 80) Adjustment should be made by bending lip of float lever After making float adjustment adjust stops on float bracket so free end of float can move 1/2" plus or minus 1/32"

PUMP ADJUSTMENT

Good acceleration depends primarily on the amount of gasoline discharged through the pump jet This quantity of pump discharge is controlled by the distance the pump plunger travels Pump travel adjustment should be made each time the carbureter is serviced and must be made before metering rod or anti percolator settings Procedure is as follows

(1) Back out throttle lever adjusting screw to allow throttle valve to seat in bore of carbureter
(2) Place pump travel gauge (tool T109 117S) on bowl cover with lip of gauge extending over top of plunger shaft
(3) Turn knurled nut of gauge until lip rests on top of plunger shaft with throttle valve seated Read number on gauge indicated by notch in knurled nut
(4) Repeat operation number 3 with throttle valve wide open
(5) The difference in the readings obtained at closed and at wide open throttle should be 14 (14/64") ADJUSTMENT IS MADE BY BENDING THROTTLE CONNECTOR ROD AT LOWER ANGLE

METERING ROD ADJUSTMENT

Correct setting of metering rod is important and must be made when reassembling carbureter or when leaner than standard rods are installed DO NOT DISTURB PUMP ADJUSTMENT

Remove metering rod and disc and install gauge T109 102 in place ot metering rod making sure lower end of gauge seats in metering rod jet Back out throttle lever set screw so throttle valve seats in bore of carbureter (Make sure fast idle cam does not hold throttle open Throttle valve must be seated) Press lightly on top of metering rod arm until upper lip of arm contacts pin in pump arm There should be less than 005" clearance between shoulder in notch of gauge and metering rod pin Adjust by bending upper lip on metering rod arm Use tool T109 105

This carbureter provides an added economy measure by means of the second lip on metering rod arm which extends below pin in pump arm and should be adjusted as follows

With throttle valve seated and finger pressing down on metering rod arm so that upper lip contacts pin on pump arm adjust lower lip for 3/16" clearance between bottom of pump arm pin and upper surface of lower lip (use gauge T109 28)

ANTI-PERCOLATOR ADJUSTMENT

Crack throttle valve 030 inch by placing (gauge T109 29) between throttle valve and bore of carbureter side opposite idle port There should now be 025 inch clearance between rocker arm lip and pump arm

Adjust by bending rocker arm

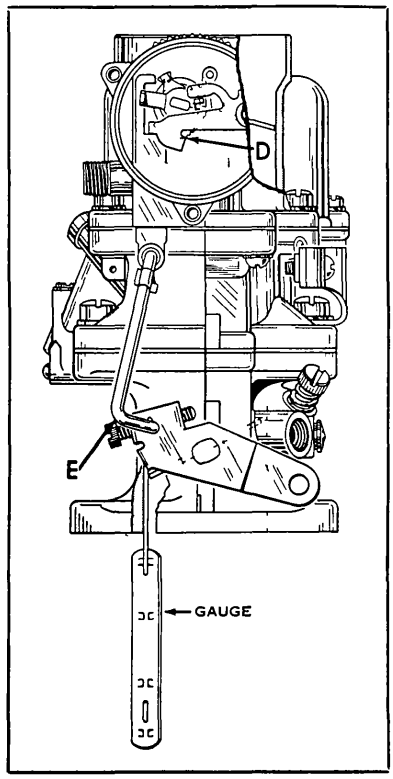


Figure 4

FAST IDLE ADJUSTMENT (Fig 4)

Remove thermostatic coil housing gasket and baffle plate Crack throttle valve and hold choke valve fully closed then close throttle This will allow fast idle cam to revolve to fast idle position (D)

With choke valve held tightly closed and slight tension on throttle lever there should now be 045 inch clearance between throttle valve and bore of carbureter side opposite idle port (gauge T109 158) Adjust by bending connector link at (E) Use bending tool T109 41

UNLOADER ADJUSTMENT· (Fig 5)

Must be made after fast idle adjustment Hold throttle valve in wide open position and close choke valve as far as possible without forcing There should be 3/16" clearance between lower edge of choke valve and inner wall of air horn (gauge T109 28) Adjust by bending arm (F) on choke trip lever use tool T109-187

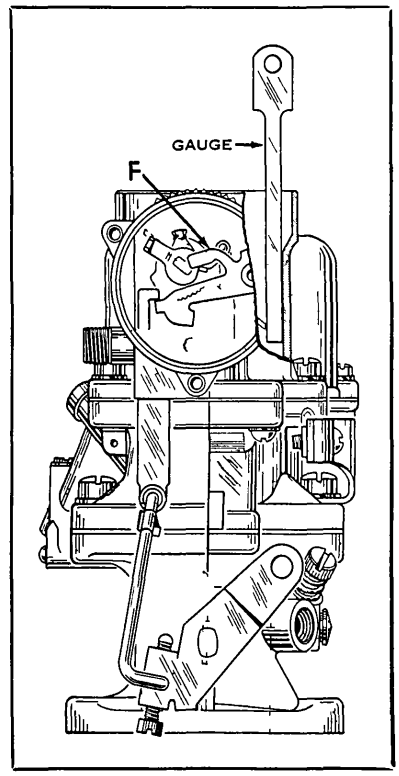
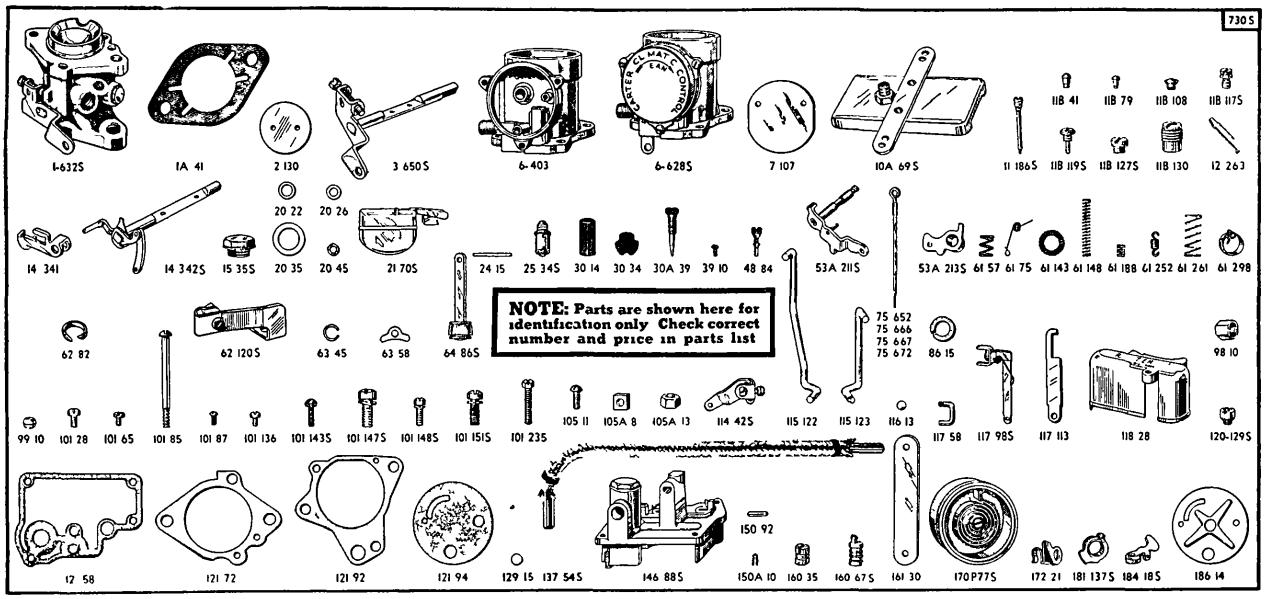


Figure 5



Carbureter No. 730S

WHEN SERVICING, USE GASKET ASSORTMENT No. 186A, REPAIR PACKAGE No. 1514A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-632S	Body flange assembly	
1A-41	FLANGE GASKET	
2-130	Throttle valve	
3-650S	Throttle shaft and lever assembly	
6-403	Air horn	
6-628S	Air horn and Climatic® control assembly	
7-107	Choke valve	
10A 69S	Manifold stove and connection assembly	
11-169S	LOW SPEED JET ASSEMBLY	
11-186S	Low speed jet assembly (Sup by 11-169S)	
11B-41	Nozzle passage plug	
11B-79	Rivet plug	(5)
11B-108	Idle port rivet plug	
11B-117S	Idle passage plug assembly	
11B-119S	Ball retainer screw plug assembly	
11B-127S	Passage plug assembly	(2)
11B-130	Nozzle retainer plug	
12-263	Nozzle	
14-341	Choke trip lever	
14-342S	Choke piston lever and shaft assembly	
15-35S	Strainer nut assembly	
20 22	Gasket	(3)
20-26	Gasket	(3)
20-35	Strainer nut gasket	
20-45	NOZZLE GASKET	
21-70S	Float and lever assembly	
24-15	Float lever pin	
25-34S	NEEDLE AND SEAT ASSEMBLY	
30-14	BOWL STRAINER	
30-34	PUMP STRAINER	
30A-39	Idle adjustment screw	
39-10	CHOKE VALVE ATTACHING SCREW	(2)
48-84	Pump jet (Sup by 48-90)	
48-90	PUMP JET	
53A-211S	Pump operating lever and countershaft assembly	
53A-213S	Pump arm and collar assembly	
61-57	Idle adjustment screw spring	
61-75	Metering rod spring	
61-143	Pump plunger spring	
61-148	VACUUM PISTON SPRING	
61-188	Rocker arm spring	
61-252	Pump operating lever spring	
61-261	Pump spring	
61-298	Fast idle cam spring	
62 82	Heat tube covering clamp	(2)
62-120S	Tube clamp assembly	
63-45	Ball retainer ring	
63-58	Coil housing retainer	(3)
64-86S	PUMP PLUNGER AND ROD ASSEMBLY	
75-652	METERING ROD—STANDARD— 072"- 072" to 061"- 042'	
75 666	Metering rod—1 size lean— 0735"- 0735" to 064"- 046	
75-667	Metering rod—2 sizes lean— 074"- 074" to 066"- 050"	
75-672	Metering rod—3 sizes lean— 075"- 075" to 068"- 054"	
86-15	Flange stud lock washer	
98-10	Compression coupling nut	(2)
99-10	Compression coupling cone	(2)
101-28	Throttle shaft arm clamp screw	
101-65	Baffle plate attaching screw	
101-85	Manifold stove attaching screw (Sup by 189-11)	(2)
101-87	Throttle valve attaching screw	(2)
101-136	Coil housing attaching screw	(3)
101-143S	Choke housing attaching screw and washer assembly	
101-147S	Body flange attaching screw and washer assembly	(2)
101-148S	Bowl and dust cover attaching screw and washer assembly	(5)
101-151S	Air horn attaching screw and washer assembly	(2)
101-235	Throttle lever adjusting screw	
105-11	Clamp screw	
105A-8	Clamp screw nut	
105A-12	Manifold stove lock nut (Use with 189-11)	(4)
105A-13	Flange nut	
114-42S	THROTTLE SHAFT ARM AND SCREW ASSEMBLY	
115-122	THROTTLE CONNECTOR ROD	
115-123	Choke connector rod	
116-13	PUMP CHECK BALL	(2)
117-58	PUMP CONNECTOR LINK	
117-98S	Vacuum piston link and spring assembly	
117-113	Fast idle link	
118-28	Dust cover	
120-129S	METERING ROD JET ASSEMBLY	
121-58	BOWL COVER GASKET	
121-72	BODY FLANGE GASKET	
121-92	AIR HORN GASKET	
121-94	THERMOSTATIC COIL HOUSING GASKET	
129-15	Metering rod disk	
137-54S	†Climatic® control heat tube and covering assembly	
146-88S	Bowl cover assembly	
150-62	Choke piston pin	
150-92	Anti-percolator pin	
150A-10	PIN SPRING	(3)
160-35	Choke piston	
160-67S	Vacuum piston and pin assembly	
161-30	Stove clamp plate (Use with 101-85)	
170P-77S	Thermostatic housing and coil assembly	
172-21	THROTTLE CONNECTOR ROD RETAINER (LOWER) AND CHOKE CONNECTOR ROD RETAINER	(2)
181-137S	Fast idle cam assembly	
184-18S	ANTI-PERCOLATING CAP AND ROCKER ARM ASSEMBLY	
186-14	Coil housing baffle plate	
189-11	Manifold stove U bolt	(2)

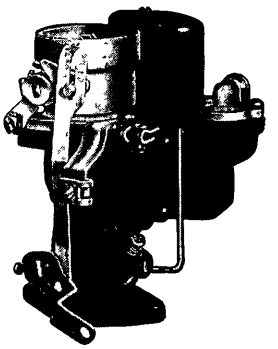
†CAUTION Be sure heat tube does not bind gear shifting levers on 1949 models

NOTE· *Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used*

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

CHEVROLET 684S
November, 1948
Revised February, 1953

ALL MODELS
1941-49
STANDARD TRANSMISSION
1950-51



Casting No. 603 on Face of Flange

CHEVROLET

1941-1951

(964S can also be used)

W-1 DOWN-DRAFT **CARBURETER No. 684S**

CARBURETER SPECIFICATIONS

For Chevorlet Six Cylinder Engine: 3½ Inch Bore, 3¾ Inch Stroke (1941-51)

For Chevrolet Six Cylinder Engine: 3-9/16 Inch Bore, 3-15/16 Inch Stroke (1941-49)

Dimensions: Flange size, 1¼ inch S. A. E.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 11/16 inch I. D.
Main venturi, 1¼ inch I. D.

Float Level: Distance from float (at free end) to float chamber cover, when needle is seated, to be ½ inch plus or minus 1/64 inch.

Vents: Outside, none. Inside balance vent tube above choke valve.

Gasoline Intake: Square vertical needle. Size No. 48 drill hole in needle seat.

Low Speed Jet Tube: Vertical jet size, .035 inch diameter.
By-pass in body, size No. 51 drill.
Economizer jet, size .0545 to .0555 inch diameter.

Idle Ports: Upper port diameter, .086 inch.
Lower port diameter, .055 inch.

Idle Port Opening: Top of lower port .044 to .048 inch above top edge of valve, with valve closed tight.

Idle Screw Seat: Size No. 52 drill.

Set Idle Adjustment Screw: 1 to 2 turns open. For richer mixture, turn screw out. Do not attempt to idle engine below 350 r. p. m.

Outer Nozzle: In primary venturi, angle 30°. Discharge size, .125 inch diameter.

Inner Nozzle: (Seats in outer nozzle) .120 inch I. D.

Metering Rod: Economy step .067 inch diameter. Second step tapers to .062 inch diameter. Third step tapers to .060 inch diameter. Power step .046 inch diameter. Length 3⅜ inches

Metering Rod Jet: Size .093 inch diameter.

Metering Rod Setting: Use gauge, part No. T109-25 (2.795 inches).

Accelerating Pump: Pressure type with non-adjustable stroke.
Discharge jet, size No. 72 drill.
Intake disk check plug, size No. 40 drill.
Discharge disk check plug, size No. 40 drill.

Choke: Manual—butterfly type, offset valve.

Throttle Valve: Opens to within 0° to 3° from perpendicular. Interconnected throttle and choke to open throttle valve to fast idle position.

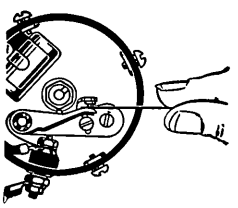
Vacuum Spark Port: Slot type: size, .041 to .125 inch. Bottom of port .000 to .004 inch above top of valve

Motor Tune-Up—Be Accurate!

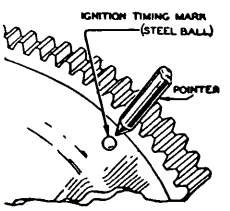
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



Spark Plug Gap
(1941-48) .040"
(1949-51) .035"



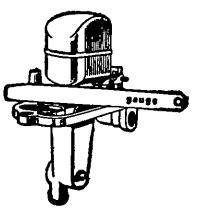
Breaker Point Setting .018"



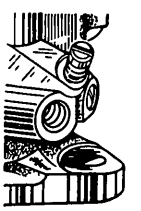
Ignition Timing
Breaker Points to Open:
5° B.T.D.C.



Valve Setting
HOT
Intake .006"-.008"
Exhaust .013"-.015"



Float Setting
(Use Gauge)
½ Inch



Idle Adjustment Screw Setting
1 to 2
Turns Open

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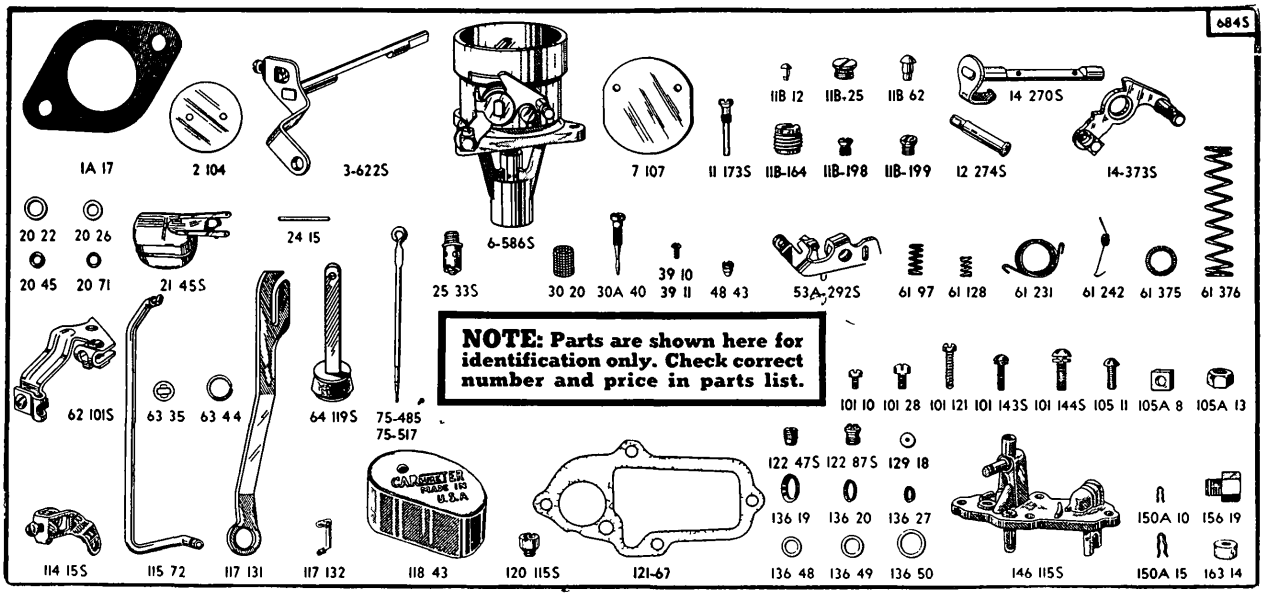
CARBURETER
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CARBURETER ADJUSTMENTS

If carbureter loads up after considerable service float level should be checked Wear on lip of float lever will raise float level Float level may be reset by bending lip of float lever down to raise float level or bending lever up to lower float level Only a very slight bend is needed

If motor stalls while idling, reset idle adjustment screw and throttle lever adjusting screw If these adjustments do not correct the trouble, remove low speed jet tube and clean thoroughly with compressed air Examine and see that tube seats gasoline-tight in body casting top and bottom If not replace with a new tube of identical specifications NEVER CHANGE A LOW SPEED JET TUBE FROM ONE CARBURETER TO ANOTHER

Poor acceleration may be due to clogged pump jet, damaged or worn plunger leather or dirt in the pump cylinder and pump check valves Clean pump jet and passages with compressed air Replace pump jet, check valves and pump plunger assembly to assure acceleration The pump jet and check valves must seat gasoline-tight When installing pump plunger assembly always use loading cylinder (T52-15) to prevent damage to plunger leather



CHEVROLET—1941-1951—CARBURETER 684S

WHEN SERVICING USE GASKET ASST No 152A REPAIR PACKAGE No 1500A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1A-17	FLANGE GASKET	
2-104	Throttle valve	
3-622S	Throttle shaft and lever assembly	
6 586S	Air horn assembly	
7-107	Choke valve	
11-173S	LOW SPEED JET ASSEMBLY	
11B-12	Rivet passage plug	(7)
11B-25	Pump check passage screw plug	
11B-62	Rivet passage plug	
11B-164	Nozzle plug	
11B-198	Pump discharge passage plug	
11B-199	Nozzle passage and idle passage plug	(2)
12-274S	NOZZLE ASSEMBLY	
14-270S	Choke shaft lever assembly	
14-373S	Choke lever assembly	
20-22	Needle seat gasket	
20-26	Metering rod jet gasket	
20-45	NOZZLE GASKET	
20-71	AIR HORN GASKET	
21-45S	Float and lever assembly	
24-15	Float lever pin	
25-33S	NEEDLE AND SEAT ASSEMBLY	
30-20	STRAINER GAUZE	
30A-40	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	Throttle valve attaching screw	(2)
48-43	PUMP JET	
53A 292S	Pump lever assembly	
61-97	Adjusting screw lock spring	
61-128	Connector rod spring (Use with 115 72)	
61-231	Choke valve spring	
61-242	Metering rod spring	
61-375	Plunger spring	
61-376	PUMP SPRING	
62-101S	Tube clamp assembly	
63-35	Spring retainer (Use with 115 72)	
63-44	Choke lever retainer ring	

Part No	PART NAME	
64-119S	PLUNGER AND ROD ASSEMBLY	
75-485	METERING ROD—STANDARD—067" 067" to 062" 062" to 060" 046"	
75 517	Metering rod—1 size lean—068" 068" to 065" 065" to 064" 049"	
75-562	Metering rod—1 size rich	
101-10	Wire clamp screw	
101 28	Throttle shaft arm clamp screw	
101-121	Throttle lever adjusting screw	
101-143S	Dust cover attaching screw and washer assembly	
101-144S	Air horn and bowl cover attaching screw and washer assembly	(7)
105 11	Tube clamp screw	(2)
105A 8	Tube clamp screw nut	(2)
105A-13	Flange nut	(2)
114-15S	THROTTLE SHAFT ARM AND SCREW ASSEMBLY	
115 72	Throttle connector rod (Sup by 115 149)	
115-149	THROTTLE CONNECTOR ROD	
117-131	Fast idle link	
117-132	Pump connector link	
118-43	Dust cover	
120-115S	METERING ROD JET ASSEMBLY	
121-67	BOWL COVER GASKET	
122 47S	DISCHARGE DISK CHECK ASSEMBLY	
122-87S	INTAKE DISK CHECK ASSEMBLY	
129-18	METERING ROD DISK	
136-19	†PLUG WASHER (CONICAL) 136 50 (FLAT)	
136-20	†PLUG WASHER (CONICAL) 136 49 (FLAT)	(2)
136-27	†PLUG WASHER (CONICAL) 136 48 (FLAT)	(2)
146-115S	Bowl cover and countershaft assembly	
150A-10	PIN SPRING	(2)
150A-15	PIN SPRING	
156-19	Fuel line fitting	
163-14	FELT PACKING	
172 21	THROTTLE CONNECTOR ROD RETAINER (Use with 115 149)	

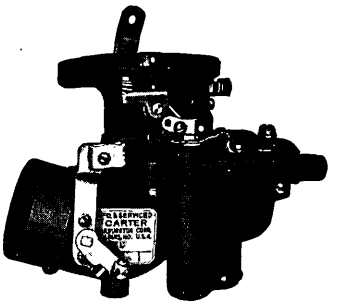
†Note· The use of flat or conical plug washers should be determined by shape of seat in casting

NOTE Figures in parentheses indicate number of pieces used in one carbureter When no figure is shown, only one is used.

CARTER CARBURETOR

DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

ALL MODELS



(Cut Shows 517S)

CHEVROLET

CAB-OVER-ENGINE TRUCK & FORWARD CONTROL DELIVERY

1941-1949

(517S can be used in place of 489S)

BB UP DRAFT CARBURETERS—Nos. 489S-517S-699S

CARBURETER SPECIFICATIONS

For Chevrolet Six-Cylinder Engine (3 1/2-inch Bore, 3 3/4-inch Stroke) (3-9/16-inch Bore, 3-15/16-inch Stroke)

Dimensions: Flange size, 1 1/4 inch (31.75 mm).
(489S) Throttle bore, 1-7/16 inch (36.51 mm).
(517S-699S) Throttle bore, 1 1/2 inch (38.10 mm).
(489S) Main venturi, 1 inch I.D. (25.40 mm).
(517S-699S) Main venturi, 1-1/16 inch I. D. (26.99 mm).
Air bleed through venturi, to idle passage .0885 to .0905 inch diameter (2.25 to 2.30 mm) drill.

Float Setting: Top of float 1/32 to 1/16 inch (.79 to 1.59 mm) below top of surface of lower body.

Balance Vent Tube: Inside diameter, 7/32 inch (5.56 mm).

Gasoline Intake Needle: Triangular, horizontal. No. 38 (2.58 mm) drill in needle seat.

Idle Jet Tube: (489S-517S) Jet size, .0236 inch (.60 mm) drill, (699S) .025 inch (.635 mm).

Idle Ports: Lower port size: .062 to .064 inch (1.58 to 1.63 mm) diameter. Top of port located .005 to .009 inch (.13 to .23 mm) below lower edge of valve. Upper port size: .053 to .057 inch (1.35 to 1.45 mm) diameter (for idle adjustment screw).

Set Idle Adjustment Screw: 1/2 to 1 1/2 turns open. For richer mixture, turn screw out. Do not idle engine below 300 r.p.m. or 6 m.p.h.

Main Metering Screw: (489S) Calibrated to flow 268 to 272 cc per minute; (517S) 366 to 370 cc per minute; (699S) calibrated to flow 352 to 356 cc per minute. (Do not gauge for size. If in doubt, replace with new part.)

Nozzle: (489S) No. 33 (2.87 mm) drill, I. D. (30°).
(517S) No. 33 (2.87 mm) drill, I. D. (24°).
(699S) .125 inch (3.175 mm) drill, I. D. (24°).

Accelerating Jets: (489S) 2—.0394 inch (1.00 mm) drill 1/16 inch (1.59 mm) from shoulder.
1—.051 inch (1.3 mm) drill 3/8 inch (9.525 mm) from shoulder.
1—.063 inch (1.6 mm) drill 23/32 inch (18.256 mm) from shoulder.
1—.051 inch (1.3 mm) drill 1-1/16 inch (26.99 mm) from shoulder.
(517S-699S) 2—.038 inch (.97 mm) drill 1/16 inch (1.59 mm) from shoulder.
2—.038 inch (.97 mm) drill 3/8 inch (9.525 mm) from shoulder.
2—.038 inch (.97 mm) drill 23/32 inch (18.256 mm) from shoulder.
(517S) 2—.038 inch (.97 mm) drill 1-1/16 inch (26.99 mm) from shoulder.
(699S) 2—.052 inch (1.32 mm) drill 1-1/16 inch (26.99 mm) from shoulder.

Air Bleed to Nozzle: (489S) (Vent tube) Size, .0394 inch (1.00 mm) drill.
(517S) (Vent tube) Size, .048 inch (1.22 mm) drill.

Step-up Jet: (489S) (Power Orifice) Size, .038 inch (.965 mm) drill; (517S) Size, .055 inch (1.40 mm) drill; (699S) Size, .043 inch (1.092 mm) drill.

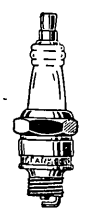
Accelerating Pump: Type, low pressure, delayed action. Stroke: Summer setting, inner hole, short stroke 9/16 inch (14.29 mm). Winter setting (outer hole, long stroke) 1 inch (25.40 mm). Pump intake ball check: Size 1/8 inch (3.175 mm). Pump discharge retainer (in pump valve cage assembly) .0635 inch diameter (1.615 mm) drill size.

Choke: Butterfly type, with poppet valve.

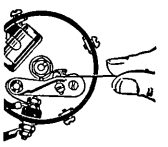
Vacuum Spark Port: Slot type, .041 x .125 (1.041 x 3.175 mm). Top of port .000 to .004 inch (.0 to .1016 mm) below valve.

Motor Tune-Up—Be Accurate!

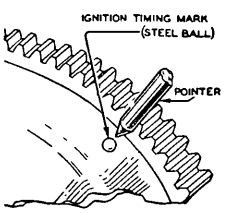
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



Spark Plug Gap .040"



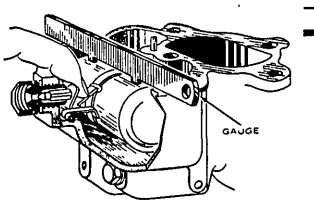
Breaker Point Setting .018"



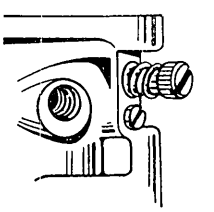
Ignition Timing
Breaker Points to Open:
5° B.T.D.C.



Valve Setting (Hot)
Intake .006" to .008"
Exhaust .013" to .015"



Float Setting (Use Gauge)
1/32 to 1/16 Inch



Idle Adjustment Screw Setting 1/2 to 1 1/2 Turns Open

CARBURETER ADJUSTMENTS

To Secure a Good Idle: Set throttle lever adjusting screw so motor runs approximately 300 rpm. Then set idle adjustment screw so motor fires evenly. Correct setting will be found between 1/2 and 1 1/2 turns open. A richer mixture is obtained by backing out adjustment screw—a leaner mixture by turning screw in. If motor stalls while idling, remove idle passage tube and idle jet tube and clean with compressed air.

To Improve Acceleration: Examine pump link setting: For winter driving, link screw should be set in outer hole, giving long stroke; for hot weather, in high altitudes, pump link should be connected in inner hole, giving short stroke. If this does not give desired results, the main metering jet, pump metering jet, check valve assembly and pump valve assembly should be removed and cleaned with compressed air.

If Motor Loads—Check Float Level: Wear on lip of float lever will raise float level from factory setting, causing carbureter to load up. To lower float level, bend lip of float lever toward needle. To raise float level, bend lip away from needle. A very slight bend is sufficient. Be sure to bend lip of float, **not** bracket.

Economy: (a) Maximum economy is secured only when breaker points, spark plugs, valves and motor timing are set to manufacturer's specifications.
(b) Float level must be set as instructed above.

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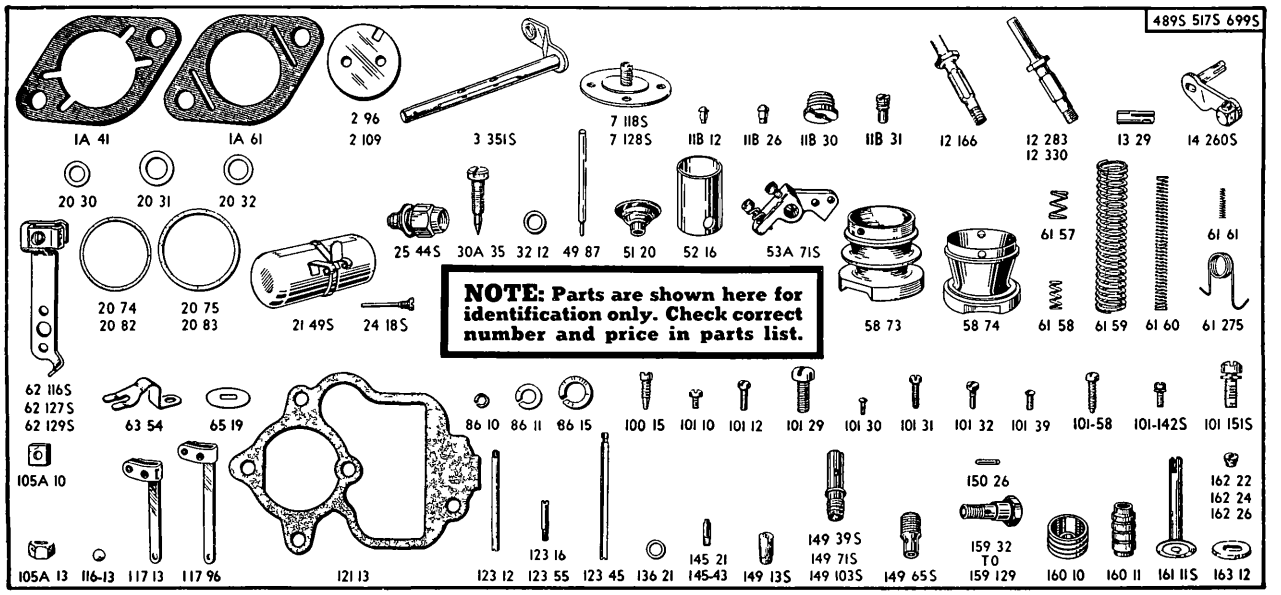
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(c) Step-up valve cage assembly should be examined. Ball check in this assembly must seat and move freely. When reassembling, valve cage must be screwed in tight against seat

(d) Step-up push rod must move freely in upper and lower guides

(e) Step-up piston in upper casting should not bind and must be free from dirt



Chevrolet Six Truck—1941-1949—Carbureters 489S-517S-699S

WHEN SERVICING, USE GASKET ASSORTMENT No. 153 (489S), No. 170B (517S-699S);
REPAIR PACKAGE No. 1090 (489S), No. 1327B (517S), No. 1529 (699S).

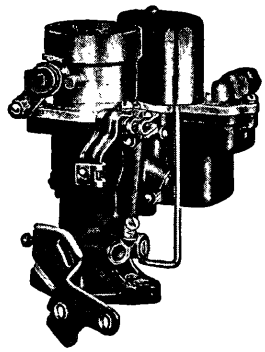
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME
1A-41	FLANGE GASKET—WITHOUT GOVERNOR
1A-61	FLANGE GASKET—WITH GOVERNOR
2-96	Throttle valve (489S)
2-109	Throttle valve (517S-699S)
3-351S	Throttle shaft and lever ass'y
7-118S	Choke valve assembly (Sup. by 7-128S)
7-128S	Choke valve assembly
11B-12	Rivet plug
11B-26	Rivet plug (3)
11B 30	Step-up piston plug
11B 31	Idle hole plug
12-166	Nozzle (489S)
12-283	Nozzle (517S)
12-330	Nozzle (699S)
13-29	Choke shaft (stub)
14-260S	Choke ass'y with clamp and screw
20-30	NOZZLE GASKET
20-31	Needle seat gasket
20-32	METERING SCREW GASKET
20-74	VENTURI GASKET—UPPER (489S)
20-75	VENTURI GASKET—LOWER (489S)
20-82	VENTURI GASKET—UPPER (517S-699S)
20 83	VENTURI GASKET—LOWER (517S-699S)
21-49S	Float and lever assembly
24-18S	FLOAT LEVER PIN AND PLUG ASSEMBLY
25-44S	NEEDLE AND SEAT ASSEMBLY
30A-35	Idle adjustment screw
32-12	Pump rod gasket (489S-517S)
49-87	STEP-UP PUSH ROD
51-20	Pump collar
52-16	Pump sleeve
53A-71S	Pump arm assembly
58-73	Venturi (489S)
58-74	Venturi (517S-699S)
61-57	Idle adjustment screw spring
61-58	Throttle lever adjusting screw spring
61-59	PUMP SPRING
61-60	STEP-UP PISTON SPRING
61-61	Step-up valve spring
61-275	Choke pull-back spring (517S-699S)
62-116S	Choke tube bracket ass'y (Sup. by 62-127S)
62-127S	Choke tube bracket ass'y (489S)
62-129S	Choke tube bracket ass y (517S 699S)
63-54	Packing retainer
65-19	Pump link cover plate (2)
86-10	Lock washer
86-11	Lock washer (Used with 101-29 on 517S) (489S) (3)
86-15	Flange stud lock washer (2)
100-15	Pump arm set screw

Part No.	PART NAME
101-10	Wire clamp screw
101-12	Choke bracket clamp screw
101-29	Body attaching screw (Sup. by 101-151S on 517S) (489S) (3)
101-30	Choke valve screw (2)
101-31	Throttle lever adjusting screw (Sup by 101 58)
101-32	PUMP LINK SCREW
101-39	Throttle valve screw (2)
101-58	Throttle lever adjusting screw
101-142S	Attaching screw and washer assembly (3)
101-151S	Body attaching screw and washer ass'y (517S-699S) (3)
105A-10	Choke tube clamp nut
105A-13	Flange nut (2)
116-13	Ball (2)
117-13	Pump link (489S)
117-96	Pump link (517S-699S)
121-13	BODY GASKET
123-12	Idle passage tube (489S)
123-16	IDLE ORIFICE TUBE (489S-517S)
123-45	Idle passage tube (517S-699S)
123-55	IDLE ORIFICE TUBE (699S)
136-21	FLOAT PIN PLUG WASHER
145-21	VENT TUBE (489S)
145-43	VENT TUBE (517S-699S)
149-13S	CHECK VALVE ASSEMBLY
149-39S	STEP-UP VALVE ASSEMBLY (489S)
149-65S	PUMP VALVE ASSEMBLY
149-71S	STEP-UP VALVE ASSEMBLY (517S)
149-103S	STEP-UP VALVE CAGE ASSEMBLY (699S)
150-26	Pump collar pin
159-32	Main metering screw—3 sizes lean (489S)
159-40	Main metering screw—1 size rich (489S)
159-46	MAIN METERING SCREW—STANDARD (489S)
159-53	Main metering screw—1 size lean (489S)
159-54	Main metering screw—2 sizes lean (489S)
159-98	MAIN METERING SCREW—STANDARD (517S)
159-99	MAIN METERING SCREW—(1 SIZE LEAN—517S), (STD 699S)
159-100	MAIN METERING SCREW—2 SIZES LEAN (517S), 1 SIZE LEAN (699S)
159-129	Main metering screw—2 sizes lean (699S)
160-10	Pump piston
160-11	STEP-UP PISTON
161-11S	Pump rod plate and rod assembly
162-22	Power orifice (489S)
162-24	Power orifice (517S)
162-26	Power orifice (669S)
163-12	FELT PACKING

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.

616S—FLEET ECONOMY MODEL



Casting No. 432 on face of flange.

CHEVROLET CARBURETER No. 616S 1946-1948

(2008S can also be used)

W-1 DOWN-DRAFT CARBURETER—**No. 616S**

CARBURETER SPECIFICATIONS

For Chevrolet Six Cylinder Engine: 3½ Inch Bore, 3¼ Inch Stroke

Dimensions: Flange size, 1¼ inch S. A. E.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 11/16 inch I. D.
Main venturi, 1-1/16 inch I. D.

Float Level: Distance from float (at free end) to float chamber cover, when needle is seated, to be ½ inch plus or minus 1/64 inch.

Vents: Outside, none. Inside balance vent tube above choke valve.

Gasoline Intake: Square vertical needle. Size No. 48 drill hole in needle seat.

Low Speed Jet Tube: Vertical jet size .025 inch diameter.
By-pass in body, size No. 56 drill.
Economizer jet, size .0545 to .0555 inch diameter.

Idle Ports: Upper port diameter, .086 inch diameter. Lower port diameter, .055 inch diameter.

Idle Port Opening: Top of lower port .044 to .048 inch above top edge of valve, with valve closed tight.

Idle Screw Seat: Size No. 52 drill.

Set Idle Adjustment Screw: 1¼ to 2¼ turns open. For richer mixture, turn screw out. Do not attempt to idle engine below 350 r. p. m.

Outer Nozzle: In primary venturi, angle 30°. Discharge size, .125 inch diameter.

Inner Nozzle: (Seats in outer nozzle) .120 inch I. D.

Nozzle Retainer Plug: Jet size, .0595 inch diameter.

Metering Rod: Economy step .0645 inch diameter. Second step .063 inch diameter. Third step tapers to .061 inch diameter. Power step .046 inch diameter. Length 3⅜ inches.

Metering Rod Jet: Size, .0835 inch diameter.

Metering Rod Setting: Use gauge, part No. T109-25 (2.795 inches).

Accelerating Pump: Low pressure type with non-adjustable stroke.
Discharge (pump) jet, size .025 inch diameter.
Intake disk check plug, size No. 62 drill.
Discharge disk check plug, size No. 40 drill.

Choke: Manual—butterfly type, offset valve.

Throttle Lever: Restricts maximum speed to approximately 60 m. p. h.

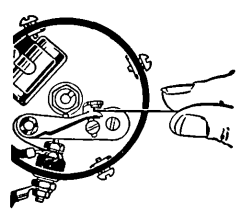
Vacuum Spark Port: Slot type: size, .041 to .125. Bottom of port .000 to .004 above top of valve.

Motor Tune-Up—Be Accurate!

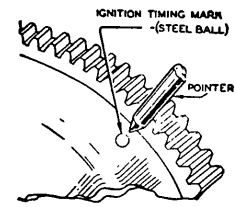
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



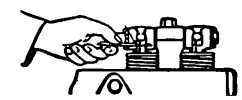
Spark Plug Gap .040"



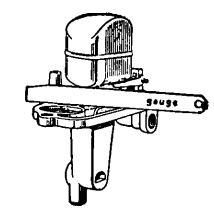
Breaker Point Setting .018"



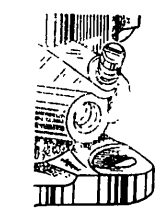
Ignition Timing Breaker Points to Open: 5° B.T.D.C.



Valve Setting HOT
Intake .006"-.008"
Exhaust .013"-.015"



Float Setting (Use Gauge) ½ Inch



Idle Adjustment Screw Setting 1¼ to 2¼ Turns Open

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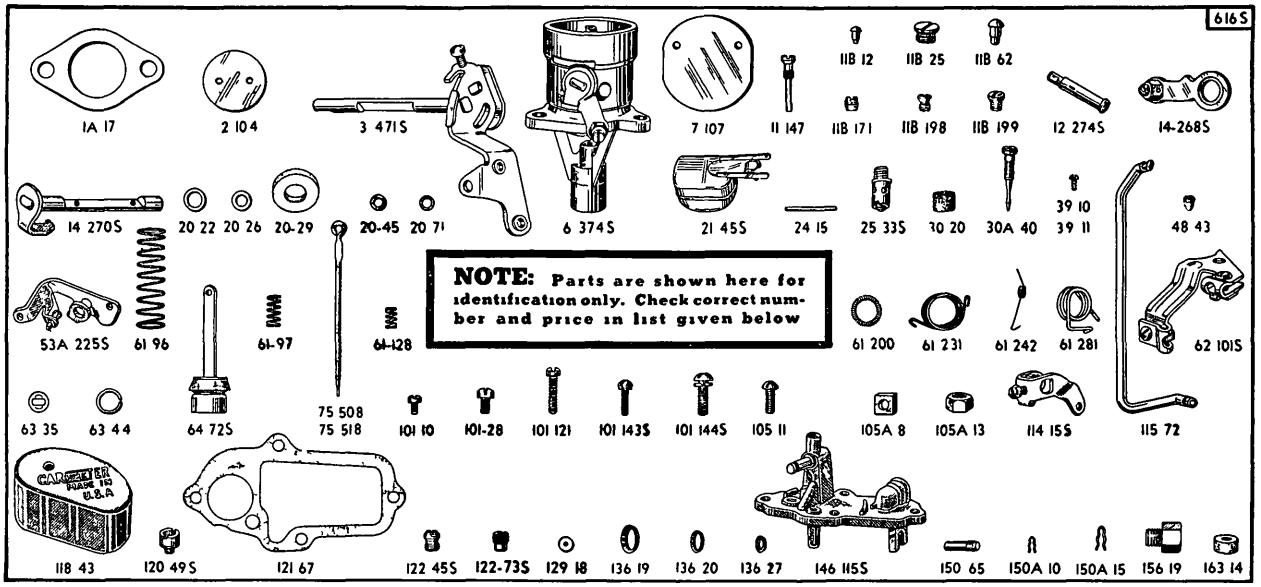
CARBURETER ADJUSTMENTS

If carpureter loads up after considerable service, float level should be checked Wear on lip of float lever will raise float level Float level may be reset by bending lip of float lever down to raise float level or bending lever up to lower float level Only a very slight bend is needed

If motor stalls while idling, reset idle adjustment screw and throttle lever adjusting screw If these adjustments do not correct the trouble, remove low speed jet tube and clean thoroughly with compressed air Examine and see that tube seats gasoline-tight in body casting, top and bottom If not, replace with a new tube of identical specifications NEVER CHANGE A LOW SPEED JET TUBE FROM ONE CARBURETER TO ANOTHER

Increased resistance on foot throttle indicates a clogged pump jet Pump jet should be removed and cleaned with compressed air, which, in many cases will remove the dirt or lint However, it is usually advisable to replace the pump jet, as its cost is nominal All jets and ball checks must be seated gasoline-tight

Poor acceleration may be due to damaged or worn plunger leather in accelerating pump corrosion in pump cylinder, loose or cracked cylinder, cracked plunger cup or bent pump arm (parts which may be replaced at small cost) When plunger is removed from cylinder, always use loading tool in reassembling to avoid damage to plunger leather



CHEVROLET SIX—1946-48—CARBURETER 616S

WHEN SERVICING, USE GASKET ASSORTMENT No 138A, REPAIR PACKAGE No 1091B

PART NAMES IN CAPITAL LETTERS, LISTED BELOW INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1A-17	FLANGE GASKET	
2-104	Throttle valve	
3-471S	Throttle shaft and lever assembly	
6-374S	Air horn assembly	
7-107	Choke valve	
11-147	LOW SPEED JET	
11B-12	Rivet plug	(7)
11B-25	Ball check passage plug	
11B-62	Rivet plug	
11B-171	Nozzle retainer plug	
11B-198	Pump jet passage plug	
11B-199	Idle port and nozzle passage plug	(2)
12-274S	Nozzle assembly	
14-268S	Choke lever assembly	
14-270S	Choke shaft and lever assembly	
20-22	Needle seat gasket	
20-26	Metering rod jet gasket	
20-29	PUMP CYLINDER GASKET (UPPER)	
20-45	Nozzle gasket	
20-71	AIR HORN GASKET	
21-45S	Float and lever assembly	
24-15	Float lever pin	
25 33S	NEEDLE AND NEEDLE SEAT ASSEMBLY	
30-20	PUMP STRAINER GAUZE	
30A-40	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	Throttle valve attaching screw	(2)
48-43	PUMP JET 72 DRILL	
53A-225S	Pump lever assembly	
53A-276S	Pump lever ass y (late production)	
61-96	Pump spring	
61-97	Idle adjusting screw spring	
61 128	Connector rod spring (Use with 115 72)	
61-200	Plunger spring	
61-231	Choke valve spring	
61-242	Metering rod spring	
61-281	Pump connector spring link	
62-101S	Tube clamp assembly	
63-35	Connector rod spring retainer (Use with 115 72)	
63-44	Choke spring retainer ring	

Part No	PART NAME	
64-72S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49-129)	
75-508	METERING ROD—STANDARD— 0645" 0645" to 063"- 063" to 061"- 046"	
75-518	Metering rod—One size lean— 0655" 0655" to 0645" 0645" to 06275"- 049"	
101-10	Wire clamp screw	
101-28	Throttle shaft arm clamp screw	
101-121	Throttle lever adjusting screw	
101-143S	Dust cover attaching screw and washer assembly	
101-144S	Bowl cover and air horn attaching screw and washer assembly	(7)
105-11	Tube clamp screw	(2)
105A-8	Tube clamp nut	(2)
105A-13	Flange nut	(2)
114-15S	THROTTLE SHAFT ARM AND SCREW ASSEMBLY	
115-72	Throttle connector rod (Sup by 115 149)	
115-149	THROTTLE CONNECTOR ROD	
117 92	★Connector link	
118-43	Dust cover	
120-49S	METERING ROD JET ASSEMBLY— 0835" DR	
121-67	BOWL COVER GASKET	
122-45S	PUMP INTAKE CHECK ASSEMBLY	
122-47S	DISCHARGE DISK CHECK ASSEMBLY	
122-73S	Pump discharge check ass y (Sup by 122 47S)	
129-18	Metering rod disk	
136-19	†PLUG WASHER (CONICAL) 136-50 (FLAT)	
136-20	†PLUG WASHER (CONICAL) 136-49 (FLAT)	(2)
136-27	†PLUG WASHER (CONICAL) 136-48 (FLAT)	(2)
146-115S	Bowl cover and countershaft assembly	
150 65	Throttle lever stop pin	
150A-10	PIN SPRING	
150A-15	PIN SPRING	
156-19	Gas line nipple	
163-14	Felt packing	
172-21	THROTTLE CONNECTOR ROD RETAINER (Use with 115-149)	

★117 92 Available for service (not used in production)

†The use of flat or conical plug washers should be determined by shape of seat in casting

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

CHEVROLET 483S-492S-515S-570S-574S
September, 1940
Revised May, 1956

492S: FLEET ECONOMY MODEL
(2008S Can Also Be Used)

483S-574S: MASTER & MASTER DE LUXE MODELS

483S-515S-570S-574S: GOVERNMENT TRUCK

(964S can be used in place of 483S-515S-570S-574S)

(Note: 483S-515S-570S-574S body painted black; 492S body painted brown)

CHEVROLET
1941-1948

Casting No. 421 on face of flange of 483S-515S-574S; No. 432 on 492S; No. 492 on 570S.

W-1 DOWN-DRAFT CARBURETERS **Nos. 483S-492S-515S-570S-574S**

CARBURETER SPECIFICATIONS

For Chevrolet Six Cylinder Engine: 3½ Inch Bore, 3¾ Inch Stroke (483S-492S-574S)
For Chevrolet Six Cylinder Engine: 3-9/16 Inch Bore, 3-15/16 Inch Stroke (515S-570S)

Dimensions: (All) Flange size, 1¼ inch S. A. E.
(All) Primary venturi, 11/32 inch I. D.
(All) Secondary venturi, 11/16 inch I. D.
(483S-515S-570S-574S) Main venturi, 1¼ inch I. D.
(492S) Main venturi 1-1/16 inch I. D.

Float Level: (483S-492S-574S) Distance from float (at free end) to float chamber cover, when needle is seated, to be ½ inch plus or minus 1/64 inch; (515S-570S) ⅜ inch.

Vents: (All) Outside, none. Inside balance vent tube above choke valve 13/64 inch I. D.

Gasoline Intake: (All) Square vertical needle. Size No. 48 drill hole in needle seat.

Low Speed Jet Tube: (483S-515S-570S-574S) Vertical jet size, .035 inch diameter.
(492S) Jet size, No. 72 drill.
(483S-515S-570S-574S) By-pass in body, size No. 51 drill.
(492S) By-pass in body, size No. 56 drill.
(All) Economizer jet; size .0545 to .0555 inch diameter.

Idle Ports: (All) Upper port diameter, No. 44 drill.
(483S-515S-570S-574S) Lower port diameter, No. 54 drill.
(492S) Lower port diameter, No. 52 drill (early production); No. 54 drill (late production).

Idle Port Opening: (483S-492S-515S-574S) Top of lower port .044 to .048 inch above top edge of valve, with valve closed tight.
(570S) Top of lower port .016 to .020 inch above top edge of valve with valve closed tight.

Idle Screw Seat: (All) Size No. 52 drill.

Set Idle Adjustment Screw: (All) 1¼ to 2¼ turns open. For richer mixture, turn screw out. Do not attempt to idle engine below 350 r. p. m.

Outer Nozzle: (All) In primary venturi, angle 30°. Discharge size, .125 inch diameter.

Inner Nozzle: (All) (Seats in outer nozzle) .120 inch I. D.

Nozzle Retainer Plug: (483S-515S-570S-574S) Jet size No. 31 drill (early production), No. 29 drill (late production).
(492S) Jet size, No. 53 drill.

Metering Rod: **(483S-574S—CIVILIAN VEHICLES)** Economy step .067 inch diameter. Second step tapers to .062 inch diameter. Third step tapers to .060 inch diameter. Power step .046 inch diameter. Length 3⅜ inches.
(483S-515S-570S-574S—MILITARY VEHICLES) Economy step 066 inch diameter. Second step tapers to .058 inch diameter. Power step .042 inch diameter. Length 3⅜ inches.
(492S) Economy step .0645 inch diameter. Second step .063 inch diameter. Third step tapers to .061 inch diameter. Power step .046 inch diameter. Length 3⅜ inches.

Metering Rod Jet: (483S-515S-570S-574S) Size .093 inch diameter. (492S) Size .0835 inch diameter.

Metering Rod Setting: (All) Use gauge, part No. T109-25 (2.795 inches).

Accelerating Pump: (All) Low pressure type with non-adjustable stroke.
(All) Discharge jet, size No. 72 drill.
(All) Intake disk check plug, size No. 62 drill.
(All) Discharge disk check plug, size No. 40 drill.

Choke: Butterfly type, offset valve.

Throttle Valve: Opens to within 0° to 3° from perpendicular (483S-515S-570S-574S).

Throttle Lever: Restricts maximum speed to approximately 60 m.p.h. (492S).

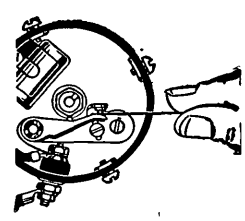
Vacuum Spark Port: (483S-492S-515S-574S) Slot type: size, .041 to .125. Bottom of port .000 to .004 above top of valve. (570S) None.

Motor Tune-Up—Be Accurate!

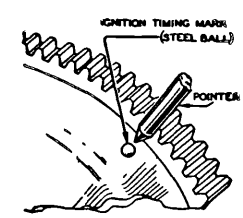
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



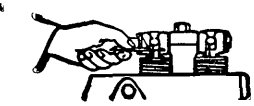
Spark Plug Gap .040"



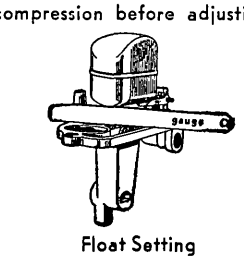
Breaker Point Setting .018"



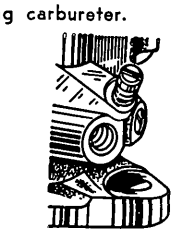
Ignition Timing Breaker Points to Open: 5° B.T.D.C.



Valve Setting HOT
Intake .006"-.008"
Exhaust .013"-.015"



Float Setting (Use Gauge)
½ Inch (483S-492S-574S)
⅜ Inch (515S-570S)



Idle Adjustment Screw Setting 1¼ to 2¼ Turns Open

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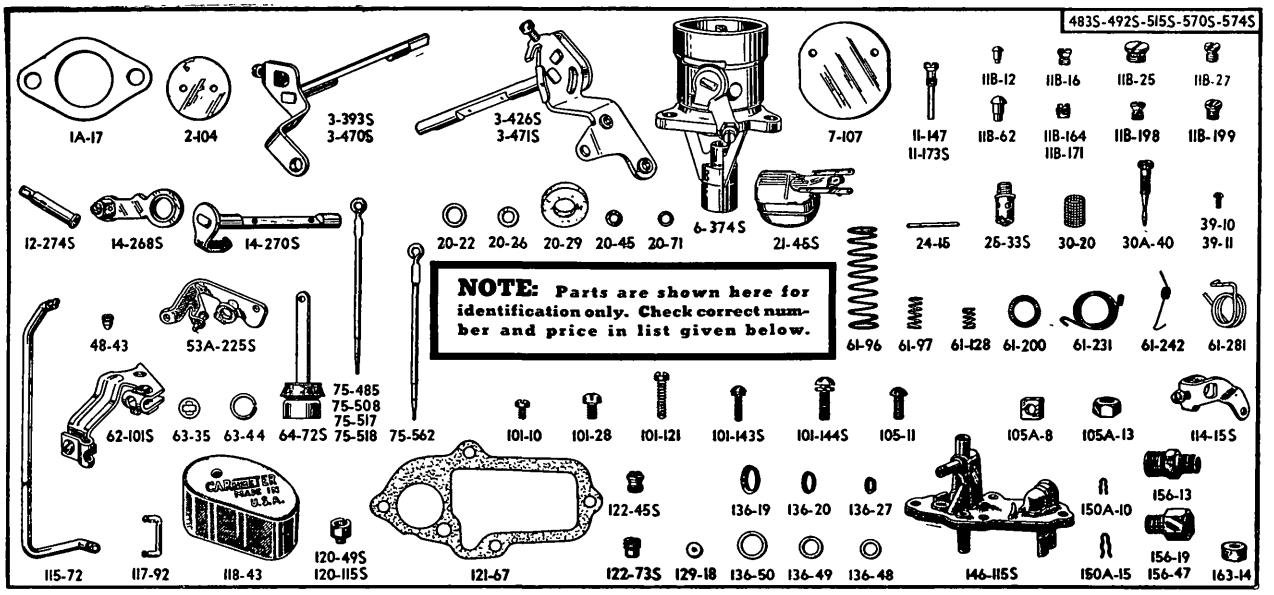
CARBURETER ADJUSTMENTS

If carbureter loads up after considerable service, float level should be checked. Wear on lip of float lever will raise float level. Float level may be reset by bending lip of float lever down to raise float level or bending lever up to lower float level. Only a very slight bend is needed.

If motor stalls while idling, reset idle adjustment screw and throttle lever adjusting screw. If these adjustments do not correct the trouble, remove low speed jet tube and clean thoroughly with compressed air. Examine and see that tube seats gasoline-tight in body casting, top and bottom. If not, replace with a new tube of identical specifications. NEVER CHANGE A LOW SPEED JET TUBE FROM ONE CARBURETER TO ANOTHER.

Increased resistance on foot throttle indicates a clogged pump jet. Pump jet should be removed and cleaned with compressed air, which, in many cases, will remove the dirt or lint. However, it is usually advisable to replace the pump jet, as its cost is nominal. All jets and ball checks must be seated gasoline-tight.

Poor acceleration may be due to damaged or worn plunger leather in accelerating pump, corrosion in pump cylinder, loose or cracked cylinder, cracked plunger cup or bent pump arm (parts which may be replaced at small cost). If plunger is removed from cylinder, always use loading tool in reassembling to avoid damage to plunger leather.



Chevrolet Six—1941-48—Carbureters 483S-492S-515S-570S-574S

USE FOR MILITARY VEHICLES ONLY—CARBURETERS 483S-515S-570S-574S

Gasket Assortment 174A; Repair Package 1336B

USE FOR CIVILIAN VEHICLES ONLY—CARBURETERS 483S-492S-574S

Gasket Assortment 138A; Repair Packages: (483S-574S) 1089D, (492S) 1091B

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME
1A-17	FLANGE GASKET (All)
2-104	Throttle valve (All)
3-393S	Throttle shaft and lever assembly (Sup. by 3-470S) (483S-515S)
3-426S	Throttle shaft and lever assembly (Sup. by 3-471S) (492S)
3-470S	Throttle shaft and lever assembly (483S-515S-570S-574S)
3-471S	Throttle shaft and lever assembly (492S)
6-374S	Air horn assembly (All)
7-107	Choke valve (All)
11-147	LOW SPEED JET (492S)
11-173S	LOW SPEED JET ASSEMBLY (483S-515S-570S-574S)
11B-12	*RIVET PLUG (All) (7)
11B-16	Pump jet passage plug (Sup. by 11B-198) (All)
11B-25	Disk check passage plug (All)
11B-27	Nozzle and idle passage plug (Sup. by 11B-199) (All) (2)
11B-62	Rivet plug (All)
11B-164	*NOZZLE PLUG (483S-515S-570S-574S)
11B-171	Nozzle plug (492S)
11B-198	Pump jet passage plug (All)
11B-199	*IDLE HOLE PASSAGE PLUG (All) (2)
12-274S	NOZZLE ASSEMBLY (All)
14-268S	Choke assembly (All)
14-270S	Choke shaft and lever assembly (All)
20-22	Needle seat gasket (570S-574S)
20-26	Metering rod jet gasket (All)
20-29	PUMP CYLINDER GASKET—UPPER (All)
20-45	NOZZLE GASKET (All)
20-71	AIR HORN GASKET (All)
21-45S	Float and lever assembly (All)
24-15	FLOAT LEVER PIN (All)
25-33S	NEEDLE AND SEAT ASSEMBLY (All)
30-20	STRAINER GAUZE (All)
30A-40	Idle adjustment screw (All)
39-10	CHOKE VALVE ATTACHING SCREW (All) (2)
39-11	THROTTLE VALVE ATTACHING SCREW (All) (2)
48-43	PUMP JET, 72 DRILL (All)
53A-225S	★PUMP LEVER ASSEMBLY (All)
53A-276S	Pump lever assembly (574S late production)
61-96	Pump spring (All)
61-97	Adjusting screw lock spring (All)
61-128	Connector rod spring (Use with 115-72) (All)
61-200	Plunger spring (All)
61-231	Choke valve spring (All)
61-242	Metering rod spring (All)
61-256	Plunger spring (Sup. by 61-200) (All)
61-281	Pump connector link spring (All)
62-101S	Tube clamp assembly (All)
63-35	Spring retainer (Use with 115-72) (All)
63-44	Retainer ring (All)
64-72S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No. 49-129) (All)
75-485	METERING ROD—STANDARD—CIVILIAN VEHICLES ONLY—.067"-.067" to .062"-.062" to .060"-.046" (Sup. by 75-562 on Military Vehicles only) (483S-574S)
75-508	METERING ROD—STANDARD—.0645"-.0645" to .063"-.063" to .061"-.046" (492S)
75-517	Metering rod—1 size lean—CIVILIAN VEHICLES ONLY—.068"-.068" to .065"-.065" to .064"-.049" (483S-574S)
75-518	Metering rod—1 size lean—.0655"-.0655" to .0645"-.0645" to .06275"-.049" (492S)
75-562	METERING ROD—STANDARD—MILITARY VEHICLES ONLY—.066"-.066" to .058"-.042" (483S-515S-570S-574S)
101-10	Wire clamp screw (All)
101-28	Throttle shaft arm clamp screw (All)
101-121	Throttle lever adjusting screw (All)
101-143S	Dust cover attaching screw and washer assembly (All)
101-144S	AIR HORN OR BOWL COVER ATTACHING SCREW AND WASHER ASSEMBLY (All) (7)
105-11	Tube clamp screw (All) (2)
105A-8	Tube clamp nut (All) (2)
105A-13	Flange nut (All) (2)
114-15S	THROTTLE SHAFT ARM AND SCREW ASSEMBLY (All)
115-72	Throttle connector rod (Sup. by 115-149) (All)
115-149	THROTTLE CONNECTOR ROD (All)
117-92	★Connector link (Sup. by 61-281 on 483S-492S-515S)
118-43	Dust cover (All)
120-49S	METERING ROD JET ASSEMBLY—.0835" Dr. (492S)
120-115S	METERING ROD JET ASSEMBLY—.093" Dr. (483S-515S-570S-574S)
121-67	BOWL COVER GASKET (All)
122-45S	INTAKE DISK CHECK ASSEMBLY (All)
122-47S	DISCHARGE DISK CHECK ASSEMBLY (All)
122-73S	Discharge disk check assembly (Sup. by 122-47S) (All)
129-18	METERING ROD DISK (All)
136-19	†PLUG WASHER (conical) 136-50 (flat) (All)
136-20	†PLUG WASHER (conical) 136-49 (flat) (All) (2)
136-27	†PLUG WASHER (conical) 136-48 (flat) (All) (2)
146-115S	Bowl cover and countershaft assembly (All)
150A-10	PIN SPRING (All) (3)
150A-15	PIN SPRING (All)
156-13	Gas line nipple (483S-492S-515S)
156-19	Gas line fitting (brass) optional (570S-574S)
156-47	Gas line fitting (steel) (570S-574S)
163-14	FELT PACKING (All)
172-21	THROTTLE CONNECTOR ROD RETAINER (Use with 115-149)

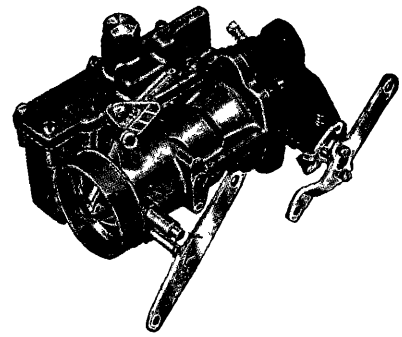
★53A-225S and 117-92 available for service (not used in production).

*Contained in Repair Parts Package 1336B only.

†Note: The use of flat or conical plug washers should be determined by shape of seat in casting.

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure shown, only one is used.

Model M-80
Two Carbureters
Per Engine



CHRYSLER MARINE 1959

YH Horizontal **Carbureter No. 2911S**

CARBURETER SPECIFICATIONS

For Chrysler 8 Cylinder 318 Cu. In. Engine: Vacuum at Idle 19.5 Inches

Dimensions: Flange size 1¼ inch 3 bolt Primary venturi 11/32 inch I D Secondary venturi 11/16 inch I D Main venturi 1 5/16 inch I D

Vents: Outside none Inside balance vent tube to air horn ahead of choke valve

Low Speed Circuit: Jet size No 69 (.029 inch) drill By pass in body size No 56 (.0465 inch) drill Economizer size No 60 (.040 inch) drill Idle port slot type length .162 inch width .030 inch

Idle Port Opening: Top of port .124 to .128 inch above top edge of valve with valve tightly closed Lower port size .0615 to .0655 inch diameter (for idle adjusting screw)

Set Idle Adjustment Screw: ¼ to 1¾ turns open For richer mixture turn screw out Do not idle engine below 500 r p m

Main Nozzle: In primary venturi DO NOT REMOVE Anti percolating jet (in tube) to nozzle size No 70 (.028 inch) drill

Accelerating Pump: Diaphragm type vacuum and mechanically operated Discharge (pump) jet size No 70 (.028 inch) drill Intake ball check (in diaphragm housing) seat size 115 120 inch diameter Discharge needle check (in body) seat size .092 inch diameter Vacuum passage restriction (in body) size No 46 (.081 inch) drill Vacuum bleed (to throttle bore) size No 65 (.035 inch) drill

Choke: Manual, offset butterfly type with poppet valve

Vacuum Spark Port: None

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .017"	Ignition Timing Breaker Points to Open: 10° B. T. C. At Vibration Damper	Valve Setting (Hot) Intake .010" Exhaust .018"	Float Setting 9/16 Inch (Use gauge T109-84)	Idle Adjustment Screw Setting ¼ to 1¾ Turns Open Idle Engine at 500 R.P.M. in Neutral

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: With gasket removed, bowl cover assembly inverted and float resting on pin in seated needle, the distance from the bowl cover to the top of float should be 9/16 inch (gauge T109-84). Do not depress float lip against spring loaded pin in needle, but let float rest of its own weight Adjust by bending float lever Float setting must be checked with bowl cover held at eye height in a level position

FLOAT DROP: With bowl cover assembly held in upright position, the distance between bottom of float (at free end) and bowl cover should be 2⅜" Adjust by bending stop tab on float arm

METERING ROD ADJUSTMENT: This adjustment is important and should be checked each time the carbureter is reassembled Insert gauge (T109-104) in place of metering rod, seating tapered end of gauge in metering rod jet Hold gauge vertical to insure seating in jet With throttle valve tightly closed, press down on diaphragm shaft until metering rod arm contacts lifter link at diaphragm stem With diaphragm shaft held in this position, metering rod pin must

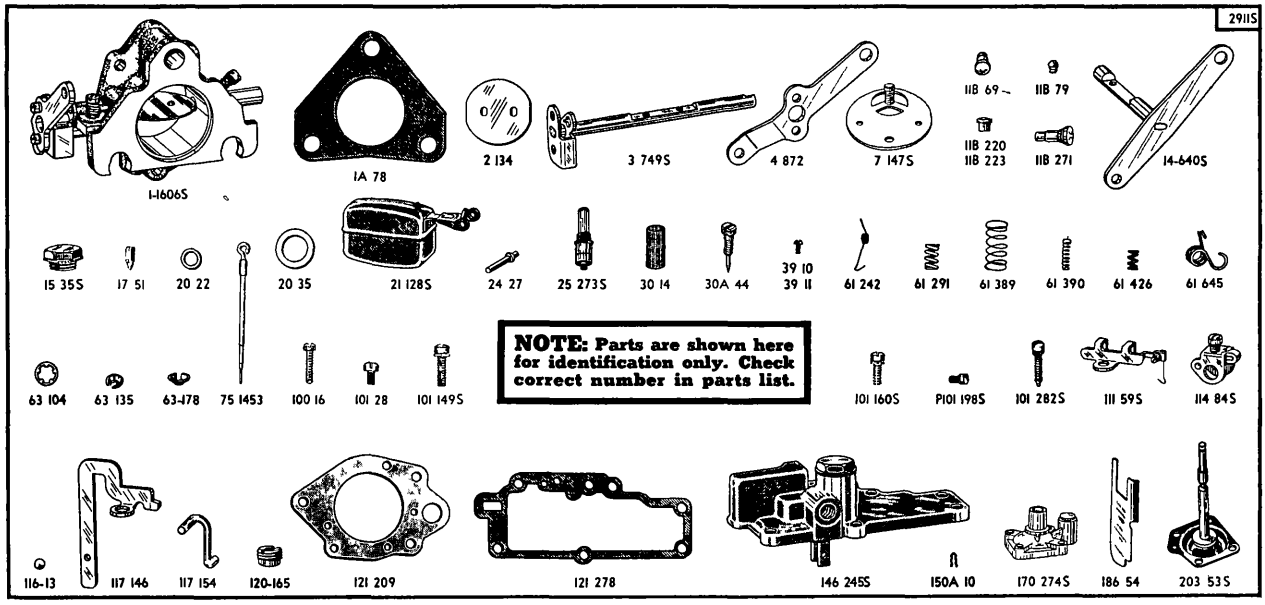
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rest lightly on metering rod gauge To adjust, bend metering rod arm Use bending tool T109-22

ACCELERATING PUMP If acceleration is not satisfactory, remove pump housing, intake rivet plug and ball check Examine diaphragm for wear or damage Be sure intake check ball and discharge check needle seats are not clogged with lint or foreign matter Intake ball check and discharge needle must seat, as a leak at these points will result in poor acceleration Inspect and replace all worn parts, clean and blow out all passages with compressed air Pump jet is permanently installed, do not remove



Chrysler Marine—1959—Carbureter No. 2911S

WHEN SERVICING, USE GASKET ASSORTMENT No. 333

Part No.	PART NAME	
1-1606S	—Body flange assembly	
1A-78	Flange gasket	
2-134	Throttle valve	
3-749S	Throttle shaft and lever assembly	
4-872	—Throttle lever	
7-147S	Choke valve assembly	
11B-69	Rivet plug	
11B-79	Rivet plug	(3)
11B-220	Rivet plug	
11B-223	Rivet plug	
11B-271	Idle port rivet plug	
14-640S	—Choke lever and shaft assembly	
15-35S	Strainer nut assembly	
17-51	Pump check needle	
20-22	Needle seat gasket	
20-35	Bowl strainer gasket	
21-128S	Float and lever assembly	
24-27	Float lever pin	
25-273S	Needle pin spring and seat assembly (.076")	
30-14	Bowl strainer	
30A-44	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	Throttle valve attaching screw	(2)
61-242	Metering rod spring	
61-291	Throttle lever adjusting screw spring	
61-389	Pump diaphragm spring	
61-390	Upper pump spring	

Part No.	PART NAME	
61-426	Idle adjustment screw spring	
61-645	—Choke return spring	
63-104	Throttle shaft retaining ring	
63-135	Upper pump spring retainer	
63-178	Diaphragm spring retainer	
75-1453	—Metering rod—standard .071" x .065" x .0575"	
100-16	Throttle lever adjusting screw	
101-28	Throttle shaft arm attaching screw	
101-149S	Body flange attaching screw and washer assembly	(3)
101-160S	Bowl cover attaching screw and washer assembly	(6)
P101-198S	Throttle lever attaching screw and washer assembly	(2)
101-282S	Diaphragm housing attaching screw and washer assembly	(4)
111-59S	Metering rod arm assembly	
114-84S	Throttle shaft arm assembly	
116-13	Pump intake check ball	
117-146	Pump lifter link	
117-154	Throttle shaft arm connector link	
120-165	Metering rod jet (.086")	
121-209	Body flange gasket	
121-278	Body gasket	
146-245S	—Bowl cover and strainer assembly	
150A-10	Pin spring	
170-274S	Pump diaphragm housing assembly	
186-54	Fuel bowl baffle plate	
203-53S	Pump diaphragm assembly	

—Parts so marked are new and listed for the first time

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

CARTER CARBURETOR
DIVISION OF ACF INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

CHRYSLER

2798S
Front

MCIX-3, MC3-S
C-300E

2799S
Rear

1959

AFB Four-Bore Down-Draft Climatic® Control Carbureters Nos. 2798S 2799S

CARBURETER SPECIFICATIONS

For Chrysler 8 Cylinder (MCIX-3) 383; (MC3-S, C-300E) 413 Cu. In. Engine: Vacuum at Idle 19.5 Inches

Dimensions: Flange, four bore – 4 bolt type.
Throttle Bore, primary 1-7/16 inch.
Secondary 1-9/16 inch I.D.
Primary venturi size, primary side, 7/16 inch, secondary side, 11/32 inch I.D.
Main venturi size, primary side 1-1/16 inch, secondary side, 1-1/4 inch I.D.

Vents: Inside (4) in air horn. Outside (5) in air horn.

Low Speed Circuit: (Primary Side Only)
Jet, size No. 68 (.031 inch) drill.
By-pass, size (.0492 inch) diameter.
Economizer, size No. 57 (.043 inch) drill.
Idle Bleed, size No. 55 (.052 inch) drill.
Idle port, slot type, length .166 inch; width .030 inch.

Idle Port Opening: (2798S) .094 to .100 inch; (2799S) .085 to .091 inch above top edge of valve with valve tightly closed.

Set Idle Adjustment Screw: 1/2 to 2 turns open. For richer mixture turn screw out. Do not idle engine below 650 R.P.M. Transmission in neutral.

Main Nozzle: Installed permanently. DO NOT REMOVE. Anti-percolator bleed, primary, (tube in venturi assembly) size No. 68 (.031 inch) drill.
Secondary, drilled hole in venturi assembly siz No. 60 (.040 inch) drill.

Main Vent Tube: (In venturi assembly, primary side only). Side holes 11 – size No. 70 (.028 inch) drill, 1 – size No. 65 (.035 inch) drill.

Secondary Initial Discharge: (In venturi assembly). Pick up tube size No. 60 (.040 inch) drill. Air bleed size (.0275 inch) diameter. Discharge port size No. 53 (.0595 inch) drill.

Accelerating Pump: Discharge jet (twin) primary side only, size No. 68 (.031 inch) drill. Intake ball check seat (screw plug), size .115 to .120 inch diameter. Discharge needle seat size No. 50 (.070 inch) drill.

Choke: (2799S) Carter Climatic® Control set 1 point rich. Butterfly type – offset choke valve, primary side only. Choke heat suction hole, bushing betw en body and piston housing, size No. 48 (.076 inch) drill.

Vacuum Spark Port: (2799S) Round type .060 inch diameter. Top of port .012 to .018 inch above upper edge of valve with valve tightly closed.

Motor Tune-Up – Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open: 10° B. T. C. At Vibration Damper	Float Setting	Idle Adjustment Screw Setting
.035"	.017"		(2798S) 9/32" (Use Gauge T109-126) (2799S) 7/32" (Use Gauge T109-106)	½ to 2 Turns Open 650 R. P. M. In Neutral

NOTE: These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

FLOAT ALIGNMENT: Side of floats parallel to edge of casting. Minimum clearance between lever and air horn lugs without binding. To adjust, bend float lever.

FLOAT LEVEL: (2798S) 9/32 inch (gauge T109-126). (2799S) 7/32 inch (gauge T109-106) between top of floats (at outer end) and air horn gasket. To adjust, bend float lever.

FLOAT DROP: 23/32 inch between top of floats (at outer end) and air horn gasket. To adjust, bend stop tabs on float bracket.

PUMP: 7/16 inch from the top of the bowl cover to the top of the plunger shaft with throttle conn ctor rod in center hole (medium stroke) of pump arm. To adjust, bend throttle connector rod.

CHOKE PISTON LEVER ADJUSTMENT: (2799S only) 1/8 inch (gauge T109-36) between choke lever and stop in piston housing with choke valve closed. To adjust, bend choke connector rod.

FAST IDLE LINKAGE ADJUSTMENT: (2799S only). With choke valve tightly closed and lug on outer choke shaft lever contacting stop on inner choke shaft lever align center of fast idle screw with index mark on cam. To adjust, bend fast idle connector rod.

FAST IDLE THROTTLE VALVE CLEARANCE: (2799S only) .012 inch (gauge T109-200) between lower edge of valve and bore with adjusting screw on index mark of cam.

FAST IDLE ON CAR: (2799S only) 1400 R.P.M. hot engine with fast idle screw on index mark of cam.

UNLOADER: (2799S only) 1/4 inch (gauge T109-31) between upper edge of choke valve and inner wall of air horn. To adjust, bend unloader lip on throttle lever.

SECONDARY THROTTLE LEVER ADJUSTMENT: 1. Block choke valve wide open. 2. With 23/64 inch between lower edge of primary valve and bore (opposite idle port) secondary valves should just start to open. To adjust, bend throttle operating rod. NOTE: At wide open throttle primary and secondary valves will reach full vertical position. 3. With primary and secondary valves in tightly closed position there should be .010" to .030" (gauge T109-29) between positive closing shoes on primary and secondary throttle lever. To adjust, bend shoe on secondary lever.

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: (2799S only). 1. Crack throttle valves and manually open and close the choke valve. Tang on secondary throttle lever should freely engage in notch of lock-out dog. To adjust, bend tang on secondary throttle lever. 2. With lock-out dog held tight against stop on flange casting and secondary throttle valves partially open there should be .020 inch (gauge T109-29) between tang on secondary throttle lever and lock-out arm. To adjust, bend arm at slot on lock-out dog. NOTE: Fast idle cam may be removed to facilitate gauging and adjusting.

IDLE SPEED AND MIXTURE ADJUSTMENT (Normal Engine Temp): In making the idle adjustment on the engine, the air adjustment screw is used to adjust idle speed in a similar manner as the throttle speed screw used previously. Turning the air adjustment screw outward increases engine speeds, but also leans the mixture supplied to the manifold which must be compensated for by adjustment of the idle mixture adjusting screws.

TOOLS REQUIRED FOR SERVICING CARBURETERS:

T109-29 .020" – .030" wire gauge	T109-106 7/32" float gauge
T109-31 1/4 Unloader gauge	T109-126 9/32" Float gauge
T109-36 1/8" Gauge	T109-200 .012" wire gauge
T109-41 Bending Tool	T109-213 Bending tool

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Chrysler – 1959 – Carbureters Nos. 2798S-2799S

WHEN SERVICING, USE GASKET ASSORTMENT No. 319 (2798S) ; No. 320 (2799S)

Part No.	PART NAME	
1A-135	–Flange gask t	
2-197	Secondary throttle valve	(2)
2-223	Primary throttle valve	(2)
3-1133	Secondary throttle shaft (2798S)	
3-1135S	Secondary throttle shaft and dog assembly (2799S)	
3-1171S	Auxiliary throttle shaft, valve and weight assembly	
3-1173S	Primary throttle shaft and lever assembly (2798S)	
3-1174S	Primary throttle shaft and lever assembly (2799S)	
4A-175	Primary, throttle shaft dog	
6-1344S	Air horn assembly (2798S)	
6-1362S	Air horn assembly (2799S)	
7-218	Choke valve (2799S)	
11B-69	Rivet plug	(2)
11B-79	Rivet plug	(2)
11B-176	Idle port rivet plug	(2)
11B-363	Pump intake screw plug	
11B-366	Nozzle well plug	(4)
11B-372	Level sight plug	(2)
11B-385	Fuel inlet passage plug	
14-512	Outside choke shaft lever (2799S)	
14-550	Inside choke shaft lever (2799S)	
14-609S	Choke piston lever, link and pin assembly (2799S)	
14-612S	Choke shaft and lever assembly (piston housing) (2799S)	
14-614S	Choke lever and shaft assembly (2799S)	
15-58S	Strainer nut assembly (2799S)	
15-62S	Strainer nut assembly (2798S)	
16-51	–Step-up rod .068" x .050" – standard (2799S)	(2)
16-81	–Step-up rod .070" x .067" – standard (2798S)	(2)
16-111	–Step-up rod .071" x .069"– 1 size lean (2798S)	(2)
16-112	–Step-up rod .072" x .070" – 2 sizes lean (2798S)	(2)
16-113	–Step-up rod .0695" x .053"–1 size lean (2799S)	(2)
16-114	–Step-up rod .071" x .056"–2 sizes lean (2799S)	(2)
17-51	Pump discharge check needle	
20-35	Strainer nut gasket (2798S)	
20-43	Piston housing gasket (2799S)	
20-126	Needle seat gasket	(2)
20-127	Strainer nut gasket (2799S)	
21-179S	Float and lever assembly	(2)
24-29	Float lever pin	(2)
25-348S	N dle and seat assembly (.076")	(2)
30-78	Fu l inlet strain r	
30A-81	Idle adjustm nt scr w	(2)

Part No.	PART NAME	
30A-83	Idle air adjustment screw	
38A-107	Pump intake check ball seat	
39-11	Choke valve attaching scr w (2799S)	(2)
47-30	Piston housing welsh plug (2799S)	
47-33	Venturi welsh plug	(4)
47-34	Spark port welsh plug (2799S)	
48-258S	Pump jet and housing assembly	
53A-419	Secondary throttle operating lever	
53A-440S	Lockout arm and collar assembly (2799S)	
58-221S	Secondary venturi assembly (choke side)	
58-222S	Secondary venturi assembly (pump side)	
58-349S	–Primary venturi assembly (choke side)	
58-350S	–Primary venturi assembly (pump side)	
61-84	Idle adjusting screw spring	(2)
61-389	Pump spring	
61-484	Vacuum piston spring	(2)
61-585	Step-up rod retaining spring	(2)
61-599	Idle air adjustment scr w spring	
61-618	Secondary throttle return spring	
61-623	Throttle flex spring	
63-144	Delayer plate retainer ring (2799S)	
63-176	Pump spring retainer	
63-225	Coil housing retainer (2799S)	
63-229	Heat tube retainer (2799S)	
64-215S	Pump plunger and rod assembly	
65-43	Step-up piston cover plat	(2)
101-65	Choke shaft lever attaching screw (2799S)	(2)
101-74	Throttle shaft lever attaching screw	(2)
101-152S	Air horn attaching screw and washer assembly	
101-184S	Pump jet housing attaching screw and washer assembly	(2)
101-362S	Air horn attaching screw and washer assembly	(8)
101-379S	Secondary venturi attaching screw and washer assembly	(4)
101-419	Secondary throttle valve attaching screw	(4)
101-420	Primary throttle valve attaching screw	(4)
101-421	Pump arm attaching scr w	
101-426	Coil housing attaching screw (2799S)	(3)
101-429	Fast idle adjustment screw (2799S)	
101-430	Fast idle cam attaching screw (2799S)	
101-431S	Air horn attaching screw and wash r ass mbly	

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Part No.	PART NAME	
101-435S	St p-up piston cover plate attaching screw and washer assembly	(2)
101-436	Piston housing attaching scr w (2799S)	(3)
101-442S	Primary venturi attaching screw and washer assembly	(4)
103-12	Lead shot (.130")	(2)
103-14	Lead shot (.180")	
103-16	Lead shot (.200") (2798S (1), (2799S (2)	
111-76	Pump arm	
114-146	Primary throttle shaft arm (outer)	
114-147	Primary throttle shaft arm (inner)	
115-284	Fast idle connector rod (2799S)	
115-285	Choke connector rod (2799S)	
115-308	Throttle operating rod	
115-323	–Throttle connector rod	
116-13	Pump intake check ball	
117-174	Pump connector link	
120-159	Primary metering jet (.089")	(2)
120-174	Secondary metering jet (.055") (2799S)	(2)
120-185	Secondary metering jet (.067") (2798S)	(2)
121-78	Coil housing gasket (2799S)	

Part No.	PART NAME	
121-287	Pump jet housing gasket	
121-291	Heat tube cap gasket (2799S)	
121-292	Air horn gasket	
121-293	Secondary venturi cluster gasket	(2)
121-302	Primary venturi cluster gasket	(2)
121-312	Air cleaner gasket	
136-34	Choke piston lever retaining washer (2799S)	
136-159	Primary throttle shaft washer	
136-160	Secondary throttle shaft washer	
150-190	Choke piston pin (2799S)	
150A-10	Pin spring (2798S (3), (2799S (6)	
150A-21	Pin spring	
160-137	–Choke piston (2799S)	
160-153	Step-up piston	(2)
170-577S	Piston housing and plug assembly (2799S)	
170AZ-538S	Thermostatic coil and housing assembly (2799S)	
172-22	Throttle connector rod retainer	
181-254	Fast idle cam (2799S)	
184-85	Choke heat tube cap (2799S)	
186-65	Choke baffle plate (2799S)	
186-70	Fuel bowl baffle	(2)

–Parts so marked are new and listed for the first time.

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

CARTER MODEL AFB CARBURETER FOR CHRYSLER (SERVICE ADJUSTMENT PROCEDURE)

NOTE: The parts and specification pages referred to are catalog pages. These pages can be obtained from Carter Carburetor, Catalog Department, St. Louis (7), Missouri. Specify the carbureter number found on the base of the carbureter, when requesting specification pages.

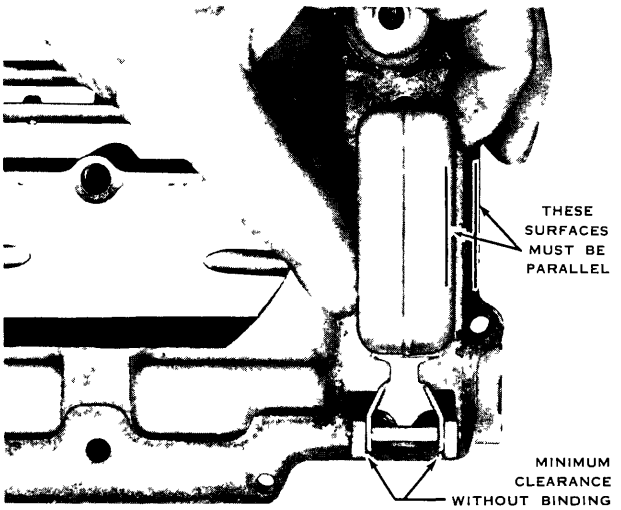


Figure 1

FLOAT ALIGNMENT ADJUSTMENT (Fig. 1):

1. Sight down the side of the float shell to determine if the side of the float is parallel to the outer edge of the air horn casting. TO ADJUST: Bend float lever by applying pressure to the end of the float shell with the fingers while supporting the float lever with the thumb.

   CAUTION: To avoid damaging the float, apply only enough pressure to bend float lever.

2. After aligning float, remove as much clearance as possible between arms of float lever and lugs on air horn by bending the float lever. Arms of float lever should be as parallel to the inner surfaces of lugs on air horn as possible.

   Floats must operate freely without excess clearance on its hinge pin.

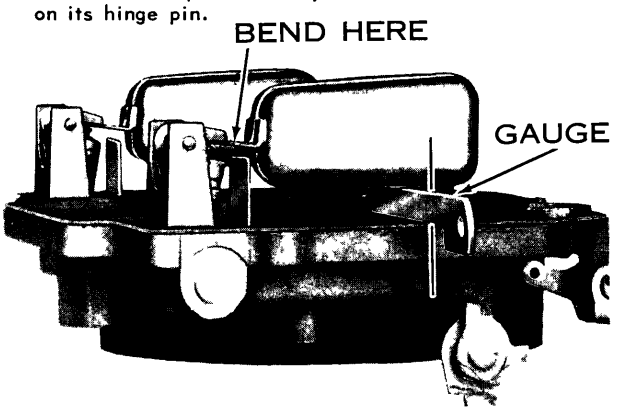


Figure 2

FLOAT LEVEL ADJUSTMENT (Fig. 2):

With air horn inverted, bowl cover gasket in place and needle seated, th clearance betwe n top f float (at outer end) and air horn gasket should be as listed on carbur ter specification page. To adjust, b nd float arm. Adjust both floats. Recheck float alignm nt.

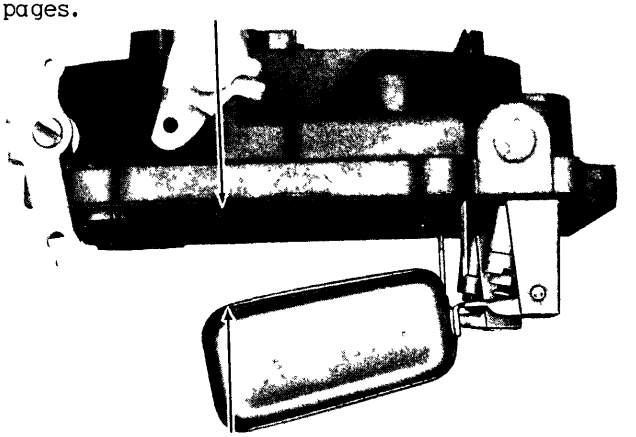


Figure 3

FLOAT DROP ADJUSTMENT (Fig. 3):

With bowl cover held in upright position and measuring from outer end of each float, the distance between top of floats and bowl cover gasket should b as listed on carbureter specification page. To adjust, b nd stop tabs on float brackets.

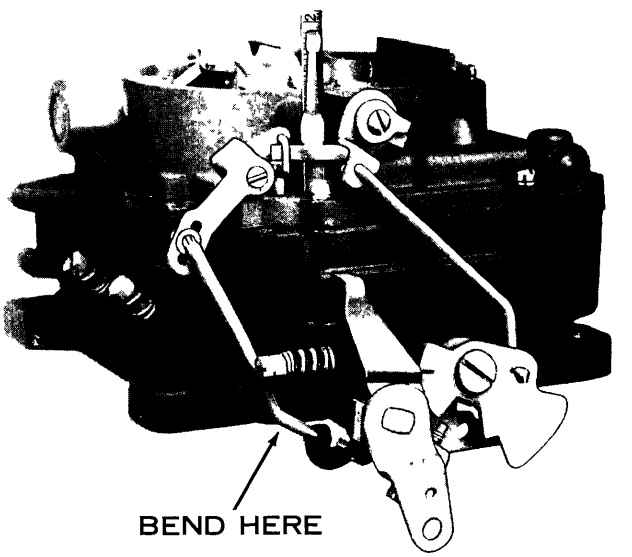


Figure 4

PUMP ADJUSTMENT (Fig. 4):

1. Back out idle speed screw until throttle valves seat in bores of carbureter. NOTE: Be sure fast idle adjusting screw does not contact fast idle cam and hold throttle valves open.
2. With throttle connector rod in cent r hole (medium stroke) of pump arm, the distanc fr m the top of the bowl cover to the top of the plunger shaft should b as list d on carbureter specification page.
3. Adjust by bending throttle connector rod at lower angle (use t ol T109-213).

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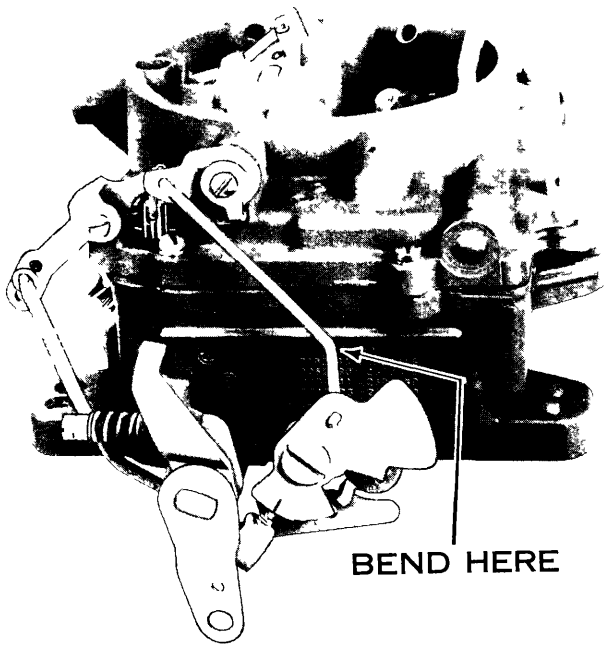


Figure 5

FAST IDLE LINKAGE ADJUSTMENT (Fig. 5):

With ch ke valv tightly closed and lug on outer choke shaft lever contacting stop on inner choke shaft lever align center of fast idle screw with index mark on cam. To adjust, bend fast idle connector rod. (Use tool T109-213.)

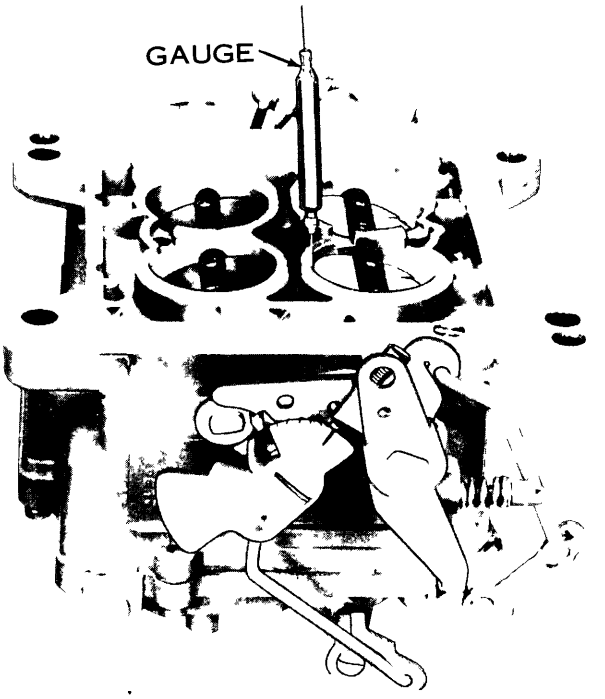


Figure 6

FAST IDLE THROTTLE VALVE CLEARANCE ADJUSTMENT (Fig. 6):

With choke valve tightly closed, tighten fast idle adjusting screw (on index mark of cam) until the clearance between throttle valve and bore of carbureter, side opposite idle port, is as listed on carbureter specification page.

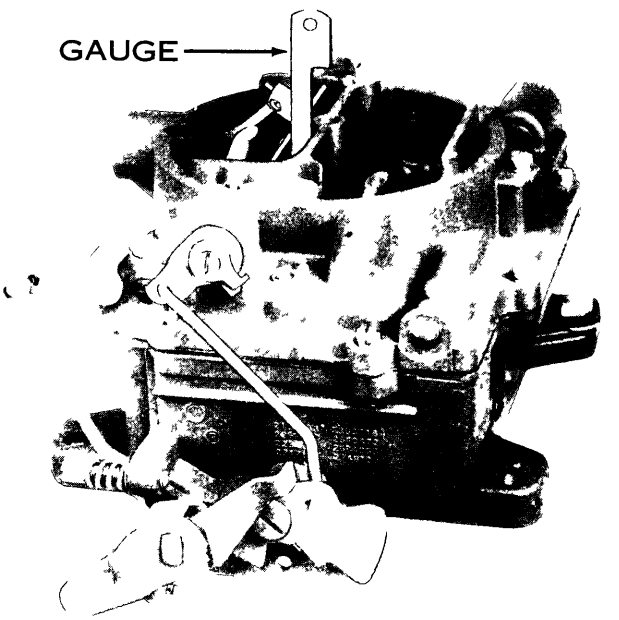


Figure 7

UNLOADER ADJUSTMENT (Fig. 7):

With throttle wid open, th cl arance betw n upper edge of choke valve and inner wall of air horn should be as listed on carbureter specification page. To adjust, bend unloader lip on throttle shaft lever. (Use tool T109-41.)

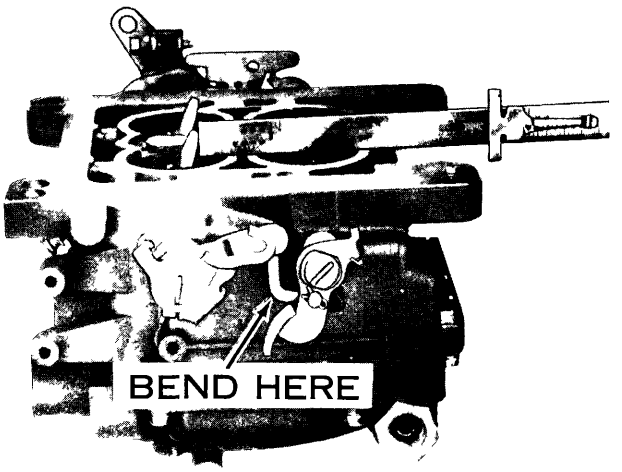


Figure 8A

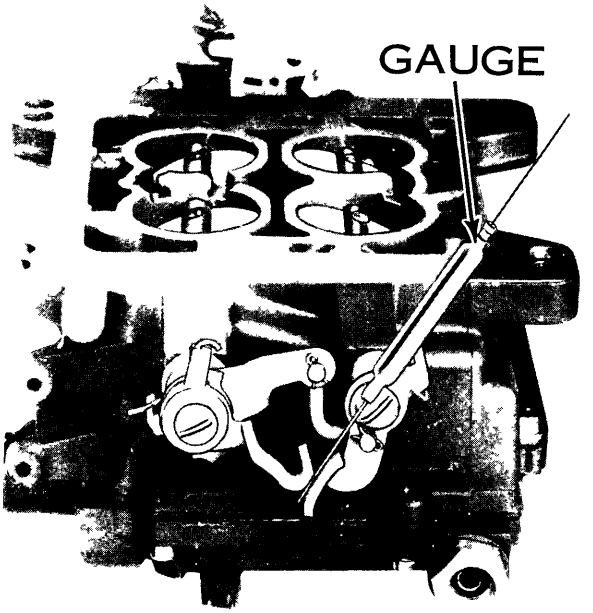


Figure 8B

SECONDARY THROTTLE LEVER ADJUSTMENT (Figs. 8A & 8B):

1. Block choke valve wide open.
2. Secondary throttle valves should just start to open when primary throttle valves are opened to the clearance as listed on specification page between lower edge of valve and bore (opposite idle port). To adjust, bend throttle operating rod. (Use bending tool T109-213). (See Fig. 8A) NOTE: Primary and secondary throttle valves should reach wide open position, full vertical, at the same time.
3. With primary and secondary throttle valves in tightly closed position, there should be the clearance as listed on specification page between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on secondary lever. (See Fig. 8B)

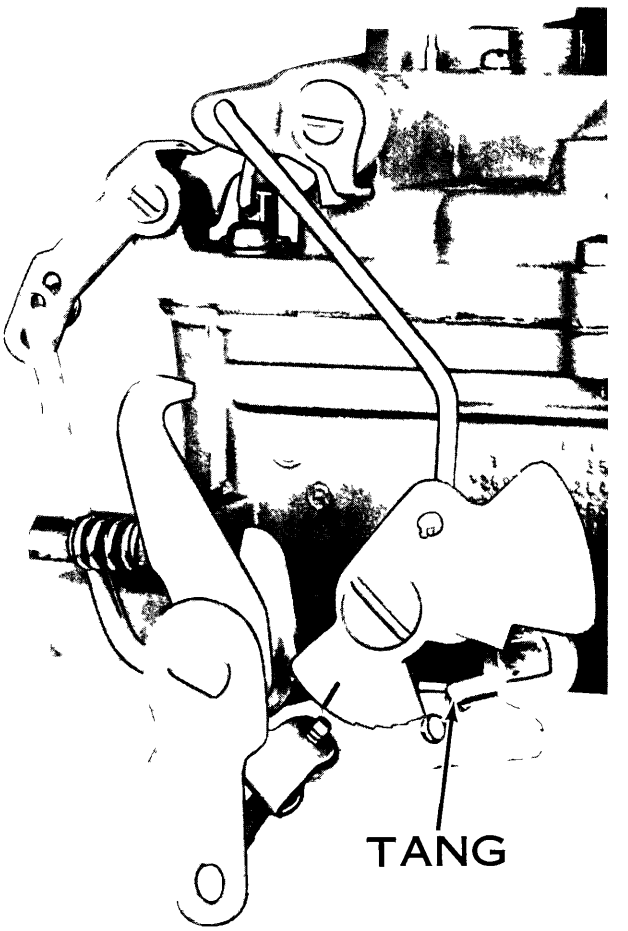


Figure 9

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT (Fig. 9):

Crack throttle valves and manually open and close the choke valve. Tang on secondary throttle lever should freely engage in notch of lock-out dog. If necessary to adjust, bend tang on secondary throttle lever.

NOTE: See last page for pertinent service information.

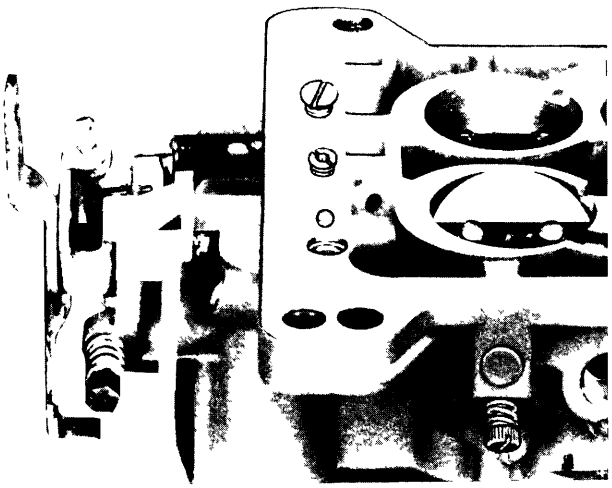


Figure 10

(Fig. 10):

Pump intake check ball, seat and screw plug are removed by inverting carbureter and removing from lower side of flange.

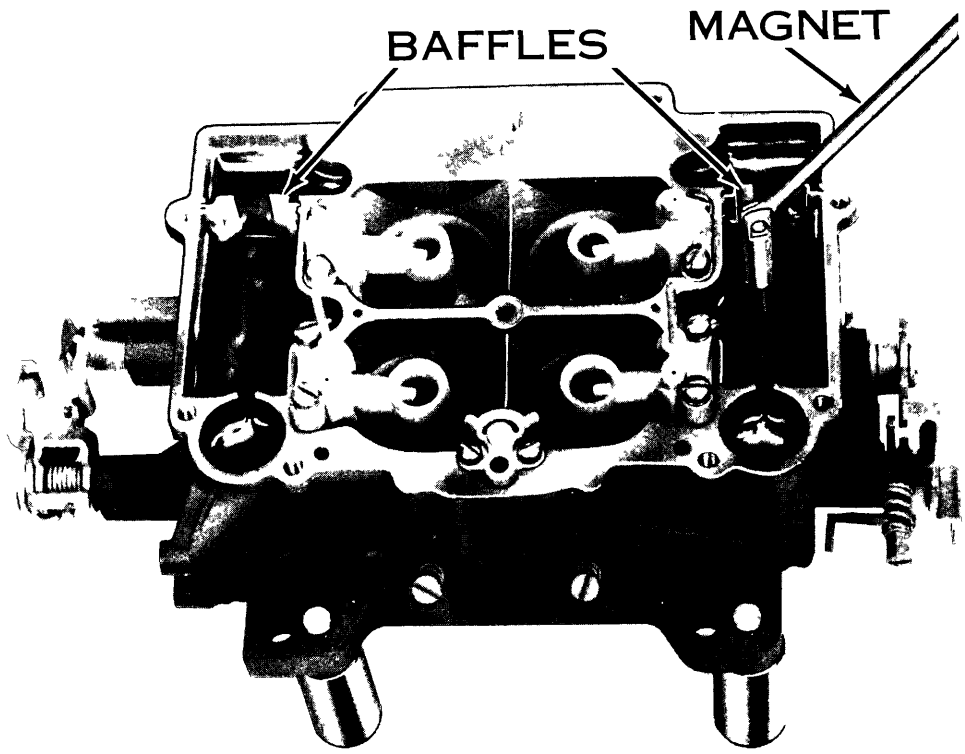


Figure 11

(Fig. 11):

Flooding, stumble on acceleration and other performance complaints are, in many instances, caused by the presence of dirt, water or other foreign matter in the carbureter. To aid in diagnosing the cause of the complaint, the carbureter should be carefully removed from the engine without draining the fuel from the bowl. The contents of the fuel bowl may then be examined for contamination as the carbureter is disassembled.

Check the fuel in the bowl for contamination by dirt, water, gum or other foreign matter. A magnet moved through the fuel in the bowl will pick up and identify any iron oxide dust that may have caused intake needle and seat leakage.

Inspect gasketed surfaces between body and air horn. Small nicks or burrs should be smoothed down to eliminate air or fuel leakage. Be especially particular when inspecting the top surface of the inner wall of the bowl around the vacuum piston passage. A poor seal at this location may contribute to a "cutting-out" on turns complaint.

Install fuel baffles as shown (Fig. 11) to prevent damage to floats. Use caution when installing air horn assembly. Baffles on air horn assembly must fit inside of fuel bowl baffles toward primary side of carbureter.

Fill the carbureter bowl with clean fuel before installing on the manifold. This will help prevent dirt trapped in the fuel system from being dislodged by the free flow of fuel as the carbureter is primed. The operation of the floats and intake needle and seats may be checked under pressure if a fuel pump is used at the bench to fill the carbureter bowl. Operate the throttle several times and visually check the discharge from the pump jets.

Before installing the carburetor, hold choke valve open and turn the idle speed screw until it just contacts the throttle lever, then 1/2 a turn more to open the throttle valves enough to keep the engine running until the idle mixture and final R.P.M. adjustment can be made.

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

CARTER MODEL BBD CARBURETER FOR CHRYSLER
(SERVICE ADJUSTMENT PROCEDURE)

NOTE: The parts and specification pages referred to are catalog pages. These pages can be obtained from Carter Carburetor, Catalog Department, St. Louis (7), Missouri. Specify the carbureter number found on the brass identification tag, when requesting specification pages.



Figure 1

FLOAT ADJUSTMENT (Fig. 1):

This adjustment must be made with th bowl cov r gasket removed. Hold the lip on float arm against the seated intake needle, making sure th float pin is at the bottom of its guide slots. The distance (A) from the top surface of the body casting to the top of ach float (at free end) should be as listed on carbur t r specification page. If one float is low r than the other, equalize by bending the float arm. If both floats require the same correction, adjust by bending lip on float arm. The floats must not rub anywhere against the inner walls of the bowl. If nec ssary, bend float arms slightly to provide clearanc on all sid s of floats.

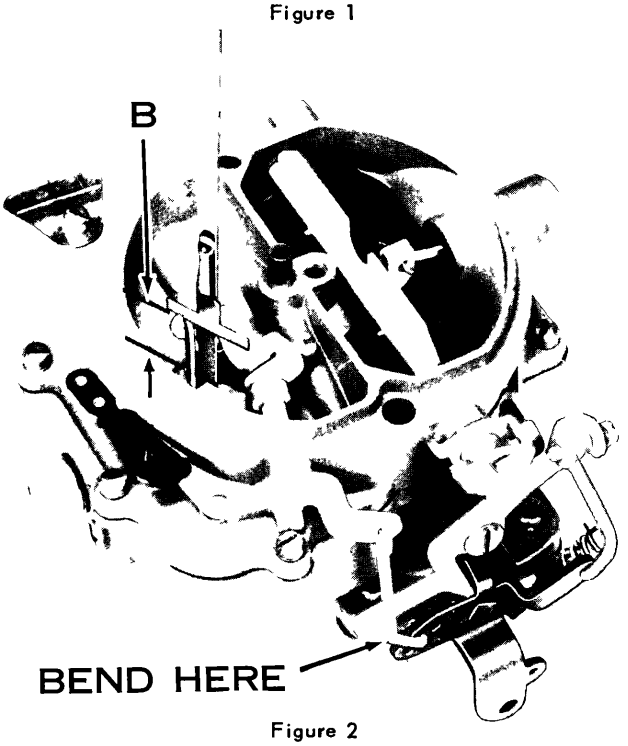


Figure 2

PUMP ADJUSTMENT (Fig. 2):

1. Back out throttle adjustment screw and open choke valve so that throttle valves seat in bores of carbureter.
2. Install throttle connector rod in the hole in the throttle lever specified on carbureter specification page.
3. The distance (B) from the top of the bowl c ver to the top of the plunger shaft should be as specifi d on carbureter sp cificati n pag .
4. Adjust by bending pump connector rod. (Use bending tool T109-213)

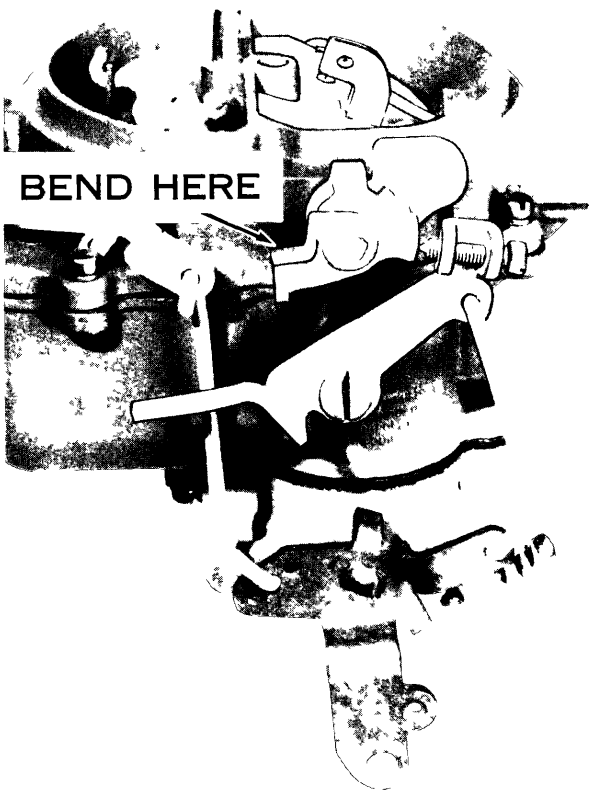


Figure 3

FAST IDLE LINKAGE ADJUSTMENT (Fig. 3):

With choke valve tightly closed and lug on fast idl cam contacting lip on choke shaft lever align c nter of fast idle screw with index mark on cam. To adjust bend lip on choke shaft lever (use t ol T109-22).

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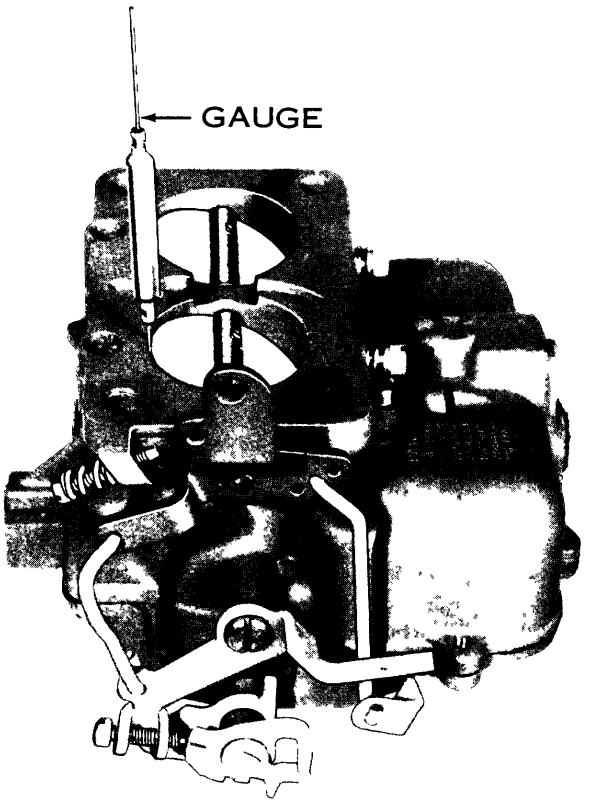


Figure 4

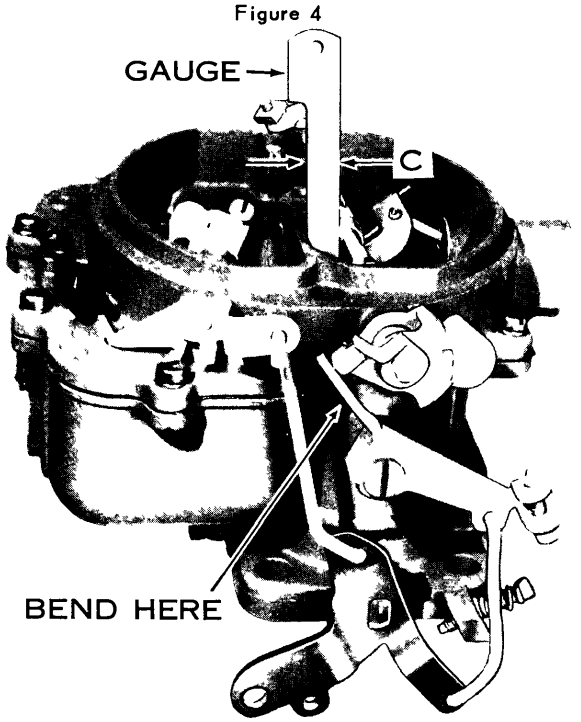


Figure 5

UNLOADER ADJUSTMENT (Fig. 5):

1. Hold throttle valves wide open.
2. Clos choke valve as far as possible without f rcing.
3. Clearance (C) between top dge of choke valve and inner wall of air horn should be as listed on carbureter specification page.
4. Adjust by bending unloader finger on fast idle arm. (Use tool T109-22).

FAST IDLE THROTTLE VALVE CLEARANCE ADJUSTMENT (Fig. 4):

1. Be sure choke valve is closed.
2. Adjust fast idle adjusting screw against index mark of cam (revolve cam if necessary) until the clearance between throttle valve (side opposite port) and bore is as listed on carbureter specification page.



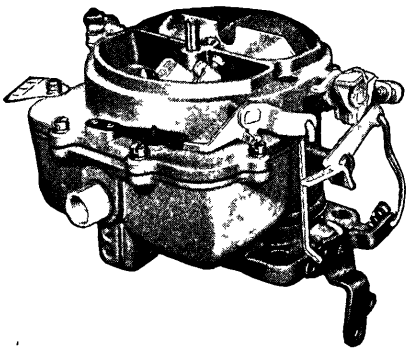
Figure 6

BOWL VAPOR VENT ADJUSTMENT (Fig. 6):

With throttle valve tightly closed the clearance between the heel of the rubber grommet and its seat on the bowl cover should be as listed on carbureter specification page. To adjust, bend lip on vapor vent arm (Use tool T109-22)

CAUTION:

When servicing carbureter use elevating legs (T109-289U) to prevent damaging throttle valves.



CHRYSLER
MODEL MC1
1959

BBD Dual Down-Draft Climatic® Control Carbureters Nos. 2795S-2872S

CARBURETER SPECIFICATIONS

For Chrysler 8 Cylinder 383 Cu. In. Engine: Vacuum at Idle 19.5 Inches

Dimensions: Flange dual, 4 bolt type. Throttle bore, 1-9/16 inch I. D. Primary venturi, 15/32 inch I. D. Main venturi 1-5/16 inch I. D.

Vent: Inside, in air horn. Outside, none.

Low Speed Circuit: Jet, in venturi assembly, size (.0295 inch) diameter. Idle bleed, in venturi cluster screw, size (.055 inch) diameter. Idle restriction, in venturi cluster screw, size (.051 inch) diameter. Venturi idle bleed, in body, size (.040 inch) diameter. Idle port, slot type, length .198 inch; width .030 inch.

Idle Port Opening: .140 to .144 inch above upper edge of valve with valve tightly closed.

Lower Port (For Idle Adjustment Screw): Size .055 inch diameter.

Set Idle Adjustment Screw: 3/4 to 2 1/4 turns open. For richer mixture, turn screw out. With gear shift in neutral position, idle engine at 500 R. P. M.

Main Nozzle: Nozzle is installed permanently. DO NOT REMOVE.

Main Vent Tube: Side holes 2—size .0292 inch, 1—size .038 inch diameter.

Accelerating Pump: Pump discharge jets (2—in venturi cluster), size .0275 inch diameter. Intake ball check seat, size .130 to .140 inch diameter. Discharge ball check seat, size .110 to .120 inch diameter.

Choke: Carter Climatic® cross over type, set at index. Butterfly type, offset valve. Choke heat suction hole, in air horn, size (.0905 inch) diameter.

Vacuum Spark Port: Horizontal, round end type, .030 by .090 inch. Top of port to be .015 to .025 inch, above upper edge of valve with valve closed tight.

Motor Tune-Up — Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .017"	Ignition Timing Breaker Points to Open: 10° B. T. C. At Vibration Damper	Float Setting 5/16 Inch (Use Gauge T109-280)	Idle Adjustment Screw Setting 3/4 to 2 1/4 Turns Open Idle Engine at 500 R. P. M. In Neutral

NOTE: These cars are equipped with Hydraulic Valve Lifters — NO ADJUSTMENT.

CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3765

Float Level: 5/16 inch (gauge T109-280) between top of each float ridge (at free end of float) and top surface of body casting. To adjust, bend lip on float arm.

Pump: 1 inch from top of the bowl cover to the top of the plunger shaft. Install throttle connector rod in center hole (medium stroke) of throttle lever. To adjust, bend throttle connector rod. When throttle connector rod is installed in a different hole for seasonal operation the bowl vapor vent must be readjusted.

Fast Idle Linkage Adjustment: With choke valve tightly closed and lug on fast idle cam contacting lip on choke shaft lever align center of fast idle screw with index mark on cam. To adjust, bend lip on choke shaft lever.

Fast Idle Throttle Valve Clearance: .018 inch (gauge T109-44) between lower edge of valve and bore with adjusting screw on index mark of cam.

Fast Idle on Car: 1400 R. P. M. hot engine, with fast idle screw on index mark of cam.

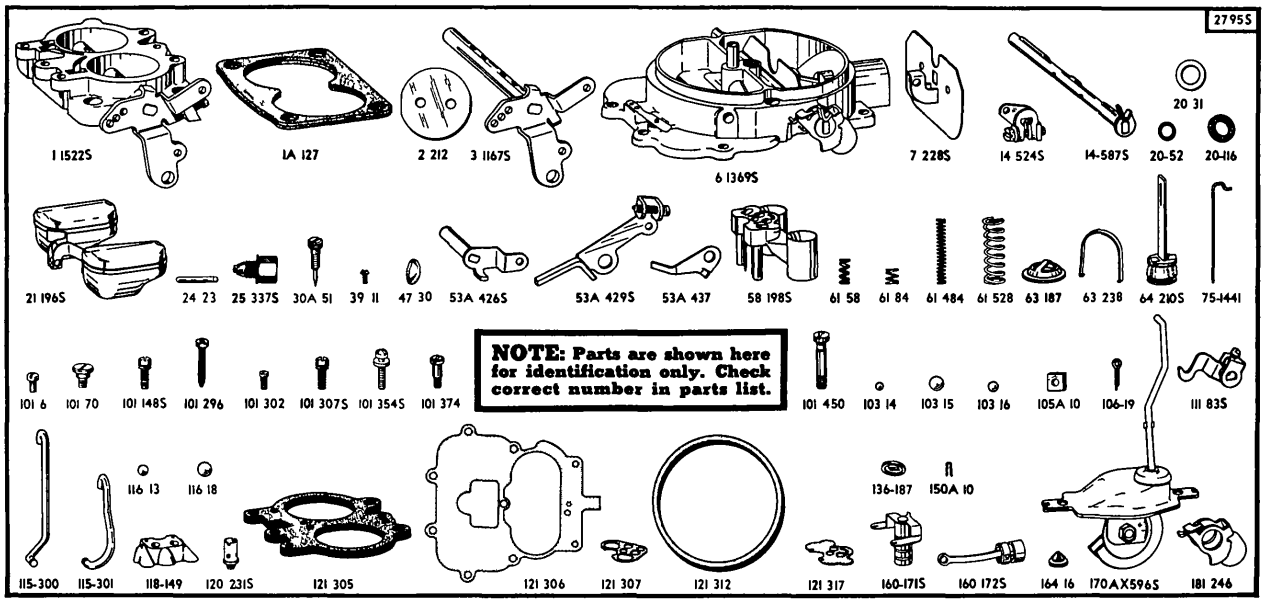
Unloader: 15/64 inch (gauge T109-32) between top edge of choke valve and inner wall of air horn with throttle valve wide open. To adjust, bend unloader finger on fast idle arm.

Bowl Vapor Vent Adjustment: .062" to .093" (gauge T109-234) between the heel of the rubber grommet and its seat on the

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bowl cover with throttle valve seated To adjust bend lip on vapor vent arm If the pump has been changed to the long or short stroke readjust the bowl vapor vent

Choke Adjustment (Cross Over Type) See Form 3657 filed under Plymouth· 1 Loosen mounting post lock nut and turn mounting post with screw driver until index mark on disk is positioned as listed on carbureter specification page Hold in this position with screw driver and tighten lock nut NOTE Screw driver may be held in vise so that one hand may be used to support housing while tightening nut 2 After adjustment is completed and coil housing and rod assembly and carbureter is installed on engine lift cover disk and open and close choke valve manually to see if connector rod clears sides of hole in housing cover If rod does not clear hole in housing cover without binding replace with a new unit since connector rod cannot be bent without affecting calibration



Chrysler — 1959 — Carbureters Nos. 2795S-2872S

WHEN SERVICING, USE GASKET ASSORTMENT No 325, RE-CARBURETION KIT No. 1949N

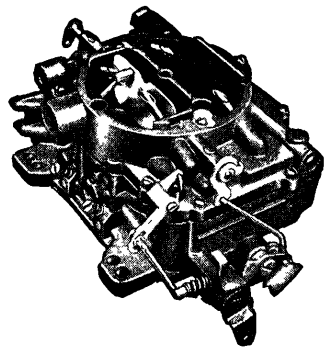
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF RE-CARBURETION KIT

Part No	PART NAME	
1-1522S	Body flange assembly (2795S)	
1-1590S	—Body flange assembly (2872S)	
1A-127	FLANGE GASKET	
2-212	Throttle valve	(2)
3-1167S	Throttle shaft and lever assembly (2795S)	
3-1231S	—Throttle shaft and lever assembly (2872S)	
6-1369S	Air horn assembly	
7-228S	Choke valve and bracket assembly	
14-524S	Choke lever assembly	
14-587S	Choke lever and shaft assembly	
20-31	Needle seat gasket	
20-52	STEP UP PISTON GASKET	
20-116	Main metering jet gasket	(2)
21-196S	Float and lever assembly	
24-23	Float lever pin	
25-337S	NEEDLE AND SEAT ASSEMBLY (.111")	
30A-51	Idle adjustment screw	(2)
39-11	Choke valve attaching screw	(2)
47-30	Welsh plug	
53A-426S	Pump arm and countershaft assembly	
53A-429S	Fast idle arm and screw assembly	
53A-437	Loose lever	
58-198S	Venturi cluster tube and nozzle assembly	
61-58	Throttle adjusting screw spring	
61-84	Idle adjustment screw spring	(2)
61-484	STEP UP PISTON SPRING	
61-528	Pump spring	
63-187	Intake check ball retainer	
63-238	Float lever pin retainer	
64-210S	PUMP PLUNGER AND ROD ASSEMBLY	
75-1441	—Step up rod (.032")	(2)
101-6	Pump arm screw	
101-70	Fast idle arm attaching screw	
101-148S	Air horn attaching screw and washer assembly	(8)
101-296	Throttle and fast idle adjusting screw	(2)

Part No	PART NAME	
101-302	Throttle valve attaching screw	(4)
101-307S	Body flange attaching screw and washer assembly	(4)
101-354S	Choke lever clamp screw and washer assembly	
101-374	Step up piston plate screw	
101-450	Venturi cluster screw	(2)
103-14	Lead shot	
103-15	Lead shot	(2)
103-16	Lead shot	(2)
105A-10	Choke lever clamp screw nut	
106-19	Cotter pin	
111-83S	Pump arm and screw assembly	
115-300	Throttle connector rod	
115-301	Fast idle connector rod	
116-13	Pump discharge check ball	
116-18	Pump intake check ball	
118-149	Venturi cover	
120-207S	Main metering jet assembly (454 to 464cc)—2 sizes lean	(2)
120-231S	MAIN METERING JET ASSEMBLY (485 to 495cc)—STANDARD	(2)
120-232S	Main metering jet assembly (470 to 480cc)—1 size lean	(2)
121-305	BODY FLANGE GASKET	
121-306	BODY GASKET	
121-307	VENTURI HOUSING GASKET	
121-312	AIR CLEANER GASKET	
121-317	VENTURI COVER GASKET	
136-187	Pump spring retainer washer	
150A-10	Pin spring	(2)
160-171S	Step up piston and plate assembly	
160-172S	Choke piston and link assembly	
164-16	Grommet seal	
170AX-596S	Thermostatic coil, housing and rod assembly	
181-246	Fast idle cam	

—Parts so marked are new and listed for the first time

NOTE: Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, nly one is used



CHRYSLER
MC2 & MC3-H

IMPERIAL
MY1
1959

AFB Four-Bore Down-Draft Climatic® Control Carbureter No. 2797S

CARBURETER SPECIFICATIONS

For Chrysler 8 Cylinder 383 (MC2); 413 (MC3-H), (MY1) Cu. In. Engine: Vacuum at Idle 19.5 Inches

Dimensions: Flange, four bore—4 bolt type.
Throttle bore, primary, 1-7/16 inch; secondary 1-9/16 inch.
Primary venturi size, primary side, 7/16 inch, secondary side, 11/32 inch I. D.
Main venturi, primary, 1-3/16 inch; secondary, 1-5/16 inch.

Vents: Inside (4) in air horn: Oustide (5) in air horn.

Low Speed Circuit: (Primary side only)
Jet, size No. 66 (.033 inch) drill.
By-pass, size (.0492 inch) diameter.
Economizer, size (.0452 inch) diameter.
Idle bleed, size (.0492 inch) diameter.
Idle port, slot type, length .198 inch, width .030 inch.

Idle Port Opening: .167 to .173 inch above top edge of valve with valve tightly closed.

Set Idle Adjustment Screw: ½ to 2 turns open. For richer mixture turn screw out. Do not idle engine below 500 R. P. M. Transmission in neutral.

Main Nozzle: Install permanently. DO NOT REMOVE. Antipercolator bleed, primary (tube in venturi assembly), size No. 68 (.031 inch) drill. Secondary (drilled hole in venturi assembly) size No. 60 (.040 inch) drill.

Main Vent Tube: (In venturi assembly) Side holes primary side 11—size No. 70 (.028 inch) 1—size No. 65 (.035 inch) drill; secondary side 2—size No. 57 (.043 inch) 1—size No. 70 (.028 inch) drill.

Accelerating Pump: Discharge jet (twin) primary side only, size No. 68 (.031inch) drill. Intake ball check seat (screw plug) size .115 to .120 inch diameter. Discharge needle seat size No. 50 (.070 inch) drill.

Choke: Carter Climatic® Control Cross Over type, set on index. Butterfly type offset valve, primary side only. Choke heat suction hole, in air horn, size No. 44 (.086 inch) drill.

Vacuum Spark Port: Slot type (round end) .045 x .110 inch. Top of port .026 to .034 inch above top edge of valve with valve tightly closed.

Motor Tune-Up — Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open:	Float Setting	Idle Adjustment Screw Setting
.035"	.017"	10° B. T. C. At Vibration Damper	(See Adjustments)	½ to 2 Turns Open Idle Engine at 500 R. P. M. In Neutral

NOTE: These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3767

FLOAT ALIGNMENT: Side of floats parallel to edge of casting. Minimum clearance between lever and air horn lugs without binding. To adjust, bend float lever.

FLOAT LEVEL: 7/32 inch (gauge T109-106) plus or minus 1/64 inch, between top of floats (at outer end) and air horn gasket. To adjust, bend float lever.

FLOAT DROP: 23/32 inch plus or minus 1/16 inch between top of floats (at outer end) and air horn gasket. To adjust, bend stop tabs on float brackets.

PUMP: 7/16 inch from the top of the bowl cover to the top of the plunger shaft with throttle connector rod in center hole (medium stroke) of pump arm. To adjust, bend throttle connector rod.

FAST IDLE LINKAGE ADJUSTMENT: With choke valve tightly closed and lug on outer choke shaft lever contacting stop on inner choke shaft lever align center of fast idle screw with index mark on cam. To adjust, bend fast idle connector rod.

FAST IDLE THROTTLE VALVE CLEARANCE: .015 inch (gauge T109-44) between lower edge of valve and bore with adjusting screw on index mark of cam.

FAST IDLE ON CAR: 1400 R. P. M. hot engine with fast idle screw on index mark of cam.

UNLOADER: 1/4 inch (gauge T109-31) between upper edge of choke valve and inner wall of air horn. To adjust, bend unloader lip on throttle lever.

SECONDARY THROTTLE LEVER ADJUSTMENT: 1. Block choke valve wide open. 2. With 3/8 inch between lower edge of primary valve and bore (opposite idle port) secondary valves should just start to open. To adjust, bend throttle operating rod. NOTE: At wide open throttle primary and secondary valves will reach full vertical position. 3. With primary and secondary throttle valves in tightly closed position there should be .010" to .030" (gauge T109-29) between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on secondary lever.

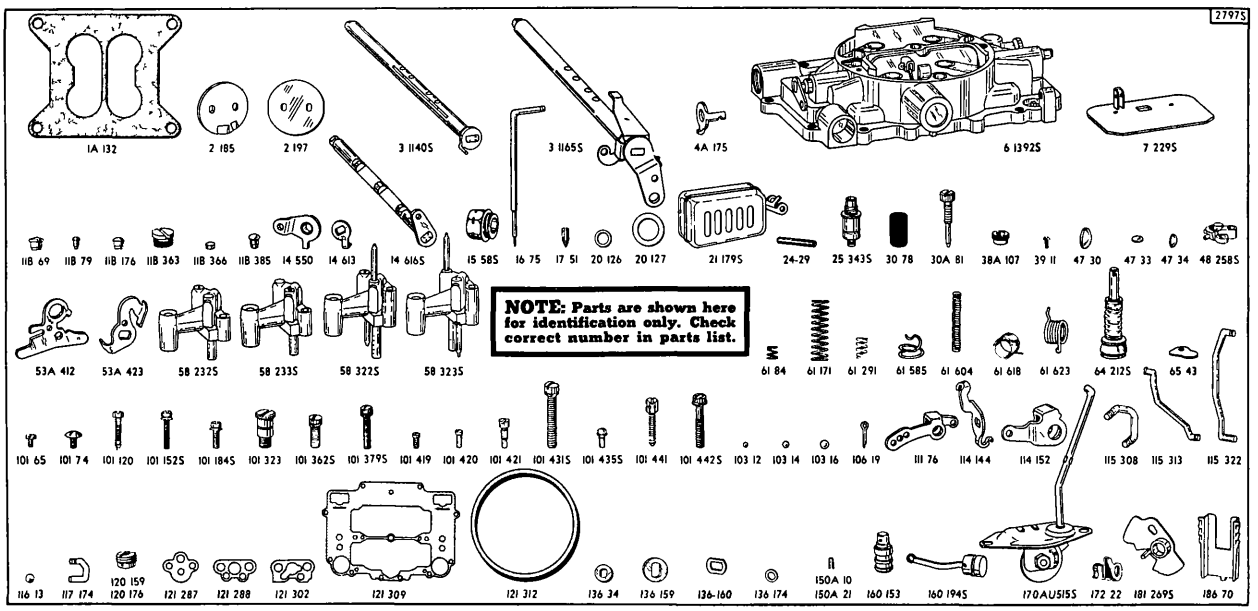
SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: Crack throttle valves and manually open and close the choke valve. Tang on secondary throttle lever should freely engage in notch of lock-out dog. To adjust, bend tang on secondary throttle lever.

CHOKE ADJUSTMENT (CROSS OVER TYPE) SEE FORM 3657 FILED UNDER PLYMOUTH: 1. Loosen mounting post lock nut and turn mounting post with screw driver until index mark on disk is positioned as listed on carbureter specification page. Hold in this position with screw driver and tighten lock nut. NOTE: Screw driver may be held in vise so that one hand may be used to support housing while tightening nut. 2. After adjustment is completed and coil housing and rod assembly and carbureter is installed on engine lift cover disk and open and close choke valve manually to see if connector rod clears sides of hole in housing cover. If rod does not clear hole in housing cover without binding replace with a new unit since connector rod cannot be bent without affecting calibration.

TOOLS REQUIRED FOR SERVICING CARBURETERS:

T109-29	.020" Wire gauge	T109-44	.015" Wire gauge
T109-31	1/4" Unloader gauge	T109-106	7/32" Float gauge
T109-41	Bending tool	T109-213	Bending tool

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Chrysler — 1959 — Carbureter No. 2797S

WHEN SERVICING, USE GASKET ASSORTMENT No. 326; RE-CARBURETION KIT No. 1956N

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF RE-CARBURETION KIT

Part No.	PART NAME	
1A-132	—FLANGE GASKET	
2-185	Primary throttle valve	(2)
2-197	Secondary throttle valve	(2)
3-1140S	Secondary throttle shaft and dog assembly	
3-1165S	Primary throttle shaft and lever assembly	
4A-175	Primary throttle shaft dog	
6-1392S	Air horn assembly	
7-229S	Choke valve and bracket assembly	
11B-69	Rivet plug	(2)
11B-79	Rivet plug	(4)
11B-176	Idle port rivet plug	(2)
11B-363	Pump intake screw plug	
11B-366	Nozzle well lead plug	(4)
11B-385	Fuel passage rivet plug	
14-550	Inside choke shaft lever	
14-613	—Outside choke shaft lever	
14-616S	Choke lever and shaft assembly	
15-58S	Fuel inlet assembly	
16-75	—STEP-UP ROD 0635" x .053"	(2)
17-51	Pump discharge check needle	
20-126	Needle seat gasket	(2)
20-127	Fuel inlet gasket	
21-179S	Float and lever assembly	(2)
24-29	Float lever pin	(2)
25-343S	NEEDLE AND SEAT ASSEMBLY (.0935")	(2)
30-78	Fuel inlet strainer	
30A-81	Idle adjustment screw	(2)
38A-107	Pump intake check ball seat	
39-11	Choke valve attaching screw	(2)

Part No.	PART NAME	
47-30	Choke piston welsh plug	
47-33	Venturi welsh plug	(4)
47-34	Spark port welsh plug	
48-258S	Pump jet and housing assembly	
53A-412	Lockout dog	
53A-423	Secondary throttle operating lever	
58-232S	Secondary venturi assembly (opposite pump)	
58-233S	Secondary venturi assembly (pump side)	
58-322S	—Primary venturi assembly (opposite pump)	
58-323S	—Primary venturi assembly (pump side)	
61-84	Idle adjusting screw spring	(2)
61-171	Pump spring (lower)	
61-291	Throttle lever adjusting screw spring	
61-585	Step-up rod retaining spring	(2)
61-604	VACUUM PISTON SPRING	(2)
61-618	Secondary throttle return spring	
61-623	Throttle flex spring	
64-212S	PUMP PLUNGER, ROD AND SPRING ASSEMBLY	
65-43	Step-up piston cover plate	(2)
101-65	Choke shaft lever attaching screw	
101-74	Throttle shaft lever attaching screw	(2)
101-120	Fast idle adjustment screw	
101-152S	Air horn attaching screw and washer assembly	
101-184S	Pump jet housing attaching screw and washer assembly	(2)
101-323	Fast idle cam attaching screw	
101-362S	Air horn attaching screw and washer assembly	(8)
101-379S	Secondary venturi attaching screw and washer assembly	(4)

Part No.	PART NAME	
101-419	Secondary throttle valve attaching screw	(4)
101-420	Primary throttle valve attaching screw	(4)
101-421	Pump arm attaching screw	
101-431S	Air horn attaching screw and washer assembly	
101-435S	Step-up piston cover plate attaching screw and washer assembly	(2)
101-441	Throttle lever adjusting screw	
101-442S	Primary venturi attaching screw and washer assembly	(4)
103-12	Lead shot (.130")	(2)
103-14	Lead shot (.180")	
103-16	Lead shot (.200")	
106-19	Cotter pin	
111-76	Pump arm	
114-144	Primary throttle shaft arm (outer)	
114-152	Primary throttle shaft arm (inner)	
115-308	Throttle operating rod	
115-313	—Choke connector rod	
115-322	—Throttle connector rod	
116-13	Pump intake check ball	
117-174	Pump connector link	
120-159	PRIMARY METERING JET (.089")	(2)
120-176	Secondary metering jet (.0635") (Use 120-185)	(2)
120-185	Secondary metering jet (.067")	(2)
121-287	PUMP JET HOUSING GASKET	
121-288	SECONDARY VENTURI CLUSTER GASKET	(2)
121-302	PRIMARY VENTURI CLUSTER GASKET	(2)
121-309	AIR HORN GASKET	
121-312	AIR CLEANER GASKET	
136-34	Choke shaft washer	
136-159	Primary throttle shaft washer	
136-160	Secondary throttle shaft washer	
136-174	Throttle lever adjusting screw washer	
150A-10	Pin spring	(4)
150A-21	Pin spring	
160-153	Step-up piston	(2)
160-194S	Choke piston and link assembly (Use 160-204S)	
160-204S	—Choke piston and link assembly	
170AU-515S	Thermostatic coil, housing and rod assembly	
172-22	Throttle connector rod retainer	
181-269S	—Fast idle cam and collar assembly	
186-70	Fuel bowl baffle	(2)

—Parts so marked are new and listed for the first time.

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

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CARTER CARBURETOR

DIVISION OF acf INDUSTRIES
INCORPORATED
ST. LOUIS 7, MO., U.S.A.

GENERAL BULLETIN

CARBURETER CONTRACT ACCOUNTS
FACTORY, P.I. AND P.C.T. GRADUATES

BULLETIN NO. 57 Chrysler

DATE March 26, 1958

SUBJECT: 1958 CHRYSLER AND IMPERIAL STALLING AND STUMBLE COMPLAINTS

STALLING AND STUMBLE ON ACCELERATION DURING ENGINE WARM-UP AFB-2650S, 2651S, 2805S AND 2806S (4 BORE) CARBURETERS

Complaints have been received of the engine stalling after the initial start and upon the first few accelerations during the warm-up period. This difficulty has been traced to the choke valve being pulled open too far by the choke piston.

The following adjustment corrects this condition by reducing the amount of opening of the choke valve caused by the pull of vacuum on the piston during the warm-up period. This adjustment replaces the choke piston lever adjustment shown on the carbureter catalog specification page.

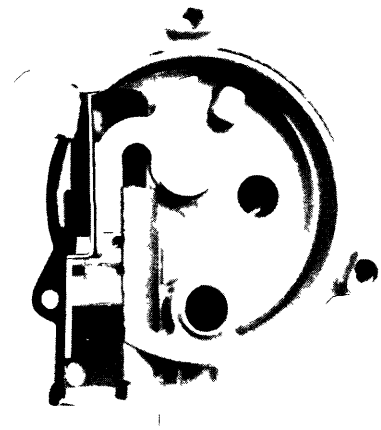


Figure 1.

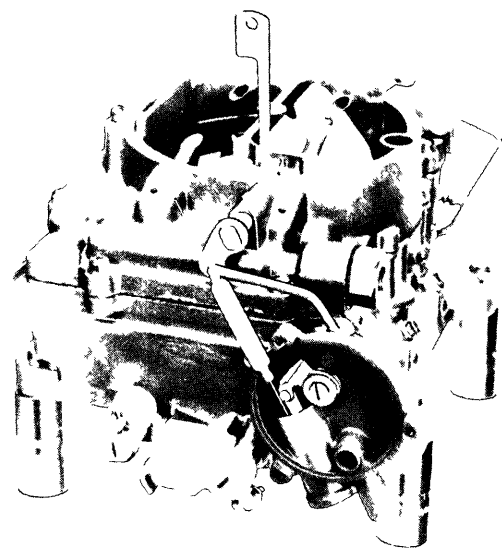


Figure 2.

1. Bend a .026" wire gauge (Carter tool T109-189) at a 90° angle approximately 1/8" from its end (See Fig. 1).

2. Remove the choke housings, gasket and baffle plate and block the throttle about half open so the fast idle cam does not contact its adjusting screw.

3. Open the choke valve and insert the wire gauge so that the bent portion is between the top of the slot in the choke piston cylinder and the bottom of the slot in the piston (See Fig. 1). Hold the wire gauge in position and close the choke valve by pressing on the piston lever in the choke housing until resistance is felt. There

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should now be 11/64 (Carter gauge T109-166) between the top of the choke valve and the air horn (See Fig. 2).

4. To adjust, bend the choke connector rod.

5. When reassembling, set the climatic control one notch rich.

ACCELERATION COMPLAINTS (ENGINE AT OPERATING TEMPERATURE)

A few complaints have been received concerning a lag or flat spot in part throttle acceleration on cars equipped with either the BBD-2685S, 2733S Dual or AFB-2650S, 2651S, 2805S and 2806S Four Bore carbureters. The engine tune-up adjustments and the proper functioning of both the cooling system and manifold heat control thermostats should be checked first. Placing the accelerator pump connector rod in the long stroke position, in some cases, will overcome this complaint. The following carbureter changes will provide a slightly richer mixture if the complaint persists.

BBD-2685S, 2733S DUAL CARBURETERS

Install two (2) 75-1370 (.028") step-up rods in place of the original 75-1414 (.030") rods.

AFB-2650S, 2651S, 2805S and 2806S FOUR BORE CARBURETERS

Install two (2) 16-45 (.0635"X.055") step-up rods in place of the original 16-43 (.065"X.060") rods.

Parts 16-45 and 75-1370 have been used in other model carbureters and should be available in field stocks, however, an initial shipment of a limited number of each part is being made to Carter Central distributors.

Carter warranty is not involved in either the choke or metering correction.

V. F. Thompson

V. F. Thompson, Manager
Distribution Sales

RJM:dg

cc: Personnel and Extra Copies - U.S.A. and Canada

CHRYSLER "V-8"

2741S Front Carburetor — MODEL LC3 "C300D" 1958 — 2742S Rear Carbureter

WCFB Four-Bore Down-Draft Climatic® Control Carbureters Nos. 2741S-2742S

CARBURETER SPECIFICATIONS

For Chrysler 8 Cylinder 392 Cu. In. Engine

Dimensions: Flange size, 1-1/4 inch. Four Bore - 4 bolt type.
Primary venturi size, 11/32 inch I. D.
Main venturi (primary) size, 1-1/16 inch.
Main venturi (secondary) size, 1-1/4 inch I. D.

Vents: Outside, (4) in flange, (4) in air horn, Inside (7) in air horn.

Low Speed Circuit: (Primary side only). Jet, size No. 67 (032 inch) drill.
By-pass, size (.057 inch) diameter.
Economizer, size No. 54 (.055 inch) drill.
Idle bleed, size No. 44 (.086 inch) drill.
Idle port, slot type, length .156 inch, width .030 inch.

Idle Port Opening: .094 to .100 inch above top edge of valve with valve tightly closed.

Lower Port: (For idle adjustment screw), size No. 53 (.0595 inch) drill.

Set Idle Adjustment Screw: 1 to 2 turns open. For richer mixture turn screw out. Do not idle engine below 650 r.p.m. in neutral.

Idle Air Adjusting Screw: Seat size .187 inch diam t r.

Main Nozzle: Installed permanently. DO NOT REMOVE. Anti-percolating bleed (primary, in plug) size No. 70 (.028 inch) drill, (secondary in plug) size No. 70 (.028 inch) drill.

Accelerating Pump: Discharge jet (twin) primary side nly size No. 74 (.0225 inch) drill.
Intake ball check seat, size .115 to .120 inch diam ter.
Discharge needle seat, size .070 inch diameter.

Choke: (2742S only) Carter Climatic® Contr l, set ne point rich. Butterfly type - offset choke valve, primary side only. Choke heat suction hole, restriction in bushing betw en air horn and piston housing size No. 50 (.070 inch) drill.

Vacuum Spark Port: (2742S only) Horiz ntal slot (round end) .064 x .120 inch. Top of port .006 to .014 inch above top edge of valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

CAUTION. Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter..

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open:	Valve Setting (Hot)	Float Setting	Idle Adjustment Screw Setting
.035"	.017"	6° B.T.C. At Vibration Damper	Intake .015" Exhaust .024"	Primary 9/32 Inch (Use Gauge T109-284) Secondary 11/32 Inch (Use Gauge T109-285)	1 t 2 Turns Open Idl Engin at 650 R.P.M. In N utral

NOTE: These cars are equipped with Hydraulic Valve Lifters – NO ADJUSTMENT.

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: Two separate float adjustments must be made - lateral and vertical. **LATERAL ADJUSTMENT:** With bowl cover assembly inverted, bowl cover gasket removed and float resting on seated needle place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting. Side of floats should just clear the vertical uprights of float gauge. Adjustment should be made by bending arms of floats. **VERTICAL ADJUSTMENT:** With float gauge in same position, floats should just clear the horizontal portion of gauge. Vertical distance between top center of float and machined surface of casting must be 9/32 inch (gauge T109-284) for primary floats and 11/32 inch (gauge T109-285) for secondary floats. Adjust by bending float arms.

FLOAT DROP ADJUSTMENT: With bowl cover held in upright position and measuring from center of float, the distance between top of floats and bowl cover should be 23/32 inch. Adjust by bending stop tabs on float brackets.

PUMP ADJUSTMENT: Install pump connector link in center hole (medium stroke) of pump arm, with ends extending toward c untershaft arm. Back out throttle lever stop scr w until throttl valves seat in bores of carbureter. Hold straight edge across t p of dust cover boss at pump arm. The flat on top of pump arm should be parallel to straight edge. Adjust by bending throttle connector rod. (Use tool T109-213).

METERING ROD ADJUSTMENT: Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Pr cedure is as follows: 1. Back out throttle lever stop screw t all w throttle valves to seat in bores of carbureter and l osen m tering rod arm clamp screw. 2. With metering rods in place, pr ss down on vacumeter link until metering rods bottom in carbureter body casting. 3. Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link. Hold in place and carefully tighten clamp screw.

FAST IDLE ADJUSTMENT: (2742S only) (a) Loosen choke lever clamp screw on choke shaft. Insert. 010 inch feeler gauge (T109-200) between lip of fast idle cam and b ss of flange casting. Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards cl sed p siti n hold in place and tighten clamp screw. (b) With choke valve tightly closed bend fast idle adjusting tang until there is .015 inch (gauge T109-44) opening between throttle valv and bore of carbureter side opposit idle port. Be sure fast idle adjusting tang is on high step f cam whil making this adjustment.

FAST IDLE ON CAR: (2742S only) 1450 R.P.M. hot engin with idle adjusting tang on high step of cam.

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UNLOADER ADJUSTMENT: (2742S only) With throttle wid open there should be 1/8 inch (gauge T109-36) clearance Between upper edg of ch ke valve and inner wall f air horn. Adjust by bending unloader lip on thr ttle shaft lever (us bending to l T109-41).

BOWL VAPOR VENT ADJUSTMENT: This adjustment should be mad after completing pump and metering rod adjustments. Install dust c ver and dust cover gasket. Back out throttle lever stop screw to allow throttle valves to seat in bores of carbur t r. There should be 1/16 inch (gauge T109-197) between lower edge f bowl vapor vent valve and dust cover. To adjust, r mov dust cover and bend vapor vent arm.

SECONDARY THROTTLE LEVER ADJUSTMENT: Primary and secondary throttle valves should reach wide open position at th same tim . To adjust, bend throttle operating rod at angle. (Use b nding tool T109-213). With primary and secondary throttle valv s in tightly closed position there should be .010 - .030 inch (gauge T109-29) cl arance between positive closing sh es n primary and sec ndary levers. To adjust, bend sh e n secondary lever.

AUXILIARY THROTTLE LOCK-OUT ADJUSTMENT: (2742S only) This adjustment should be made after completing fast idle and secondary throttle lever adjustments. Crack throttle valves and hold ch ke valve tightly closed. Then close thr ttle. L ck-out dog on auxiliary throttle shaft should freely engage in notch of lock-out arm. If necessary to adjusts, bend lock-out dog on auxiliary throttle shaft.

IDLE SPEED AND MIXTURE ADJUSTMENT (NORMAL ENGINE TEMP.): In making the idle adjustment on the engine the air adjustment screw is used to adjust idle speed in a similar manner as the throttle speed screw used previously. Turning the air adjustment screw outward increases engine speed, but also leans the mixture supplied to the manifold which must be compensated for by adjustment of the idle mixture adjusting screws.

Chrysler "V-8" – 1958 – Carbureters Nos. 2741S-2742S

WHEN SERVICING, USE GASKET ASSORTMENT NO. 310

Part No.	PART NAME	
1-1566S	–Body flange assembly (2742S)	
1-1502S	Body flange assembly (2741S)	
1A-110	Flange gasket	
2-189	Primary throttle valve	(2)
2-201	Secondary throttle valve	(2)
2-206	Auxiliary throttle valve	(2
3-1096S	Secondary throttle shaft and dog assembly	
3-1148S	Primary throttle shaft and lever assembly (2742S)	
3-1149S	Auxiliary throttle shaft and weight ass'y.	
3-1150S	Primary throttle shaft and lever ass'y. (2741S)	
4A-179	Auxiliary throttle shaft and lockout dog (2742S)	
6-1366S	– Air horn assembly (2742S)	
6-1368S	– Air horn assembly (2741S)	
7-173	Choke valve (2742S)	
11-311S	Low speed jet assembly (.032")	(2)
11B-35	Rivet plug	(4)
11B-41	Rivet plug (2742S)	
11B-79	Rivet plug	
11B-129S	Pump discharge passage plug assembly	
11B-134	Rivet plug	
11B-223	Rivet plug	(4)
11B-272	Rivet plug	(2)
11B-294	Idle port rivet plug	(2)
11B-305	Rivet plug	(2)
11B-306	Rivet plug	
14-383S	Choke lever and screw assembly (2742S)	
14-439S	Choke piston lever, link and shaft ass'y. (2742S)	
14-440	Cam trip lever (2742S)	
15-63S	Strainer Nut Assembly	(2)
17-70	Pump check needle	
20-26	Relief valve gasket	
20-126	Needle seat gasket	(2)
20-127	Bowl strainer gasket	(2)
21-143S	Primary float and lever assembly	
21-168S	Secondary float and lever assembly	
24-24	Float lever pin	(2)
25-278S	Primary and secondary needle and seat ass'y. (.0935")	(2)
30-75	Bowl strainer	
30A-67	Idle adjustment screw	(2)
30A-79	Idle air adjustment screw	(2)
39-11	Choke valve attaching screw (2742S)	
47-30	Welsh plug (choke housing) (2742S)	
47-33	Welsh plug (spark port)	
48-174S	Pump jet and housing assembly	
53A-333S	Pump operating lever and countershaft ass'y.	
53A-344	Vent arm	
53A-417	Lockout arm (2742S)	
61-84	Idle adjustment screw spring	(2)
61-128	Connector rod spring	
61-205	Vacuum piston spring	
61-291	Throttle lever adjusting screw spring	
61-382	Metering rod spring	
61-413	Upper pump spring	
61-454	Fast idle cam spring (2742S)	
61-474	Bowl vent spring	
61-483	Secondary throttle return spring	
61-593	Lockout arm spring (2742S)	
61-595	Idle arm adjustment screw spring	
63-35	Connector rod spring retainer	
63-57	Intake check ball retainer	
63-144	Delayer plate retainer ring (2742S)	
63-149	Bowl vent spring retainer	
63-176	Pump spring retainer	
63-225	Coil housing retainer (2742S)	
63-229	Heat Tube retainer (2742S)	

Part No.	PART NAME	
64-145S	Pump plunger and rod assembly	
75-1160	Metering rod – standard. .076" x .066" x .048"	(2)
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-65	Lockout dog attaching screw (2742S)	
101-74	Throttle shaft screw	
101-149S	Body flange attaching screw and washer ass'y	
101-152S	Air horn attaching screw and washer ass'y.	
101-184S	Dust cover attaching screw & washer ass'y	(2)
101-275	Piston housing attaching screw (2742S)	
101-277S	Vent arm attaching screw and washer ass'y.	
101-278	Pump jet housing attaching screw	
101-298S	Body flange attaching screw and washer ass'y	(2)
101-307S	Bracket and air horn attaching screw and washer assembly	(8)
101-320	Auxiliary throttle valve attaching screw	(4)
101-324	Fast idle cam screw (2742S)	
101-335S	Air horn attaching screw and washer ass'y	(7)
101-354S	Choke lever clamp screw and washer ass'y (2742S)	
101-363	Piston housing attaching screw (2742S)	(2)
101-382S	Body flange attaching screw and washer ass'y.	(3)
101-391	Throttle lever adjusting screw	
101-420	Primary and Secondary throttle valve attaching screw	(8)
101-426	Coil housing attaching screw (2742S)	(3)
103-14	Lead shot (2741S (4) (2742S (3)	
105A-10	Choke lever clamp screw nut (2742S)	
111-60S	Metering rod arm and screw assembly	
111-78S	Pump arm and screw assembly	
114-139	Throttle shaft arm (inner)	
114-145	– Throttle shaft arm (outer)	
115-215	Choke connector rod (2742S)	
115-216	Throttle connector rod	
115-292	Throttle operating rod	
116-13	Pump intake check ball	
117-162	Vacumeter piston link	
117-165	Pump connector link	
118-102S	Dust cover assembly	
120-163	Primary metering rod jet (.098")	(2)
120-193	Secondary metering jet (.057") (2741S)	(2)
120-226	Secondary metering jet (.065") (2742S)	(2)
121-78	Coil housing gasket (2742S)	
121-208	Dust cover gasket	
121-241	Pump jet housing gasket	
121-265	Air horn gasket	
121-277	Body flange gasket	
121-291	Heat tube cap gasket (2742S)	
121-298	Piston housing gasket (2742S)	
136-37	Throttle operating rod washer	(5)
136-84	Throttle shaft spring washer	
136-159	Throttle shaft washer	
136-199	Copper washer (Use with 101-298S)	(2)
145-142	Choke vacuum passage standpipe (2742S)	
145-148	Cross over bowl vent tubes	(2)
150-186S	Pin and valve cap assembly	
150-190	Choke piston pin (2742S)	
150A-10	Pin spring (2741S (4) (2742S (5)	
160-110S	Vacuum piston and pin assembly	
160-128	Choke piston (2742S)	
170-489S	Piston housing and plug assembly (2742S)	
170AW484S	Thermostatic coil and housing assembly (2742S)	
181-204S	Fast idle cam assembly (2742S)	
184-88	Choke heat tube cap (2742S)	
186-42	Choke baffle plate (2742S)	

–Parts so marked ar new and listed for the first time

NOTE Figures in parentheses indicate number of pieces us d in one carburet r. Where no figure is shown, nly one is us d.

CHRYSLER "V-8"

MODEL LC1

1958

(2733S Car Cooling)

BBD Dual Down-Draft Climatic® Control Carbureters Nos. 2685S-2733S

CARBURETER SPECIFICATIONS

For Chrysler 8 Cylinder 354 Cu. In. Engine: Vacuum at Idle 19 5 Inches

Dimensions: Flange size 1¼ inch dual 4 bolt type Throttle bore 1 7/16 inch I D Primary venturi 3/8 inch I D Main venturi, 1 3/16 inch I D

Vent: Inside balance vent tube to bowl in air horn above choke valve Outside (2) in flange above throttle valve

Low Speed Circuit: Jet (in venturi assembly) size 0255 inch diameter Idle bleed (in venturi cluster screw) size 051 inch diameter Idle restriction (in venturi cluster screw) size 055 inch diameter Venturi idle bleed (in body) size 0472 inch diameter Idle port slot type length 189 inch width 030 inch

Idle Port Opening: 144 to 148 inch above upper edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw). Size 055 inch diameter

Set Idle Adjustment Screw: ½ to 1½ turns open For richer mixture turn screw out With gear shift lever in neutral position idle engine at 500 R P M

Main Nozzle: Nozzle is installed permanently DO NOT REMOVE

Main Vent Tube: Side holes 10—size 0433 inch I—size 0393 inch diameter Main vent in bottom of tube size 0393 inch diameter

Accelerating Pump: Pump discharge jets (2—in venturi cluster) size 0275 inch diameter Intake ball check seat size 130 to 140 inch diameter Discharge ball check seat size 110 to 120 inch diameter

Choke: Carter Climatic® Control set 1 point rich Butterfly type offset valve Choke heat suction hole in body size 075 inch diameter NOTE Thermostatic coil should not be removed from delayer mounting post If defective replace with complete thermostatic coil and housing assembly

Vacuum Spark Port Horizontal round end type 045 by 110 inch Top of port to be 025 to 035 inch above upper edge of valve with valve closed tight

Motor Tune-Up — Be Accurate!

CAUTION· Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .017"	Ignition Timing Breaker Points to Open: 8° B. T. C. At Vibration Damper	Float Setting 9/32 Inch (Use Gauge T109-239)	Idle Adjustment Screw Setting ½ to 1½ Turns Open Idle Engine at 500 R. P. M. In Neutral

NOTE: These cars are equipped with Hydraulic Valve Lifters — NO ADJUSTMENT.

CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3655

Float Level: 9/32 inch (gauge T109-239) between top of each float ridge (at center of float) and top surface of body casting To adjust bend lip on float arm

Pump: 1 1/32 inch from the top of the bowl cover to the top of the plunger shaft Install throttle connector rod in center hole (medium stroke) of throttle lever and inner hole of pump arm To adjust bend throttle connector rod

Fast Idle Cam Clearance: With choke valve closed and lip on inner choke shaft lever contacting lug on outer lever, align index mark on cam with adjusting screw To adjust. bend lip on inner choke lever

Fast Idle Throttle Valve Clearance: 015 inch (gauge T109 44) between lower edge of valve and bore with adjusting screw on high step of cam

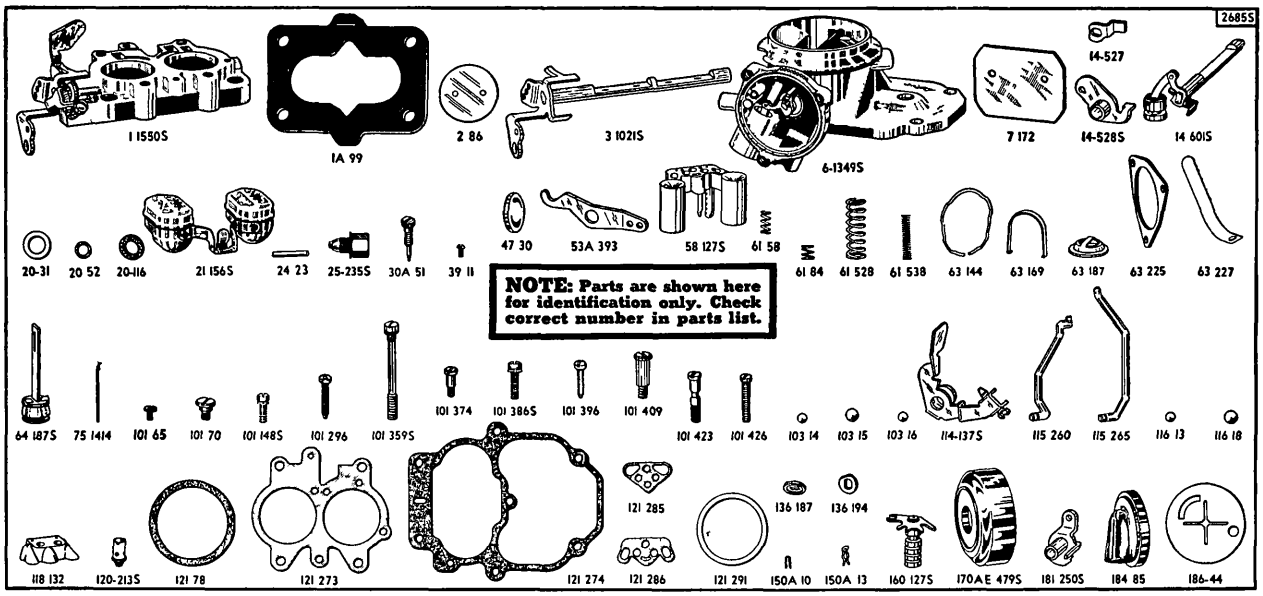
Fast Idle on Car: 1400 R P M hot engine with adjusting screw on index mark of cam

Unloader. ¼ inch (gauge T109-31) between top edge of choke valve and inner wall of air horn with throttle valves wide open To adjust bend unloader arm on throttle lever

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Chrysler "V-8"—1958—Carbureters Nos. 2685S-2733S

WHEN SERVICING, USE GASKET ASSORTMENT No 298, RE-CARBURETION KIT No 1918N (2685S), No 1917N (2733S)
PART NAMES IN CAPITAL LETTERS, LISTED BELOW INDICATE CONTENTS OF RE-CARBURETION KIT

Part No	PART NAME	
1-1550S	—Body flange assembly	
1A 99	FLANGE GASKET	
2-86	Throttle valve	(2)
3 1021S	Throttle shaft and lever assembly	
6-1349S	—Air horn assembly	
7-172	Choke valve	
14 527	Choke shaft lever	
14-528S	Choke lever assembly	
14 601S	—Choke piston lever link and shaft assembly	
20-31	Needle seat gasket	
20-52	STEP UP PISTON GASKET	
20-116	Main metering jet gasket	(2)
21-156S	Float and lever assembly	
24 23	Float lever pin	
25-235S	NEEDLE AND SEAT ASSEMBLY (1015") (2685S)	
25-291S	NEEDLE AND SEAT ASSEMBLY (1015") (2733S)	
30A 51	Idle adjustment screw	(2)
39-11	Choke and throttle valve attaching screw	(6)
47-30	Welsh plug	
53A 393	Pump arm	
58 127S	Venturi cluster and nozzle assembly	
61-58	Throttle adjusting screw spring	
61-84	Idle adjustment screw spring	(2)
61-528	Pump spring	
61-538	STEP UP PISTON SPRING	
63-144	Delayer plate retainer ring	
63-169	Float lever pin retainer	
63-187	Intake check ball retainer	
63-225	Coil housing retainer	
63-227	Heat tube retainer	
64-187S	PUMP PLUNGER AND ROD ASSEMBLY	
75-1414	—Step up rod .030"	(2)
101-65	Choke lever attaching screw	
101-70	Pump arm screw	
101-148S	Air horn attaching screw and washer assembly	(4)
101-296	Throttle adjusting screw	
101-359S	Body attaching screw and washer assembly	(2)

Part No	PART NAME	
101-374	Step up piston plate guide screw	
101-386S	Body flange attaching screw and washer assembly	(2)
101-396	Fast idle adjusting screw	
101-409	Fast idle cam attaching screw	
101-423	Venturi cluster screw	(2)
101-426	Coil housing attaching screw	(3)
103 14	Lead shot	
103-15	Lead shot	(2)
103-16	Lead shot	(2)
114-137S	Dash pot lever assembly	
115-260	Choke connector rod	
115-265	Throttle connector rod	
116-13	Discharge check ball	
116-18	Intake check ball	
118-132	Venturi cover	
120-213S	Main metering jet assembly 337 to 343 cc—2 sizes lean	(2)
120-214S	Main metering jet assembly 356 to 364 cc—1 size lean	(2)
120 215S	MAIN METERING JET ASSEMBLY 378 to 386 cc —Standard	(2)
121-78	COIL HOUSING GASKET	
121-273	BODY FLANGE GASKET	
121-274	BODY GASKET	
121-285	VENTURI HOUSING GASKET	
121-286	VENTURI COVER GASKET	
121-291	HEAT TUBE CAP GASKET	
121-313	—Air cleaner gasket	
136-187	Pump spring retainer washer	
136-194	Choke shaft washer	
150A-10	Pin spring	
150A-13	Pin spring	(2)
160-127S	Step up piston and plate assembly	
170AE-479S	—Thermostatic coil and housing assembly	
181-250S	—Fast idle cam assembly	
184-85	Choke heat tube cap	
186 44	Choke baffle plate	

—Parts so marked are new and listed for the first time

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.

CHRYSLER "V-8"
MODEL LC3

IMPERIAL "V-8"
MODEL LY1

1958

(Use 2806S and 15-58S to replace 2651S)

AFB Four-Bore Down-Draft Climatic® Control Carbureters Nos. 2651S-2806S

CARBURETER SPECIFICATIONS

For Chrysler 8 Cylinder 392 Cu. In. Engine: Vacuum at Idle 19.5 Inches

Dimensions: Flange four bore—4 bolt type
Throttle bore, 1-7/16 inch.
Primary venturi size primary side 7/16 inch secondary side, 11/32 inch I D
Main venturi size, 1-3/16 inch

Vents: Inside (4) in air horn Outside (5) in air horn (4) in body

Low Speed Circuit (Primary Side only): Jet size No 68 (.031 inch) drill By-pass, size (.0492 inch) diameter Economizer size (.0452 inch) diameter Idle bleed size (.0492 inch) diameter Idle port slot type length .198 inch width .030 inch

Idle Port Opening: .142 to .148 inch above top edge of valve with valve tightly closed

Set Idle Adjustment Screw: 1/4 to 1 3/4 turns open For richer mixture turn screw out Do not idle engine below 500 r p m Transmission in neutral

Main Nozzle: Installed permanently DO NOT REMOVE Anti-percolator bleed primary, (tube in venturi assembly) size No 68 (.031 inch) drill Secondary, (drilled hole in venturi assembly) size No 60 (.040 inch) drill

Main Vent Tube: (In venturi assembly) Side holes primary side 1—size No 70 (.028 inch) 1—size No 65 (.035 inch) drill; secondary side 2—size No 57 (.043 inch) drill

Accelerating Pump: Discharge jet (twin primary side only size No 70 (.028 inch) drill Intake ball check seat (screw plug) size 115 to 120 inch diameter Discharge needle seat size No 50 (.070 inch) drill

Choke: Carter Climatic® Control set 1 point rich Butterfly type offset choke valve primary side only Choke heat suction hole restriction in body size No 50 (.070 inch) drill

Vacuum Spark Port: Slot type (round end) .045 x .110 inch Top of port .026 to .034 inch above top edge of valve with valve tightly closed

Motor Tune-Up — Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .017"	Ignition Timing Breaker Points to Open 6° B. T. C. At Vibration Damper	Float Setting (See Adjustments)	Idle Adjustment Screw Setting 1/4 to 1 3/4 Turns Open Idle Engine at 500 R. P. M. In Neutral

NOTE: These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT.

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CARBURETER
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MARCA RE ISTRADA

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CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3725

FLOAT ALIGNMENT: Side of floats parallel to edge of casting. Minimum clearance between lever and air horn lugs without binding. To adjust, bend float lever.

FLOAT LEVEL: 5/16 inch (gauge T109-107) for 21-188S floats (identify by smooth sides); 7/32 inch (gauge T109-106) for 21-179S floats (identify by ribs on floats) between top of floats (at outer end) and air horn gasket. To adjust, bend float lever.

FLOAT DROP: 23/32 inch between top of floats (at outer end) and air horn gasket. To adjust, bend stop tabs on float brackets.

PUMP: 7/16 inch from the top of the bowl cover to the top of the plunger shaft, with throttle connector rod in center hole (medium stroke) of pump arm. To adjust, bend throttle connector rod.

CHOKE PISTON LEVER ADJUSTMENT: .040 inch (gauge T109-193) between choke lever and stop in piston housing with choke valve closed. To adjust, bend choke connector rod.

FAST IDLE LINKAGE ADJUSTMENT: With choke valve tightly closed and lug on outer choke shaft lever contacting stop on inner choke shaft lever align center of fast idle screw with index mark on cam. To adjust, bend fast idle connector rod.

FAST IDLE THROTTLE VALVE CLEARANCE: .012 inch (gauge T109-200) between lower edge of valve and bore with adjusting screw on index mark of cam.

FAST IDLE ON CAR: 1400 R. P. M. hot engine with fast idle screw on index mark of cam.

UNLOADER: 1/4 inch (gauge T109-31) between upper edge of choke valve and inner wall of air horn. To adjust, bend unloader lip on throttle lever.

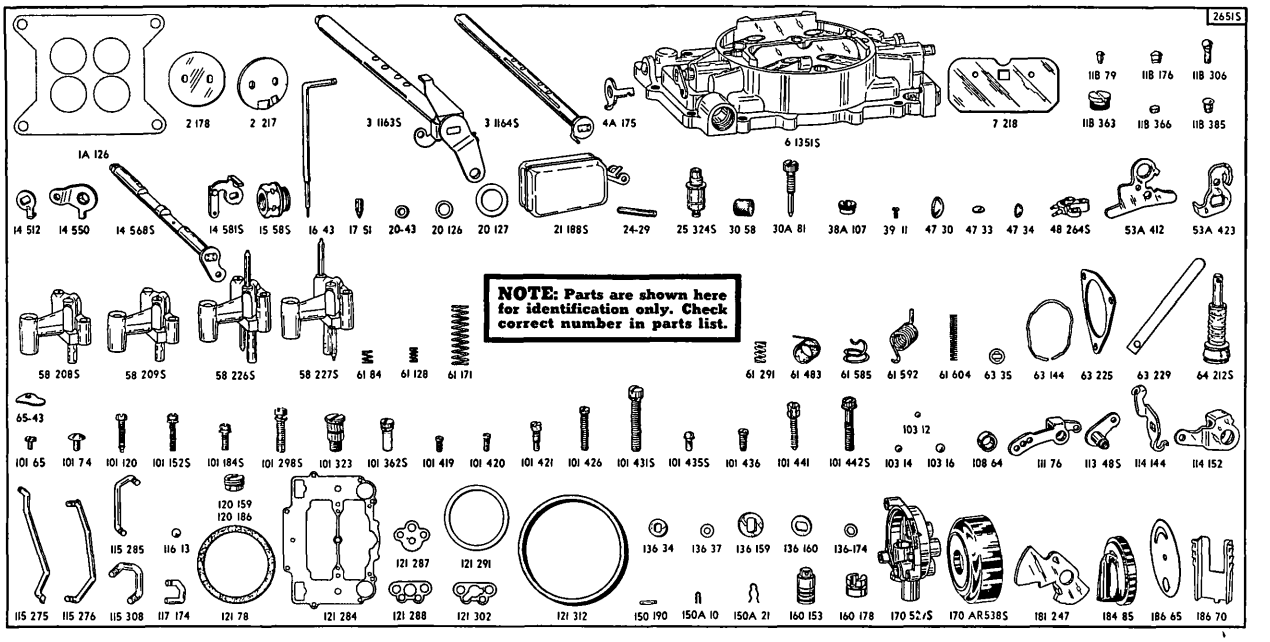
SECONDARY THROTTLE LEVER ADJUSTMENT: 1. Block choke valve wide open. 2. With 3/8 inch between lower edge of primary valve and bore (opposite idle port) secondary valves should just start to open. To adjust, bend throttle operating rod. NOTE: At wide open throttle primary and secondary valves will reach full vertical position. 3. With primary and secondary throttle valves in tightly closed position there should be .010" to .030" (gauge T109-29) between positive closing shoes on primary and secondary throttle lever. To adjust, bend shoe on secondary lever.

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: Crack throttle valves and manually open and close the choke valve. Tang on secondary throttle lever should freely engage in notch of lock-out dog. To adjust, bend tang on secondary throttle lever.

TOOLS REQUIRED FOR SERVICING CARBURETERS:

T109-29 .020" Wire gauge	T109-107 5/16" Float gauge (early)
T109-31 1/4" Unloader gauge	T109-193 .040" Wire gauge
T109-41 Bending tool	T109-200 .012" Wire gauge
T109-106 7/32" Float gauge (late)	T109-213 Bending tool

CARBURETER
TRADE MARK REG. U. S. PAT. OFF.
MARCA REGISTRADA



Chrysler — 1958 — Carbureters Nos. 2651S-2806S

WHEN SERVICING, USE GASKET ASSORTMENT No. 313; RE-CARBURETION KIT No. 1907N

PART NAMES IN CAPITAL LETTERS, LISTED BELOW INDICATE CONTENTS OF RE-CARBURETION KIT

Part No.	PART NAME	
1A-126	—FLANGE GASKET	
2-178	Secondary throttle valve	(2)
2-217	—Primary throttle valve	(2)
3-1163S	—Primary throttle shaft and lever assembly	
3-1164S	—Secondary throttle shaft and dog assembly	
4A-175	Primary throttle shaft dog	
6-1351S	—Air horn assembly	
7-218	Choke valve	
11B-69	Rivet plug (late prod.)	(2)
11B-79	Rivet plug (early prod (2) (late prod (4)	
11B-176	Idle port rivet plug	(2)
11B-306	Fuel passage rivet plug (early prod.) (2651S)	(2)
11B-363	Pump intake screw plug	
11B-366	Lead plug	(4)
11B-385	—Fuel passage rivet plug (late prod.)	(2)
14-512	Outside choke shaft lever	
14-550	Inside choke shaft lever	
14-568S	—Choke lever and shaft assembly (2651S) (Sup by 14-614S)	
14-581S	Choke piston lever, link and pin assembly (use with 170-527S)	
14-609S	—Choke piston lever, link and pin assembly (use with 170-573S)	
14-612S	—Choke shaft and lever assembly (piston housing) (use with 170-573S)	
14-614S	—Choke lever and shaft assembly	
15-58S	Strainer nut assembly (2651S)	
16-39	Step-up rod—1 size lean 066" x .061"	(2)
16-40	Step-up rod—2 sizes lean 067" x 064"	(2)
16-43	—STEP UP ROD—STANDARD .065" x .060"	(2)
17-51	Pump discharge check needle	
20-43	Piston housing gasket	
20-126	Needle seat gasket	(2)
20-127	Strainer nut gasket	
21-179S	Float and lever assembly	(2)
21-188S	Float and lever assembly (2651S) (Sup. by 21-179S)	(2)
24-29	Float lever pin	(2)
25-324S	Needle and seat assembly (.1015") (2651S) (Sup by 25 343S)	(2)
25-343S	—NEEDLE AND SEAT ASSEMBLY (.0935")	(2)
30-58	Fuel inlet strainer	
30A-81	—Idle adjustment screw	(2)
38A-107	Pump intake check ball seat	
39-11	Choke valve attaching screw	(2)
47-30	Piston housing welsh plug	
47-33	—Venturi welsh plug	(4)
47-34	Spark port welsh plug	
48-264S	Pump jet and housing assembly	
53A-412	Lockout dog	
53A-423	—Secondary throttle operating lever	
58-208S	—Secondary venturi assembly (choke side)	
58-209S	—Secondary venturi assembly (pump side)	
58-226S	—Primary venturi assembly (choke side)	
58-227S	—Primary venturi assembly (pump side)	
61-84	Idle adjusting screw spring	(2)
61-128	Throttle connector rod spring	
61-171	Pump spring (lower)	
61-291	Throttle lever adjusting screw spring	
61-483	Secondary throttle return spring (2651S) Sup by 61-618)	
61-585	Step-up rod retaining spring	(2)
61-592	Throttle flex spring (Sup by 61 623)	
61-604	—VACUUM PISTON SPRING	(2)
61-618	Secondary throttle return spring	
61-623	Throttle flex spring	
63-35	Throttle connector rod retainer	

Part No	PART NAME	
63-144	Delayer plate retainer ring	
63-225	Coil housing retainer	
63-229	Heat tube retainer	
64-212S	—PUMP PLUNGER ROD AND SPRING ASSEMBLY	
65-43	Step up piston cover plate	(2)
101-65	Choke shaft lever attaching screw	(2)
101-74	Throttle shaft lever attaching screw	(2)
101-120	Fast idle adjustment screw	
101-152S	Air horn attaching screw and washer assembly	
101-184S	Pump jet housing attaching screw and washer assembly	(2)
101-298S	Secondary venturi attaching screw and washer assembly (length 1⅛") (early prod)	(4)
101-323	Fast idle cam attaching screw	
101-362S	Air horn attaching screw and washer assembly	(8)
101 379S	Secondary venturi attaching screw and washer assembly (length 1") (late prod)	(4)
101-419	Secondary throttle valve attaching screw	(4)
101 420	Primary throttle valve attaching screw	(4)
101-421	Pump arm attaching screw	
101-426	Coil housing attaching screw	(3)
101-431S	Air horn attaching screw and washer assembly	
101-435S	Step up piston cover plate attaching screw and washer assembly	(2)
101-436	Piston housing attaching screw	(3)
101-441	Throttle lever adjusting screw	
101-442S	Primary venturi attaching screw and washer assembly	(4)
103-12	—Lead shot	(2)
103-14	Lead shot (.180 dia)	
103-15	Lead shot (.240" dia)	
103-16	Lead shot	
108 64	Fast idle cam spacer (2651S) (Sup by 181 258S)	
111-76	Pump arm	
113-48S	—Choke shaft and lever assembly (piston housing) (use with 170 527S)	
114-144	Primary throttle shaft arm (outer)	
114-152	—Primary throttle shaft arm (inner)	
115-275	Fast idle connector rod	
115-276	—Throttle connector rod	
115-285	—Choke connector rod	
115-308	—Throttle operating rod	
116-13	Pump intake check ball	
117-174	Pump connector link	
120-159	PRIMARY METERING JET (.089")	(2)
120-186	Secondary metering jet (.061")	(2)
121-78	COIL HOUSING GASKET	
121-284	Air horn gasket (2651S) (Sup by 121 309)	
121-287	PUMP JET HOUSING GASKET	
121-288	SECONDARY VENTURI CLUSTER GASKET	(2)
121-291	HEAT TUBE CAP GASKET	
121-302	PRIMARY VENTURI CLUSTER GASKET	(2)
121-309	AIR HORN GASKET	
121-312	—Air cleaner gasket	
136-34	Choke piston lever retaining washer (use (2) with 170 527S (1) with 170 573S)	
136-37	Throttle operating rod washer	
136-159	Primary throttle shaft washer	
136-160	Secondary throttle shaft washer	
136-174	Throttle lever adjusting screw washer	
150-190	Choke piston pin	
150A-10	Pin spring	(6)
150A-21	Pin spring	
156-116S	Fuel inlet fitting (2806S)	
160-153	Step up piston	(2)
160-178	—Choke piston	
170-527S	—Piston housing and plug assembly (early prod — casting No 170 461)	
170 573S	—Piston housing and plug assembly (late prod — casting No 170 571)	
170AR-538S	—Thermostatic coil and housing assembly	
181-247	—Fast idle cam (2651S) (Sup by 181 258S)	
181-258S	—Fast idle cam and collar assembly	
184-85	Choke heat tube cap	
186-65	—Choke baffle plate	
186-70	Fuel bowl baffle	(2)

—Parts so marked are new and listed for the first time

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

CHRYSLER "V-8"

(Also used on Canadian De Soto, Model LS2 and Canadian Dodge, Model LD3)

MODEL LC2

(Power Pak)

1958

(Use 2805S and 15-58S to replace 2650S)

AFB Four-Bore Down-Draft Climatic® Control Carbureters Nos. 2650S-2805S

CARBURETER SPECIFICATIONS

For Chrysler 8 Cylinder 354 Cu. In. Engine. Vacuum at Idle 19.5 Inches

Dimensions: Flange four bore — 4 bolt type
Throttle bore 1 7/16 inch
Primary venturi size primary side, 7/16 inch secondary side 11/32 inch I D
Main venturi size 1 3/16 inch

Vents: Inside (4) in air horn, Outside (5) in air horn (4) in body

Low Speed Circuit: (Primary side only) Jet, size No 68 (.031 inch) drill
By pass size (.0492 inch) diameter
Economizer size (.0452 inch) diameter
Idle bleed size (.0492 inch) diameter
Idle port slot type length .198 inch, width .030 inch.

Idle Port Opening .142 to .148 inch above top edge of valve with valve tightly closed

Set Idle Adjustment Screw: 1/4 to 1 3/4 turns open For richer mixture turn screw out Do not idle engine below 500 r p m Transmission in neutral

Main Nozzle: Installed permanently DO NOT REMOVE Anti percolator bleed primary (tube in venturi assembly) size No 68 (.031 inch) drill
Secondary (drilled hole in venturi assembly) size No 60 (.040 inch) drill.

Main Vent Tube: (In venturi assembly) Side holes primary side 1 1—size No. 70 (.028 inch) 1—size No 65 (.035 inch) drill secondary side 2—size No 57 (.043 inch) drill.

Accelerating Pump: Discharge jet (twin primary side only size No 70 (.028 inch) drill Intake ball check seat (screw plug) size .115 to .120 inch diameter Discharge needle seat size No 50 (.070 inch) drill.

Choke: Carter Climatic® Control set 1 point rich Butterfly type offset choke valve primary side only Choke heat suction hole restriction in body size No 50 (.070 inch) drill

Vacuum Spark Port: Slot type (round end) .045 x .110 inch Top of port .026 to .034 inch above top edge of valve with valve tightly closed

Motor Tune-Up — Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .017"	Ignition Timing Breaker Points to Open. 6° B. T. D. C. At Vibration Damper	Float Setting (See Adjustments)	Idle Adjustment Screw Setting 1/4 to 1 3/4 Turns Open 500 R. P. M. In Neutral

NOTE: These cars are equipped with Hydraulic Valve Lifters — NO ADJUSTMENT.

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CARBURETER
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CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3725

FLOAT ALIGNMENT: Side of floats parallel to edge of casting. Minimum clearance between lever and air horn lugs without binding. To adjust, bent float lever.

FLOAT LEVEL: 5/16 inch (gauge T109-107) for 21-188S floats (identify by smooth sides); 7/32 inch (gauge T109-106) for 21-179S floats (identify by ribs on floats) between top of floats (at outer end) and air horn gasket. To adjust, bend float lever.

FLOAT DROP: 23/32 inch between top of floats (at outer end) and air horn gasket. To adjust, bend stop tabs on float brackets.

PUMP: 7/16 inch from the top of the bowl cover to the top of the plunger shaft, with throttle connector rod in center hole (medium stroke) of pump arm. To adjust, bend throttle connector rod.

CHOKE PISTON LEVER ADJUSTMENT: .040 inch (Gauge T109-193) between choke lever and stop in piston housing with choke valve closed. To adjust, bend choke connector rod.

FAST IDLE LINKAGE ADJUSTMENT: With choke valve tightly closed and lug on outer choke shaft lever contacting stop on inner choke shaft lever align center of fast idle screw with index mark on cam. To adjust, bend fast idle connector rod.

FAST IDLE THROTTLE VALVE CLEARANCE: .012 inch (Gauge T109-200) between lower edge of valve and bore with adjusting screw on index mark of cam.

FAST IDLE ON CAR: 1400 R. P. M. hot engine with fast idle screw on index mark of cam.

UNLOADER: 1/4 inch (Gauge T109-31) between upper edge of choke valve and inner wall or air horn. To adjust, bend unloader lip on throttle lever.

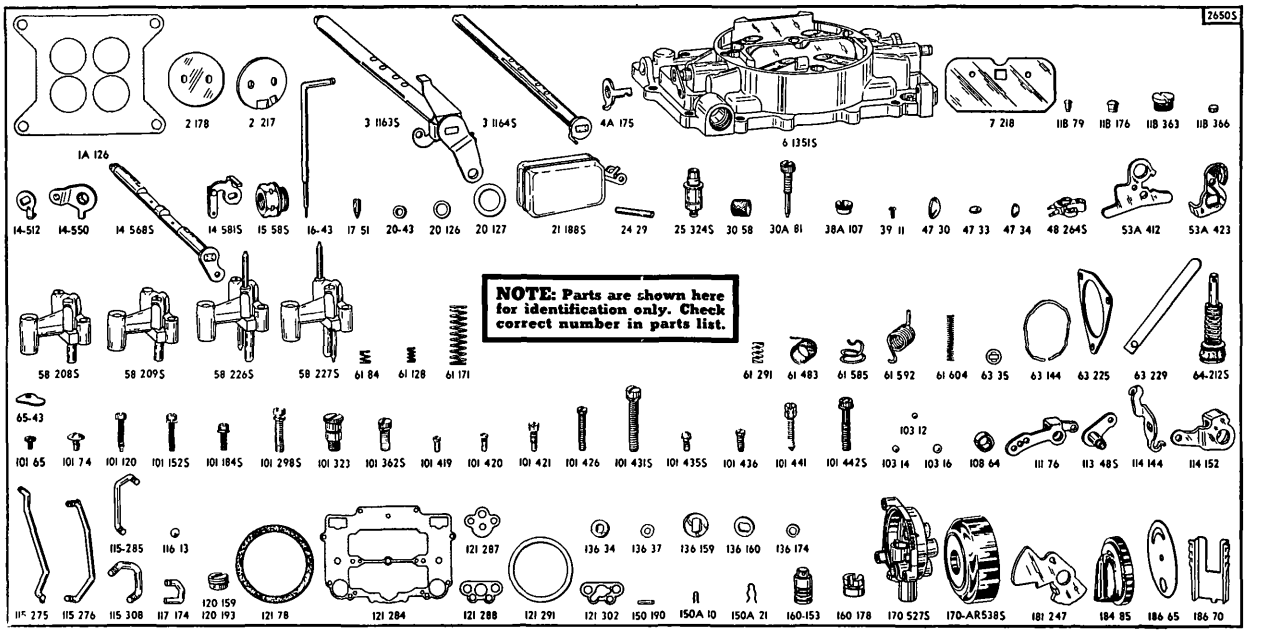
SECONDARY THROTTLE LEVER ADJUSTMENT: 1. Block choke valve wide open. 2. With 3/8 inch between lower edge of primary valve and bore (opposite idle port) secondary valves should just start to open. To adjust, bend throttle operating rod. NOTE: At wide open throttle primary and secondary valves will reach full vertical position. 3. With primary and secondary throttle valves in tightly closed position there should be .010" to .030" (Gauge T109-29) between positive closing shoes on primary and secondary throttle lever. To adjust, bend shoe on secondary lever.

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: Crack throttle valves and manually open and close the choke valve. Tang on secondary throttle lever should freely engage in notch of lock-out dog. To adjust, bend tang on secondary throttle lever.

TOOLS REQUIRED FOR SERVICING CARBURETERS:

T109-29	.020" Wire gauge	T109-107	5/16" Float gauge (early)
T109-31	1/4" Unloader gauge	T109-193	.040" Wire gauge
T109-41	Bending tool	T109-200	.012" Wire gauge
T109-106	7/32" Float gauge (late)	T109-213	Bending tool

CARBURETER
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Chrysler — 1958 — Carbureters Nos. 2650S-2805S

WHEN SERVICING, USE GASKET ASSORTMENT No. 313; RE-CARBURETION KIT No. 1907N

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF RE-CARBURETION KIT

Part No.	PART NAME	
1A-126	—FLANGE GASKET	
2-178	Secondary throttle valve	(2)
2-217	—Primary throttle valve	(2)
3-1163S	—Primary throttle shaft and lever assembly	
3-1164S	—Secondary throttle shaft and dog assembly	
4A-175	Primary throttle shaft dog	
6-1351S	—Air horn assembly	
7-218	Choke valve	
11B-69	Rivet plug (late prod.)	(2)
11B-79	Rivet plug (early prod (2), (late prod. (4)	
11B-176	Idle port rivet plug	(2)
11B-306	Fuel passage rivet plug (early prod.) (2650S)	(2)
11B-363	Pump intake screw plug	
11B-366	Lead plug	(4)
11B-385	—Fuel passage rivet plug (late prod)	(2)
14-512	Outside choke shaft lever	
14-550	Inside choke shaft lever	
14-568S	—Choke lever and shaft assembly (2650S) (Sup. by 14-614S)	
14-581S	Choke piston lever, link and pin assembly (use with 170-527S)	
14-609S	—Choke piston lever, link and pin assembly (use with 170-573S)	
14-612S	—Choke shaft and lever assembly (piston housing) (use with 170-573S)	
14-614S	—Choke lever and shaft assembly	
15-58S	Strainer nut assembly (2650S)	
16-39	Step-up rod .066" x .061"—1 size lean	(2)
16-40	Step-up rod .067" x .064"—2 sizes lean	(2)
16-43	—STEP-UP ROD .065" x .060"	(2)
17-51	Pump discharge check needle	
20-43	Piston housing gasket	
20-126	Needle seat gasket	(2)
20-127	Strainer nut gasket	

Part No.	PART NAME	
21-179S	Float and lever assembly	(2)
21-188S	Float and lever assembly (2650S) (Sup. by 21-179S)	(2)
24-29	Float lever pin	(2)
25-324S	Needle and seat assembly (.1015") (2650S) (Sup. by 25-343S)	(2)
25-343S	— NEEDLE AND SEAT ASSEMBLY (.0935")	(2)
30-58	Fuel inlet strainer	
30A-81	—Idle adjustment screw	(2)
38A-107	Pump intake check ball seat	
39-11	Choke valve attaching screw	(2)
47-30	Piston housing welsh plug	
47-33	Venturi welsh plug	(4)
47-34	Spark port welsh plug	
48-264S	Pump jet and housing assembly	
53A-412	Lockout dog	
53A-423	—Secondary throttle operating lever	
58-208S	—Secondary venturi assembly (choke side)	
58-209S	—Secondary venturi assembly (pump side)	
58-226S	—Primary venturi assembly (choke side)	
58-227S	—Primary venturi assembly (pump side)	
61-84	Idle adjusting screw spring	(2)
61-128	Throttle connector rod spring	
61-171	Pump spring (lower)	
61-291	Throttle lever adjusting screw spring	
61-483	Secondary throttle return spring (2650S) (Sup. by 61-618)	
61-585	Step-up rod retaining spring	(2)
61-592	Throttle flex spring (Sup. by 61-623)	
61-604	—VACUUM PISTON SPRING	(2)
61-618	Secondary throttle return spring	
61-623	Throttle flex spring	
63-35	Throttle connector rod retainer	
63-144	Delayer plate retainer ring	
63-225	Coil housing retainer	

Part No.	PART NAME	
63-229	Heat tube retainer	
64-212S	—PUMP PLUNGER, ROD AND SPRING ASSEMBLY	
65-43	Step-up piston cover plate	(2)
101-65	Choke shaft lever attaching screw	(2)
101-74	Throttle shaft lever attaching screw	(2)
101-120	Fast idle adjustment screw	
101-152S	Air horn attaching screw and washer assembly	
101-184S	Pump jet housing attaching screw and washer assembly	(2)
101-298S	Secondary venturi attaching screw and washer assembly (length 1⅛") (early prod)	(4)
101-323	Fast idle cam attaching screw	
101-362S	Air horn attaching screw and washer assembly	(8)
101-379S	Secondary venturi attaching screw and washer assembly (length 1"), (late prod)	(4)
101-419	Secondary throttle valve attaching screw	(4)
101-420	Primary throttle valve attaching screw	(4)
101-421	Pump arm attaching screw	
101-426	Coil housing attaching screw	(3)
101-431S	Air horn attaching screw and washer assembly	
101-435S	Step-up piston cover plate attaching screw and washer assembly	(2)
101-436	Piston housing attaching screw	(3)
101-441	Throttle lever adjusting screw	
101-442S	Primary venturi attaching screw and washer assembly	(4)
103-12	—Lead shot	(2)
103-14	Lead shot (.180" dia)	
103-15	Lead shot (.240" dia),	
103-16	Lead shot	
108-64	Fast idle cam spacer (2650S) (Sup. by 181-258S)	
111-76	Pump arm	
113-48S	—Choke shaft and lever assembly (piston housing) (use with 170-527S)	
114-144	Primary throttle shaft arm (outer)	
114-152	—Primary throttle shaft arm (inner)	
115-275	Fast idle connector rod	
115-276	Throttle connector rod	
115-285	—Choke connector rod	
115-308	—Throttle operating rod	
116-13	Pump intake check ball	
117-174	Pump connector link	
120-159	PRIMARY METERING JET (.089")	(2)
120-193	Secondary metering jet (.057")	(2)
121-78	COIL HOUSING GASKET	
121-284	Air horn gasket (2650S) (Sup. by 121-309)	
121-287	PUMP JET HOUSING GASKET	
121-288	SECONDARY VENTURI CLUSTER GASKET	(2)
121-291	HEAT TUBE CAP GASKET	
121-302	PRIMARY VENTURI CLUSTER GASKET	(2)
121-309	AIR HORN GASKET	
121-312	—Air cleaner gasket	
136-34	Choke piston lever retaining washer (use (2) with 170-527S, (1) with 170-573S)	
136-37	Throttle operating rod washer	
136-159	Primary throttle shaft washer	
136-160	Secondary throttle shaft washer	
136-174	Throttle lever adjusting screw washer	
150-190	Choke piston pin	
150A-10	Pin spring	(6)
150A-21	Pin spring	
156-116S	Fuel inlet fitting (2805S)	
160-153	Step-up piston	(2)
160-178	—Choke piston	
170-527S	—Piston housing and plug assembly (early prod — casting No. 170-461)	
170-573S	—Piston housing and plug assembly (late prod — casting No. 170-571)	
170AR-538S	—Thermostatic coil and housing assembly	
181-247	Fast idle cam (2650S) (Sup. by 181-258S)	
181-258S	—Fast idle cam and collar assembly	
184-85	Choke heat tube cap	
186-65	—Choke baffle plate	
186-70	Fuel bowl baffle	(2)

—Parts so marked are new and listed for the first time.

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

CARBURETER
TRADE MARK REG. U. S. PAT. OFF.
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CHRYSLER "V-8"

2448S	2686S	2836S
C-76	C-75-2	LC2
Imperial		
IM-1, 2 & 3	1957	1958
1957		

Note: 2836S limited production can use 2805S

AFB Four-Bore Down-Draft Climatic® Control Carbureters Nos. 2448S-2686S-2836S

CARBURETER SPECIFICATIONS

For Chrysler 8 Cylinder 354 Cu. In. Engine: Vacuum at Idle 19 Inches (C-75-2, LC2)

For Chrysler 8 Cylinder 392 Cu. In. Engine: Vacuum at Idle 19 Inches (C-76, IM-1, 2 & 3)

Dimensions: Flange, four bore — 4 bolt type
Throttle bore, 1 7/16 inch
Primary venturi size, primary side, 7/16 inch secondary side, 11/32 inch I D
Main venturi size 1-3/16 inch

Vent: Inside (4) in air horn, Outside (4) in body, (5) in air horn (2836 only).

Low Speed Jet Tube: (In venturi assembly, primary side only)
Jet, size No 68 (.031 inch) drill
By-pass, size (.0492 inch) diameter.
Economizer, size (.0452 inch) diameter
Idle bleed, size (.0492 inch) diameter

Idle Port: (Upper) slot type Primary, length .198 inch, width .030 inch. Secondary, none.

Idle Port Opening: Primary, .142 to .148 inch above top edge of valve with valve tightly closed Secondary, none

Set Idle Adjustment Screw: 1/4 to 1 3/4 turns open. For richer mixture turn screw out. Do not idle engine below 500 r p m Transmission in neutral

Main Nozzle: Installed permanently DO NOT REMOVE Anti-percolator bleed, primary (tube in venturi assembly), size No 68 (.031 inch) drill.
Secondary (drilled hole in venturi assembly), size No 60 (.040 inch) drill

Main Vent Tube: (In venturi assembly) Side holes primary side 1—size No 70 (.028 inch), 10—size No 65 (.035 inch) drill; secondary side 2—size No. 57 (.043 inch) drill

Accelerating Pump: Discharge jet (twin) primary side only, size No. 70 (.028 inch) drill. Intake ball check seat (screw plug) size .115 to .120 inch diameter. Discharge needle seat size No 50 (.070 inch) drill

Choke: Carter Climatic® Control set 1 point rich. Butterfly type offset choke valve, primary side only. Choke heat suction hole, restriction in body size No 50 (.070 inch) drill

Vacuum Spark Port: Slot type (round end) .045 x .110 inch Top of port .026 to .034 inch above top edge of valve with valve tightly closed

Motor Tune-Up — Be Accurate!

CAUTION. Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open:	Float Setting	Idle Adjustment Screw Setting
.035"	.017"	6° B T. D. C. At Vibration Damper	See Adjustments	1/4 to 1 3/4 Turns Open 500 R. P. M. In Neutral

NOTE: These cars are equipped with Hydraulic Valve Lifters — NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3725

FLOAT ALIGNMENT: Side of floats parallel to edge of casting. Minimum clearance between lever and air horn lugs without binding. To adjust, bend float lever.

FLOAT LEVEL: 5/16 inch (gauge T109-107) for 21-188S floats (identify by smooth sides): 7/32 inch (gauge T109-106) for 21-179S floats (identify by ribs on floats) between top of floats (at outer end) and air horn gasket. To adjust, bend float lever.

FLOAT DROP: 23/32 inch between top of floats (at outer end) and air horn gasket. To adjust, bend stop tabs on float brackets.

PUMP: 7/16 inch from the top of the bowl cover to the top of the plunger shaft with throttle connector rod in center hole (medium stroke) of pump arm. To adjust, bend throttle connector rod.

CHOKE PISTON LEVER ADJUSTMENT: (2448S-2686S) .040 inch (Gauge T109-193) (2836S) .067 inch (Gauge T109-234) between choke lever and stop in piston housing with choke valve closed. To adjust, bend choke connector rod.

FAST IDLE LINKAGE ADJUSTMENT: With choke valve tightly closed and lug on outer choke shaft lever contacting stop on inner choke shaft lever align center of fast idle screw with index mark on cam. To adjust, bend fast idle connector rod.

FAST IDLE THROTTLE VALVE CLEARANCE: .012 inch (Gauge T109-200) between lower edge of valve and bore with adjusting screw on index mark of cam.

FAST IDLE ON CAR: (2448S) 1450 to 1500, (2686S) 1300 to 1350, (2836S) 1400 R. P. M. hot engine with fast idle screw on index mark of cam.

UNLOADER: 1/4 inch (Gauge T109-31) between upper edge of choke valve and inner wall of air horn. To adjust, bend unloader lip on throttle lever.

SECONDARY THROTTLE LEVER ADJUSTMENT: 1. Block choke valve wide open. 2. With 19/64 inch (2448S-2686S), 3/8 inch (2836S) between lower edge of primary valve and bore (opposite idle port) secondary valves should just start to open. To adjust, bend throttle operating rod. **NOTE:** At wide open throttle primary and secondary valves will reach full vertical position. 3. With primary and secondary throttle valves in tightly closed position there should be .010" to .030" (gauge T109-29) between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on secondary lever.

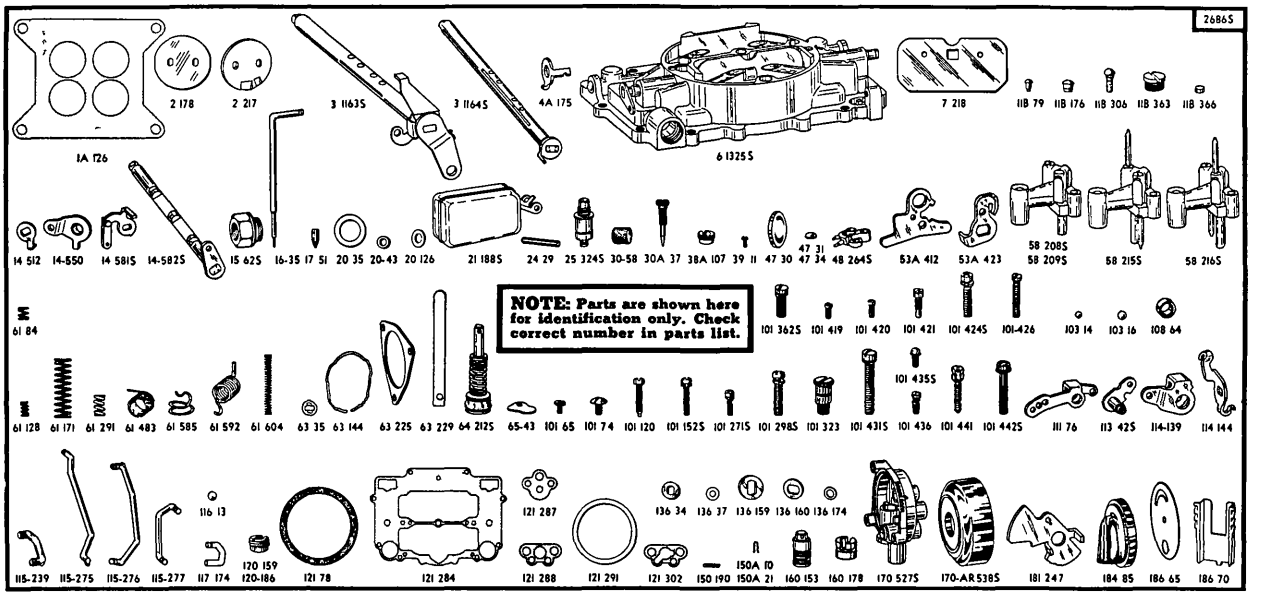
SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: Crack throttle valves and manually open and close the choke valve. Tang on secondary throttle lever should freely engage in notch of lock-out dog. To adjust, bend tang on secondary throttle lever.

TOOLS REQUIRED FOR SERVICING CARBURETERS:

T109-29	.020" Wire gauge	T109-107	5/16" Float gauge (early)
T109-31	1/4" Unloader gauge	T109-193	.040" Wire gauge
T109-41	Bending tool	T109-200	.012" Wire gauge
T109-106	7/32" Float gauge (late)	T109-213	Bending tool

T109-234 .067" Wire gauge

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Chrysler — 1957 — Carbureters Nos. 2448S-2686S-2836S

WHEN SERVICING, USE GASKET ASSORTMENT No. 313; RE-CARBURETION KIT No. 1876N

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF RE-CARBURETION KIT

Part No.	PART NAME	
1A-126	FLANGE GASKET	
2-178	Secondary throttle valve	(2)
2-217	Primary throttle valve	(2)
3-1163S	Primary throttle shaft and lever assembly	
3-1164S	Secondary throttle shaft and dog assembly	
4A-175	Primary throttle shaft dog	
6-1325S	Air horn assembly (2448S-2686S)	
6-1395S	Air horn assembly (2836S)	
7-218	Choke valve	
11B-79	Rivet plug	(2)
11B-176	Idle port rivet plug	(2)
11B-306	Rivet plug (early prod.) (2448S-2686S)	(2)
11B-363	Pump intake screw plug	
11B-366	Lead plug	(4)
11B-385	Fuel passage plug	(2)
14-512	Outside choke shaft lever	
14-550	Inside choke shaft lever	
14-581S	Choke piston lever, link and pin assembly	
14-582S	Choke lever and shaft assembly	
15-62S	Strainer nut assembly (2448S-2686S)	
16-35	STEP-UP ROD .0645" x .058"—STANDARD	(2)
16-39	Step-up rod .066" x .061"—1 size lean	(2)
16-40	Step-up rod .0675" x .064"—2 sizes lean	(2)
17-51	Pump discharge check needle	
20-35	Strainer nut gasket (2448S-2686S)	
20-43	Piston housing gasket	
20-126	Needle seat gasket	(2)
20-127	Strainer nut gasket (2836S)	
21-179S	Float and lever assembly	(2)
21-188S	Float and lever assembly (2448S-2686S) (Sup. by 21-179S)	(2)
24-29	Float lever pin	(2)

Part No.	PART NAME	
25-324S	Needle and seat assembly (.1015") (2448S-2686S) (Sup. by 25-343S)	(2)
25-343S	NEEDLE AND SEAT ASSEMBLY (.0935")	(2)
30-58	Fuel inlet strainer	
30A-37	Idle adjustment screw	(2)
38A-107	Pump intake check ball seat	
39-11	Choke valve attaching screw	(2)
47-30	Piston housing welsh plug	
47-31	Venturi welsh plug (2448S-2686S) (Sup. by 47-33)	(4)
47-33	Venturi welsh plug	(4)
47-34	Spark port welsh plug	
48-264S	Pump jet and housing assembly	
53A-412	Lockout dog	
53A-423	Secondary throttle operating lever	
58-192S	Primary venturi assembly (choke side)	
58-193S	Primary venturi assembly (pump side)	
58-208S	Secondary venturi assembly (choke side)	
58-209S	Secondary venturi assembly (pump side)	
58-215S	Primary venturi assembly (choke side) (2686S) (Sup. by 58-192S)	
58-216S	Primary venturi assembly (pump side) (2686S) (Sup. by 58-193S)	
61-84	Idle adjusting screw spring	(2)
61-128	Throttle connector rod spring	
61-171	Pump spring (lower)	
61-291	Throttle lever adjusting screw spring	
61-483	Secondary throttle return spring (2448S-2686S)	
61-585	Step-up rod retaining spring	(2)
61-592	Throttle flex spring	
61-604	VACUUM PISTON SPRING	(2)
61-618	Secondary throttle return spring	

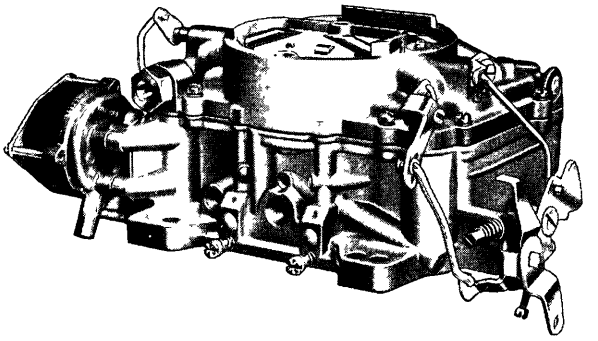
Part No.	PART NAME	
63-35	Throttle connector rod retainer	
63-144	Delayer plate retainer ring	
63-225	Coil housing retainer	
63-229	Heat tube retainer	
64-212S	PUMP PLUNGER, ROD AND SPRING ASSEMBLY	
65-43	Step-up piston cover plate	(2)
101-65	Choke shaft lever attaching screw	(2)
101-74	Throttle shaft lever attaching screw	(2)
101-120	Fast idle adjusting screw	
101-152S	Air horn attaching screw and washer assembly	
101-184S	Pump jet housing attaching screw and washer assembly	(2)
101-271S	Pump jet housing attaching screw and washer assembly (2448S-2686S) (Sup. by 101-184S)	(2)
101-298S	Secondary venturi attaching screw and washer assembly (length 1-1/8") (Sup. by 101-379S)	(4)
101-323	Fast idle cam attaching screw	
101-362S	Air horn attaching screw and washer assembly	(8)
101-379S	Secondary venturi attaching screw and washer assembly (length 1")	(4)
101-419	Secondary throttle valve attaching screw	(4)
101-420	Primary throttle valve attaching screw	(4)
101-421	Pump arm attaching screw	
101-424S	Secondary venturi attaching screw and washer assembly (Sup. by 101-379S)	(4)
101-426	Coil housing attaching screw	(3)
101-431S	Air horn attaching screw and washer assembly	
101-435S	Step-up piston cover plate attaching screw and washer assembly	(2)
101-436	Piston housing attaching screw	(3)
101-441	Throttle lever adjusting screw	
101-442S	Primary venturi attaching screw and washer assembly	(4)
103-14	Lead shot (.180" dia.)	
103-15	Lead shot (.240" dia.)	
103-16	Lead shot (.200" dia.)	
108-64	Fast idle cam spacer (2448S-2686S) (Sup. by 181-258S)	
111-76	Pump arm	
113-42S	Choke shaft and lever assembly (piston housing)	
114-139	Primary throttle shaft arm (inner) (2448S-2686S)	
114-144	Primary throttle shaft arm (outer)	
114-152	Primary throttle shaft arm (inner) (2836S)	
115-239	Throttle operating rod (2448S-2686S)	
115-275	Fast idle connector rod	
115-276	Throttle connector rod	
115-277	Choke connector rod	
115-308	Throttle operating rod (2836S)	
116-13	Pump intake check ball	
117-174	Pump connector link	
120-159	PRIMARY METERING JET (.089")	(2)
120-186	Secondary metering jet (.061") (2686S)	(2)
120-193	Secondary metering jet (.057") (2836S)	(2)
120-226	Secondary metering jet (.065") (2448S)	(2)
121-78	COIL HOUSING GASKET	
121-284	AIR HORN GASKET (2448S-2686S) (Sup. by 121-309)	
121-287	PUMP JET HOUSING GASKET	
121-288	SECONDARY VENTURI CLUSTER GASKET	(2)
121-291	HEAT TUBE CAP GASKET	
121-302	PRIMARY VENTURI CLUSTER GASKET	(2)
121-309	Air horn gasket	
121-312	Air cleaner gasket	
136-34	Choke piston lever retaining washer	(2)
136-37	Throttle operating rod washer	(5)
136-159	Primary throttle shaft washer	
136-160	Secondary throttle shaft washer	
136-174	Throttle lever adjusting screw washer	
150-190	Choke piston pin	
150A-10	Pin spring	(6)
150A-21	Pin spring	
156-116S	Strainer nut assembly (2836S)	
160-153	Step-up piston	(2)
160-178	Choke piston	
170-527S	Piston housing and plug assembly	
170AR-538S	Thermostatic coil and housing assembly	
181-247	Fast idle cam (2448S-2686S) (Sup. by 181-258S)	
181-258S	Fast idle cam and collar assembly	
184-85	Choke heat tube cap	
186-65	Choke baffle plate	
186-70	Fuel bowl baffle	(2)

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

Form 5279A

CARTER CARBURETOR
DIVISION OF ACF INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

CHRYSLER 2448S
April, 1957
Revised July, 1957



CHRYSLER
MODEL C-76

IMPERIAL
MODELS IM-1, 2 & 3
1957

AFB Four-Bore Down-Draft Climatic® Control Carbureter No. 2448S

CARBURETER SPECIFICATIONS

For Chrysler 8 Cylinder 392 Cu. In. Engine: Vacuum at Idle 19 Inches

Dimensions: Flange, four bore — 4 bolt type.
Throttle bore, 1-7/16 inch.
Primary venturi size, primary side, 7/16 inch, secondary side, 11/32 inch I. D.
Main venturi size, 1-3/16 inch.

Vents: Inside (4) in air horn; Outside (4) in body.

Gasoline Intake: Size No. 40 (.0935 inch) drill hole in needle seat.

Low Speed Jet Tube: (In venturi assembly, primary side only.)
Jet, size No. 68 (.031 inch) drill.
By-pass, size (.0492 inch) diameter.
Economizer, size (.0452 inch) diameter.
Idle bleed, size (.0492 inch) diameter.

Idle Port: (Upper) slot type. Primary, length .198 inch; width .030 inch. Secondary, none.

Idle Port Opening: Primary, .142 to .148 inch above top edge of valve with valve tightly closed. Secondary, none.

Set Idle Adjustment Screw: 1/4 to 1 3/4 turns open. For richer mixture turn screw out. Do not idle engine below 500 r.p.m. Transmission in neutral.

Main Nozzle: Installed permanently. DO NOT REMOVE. Anti-percolator bleed, primary, (tube in venturi assembly) size No. 68 (.031 inch) drill.
Secondary, (drilled hole in venturi assembly) size No. 60 (.040 inch) drill.

Main Vent Tube: (In venturi assembly) Side holes primary side 1—size No. 70 (.028 inch), 10—size No. 65 (.035 inch) drill; secondary side 2—size No. 57 (.043 inch) drill.

Step-Up Rod: (Vacumeter type) see parts list for size.

Metering Jet: Primary, size .089 inch diameter (for step-up rod). Secondary size .0649 inch diameter (no step-up rod).

Accelerating Pump: Discharge jet (twin primary side only, size No. 70 (.028 inch) drill. Intake ball check seat (screw plug) size .115 to .120 inch diameter. Discharge needle seat size No. 50 (.070 inch) drill.

Choke: Carter Climatic® Control set 1 point rich. Butterfly type offset choke valve, primary side only. Choke heat suction hole, restriction in body size No. 50 (.070 inch) drill.

Vacuum Spark Port: Slot type (round end) .045 x .110 inch. Top of port .026 to .034 inch above top edge of valve with valve tightly closed.

Motor Tune-Up — Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .017"	Ignition Timing Breaker Points to Open: 6° B. T. D. C. At Vibration Damper	Float Setting 5/16 Inch (Use Gauge T109-107)	Idle Adjustment Screw Setting 1/4 to 1 3/4 Turns Open 500 R. P. M. In Neutral

NOTE: These cars are equipped with Hydraulic Valve Lifters — NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3725

FLOAT ALIGNMENT: Side of floats parallel to edge of casting. Minimum clearance between lever and air horn lugs without binding. To adjust, bend float lever.

FLOAT LEVEL: 5/16 inch (gauge T109-107) between top of floats (at outer end) and air horn gasket. To adjust, bend float lever.

FLOAT DROP: 23/32 inch between top of floats (at outer end) and air horn gasket. To adjust, bend stop tabs on float brackets.

PUMP: 7/16 inch from the top of the bowl cover to the top of the plunger shaft, with throttle connector rod in center hole (medium stroke) of pump arm. To adjust, bend throttle connector rod.

CHOKE PISTON LEVER ADJUSTMENT: .040 inch (Gauge T109-193) between choke lever and stop in piston housing with choke valve closed. To adjust, bend choke connector rod.

FAST IDLE LINKAGE ADJUSTMENT: With choke valve tightly closed and lug on outer choke shaft lever contacting stop on inner choke shaft lever align center of fast idle screw with index mark on cam. To adjust, bend fast idle connector rod.

FAST IDLE THROTTLE VALVE CLEARANCE: .015 inch (Gauge T109-44) between lower edge of valve and bore with adjusting screw on index mark of cam.

FAST IDLE ON CAR: 1450 to 1500 R.P.M. hot engine with fast idle screw on index mark of cam.

UNLOADER: 1/4 inch (Gauge T109-31) between upper edge of choke valve and inner wall of air horn. To adjust, bend unloader lip on throttle lever.

SECONDARY THROTTLE LEVER ADJUSTMENT: 1. Block choke valve wide open. 2. With 19/64 inch between lower edge of primary valve and bore (opposite idle port) secondary valves should just start to open. To adjust, bend throttle operating rod. NOTE: At wide open throttle primary and secondary valves will reach full vertical position. 3. With primary and secondary throttle valves in tightly closed position there should be .017" to .022" (gauge T109-29) between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on secondary lever.

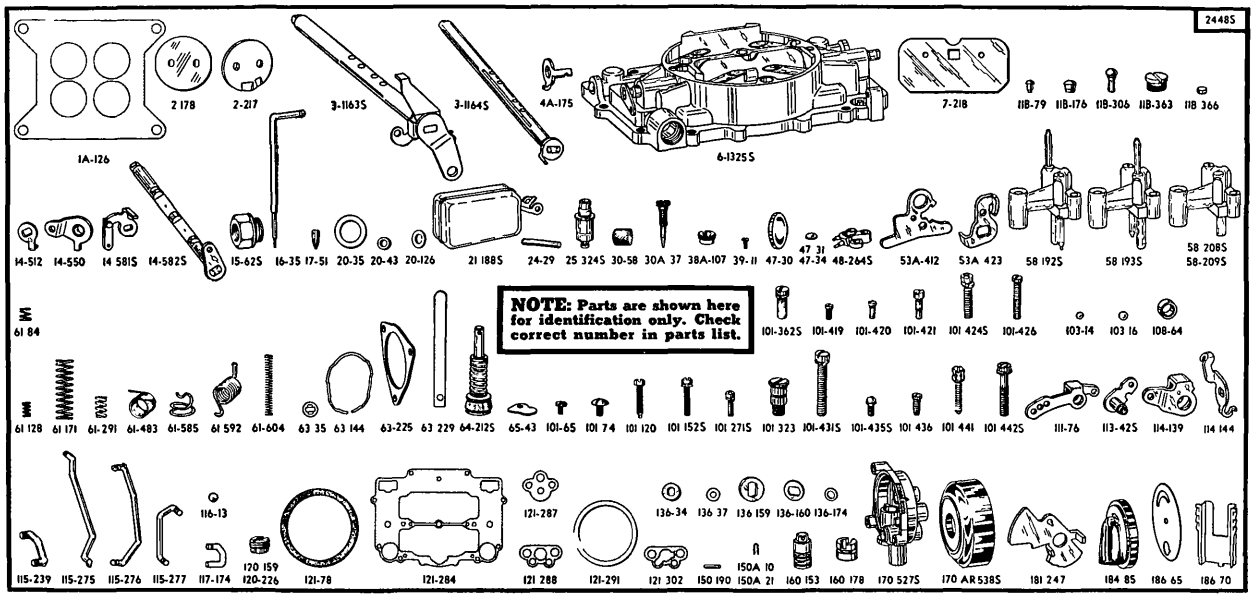
SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: Crack throttle valves and manually open and close the choke valve. Tang on secondary throttle lever should freely engage in notch of lock-out dog. To adjust, bend tang on secondary throttle lever.

TOOLS REQUIRED FOR SERVICING CARBURETERS:

T109-29	.020" Wire gauge	T109-44	.015" Wire gauge
T109-31	1/4" Unloader gauge	T109-107	5/16" Float gauge
T109-41	Bending tool	T109-193	.040" Wire gauge

T109-213 Bending tool

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Chrysler—1957—Carbureter No. 2448S

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

WHEN SERVICING, USE GASKET ASSORTMENT No. 313; REPAIR PACKAGE No. 1876N

Part No.	PART NAME	
1A-126	—FLANGE GASKET	
2-178	Secondary throttle valve	(2)
2-217	—Primary throttle valve	(2)
3-1163S	—Primary throttle shaft and lever assembly	
3-1164S	—Secondary throttle shaft and dog assembly	
4A-175	Primary throttle shaft dog	
6-1325S	—Air horn assembly	
7-218	Choke valve	
11B-79	Rivet plug	(2)
11B-176	Idle port rivet plug	(2)
11B-306	Rivet plug (early prod.)	(2)
11B-363	Pump intake screw plug	
11B-366	Lead plug (early prod. (4) (late prod. (5)	
11B-385	—Fuel passage plug (late prod.)	(2)
14-512	Outside choke shaft lever	
14-550	Inside choke shaft lever	
14-581S	Choke piston lever, link and pin assembly	
14-582S	Choke lever and shaft assembly	
15-62S	—Strainer nut assembly	
16-35	—STEP-UP ROD .0645" x .058"—STANDARD	(2)
16-39	—Step-up rod .066" x .061"—1 size lean	(2)
16-40	—Step-up rod .0675" x .064"—2 sizes lean	(2)
17-51	Pump discharge check needle	
20-35	Stariner nut gasket	
20-43	Piston housing gasket	
20-126	Needle seat gasket	(2)
21-188S	—Float and lever assembly	(2)
24-29	Float lever pin	(2)
25-324S	Needle and seat assembly (.1015") (Sup. by 25-343S)	(2)
25-343S	—NEEDLE AND SEAT ASSEMBLY (.0935")	(2)
30-58	Fuel inlet strainer	
30A-37	Idle adjustment screw	(2)
38A-107	Pump intake check ball seat	
39-11	Choke valve attaching screw	(2)
47-30	Piston housing welsh plug	
47-31	Venturi welsh plug (Sup. by 47-33)	(4)
47-33	Venturi welsh plug	(4)
47-34	Spark port welsh plug	
48-264S	Pump jet and housing assembly	
53A-412	Lockout dog	
53A-423	—Secondary throttle operating lever	
58-192S	—Primary venturi assembly (choke side)	
58-193S	—Primary venturi assembly (pump side)	
58-208S	—Secondary venturi assembly (choke side)	
58-209S	—Secondary venturi assembly (pump side)	
61-84	Idle adjusting screw spring	(2)
61-128	Throttle connector rod spring	
61-171	Pump spring (lower)	
61-291	Throttle lever adjusting screw spring	
61-483	Secondary throttle return spring	
61-585	Step-up rod retaining spring	(2)
61-592	Throttle flex spring	
61-604	—VACUUM PISTON SPRING	(2)
63-35	Throttle connector rod retainer	
63-144	Delayer plate retainer ring	
63-225	Coil housing retainer	
63-229	Heat tube retainer	
64-212S	—PUMP PLUNGER, ROD AND SPRING ASSEMBLY	
65-43	Step-up piston cover plate	(2)
101-65	Choke shaft lever attaching screw	(2)
101-74	Throttle shaft lever attaching screw	(2)
101-120	Fast idle adjusting screw	
101-152S	Air horn attaching screw and washer assembly	
101-184S	Pump jet housing attaching screw and washer assembly	(2)
101-271S	Pump jet housing attaching screw and washer assembly (Sup. by 101-184S)	(2)
101-298S	Secondary venturi attaching screw and washer assembly (late prod.)	(4)
101-323	Fast idle cam attaching screw	
101-362S	Air horn attaching screw and washer assembly	(8)
101-419	Secondary throttle valve attaching screw	(4)
101-420	Primary throttle valve attaching screw	(4)
101-421	Pump arm attaching screw	
101-424S	Secondary venturi attaching screw and washer assembly (early prod.)	(4)
101-426	Coil housing attaching screw	(3)
101-431S	Air horn attaching screw and washer assembly	
101-435S	Step-up piston cover plate attaching screw and washer assembly	(2)
101-436	Piston housing attaching screw	(3)
101-441	Throttle lever adjusting screw	
101-442S	Primary venturi attaching screw and washer assembly	(4)

Part No.	PART NAME	
103-14	Lead shot (early prod.)	
103-16	Lead shot	
108-64	Fast idle cam spacer (Sup. by 181-258S)	
111-76	Pump arm	
113-42S	Choke shaft and lever assembly (Piston housing)	
114-139	Primary throttle shaft arm (inner)	
114-144	Primary throttle shaft arm (outer)	
115-239	Throttle operating rod	
115-275	Fast idle connector rod	
115-276	Throttle connector rod	
115-277	Choke connector rod	
116-13	Pump intake check ball	
117-174	Pump connector link	
120-159	PRIMARY METERING JET	(2)
120-226	Secondary metering jet	(2)
121-78	COIL HOUSING GASKET	
121-284	AIR HORN GASKET	
121-287	PUMP JET HOUSING GASKET	
121-288	SECONDARY VENTURI CLUSTER GASKET	(2)
121-291	HEAT TUBE CAP GASKET	
121-302	PRIMARY VENTURI CLUSTER GASKET	(2)
121-312	—Air cleaner gasket	
136-34	Choke piston lever retaining washer	(2)
136-37	Throttle operating rod washer	(5)
136-159	Primary throttle shaft washer	
136-160	Secondary throttle shaft washer	
136-174	Throttle lever adjusting screw washer	
150-190	Choke piston pin	
150A-10	Pin spring	(6)
150A-21	Pin spring	
160-153	Step-up piston	(2)
160-178	—Choke piston	
170-527S	—Piston housing and plug assembly	
170AR-538S	—Thermostatic coil and housing assembly	
181-247	—Fast idle cam (Sup. by 181-258S)	
181-258S	—Fast idle cam and collar assembly	
184-85	Choke heat tube cap	
186-65	—Choke baffle plate	
186-70	Fuel bowl baffle	(2)

—Parts so marked are new and listed for the first time.

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

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CARTER MODEL AFB CARBURETER FOR CHRYSLER (SERVICE ADJUSTMENT PROCEDURE)

NOTE: The parts and specification pages referred to are catalog pages. These pages can be obtained from Carter Carburetor, Catalog Department, St. Louis (7), Missouri. Specify the carbureter number found on the base of the carbureter, when requesting specification pages.

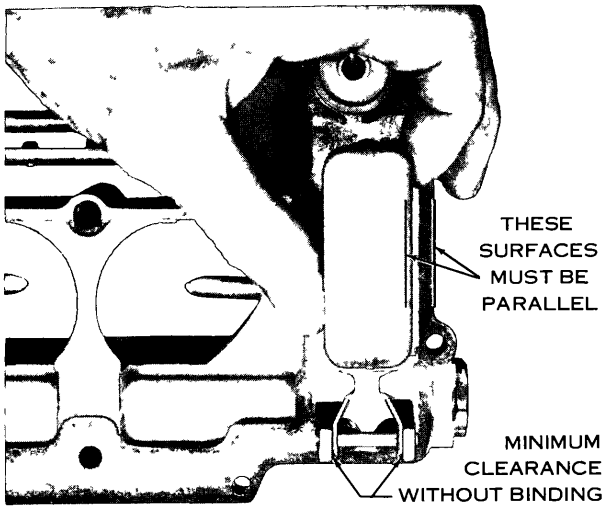


Figure 1

FLOAT ALIGNMENT ADJUSTMENT (Fig. 1):

1. Sight down the side of the float shell to determine if the side of the float is parallel to the outer edge of the air horn casting. TO ADJUST: Bend float lever by applying pressure to the end of the float shell with the fingers while supporting the float lever with the thumb.

   CAUTION: To avoid damaging the float, apply only enough pressure to bend float lever.

2. After aligning float, remove as much clearance as possible between arms of float lever and lugs on air horn by bending the float lever. Arms of float lever should be as parallel to the inner surfaces of lugs on air horn as possible.

   Floats must operate freely without excess clearance on its hinge pin.

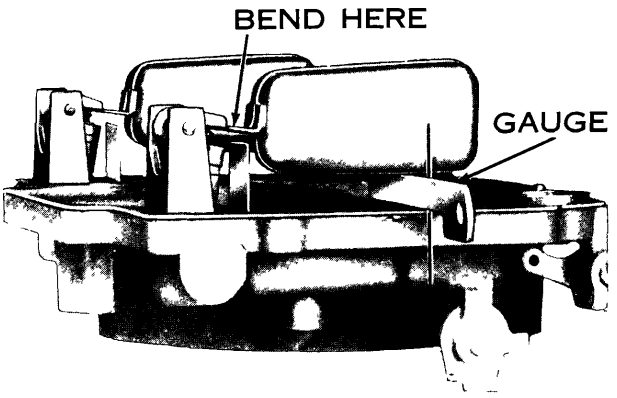


Figure 2

FLOAT LEVEL ADJUSTMENT (Fig. 2):

With air horn inverted, bowl cover gasket in place and needle seated, the clearance between top of float (at outer end) and air horn gask t should be as listed on carbureter specification page. To adjust, bend float arm. Adjust both floats. Rech ck float alignment.

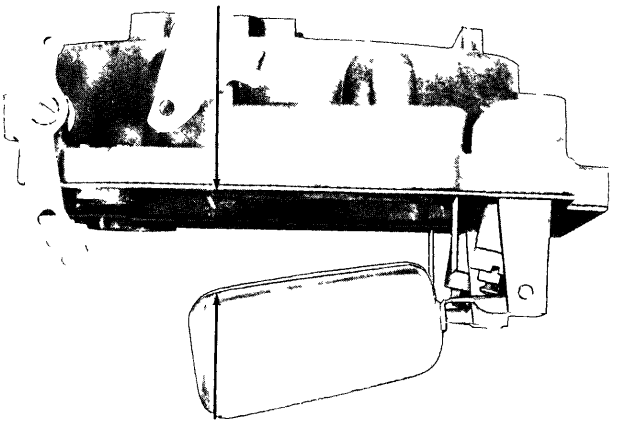


Figure 3

FLOAT DROP ADJUSTMENT (Fig. 3):

With bowl cover held in upright position and measuring from outer end of each float, the distance b tween top of floats and bowl cover gasket should be as listed on carbureter specification page. To adjust, bend stop tabs on float brackets.

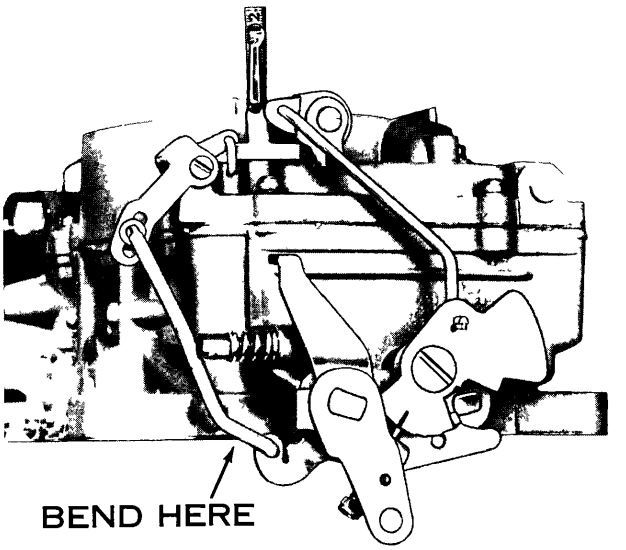


Figure 4

PUMP ADJUSTMENT (Fig. 4):

1. Back out idle speed screw until throttle valves seat in bores of carbureter. NOTE: Be sure fast idle adjusting screw does not contact fast idl cam and hold throttle valves open.
2. With throttle connector rod in center hole (medium stroke) of pump arm, the distance from the top of th bowl cover to the top of the plunger shaft should be as listed on carbureter specification page.
3. Adjust by bending throttl conn ctor rod at lower angl (use tool T109-213).

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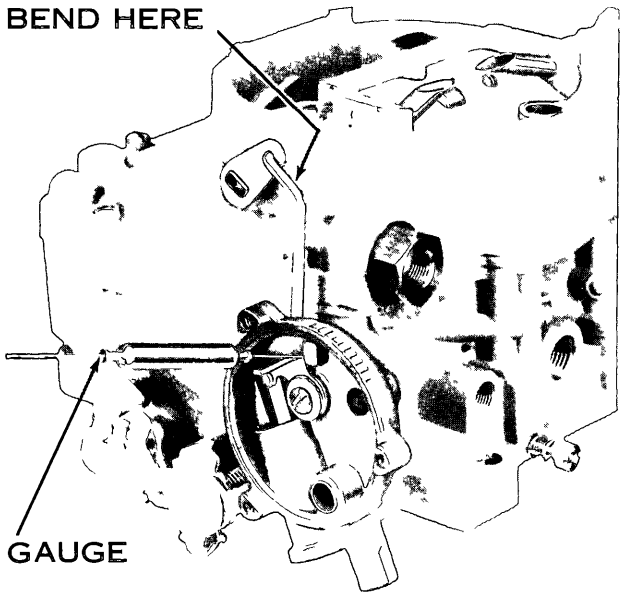


Figure 5

CHOKE PISTON LEVER ADJUSTMENT (Fig. 5):

With choke valve tightly closed, the clearance between choke lever and stop in piston housing should be as listed on carbureter specification page. To adjust, bend choke connect r rod (use tool T109-213).

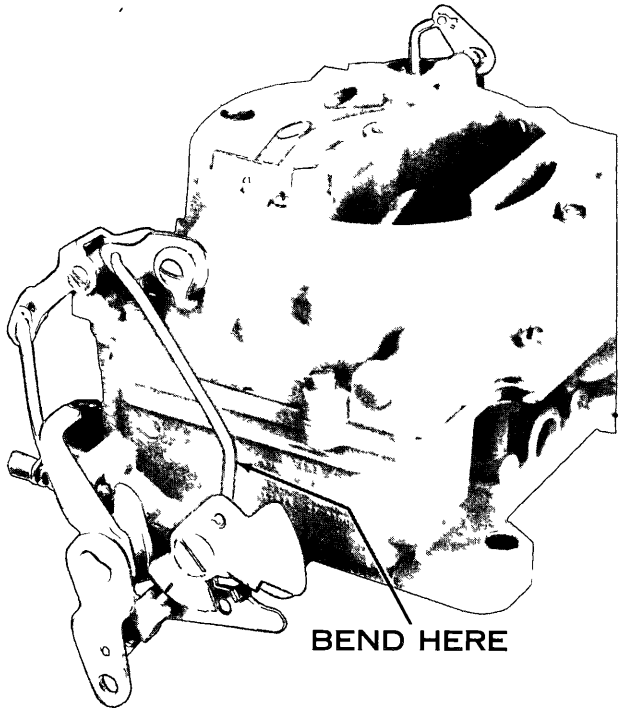


Figure 6

FAST IDLE LINKAGE ADJUSTMENT (Fig. 6):

With choke valve tightly clos d and lug on out r choke shaft lever contacting stop on inner choke shaft l v r align center of fast idle screw with index mark on cam. To adjust, b nd fast idl connector rod. (Us tool T109-213.)

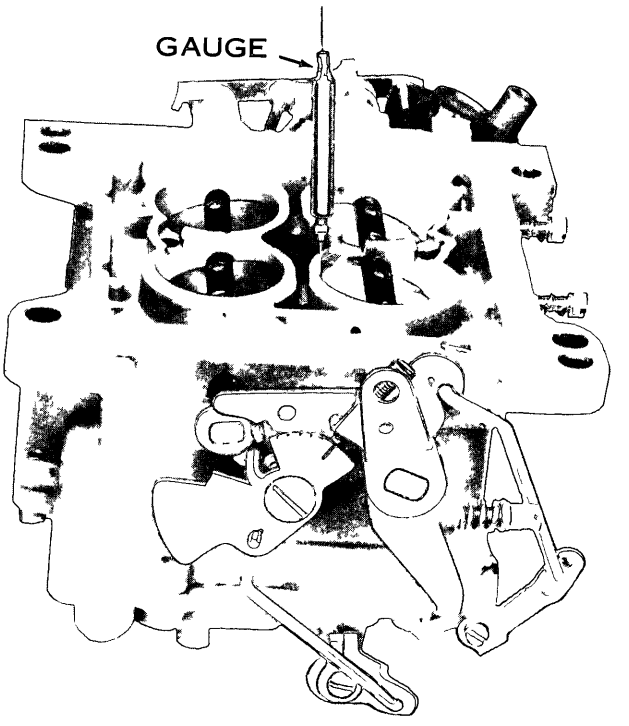


Figure 7

FAST IDLE THROTTLE VALVE CLEARANCE ADJUSTMENT (Fig. 7):

With choke valve tightly closed, tighten fast idle adjusting screw (on index mark of cam) until the clearance between throttle valve and bore of carbureter, side opposite idle port, is as listed on carbureter specification page.

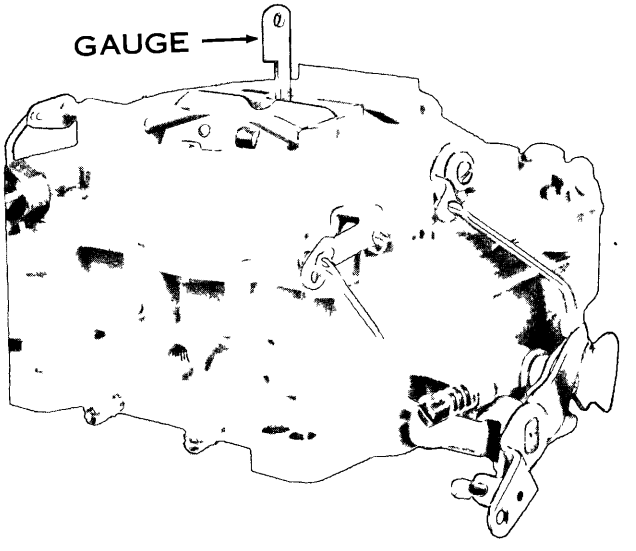


Figure 8

UNLOADER ADJUSTMENT (Fig. 8):

With throttl wide op n, the clearance betwe n upp r edg of choke valve and inner wall of air horn should b as list d on carbureter specification page. To adjust, b nd unload r lip on throttle shaft lever. (Use tool T109-41.)

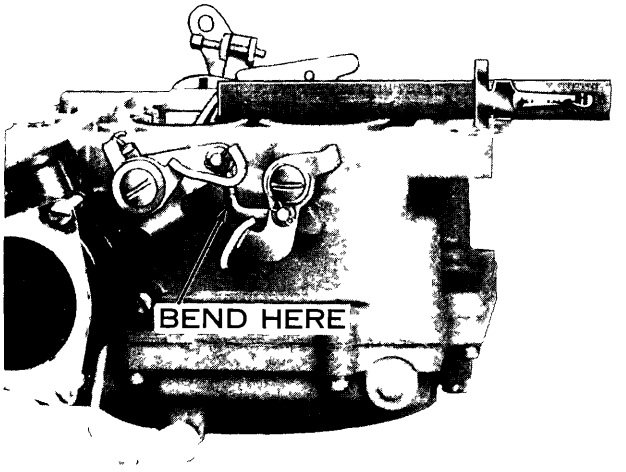


Figure 9A

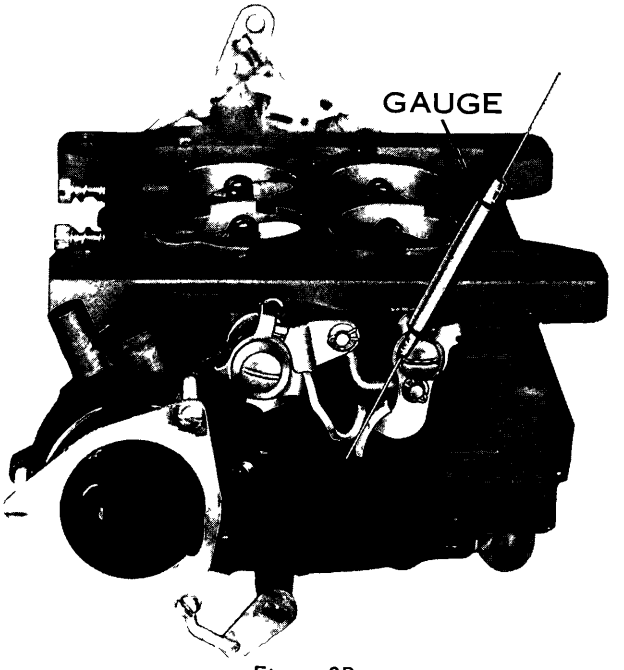


Figure 9B

SECONDARY THROTTLE LEVER ADJUSTMENT (Figs. 9A and 9B):

1. Block choke valve wide open.

2. Secondary throttle valves should just start to open when primary throttle valves are opened to the clearance as listed on specification page between lower edge of valve and bore (opposite idle port). To adjust, bend throttle operating rod. (Use bending tool T109-213). (See Fig. 9A) NOTE: Primary and secondary throttle valves should reach wide open position, full vertical, at the same time.

3. With primary and secondary throttle valves in tightly closed position, there should be the clearance as listed on specification page between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on secondary lever. (See Fig. 9B.)

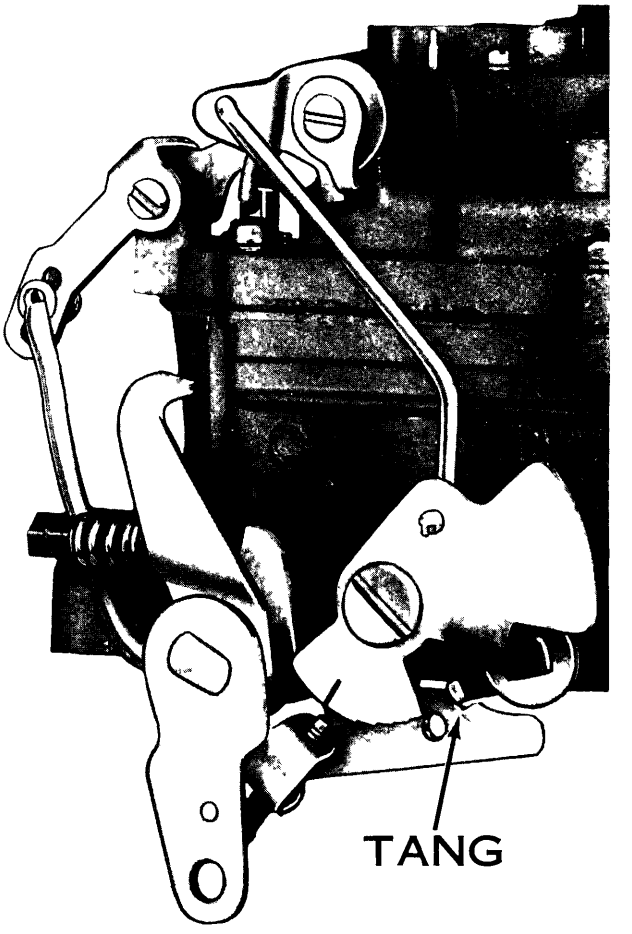
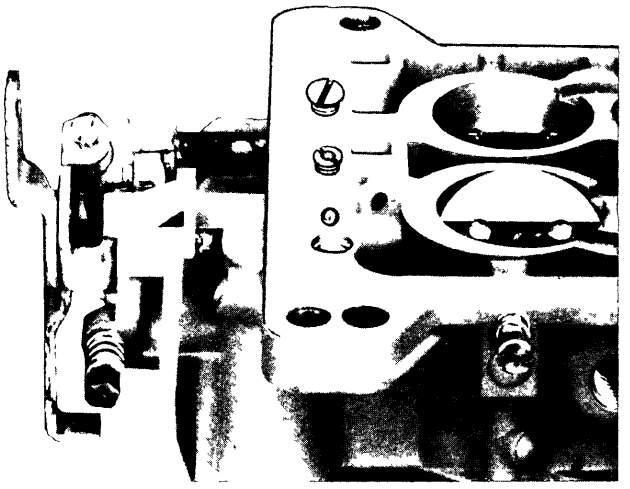


Figure 10

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT (Fig. 10):

Crack throttle valves and manually open and close the choke valve. Tang on secondary throttle lever should freely engage in notch of lock-out dog. If necessary to adjust, bend tang on secondary throttle lever.

NOTE: See last page for pertinent service information.



(Fig. 11):

Pump intake check ball, seat and screw plug are removed by inverting carbureter and removing from lower side of flange.

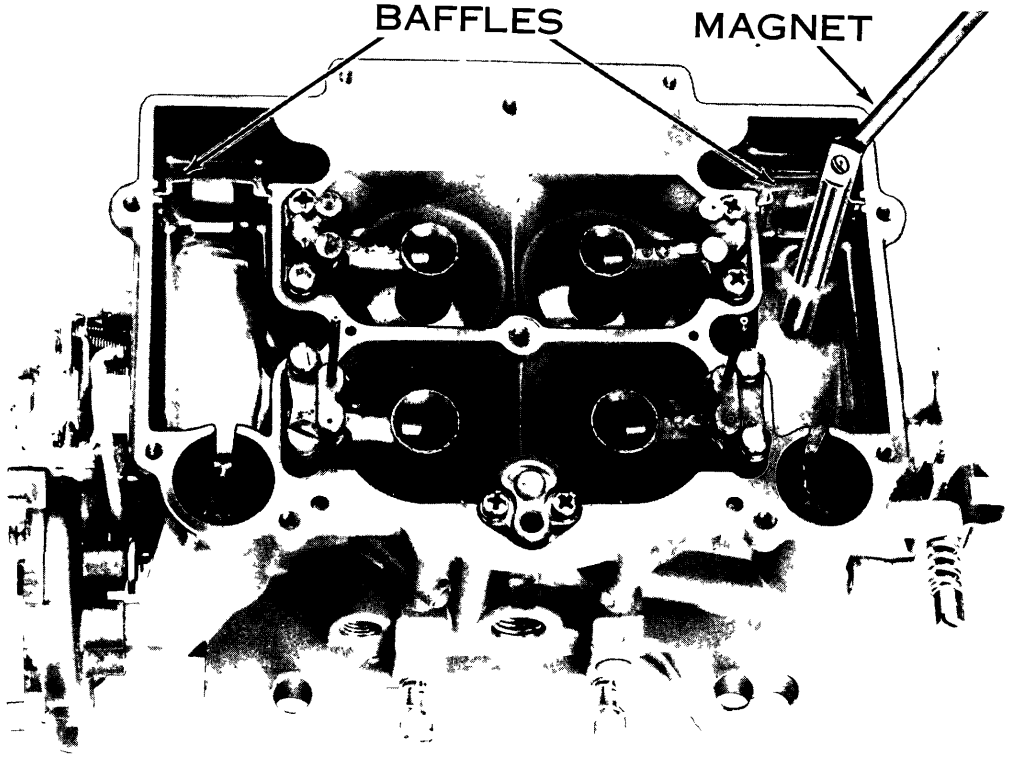


Figure 12

(Fig. 12):

Flooding, stumble on acceleration and other performance complaints are, in many instances, caused by the presence of dirt, water or other foreign matter in the carbureter. To aid in diagnosing the cause of the complaint, the carbureter should be carefully removed from the engine without draining the fuel from the bowl. The contents of the fuel bowl may th n be xamined for contamination as the carbureter is disassembled.

Check the fuel in the bowl for contamination by dirt, water, gum or other foreign matter. A magnet moved through the fuel in the b wl will pick up and identify any iron oxide dust that may have caused intake needle and seat leakage.

Inspect gasketed surfaces between body and air horn. Small nicks or burrs should be smoothed down to eliminate air or fuel leakage. Be especially particular when inspecting the top surface of the inner wall of the bowl around the vacuum piston passage. A poor seal at this location may contribute to a "cutting-out" on turns complaint.

Install fuel baffles as shown (Fig. 12) to prevent damage to floats.

Fill the carbureter bowl with clean fuel before installing on the manifold. This will help prevent dirt trapped in the fuel system from being dislodged by the free flow of fuel as the carbureter is primed. The operation of the floats and intake needle and s ats may be ch cked under pressur if a fuel pump is used at the bench to fill the carbureter bowl. Operate the throttle several times and visually check the discharge from the pump j ts.

Before installing the carbureter, hold choke valve open and turn th idle speed screw until it just contacts the throttle lever, then 1/2 a turn more to open the throttle valves en ugh to keep the engine running until the idle mixture and final R.P.M. adjustm nt can be made.

CHRYSLER MARINE "V-8" – 1957

Model M-45-3 Special

(Two Carbureters Per Engine)

WCFB FOUR-BORE DOWN-DRAFT **CARBURETER No. 2628S**

CARBURETER SPECIFICATIONS

For Chrysler 8 Cylinder Engine 3.94 Inch Bore, 3 63 Inch Stroke

Dimensions Flange size 1⅛ inch Four Bore—4 Bolt type
Primary venturi size 11/32 inch I D
Main venturi size 1 1/16 inch I D

Vents Inside (5) Outside None

Gasoline Intake Size No 42 (0935 inch) drill, in needle seat

Low Speed Jet Tube Jet primary and secondary, size No 69 (0293 inch) drill By pass in body size primary No 52 (0635 inch) drill secondary (057 inch) diameter Econ omizer plug in body size (0452 inch) diameter Idle bleed in body size primary (059 inch) diameter secondary No 44 (086 inch) drill

Idle Port Upper slot type primary length 175 inch width 030 inch Secondary length 103 inch width 030 inch

Idle Port Opening Primary 116 to 122 inch secondary 059 to 065 inch above top edge of valve with valve tightly closed

Lower Port Primary (for idle adjustment screw) size No 55 (052 inch) drill
Secondary (no idle adjustment screw) size No 57 (043 inch) drill

Set Idle Adjustment Screw ¼ to 1¼ turns open For richer mixture turn screw out Do not idle engine below 500 R P M

Main Nozzle Installed permanently DO NOT REMOVE Anti percolating jet (4) size No 70 (028 inch) drill

Metering Rod Primary Economy step 078 inch diameter
Middle step tapers to 0/0 inch diameter
Power step 045 inch diameter
Secondary none

Metering Rod Jet Primary size 0935 inch diameter
Secondary size 055 inch diameter

Accelerating Pump Discharge jet (twin) primary side only size No 74 (0225 inch) drill Intake ball check seat size 115 to 120 inch diameter Discharge needle seat size No 50 (070 inch) drill Relief passage (vent) to fuel chamber size No 42 (0935 inch) drill

Choke Manual Butterfly type offset choke valve primary side only

Vacuum Spark Port None

Motor Tune-Up—Be Accurate!

CAUTION *Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter*

Spark Plug Gap .035"	Set Breaker Points 017"	Ignition Timing Breaker Points to Open T. D. C At Vibration Damper	Set Valves (Hot) Intake 015" Exhaust 028"	Float Setting Primary 5/32 Inch (Gauge T109-236) Secondary 7/32 Inch (Gauge T109-283)	Idle Adjustment Screw Setting ¼ to 1¼ Turns Open Idle engine at 500 R P M

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT Two separate float adjustments must be made—lateral and vertical **LATERAL ADJUSTMENT** With bowl cover assembly inverted, bowl cover gasket removed and float resting on seated needle, place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting Side of floats should just clear the vertical uprights of float gauge Adjustment should be made by bending arms of floats
VERTICAL ADJUSTMENT With float gauge in same position floats should just clear the horizontal portion of gauge Vertical distance between top of float and machined surface of casting must be 5/32 inch (gauge T109 236) for primary floats and 7/32 inch (gauge T109-283) for secondary floats Adjust by bending float arms
FLOAT DROP ADJUSTMENT With bowl cover held in upright position and measuring from center of floats, the distance between top of floats and bowl cover should be 21/32 inch for primary floats and 23/32 inch for secondary floats Adjust by bending stop tabs on float bracket
PUMP ADJUSTMENT Install pump connector link in center hole (medium stroke) of pump arm with ends extending toward countershaft arm Back out throttle lever set screw until throttle valves seat in bores of carbureter Hold straight edge across top of dust cover boss at pump arm The flat on top of pump arm should be parallel to straight edge Adjust by bending throttle connector rod at upper angle (Use tool T109-213)
METERING ROD ADJUSTMENT Metering rod adjustment is important and must be made after completing the pump adjustment No metering rod gauges are necessary Procedure is as follows 1 Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw 2 With metering rods in place press down on vacuumeter link until metering rods bottom in carburetor body casting 3 Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link Hold in place and carefully tighten clamp screw
BOWL VAPOR VENT ADJUSTMENT This adjustment should be made after completing pump and metering rod adjustments Install dust cover and dust cover gasket Back out throttle lever stop screw to allow throttle valves to seat in bores of carbureter There should be 1/16 inch (gauge T109-197) between lower edge of bowl vapor vent and dust cover To adjust remove dust cover and bend vapor vent arm

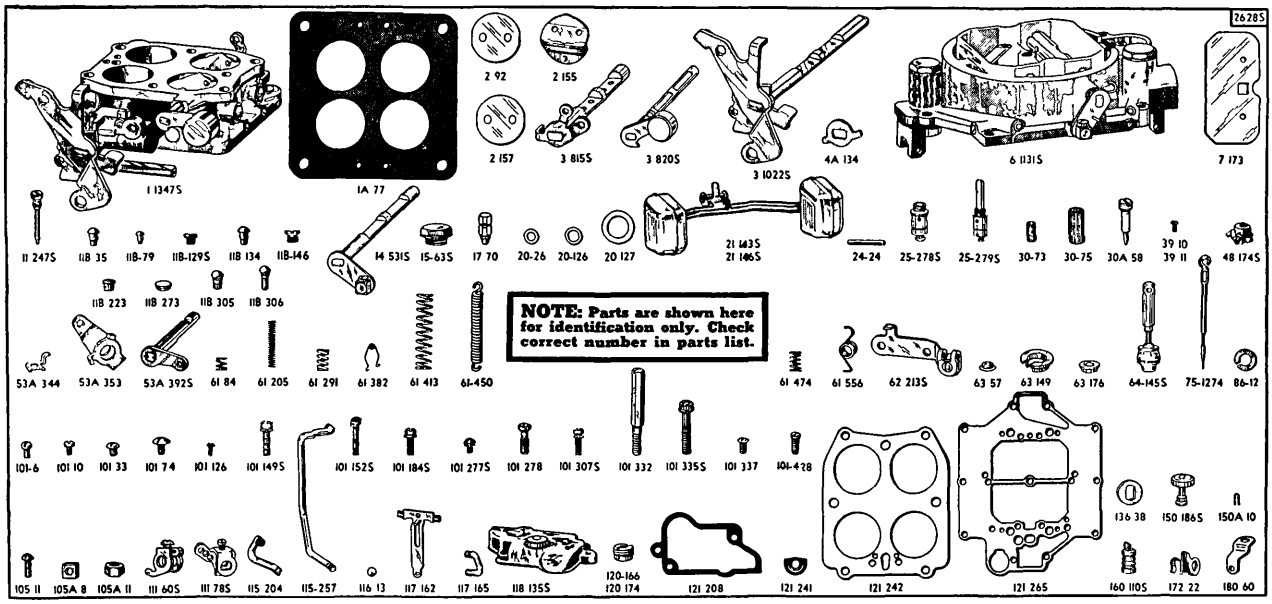
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AUXILIARY THROTTLE VALVE ADJUSTMENT (a) Disconnect secondary throttle operating rod (b) Adjust stop lug on secondary throttle lever (use bending tool T109-214) until there is 27/64 inch clearance (gauge T109-242) between lower edge of auxiliary throttle valve and bore when lug is against stop on flange

SECONDARY THROTTLE LEVER ADJUSTMENT. The stop lug on both primary and secondary throttle levers should contact boss on flange at the same time To adjust bend secondary throttle operating rod at angle (use bending tool T109-213) NOTE Secondary throttle valves will be a few degrees from wide open position



Chrysler Marine "V-8"—1957—Carbureter No. 2628S

WHEN SERVICING, USE GASKET ASSORTMENT No 269A

Part No	PART NAME	
1-1347S	Body flange assembly	
1A-77	Flange gasket	
2-92	Primary throttle valve	(2)
2-155	Auxiliary throttle valve	(2)
2-157	Secondary throttle valve	(2)
3-815S	Secondary throttle shaft and operating lever assembly	
3 820S	Auxiliary throttle shaft, lever and weight assembly	
3-1022S	Primary throttle shaft and lever assembly	
4A-134	Primary throttle shaft dog	
6-1323S	—Air horn assembly	
7-173	Choke valve	
11-247S	Low speed jet assembly	(4)
11B-35	Rivet plug	(6)
11B 79	Rivet plug (early prod (4) (late prod (3)	
11B-129S	Pump discharge passage plug assembly	
11B-134	Rivet plug	
11B-146	Level sight plug	(2)
11B-223	Nozzle passage and idle port rivet plug	(8)
11B-273	Secondary throttle shaft rivet plug	
11B-305	Rivet plug	(2)
11B-306	Rivet plug	
14-531S	Choke lever and shaft assembly	
15-63S	Strainer nut assembly	(2)
17-70	Pump check needle	
20-26	Pump discharge passage gasket	
20-126	Needle seat gasket	(2)
20-127	Bowl strainer gasket	(2)
21-143S	Primary float and lever assembly	
21-146S	Secondary float and lever assembly	
24-24	Float lever pin	(2)
25-278S	Primary needle and needle seat assembly	
25-279S	Secondary needle and needle seat assembly	
30-73	Primary needle seat strainer	
30-75	Bowl strainer	
30A-58	Idle adjustment screw	(2)
39-10	Primary throttle valve attaching screw	(4)
39-11	Choke valve attaching screw	(2)
48-174S	Pump jet and housing assembly	
53A-344	Vent arm	
53A-353	Primary operating lever	
53A-392S	Pump operating lever and countershaft assembly	
61 84	Idle adjustment screw lock spring	(2)
61-205	Vacuum piston spring	
61 291	Throttle lever adjusting screw spring	
61 382	Metering rod spring	
61-413	Pump spring (upper)	
61-450	Secondary throttle return spring	
61-474	Bowl vent spring	
61-556	Choke spring	

Part No.	PART NAME	
62-213S	Choke tube bracket assembly	
63-57	Intake check ball retainer	
63-149	Bowl vent spring retainer	
63-176	Pump spring retainer	
64-145S	Pump plunger and rod assembly	
75-1274	Metering rod—standard	(2)
75-1394	—Metering rod—1 size lean	(2)
86-12	Flange stud lock washer	(4)
101-6	Pump arm clamp screw	
101-10	Wire clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	
101-126	Auxiliary throttle valve attaching screw	(4)
101-149S	Body flange attaching screw and washer assembly	(4)
101 152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet housing attaching screw	
101-307S	Bracket and air horn attaching screw and washer assembly	(8)
101-332	Throttle lever adjusting screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101 428	Choke tube bracket attaching screw	(2)
103-14	Lead shot (late prod)	
105-11	Tube clamp screw	
105A-8	Tube clamp nut	
105A-11	Flange stud nut	(4)
111-60S	Metering rod arm and screw assembly	
111-78S	Pump arm and screw assembly	
115-204	Throttle operating rod	
115-257	Throttle connector rod	
116-13	Pump intake check ball	
117-162	Vacumeter piston link	
117-165	Pump connector link	
118-102S	Dust cover assembly	
118-135S	Dust cover assembly (Sup by 118-102S)	
120-166	Primary metering rod jet	(2)
120-174	Secondary metering jet	(2)
121-208	Dust cover gasket	
121 241	Pump jet housing gasket	
121-242	Body flange gasket	
121-265	Air horn gasket	
136-38	Throttle shaft washer	
150-186S	Pin and valve cap assembly	
150A-10	Pin spring	(4)
160-110S	Vacuum piston and pin assembly	
172-22	Throttle connector rod retainer	
180-60	Lever return spring bracket	

—Parts so marked are new and listed for the first time

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

CHRYSLER INDUSTRIAL
MODELS
INDUSTRIAL 30 & 31
1957

Three Speed Automatic Transmission

BBS DOWN-DRAFT **CARBURETER No. 2624S**

CARBURETER SPECIFICATIONS

For Chrysler Ind Six Cylinder Engine· 3.25 Inch Bore, 4.63 Inch Stroke

Dimensions· Flange size 1½ inch S A E
Throttle bore 1-11/16 inch I D
Main venturi 1 11/32 inch I D

Vents Outside none Inside balance vent tube

Gasoline Intake· Size No 44 (.086 inch) drill in needle seat

Idle Tube. Jet size 0315 inch diameter Idle passage air bleed in body, size (.061 inch) diameter Restriction in body 057 inch diameter

Idle Port Upper slot type length 195 inch width 030 inch

Idle Port Opening. Top of port located 140 to 144 inch above top edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw) Size 053 to 057 inch diameter

Set Idle Adjustment Screw ½ to 1½ turns open For richer mixture turn screw out Idle engine between 450 500 r p m (transmission in neutral)

Main Metering Jet: Calibrated to flow 406 cc per minute (Do not gauge for size, if in doubt replace with new part)

Main Vent Tube: Side holes 6—.0354 inch diameter Bleed in top of tube .0236 inch diameter

Step-Up Rod: (Vacuum operated) .022 inch diameter

Accelerating Pump. Pump intake passage ball check seat size 110 to 120 inch diameter
Pump discharge passage restriction (under ball check) size 110 to 120 inch diameter in body
Pump (discharge) jet size 0275 inch drill

Choke Manual—butterfly type with poppet valve

Vacuum Spark Port· Slot type Size 030 x 110 inch Top of port 044 to 050 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .020"	Ignition Timing Breaker Points to Open· 2° B. T. C. At Vibration Damper	Valve Setting (Hot) Intake .010" Exhaust .014"	Float Setting 7/32 Inch (Use Gauge T109-239)	Idle Adjustment Screw Setting ½ to 1½ Turns Open Idle engine at 450 to 500 R.P.M.

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: This adjustment must be made with the bowl cover gasket and float pin retainer removed Hold the lip on float arm against the seated intake needle, making sure the float pin is at the bottom of its guide slots The distance from the top surface of the body casting to the top of each float should be 7/32 inch (gauge T109-239) If one float is lower than the other, equalize by bending the float arm If both floats require the same correction, adjust by bending lip

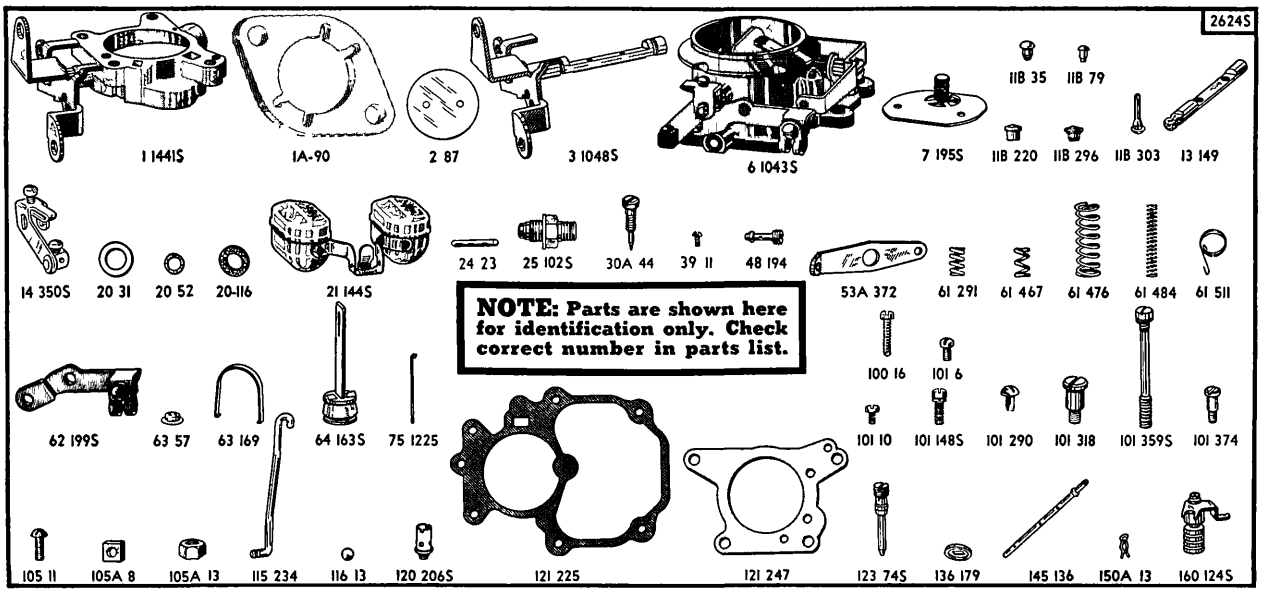
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on float arm The floats must not rub anywhere against the inner walls of the bowl If necessary bend float arms slightly to provide clearance on all sides of floats

PUMP ADJUSTMENT Back out throttle adjusting screw so that throttle valve seats in bore of carbureter Install throttle connector rod in center hole (medium stroke) of throttle lever The distance from the top of the bowl cover to the top of plunger shaft (not pump arm) should be 54/64 inch Adjust by bending pump connector rod at lower angle (use tool T109 213)



Chrysler Industrial—1957—Carbureter No. 2624S

WHEN SERVICING USE GASKET ASSORTMENT No 252

Part No	PART NAME	
1-1441S	Body flange assembly	
1A-90	Flange gasket—for use without governor	
2-87	Throttle valve	
3-1048S	Throttle shaft and lever assembly	
6-1043S	Air horn assembly	
7-195S	Choke valve assembly	
11B-35	Rivet plug	
11B-79	Rivet plug	(6)
11B 220	Rivet plug	
11B-296	Pump jet rivet plug	
11B-303	Rivet plug	
13-149	Choke shaft	
14-350S	Choke lever assembly	
20-31	Needle seat gasket	
20-52	Step up piston gasket	
20-116	Main metering jet gasket	
21-144S	Float and lever assembly	
24-23	Float lever pin	
25-102S	Needle and seat assembly	
30A-44	Idle adjustment screw	
39-11	Choke and throttle valve attaching screw	(4)
48-194	Pump jet	
53A-372	Pump arm	
61-291	Fast idle screw spring	
61-467	Idle adjustment screw spring	
61-476	Pump spring	
61-484	Step up piston spring	
61-511	Choke spring	

Part No.	PART NAME	
62-199S	Choke tube bracket assembly	
63-57	Intake check ball retainer	
63-169	Float lever pin retainer	
64 163S	Pump plunger and rod assembly	
75-1225	Step up rod	
100-16	Throttle adjusting screw	
101-6	Screw	
101-10	Wire clamp screw	
101-148S	Bowl cover attaching screw and washer assembly	(2)
101-290	Choke tube bracket attaching screw	
101-318	Pump arm screw	
101-359S	Air horn attaching screw and washer assembly	(4)
101-374	Step up piston plate guide screw	
105-11	Choke tube bracket clamp screw	
105A-8	Choke tube bracket clamp nut	
105A-13	Flange nut	(2)
115-234	Throttle connector rod	
116-13	Pump intake and discharge check ball	(2)
120-206S	Main metering jet assembly—standard	
120-214S	Main metering jet assembly—2 sizes lean	
120-215S	Main metering jet assembly—1 size lean	
121-225	Body gasket	
121-247	Body flange gasket	
123-74S	Idle orifice tube and plug assembly	
136-179	Pump spring retainer washer	
145-136	Main vent tube	
150A-13	Pin spring	
160-124S	Step up piston and plate assembly	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

CHRYSLER "V-8"
MODEL C-76

IMPERIAL "V-8"
MODELS IM-1, 2 & 3

1957

WCFB Four-Bore Down-Draft Climatic® Control **Carbureter No. 2590S**

CARBURETER SPECIFICATIONS

For Chrysler 8 Cylinder Engine: 4.0 Inch Bore, 3.9 Inch Stroke

Dimensions Flange size 1¼ inch Four Bore—4 bolt type
Primary venturi size, 11/32 inch I D
Main venturi size 1-3/16 inch I D

Vents: Inside, (5)

Gasoline Intake Primary size No 38 (1015 inch) secondary, size No 42 (0935 inch) drill hole in needle seat

Low Speed Jet Tube: Jet (4) size 032 inch diameter
By pass in body (4) size No 52 (0635 inch) drill
Economizer (4) size No 56 (0465 inch) drill
Idle bleed, (4) in body size No 52 (0635 inch) drill.

Idle Port: Upper, slot type Primary, length 175 inch; width 030 inch Secondary, length 101 inch, width .030 inch.

Idle Port Opening: Primary 130 to 134 inch above top edge of valve with valve tightly closed Secondary, 071 to .077 inch

Lower Port: Primary (for idle adjustment screw) size No 53 (0595 inch) drill Secondary constant feed size 040 inch diameter

Set Idle Adjustment Screw: 1 to 2 turns open For richer mixture turn screw out Do not idle engine below 500 R P M in neutral

Main Nozzle: Installed permanently DO NOT REMOVE Anti percolating bleed (to nozzle well), primary side (to idle well), secondary side size No 70 (028 inch) drill

Metering Rod: (Vacumeter type) see parts list for size

Metering Rod Jet: Primary, size 0935 inch diameter (for metering rod).
Secondary, size 0635 inch diameter (no metering rod)

Accelerating Pump: Discharge jet (twin) primary side only size No 72 (025 inch) drill
Intake ball check seat, size 115 to 120 inch diameter
Discharge needle seat, size 070 inch diameter
Relief passage (vent) to fuel chamber No 42 (0935 inch) drill.
Discharge relief plug size No 55 (052 inch) drill

Choke: Carter Climatic® Control, set one point rich Butterfly type, offset choke valve primary side only Choke heat suction hole bushing between piston housing and air horn size No 50 (070 inch) drill

Vacuum Spark Port: Horizontal slot (round end) 045 by 110 inch Top of port 032 to 042 inch above valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .017"	Ignition Timing Breaker Points to Open: 6° B. T. C. At Vibration Damper	Float Setting Primary 5/32 Inch (Use Gauge T109-236) Secondary 9/32 Inch (Use Gauge T109-284)	Idle Adjustment Screw Setting 1 to 2 Turns Open Idle Engine at 500 R.P.M. In Neutral

NOTE: These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT Two separate float adjustments must be made—lateral and vertical **Lateral Adjustment** Side of floats should just clear the vertical uprights of float gauge Adjustment should be made by bending arms of floats **Vertical Adjustment** With bowl gasket removed vertical distance between top of float and machined surface of casting must be 5/32 inch (gauge T109 236) for primary floats and 9/32 inch (gauge T109 284) for secondary floats Adjust by bending float arms

FLOAT DROP ADJUSTMENT With bowl cover held in upright position and measuring from center of floats the distance between top of floats and bowl cover should be 21/32 inch for primary floats and 25/32 inch for secondary floats Adjust by bending stop tabs on float bracket

PUMP ADJUSTMENT Install pump connector link in center hole (medium stroke) of pump arm with ends extending outward toward countershaft arm Back out throttle lever set screw until throttle valves seat in bores of carbureter Hold straight edge across top of dust cover boss at pump arm The flat on top of pump arm should be parallel to straight edge Adjust by bending throttle connector rod at lower angle (Use tool T109 213)

METERING ROD ADJUSTMENT Metering rod adjustment must be made after pump adjustment 1 Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw 2 With metering rods in place press down on vacumeter link until metering rods bottom in carbureter body casting 3 Holding rods in downward position and throtle valves seated revolve metering rod arm until finger on arm contacts lip of vacumeter link Hold in place and carefully tighten clamp screw

BOWL VAPOR VENT ADJUSTMENT This adjustment should be made after completing pump and metering rod adjustments Install dust cover and dust cover gasket Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter There should be 1/16 inch (gauge T109 197) between lower edge of bowl vapor vent valve and dust cover To adjust remove dust cover and bend vapor vent arm

FAST IDLE ADJUSTMENT (a) Loosen choke lever clamp screw on choke shaft Insert 020 inch wire gauge (T109 29) between lip of fast idle cam and boss of flange casting Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw (b) With choke valve tightly closed tighten fast idle adjusting screw until there is 012 inch (gauge T109 200) opening between throttle valve and bore of carbureter side opposite idle port Be sure fast idle adjusting screw is on high step of cam while making this adjustment

FAST IDLE ON CAR 1450 to 1500 R P M with fast idle screw on high step of cam

UNLOADER ADJUSTMENT With throttle wide open there should be 15/64 inch (gauge T109 32) clearance between upper edge of choke valve and inner wall of air horn Adjust by bending unloader lip on throttle shaft lever (use bending tool T109 41)

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT This adjustment should be made after completing fast idle adjustment Crack throttle valves and manually open and close the choke valve Tang on secondary throttle lever should freely engage in notch of lock out dog It necessary to adjust bend tang on secondary throttle lever

PRIMARY THROTTLE SHAFT DOG ADJUSTMENT

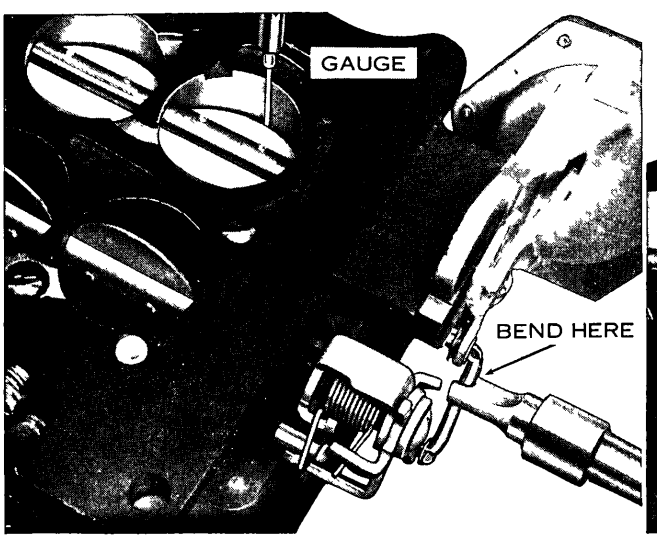


Figure 1

With primary throttle valves in wide open position adjust (use tool T109 213) secondary operating rod so there is 054" to 064" clearance (gauge T109 193) between upper edge of secondary throttle valves (next to idle port) and bore of carbureter (Fig 1)

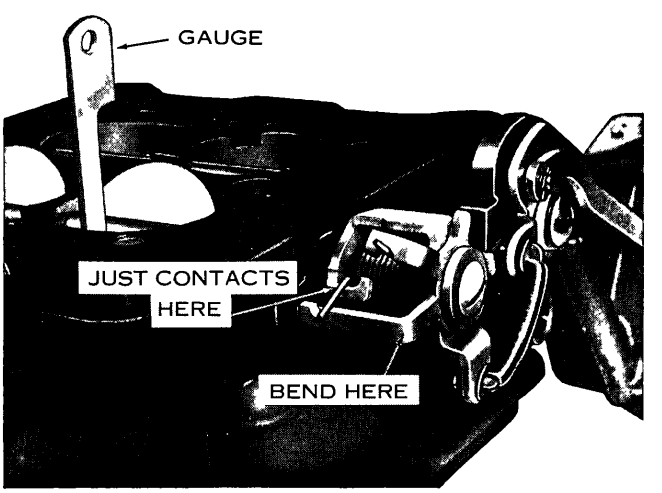


Figure 2

Place 1/4" gauge (tool T109 31) between upper edge of primary throttle valve and bore (next to idle port) and adjust (use tool T109 214) long tang on primary throttle shaft dog so that inner arm of spring just contacts inner lug of secondary operating lever and secondary throttle valves just start to open (Fig 2)

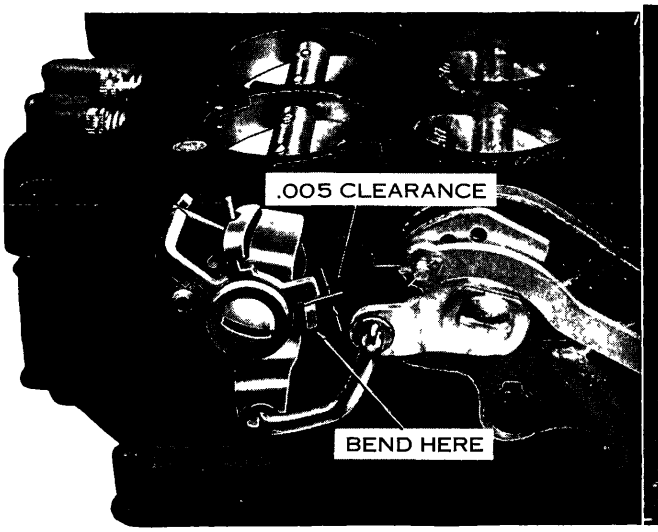


Figure 3

With primary and secondary throttle valves tightly seated, there should be .005" clearance (gauge T109-237) between outer lip on secondary operating lever and stop lug on primary throttle shaft dog.

TO ADJUST: Bend outer lip on secondary operating lever (use tool T109-214).

CAUTION: After bending, be sure secondary operating lever operates freely and does not bind in any position (Fig. 3).

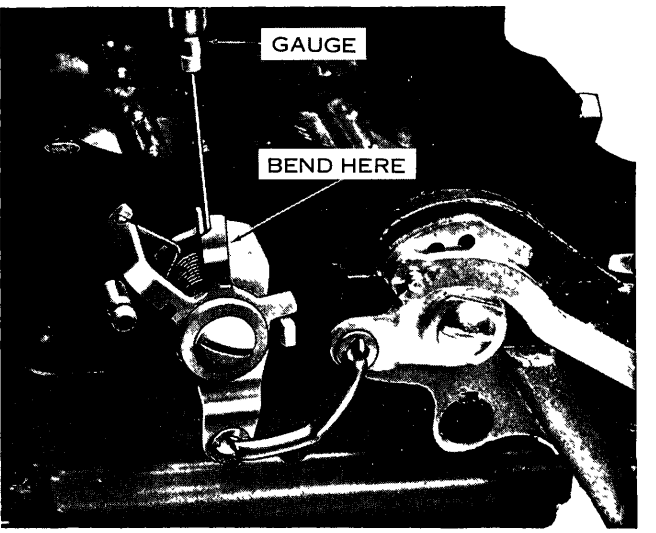
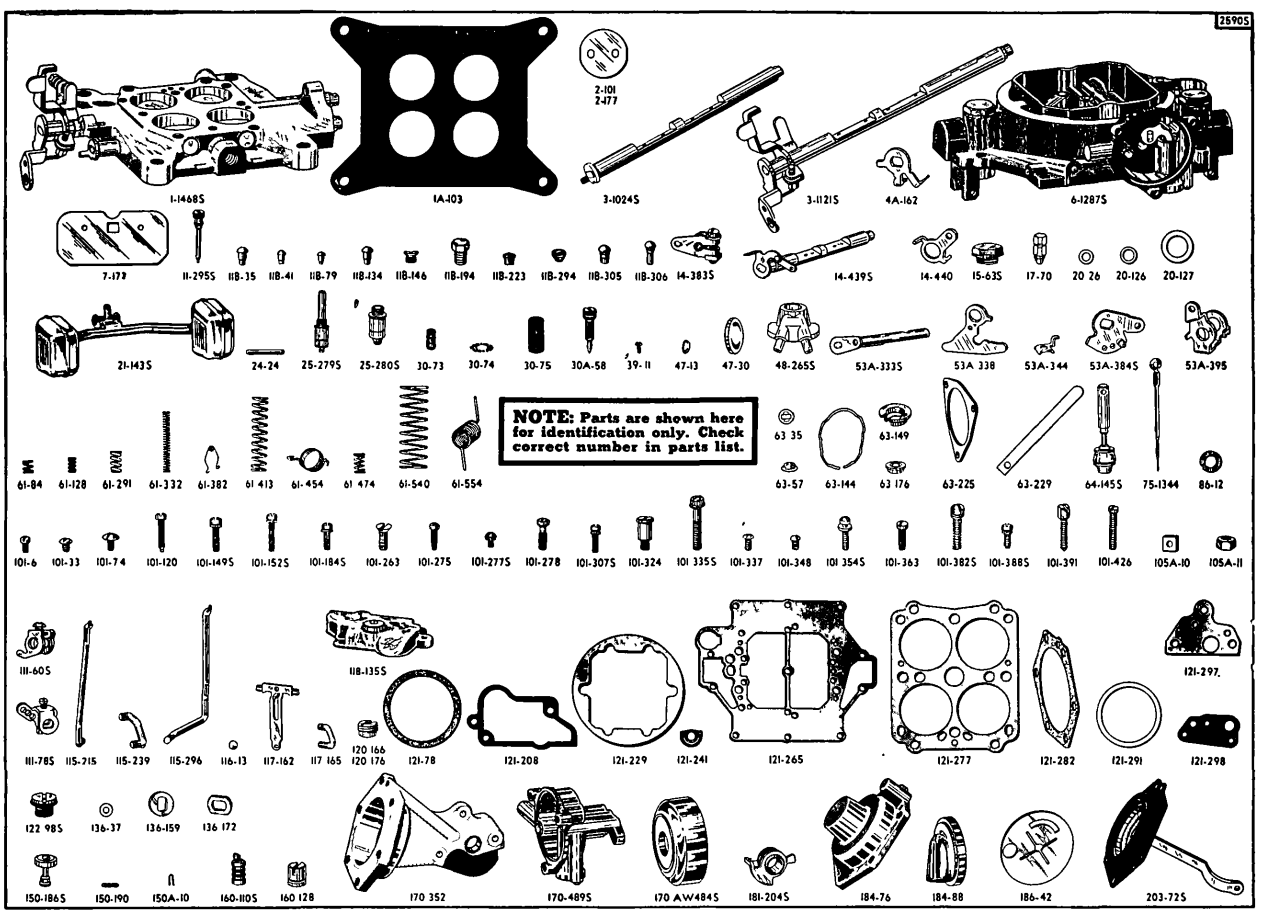


Figure 4

With primary and secondary throttle valves tightly closed, there should be .040" clearance (gauge T109-193) between short tang on primary throttle shaft dog and outer arm of spring.

TO ADJUST: Bend short tang on primary throttle shaft dog (use tool T109-214) (Fig. 4).



Chrysler "V-8"—1957—Carbureter No. 2590S

(See Page 4 for above parts group identification.)

Chrysler "V-8"—1957—Carbureter No. 2590S

WHEN SERVICING, USE GASKET ASSORTMENT No. 297; REPAIR PACKAGE No. 1869

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1468S	Body flange assembly	
1A-103	FLANGE GASKET	
2-101	Primary throttle valve	(2)
2-177	Secondary throttle valve	(2)
3-1024S	Secondary throttle shaft and dog assembly	
3-1121S	Primary throttle shaft and lever assembly	
4A-162	Primary throttle shaft dog	
6 1287S	Air horn assembly	
7-173	Choke valve	
11-295S	LOW SPEED JET ASSEMBLY	(4)
11B-35	Rivet plug	(4)
11B-41	Rivet plug	
11B-79	Rivet plug (early prod) (4) (late prod) (1)	
11B-134	Rivet plug	
11B-146	Level sight plug	(2)
11B-194	Pipe plug	
11B-223	Nozzle passage rivet plug	(4)
11B-294	Idle port rivet plug	(4)
11B-305	Rivet plug	(2)
11B-306	Rivet plug	
14-383S	Choke lever and screw assembly	
14-439S	Choke piston lever link and shaft assembly	
14-440	Cam trip lever	
15-63S	Strainer nut assembly	(2)
17-70	PUMP CHECK NEEDLE	
20-26	Pump relief plug gasket	
20-126	Needle seat gasket	(2)
20-127	BOWL STRAINER GASKET	(2)
21-143S	Secondary float and lever assembly	
21-192S	Primary float and lever assembly	
24-24	Float lever pin	(2)
25-279S	SECONDARY NEEDLE AND SEAT ASSEMBLY	
25-280S	PRIMARY NEEDLE AND SEAT ASSEMBLY	
30-73	PRIMARY NEEDLE SEAT STRAINER	
30-74	SECONDARY FUEL INLET STRAINER	
30-75	BOWL STRAINER	
30A-58	Idle adjustment screw	(2)
39-11	Choke valve attaching screw	(2)
47-13	Welsh plug (spark port passage)	
47-30	Welsh plug (choke housing)	
48-265S	Pump jet and housing assembly	
53A-333S	Pump operating lever and countershaft assembly	
53A-338	Lockout arm	
53A-344	VENT ARM	
53A-384S	Secondary throttle operating lever assembly	
53A-395	Primary throttle operating lever	
61-84	Idle adjustment screw spring	(2)
61-128	Connector rod spring	
61-291	Throttle adjusting screw spring	
61-332	VACUUM PISTON SPRING	
61-382	METERING ROD SPRING	
61-413	UPPER PUMP SPRING	
61-454	Fast idle cam spring	
61-474	Bowl vent spring	
61-540	Diaphragm return spring	
61-554	Throttle flex spring	
63-35	Connector rod spring retainer	
63-57	INTAKE CHECK BALL RETAINER	
63-144	Delayer plate retainer ring	
63-149	Bowl vent spring retainer	
63-176	Pump spring retainer	
63-225	Coil housing retainer	
63-229	Heat tube retainer	
64-145S	PUMP PLUNGER AND ROD ASSEMBLY	
75-1344	METERING ROD—STANDARD 071"x 062" x 048"	(2)
75-1336	Metering rod 2 sizes lean 072" x 065" x 058"	(2)
75-1365	Metering rod 1 size lean 072" x 064" x 055"	(2)

Part No.	PART NAME	
86-12	Flange stud lock washer	(4)
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	(2)
101-120	Fast idle adjustment screw	
101-149S	Body flange attaching screw and washer assembly	
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assy	(2)
101-263	Diaphragm housing attaching screw	(3)
101-275	Piston housing attaching screw	
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet housing attaching screw	
101-307S	Air horn attaching screw and washer assembly	(8)
101-324	Fast idle cam attaching screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-348	Primary throttle valve attaching screw	(4)
101-354S	Choke lever clamp screw assembly	
101-363	Piston housing attaching screw	(2)
101-382S	Body flange attaching screw and washer assy	(3)
101-388S	Diaphragm housing cover attaching screw and washer assembly	(6)
101-391	Throttle lever adjusting screw	
101-426	Coil housing attaching screw	(3)
103-14	Lead shot (late prod)	(3)
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
111-60S	Metering rod arm and screw assembly	
111-78S	Pump arm and screw assembly	
115-215	Choke connector rod	
115-239	Throttle operating rod	
115-296	THROTTLE CONNECTOR ROD	
116-13	PUMP INTAKE CHECK BALL	
117-162	Vacumeter piston link	
117-165	Pump connector link	
118-102S	Dust cover assembly	
118-135S	Dust cover assembly (Sup by 118 102S)	
120-166	PRIMARY METERING ROD JET	(2)
120-176	SECONDARY METERING JET	(2)
121-78	COIL HOUSING GASKET	
121-208	DUST COVER GASKET	
121-229	AIR CLEANER GASKET	
121-241	PUMP JET HOUSING GASKET	
121-265	AIR HORN GASKET	
121-277	BODY FLANGE GASKET	
121-282	GASKET (DIAPHRAGM TO LOWER HOUSING	
121-291	HEAT TUBE CAP GASKET	
121-297	DIAPHRAGM HOUSING TO FLANGE GASKET	
121-298	PISTON HOUSING GASKET	
122-98S	PUMP RELIEF PLUG ASSEMBLY	
136-37	Throttle connector rod and operating rod washer	(5)
136-159	Primary throttle shaft washer	
136-172	Secondary throttle shaft washer	
150-186S	Pin and valve cap assembly	
150-190	Choke piston pin	
150A-10	PIN SPRING	(5)
160-110S	Vacuum piston and pin assembly	
160-128	Choke piston	
170-352	Diaphragm housing	
170-489S	Piston housing and plug assembly	
170AW-484S	Thermostatic coil and housing assembly	
181-204S	Fast idle cam assembly	
184-76	Diaphragm housing cap	
184-88	Choke heat tube cap	
186-42	Choke baffle plate	
203-72S	Secondary throttle shaft diaphragm assembly	

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

CHRYSLER "V-8"

MODEL C-75-2

(POWER PACKAGE)

1957

WCFB Four-Bore Down-Draft Climatic® Control **Carbureter No. 2589S**

CARBURETER SPECIFICATIONS

For Chrysler 8 Cylinder Engine 3 94 Inch Bore, 3 63 Inch Stroke

Dimensions Flange size 1¼ inch Four Bore—4 bolt type
Primary venturi size 11/32 inch I D
Main venturi size 1 3/16 inch I D

Vents Inside (5)

Gasoline Intake Primary size No 38 (1015 inch) secondary size No 42 (0935 inch) drill hole in needle seat

Low Speed Jet Tube Jet (4) size 032 inch diameter
By pass in body (4) size No 52 (0635 inch) drill
Economizer (4) size No 56 (0465 inch) drill
Idle bleed (4) in body size No 52 (0635 inch) drill

Idle Port Upper slot type Primary length 175 inch width 030 inch Secondary length 101 inch width 030 inch

Idle Port Opening Primary 130 to 134 inch above top edge of valve with valve tightly closed Secondary 071 to 077 inch

Lower Port Primary (for idle adjustment screw) size No 53 (0595 inch) drill Secondary constant feed size 040 inch diameter

Set Idle Adjustment Screw ¾ to 1¾ turns open For richer mixture turn screw out Do not idle engine below 500 R P M in neutral

Main Nozzle Installed permanently DO NOT REMOVE Anti-percolating bleed (to nozzle well) primary side (to idle well) secondary side size No 70 (028 inch) drill

Metering Rod (Vacumeter type) see parts list for size

Metering Rod Jet Primary size 0935 inch diameter (for metering rod)

Secondary size 061 inch diameter (no metering rod)

Accelerating Pump Discharge jet (twin) primary side only size No 72 (025 inch) drill

Intake ball check seat size 115 to 120 inch diameter

Discharge needle seat size 070 inch diameter

Relief passage (vent) to fuel chamber No 42 (0935 inch) drill

Discharge relief plug size No 55 (052 inch) drill

Choke Carter Climatic® Control set one point rich Butterfly type offset choke valve primary side only Choke heat suction hole bushing between piston housing and air horn size No 50 (070 inch) drill

Vacuum Spark Port Horizontal slot (round end) 045 by 110 inch Top of port 032 to 042 inch above valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap 035"	Breaker Point Setting 017"	Ignition Timing Breaker Points to Open 6° B T C. At Vibration Damper	Float Setting Primary 5/32 Inch (Use Gauge T109-236) Secondary 9/32 Inch (Use Gauge T109-284)	Idle Adjustment Screw Setting ¾ to 1¾ Turns Open Idle Engine at 500 R P M. In Neutral

NOTE These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: Two separate float adjustments must be made—lateral and vertical. **Lateral Adjustment:** Side of floats should just clear the vertical uprights of float gauge. Adjustment should be made by bending arms of floats. **Vertical Adjustment:** With bowl gasket removed, vertical distance between top of float and machined surface of casting must be 5/32 inch (gauge T109-236) for primary floats; and 9/32 inch (gauge T109-284) for secondary floats. Adjust by bending float arms.

FLOAT DROP ADJUSTMENT: With bowl cover held in upright position and measuring from center of floats, the distance between top of floats and bowl cover should be 21/32 inch for primary floats and 25/32 inch for secondary floats. Adjust by bending stop tabs on float bracket.

PUMP ADJUSTMENT: Install pump connector link in center hole (medium stroke) of pump arm, with ends extending outward toward countershaft arm. Back out throttle lever set screw until throttle valves seat in bores of carbureter. Hold straight edge across top of dust cover boss at pump arm. The flat on top of pump arm should be parallel to straight edge. Adjust by bending throttle connector rod at lower angle. (Use tool T109-213.)

METERING ROD ADJUSTMENT: Metering rod adjustment must be made after pump adjustment. 1. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw. 2. With metering rods in place, press down on vacumeter link until metering rods bottom in carbureter body casting. 3. Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link. Hold in place and carefully tighten clamp screw.

BOWL VAPOR VENT ADJUSTMENT: This adjustment should be made after completing pump and metering rod adjustments Install dust cover and dust cover gasket. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter. There should be 1/16 inch (gauge T109-197) between lower edge of bowl vapor vent valve and dust cover. To adjust, remove dust cover and bend vapor vent arm.

FAST IDLE ADJUSTMENT: (a) Loosen choke lever clamp screw on choke shaft. Insert .020 inch wire gauge (T109-29) between lip of fast idle cam and boss of flange casting. Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw. (b) With choke valve tightly closed, tighten fast idle adjusting screw until there is .012 inch (gauge T109-200) opening between throttle valve and bore of carbureter, side opposite idle port. Be sure fast idle adjusting screw is on high step of cam while making this adjustment.

FAST IDLE ON CAR: 1350 to 1400 R.P.M. hot engine, with fast idle screw on high step of cam.

UNLOADER ADJUSTMENT: With throttle wide open there should be 15/64 inch (gauge T109-32) clearance between upper edge of choke valve and inner wall of air horn. Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41).

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: This adjustment should be made after completing fast idle adjustment. Crack throttle valves and manually open and close the choke valve. Tang on secondary throttle lever should freely engage in notch of lock-out dog. If necessary to adjust, bend tang on secondary throttle lever.

PRIMARY THROTTLE SHAFT DOG ADJUSTMENT:

Block choke valve wide open.

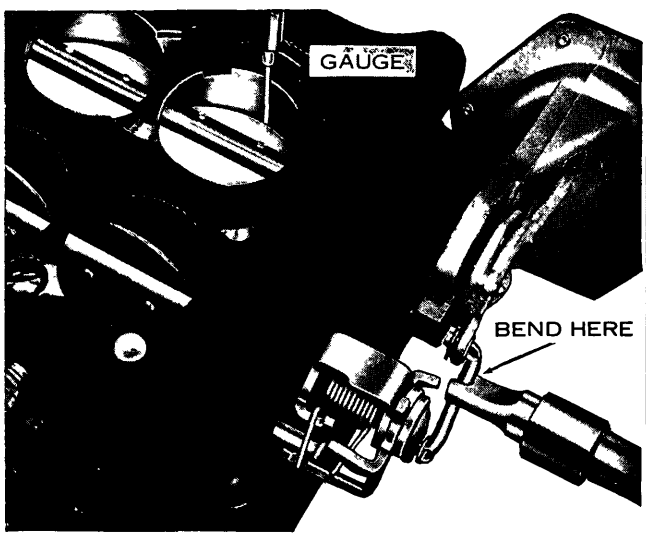


Figure 1

With primary throttle valves in wide open position, adjust (use tool T109-213) secondary operating rod so there is .054" to .064" clearance (gauge T109-193) between upper edge of secondary throttle valve (next to idle port) and bore of carbureter (Fig. 1).

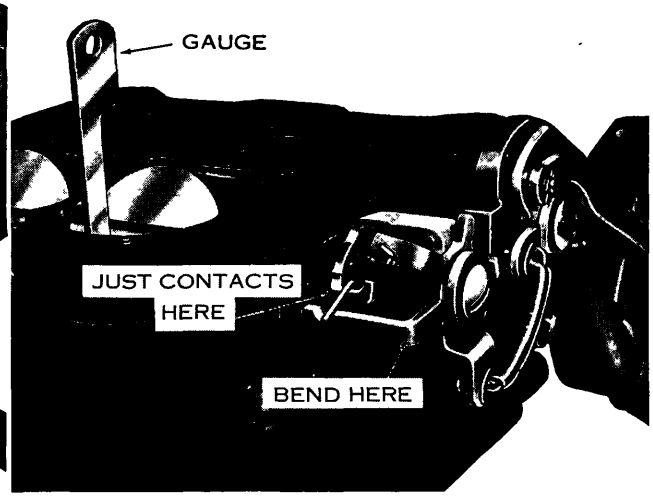


Figure 2

Place 1/4" gauge (tool T109-31) between upper edge of primary throttle valve and bore (next to idle port) and adjust (use tool T109-214) long tang on primary throttle shaft dog so that inner arm of spring just contacts inner lug of secondary operating lever and secondary throttle valves just start to open (Fig. 2).

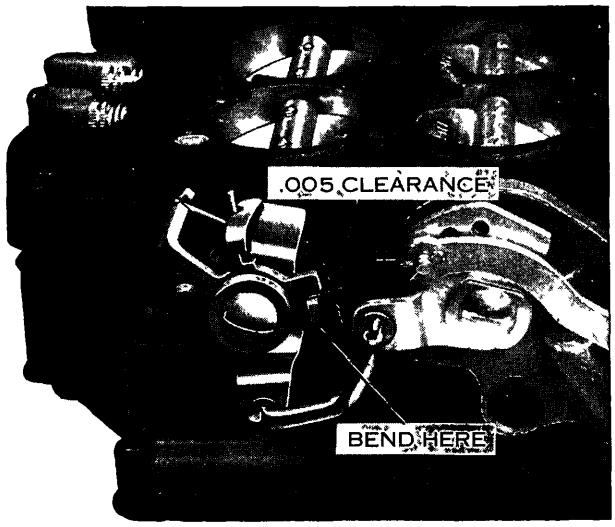


Figure 3

With primary and secondary throttle valves tightly seated there should be 005" clearance (gauge T109-237) between outer lip on secondary operating lever and stop lug on primary throttle shaft dog

TO ADJUST Bend outer lip on secondary operating lever (use tool T109-214)

CAUTION After bending, be sure secondary operating lever operates freely and does not bind in any position (Fig 3)

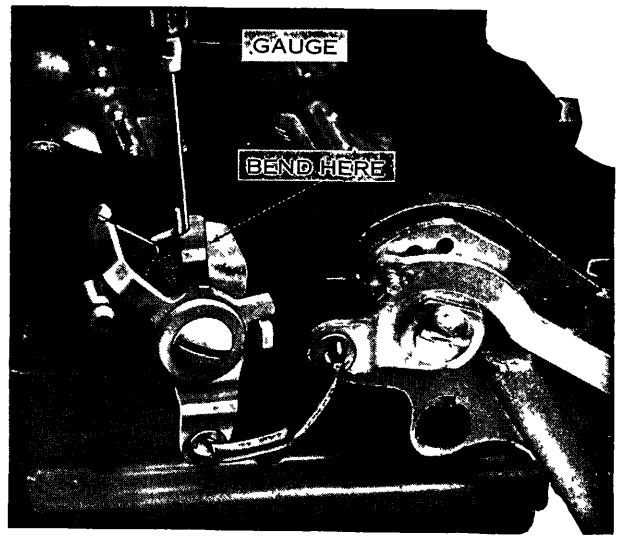
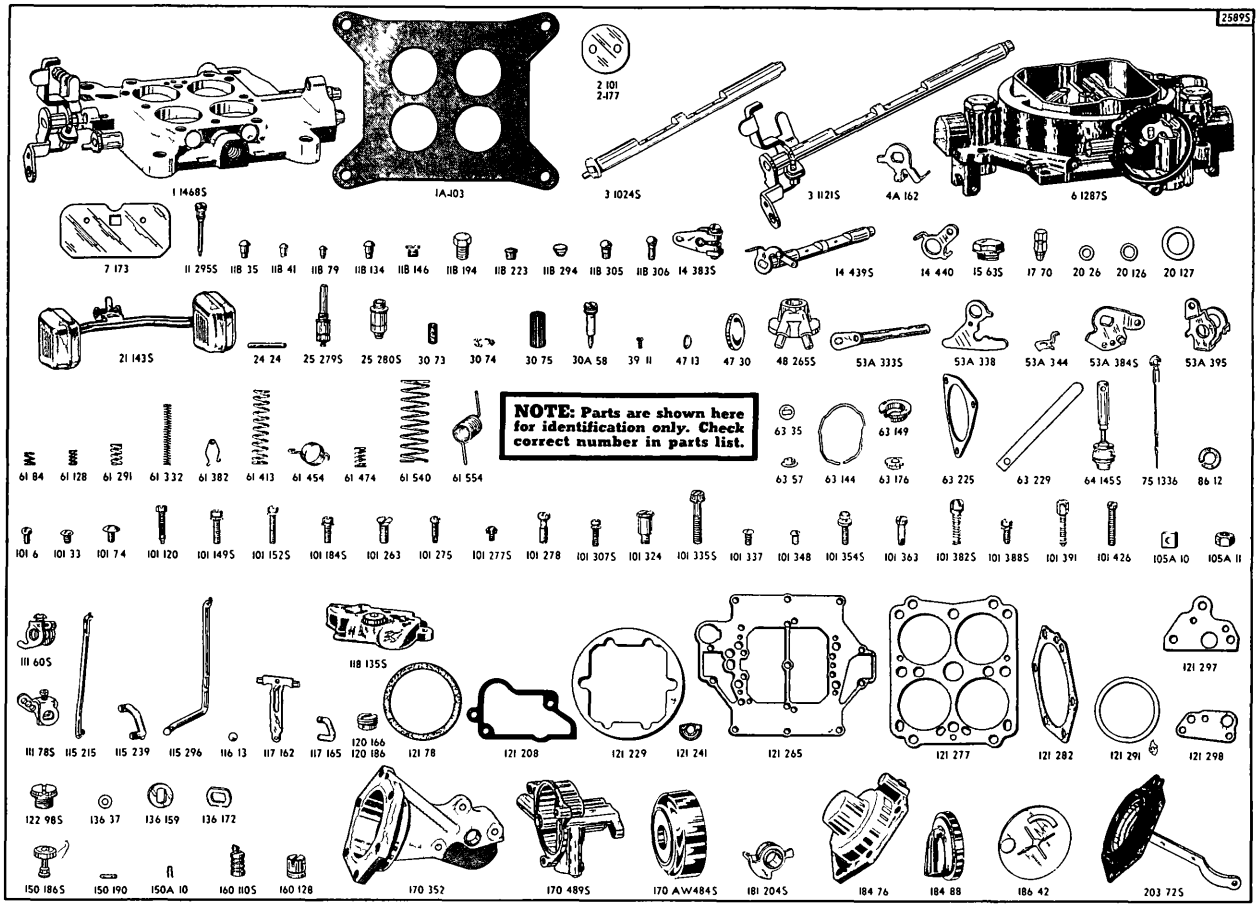


Figure 4

With primary and secondary throttle valves tightly closed there should be 040" clearance (gauge T109-193) between short tang on primary throttle shaft dog and outer arm of spring

TO ADJUST Bend short tang on primary throttle shaft dog (use tool T109 214) (Fig 4)



Chrysler "V-8"—1957—Carbureter No. 2589S

(See Page 4 for above parts group identification.)

Chrysler "V-8"—1957—Carbureter No. 2589S

WHEN SERVICING, USE GASKET ASSORTMENT No. 297, REPAIR PACKAGE No. 1857

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1468S	Body flange assembly	
1A-103	FLANGE GASKET	
2-101	Primary throttle valve	(2)
2-177	Secondary throttle valve	(2)
3-1024S	Secondary throttle shaft and dog assembly	
3-1121S	Primary throttle shaft and lever assembly	
4A-162	Primary throttle shaft dog	
6-1287S	Air horn assembly	
7-173	Choke valve	
11-295S	LOW SPEED JET ASSEMBLY	(4)
11B-35	Rivet plug	(4)
11B-41	Rivet plug	
11B-79	Rivet plug (early prod (4) (late prod (1)	
11B-134	Rivet plug	
11B-146	Level sight plug	(2)
11B-194	Pipe plug	
11B-223	Nozzle passage rivet plug	(4)
11B 294	Idle port rivet plug	(4)
11B-305	Rivet plug	(2)
11B 306	Rivet plug	
14-383S	Choke lever and screw assembly	
14 439S	Choke piston lever link and shaft assembly	
14-440	Cam trip lever	
15-63S	Strainer nut assembly	(2)
17-70	PUMP CHECK NEEDLE	
20 26	Pump relief plug gasket	
20-126	Needle seat gasket	(2)
20-127	BOWL STRAINER GASKET	(2)
21-143S	Secondary float and lever assembly	
21-192S	Primary float and lever assembly	
24-24	Float lever pin	(2)
25-279S	SECONDARY NEEDLE AND SEAT ASSEMBLY	
25-280S	PRIMARY NEEDLE AND SEAT ASSEMBLY	
30-73	PRIMARY NEEDLE SEAT STRAINER	
30-74	SECONDARY FUEL INLET STRAINER	
30-75	BOWL STRAINER	
30A-58	Idle adjustment screw	(2)
39-11	Choke valve attaching screw	(2)
47-13	Welsh plug (spark port passage)	
47-30	Welsh plug (choke housing)	
48 265S	Pump jet and housing assembly	
53A-333S	Pump operating lever and countershaft assembly	
53A 338	Lockout arm	
53A 344	VENT ARM	
53A-384S	Secondary throttle operating lever assembly	
53A-395	Primary throttle operating lever	
61-84	Idle adjustment screw spring	(2)
61-128	Connector rod spring	
61-291	Throttle adjusting screw spring	
61-332	VACUUM PISTON SPRING	
61-382	METERING ROD SPRING	
61-413	UPPER PUMP SPRING	
61 454	Fast idle cam spring	
61 474	Bowl vent spring	
61-540	Diaphragm return spring	
61-554	Throttle flex spring	
63-35	Connector rod spring retainer	
63-57	INTAKE CHECK BALL RETAINER	
63-144	Delayer plate retainer ring	
63-149	Bowl vent spring retainer	
63 176	Pump spring retainer	
63-225	Coil housing retainer	
63-229	Heat tube retainer	
64 145S	PUMP PLUNGER AND ROD ASSEMBLY	
75-1336	METERING ROD—STANDARD (.072" x .065" x .058")	(2)
75 1387	Metering rod—1 size lean .073" x .067" x .062"	(2)
75-1413	Metering rod—2 sizes lean .074" x .069" x .064"	(2)
86-12	Flange stud lock washer	(4)

Part No.	PART NAME	
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	(2)
101-120	Fast idle adjustment screw	
101-149S	Body flange attaching screw and washer assembly	
101 152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-263	Diaphragm housing attaching screw	(3)
101-275	Piston housing attaching screw	
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet housing attaching screw	
101-307S	Air horn attaching screw and washer assembly	(8)
101-324	Fast idle cam attaching screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-348	Primary throttle valve attaching screw	(4)
101-354S	Choke lever clamp screw assembly	
101-363	Piston housing attaching screw	(2)
101-382S	Body flange attaching screw and washer assembly	(3)
101-388S	Diaphragm housing cover attaching screw and washer assembly	(6)
101-391	Throttle lever adjusting screw	
101-426	Coil housing attaching screw	(3)
103-14	Lead shot (late prod)	(3)
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
111-60S	Metering rod arm and screw assembly	
111-78S	Pump arm and screw assembly	
115-215	Choke connector rod	
115-239	Throttle operating rod	
115-296	THROTTLE CONNECTOR ROD	
116-13	PUMP INTAKE CHECK BALL	
117-162	Vacumeter piston link	
117-165	Pump connector link	
118-102S	Dust cover assembly	
118-135S	Dust cover assembly (Sup by 118 102S)	
120-166	PRIMARY METERING ROD JET	(2)
120-186	SECONDARY METERING JET	(2)
121-78	COIL HOUSING GASKET	
121-208	DUST COVER GASKET	
121-229	AIR CLEANER GASKET	
121-241	PUMP JET HOUSING GASKET	
121-265	AIR HORN GASKET	
121-277	BODY FLANGE GASKET	
121 282	GASKET (DIAPHRAGM TO LOWER HOUSING)	
121 291	HEAT TUBE CAP GASKET	
121-297	DIAPHRAGM HOUSING TO FLANGE GASKET	
121-298	PISTON HOUSING GASKET	
122-98S	PUMP RELIEF PLUG ASSEMBLY	
136-37	Throttle connector rod and operating rod washer	(5)
136-159	Primary throttle shaft washer	
136 172	Secondary throttle shaft washer	
150-186S	Pin and valve cap assembly	
150 190	Choke piston pin	
150A-10	PIN SPRING	(5)
160-110S	Vacuum piston and pin assembly	
160-128	Choke piston	
170-352	Diaphragm housing	
170-489S	Piston housing and plug assembly	
170AW-484S	Thermostatic coil and housing assembly	
181-204S	Fast idle cam assembly	
184-76	Diaphragm housing cap	
184 88	Choke heat tube cap	
186-42	Choke baffle plate	
203-72S	Secondary throttle shaft diaphragm assembly	

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown only one is used.

CHRYSLER "V-8"

MODEL C-75-1

1957

BBD Dual Down-Draft Climatic® Control **Carbureter No. 2527S**

CARBURETER SPECIFICATIONS

For Chrysler 8 Cylinder Engine 3 94 Inch Bore 3 63 Inch Stroke

Dimensions Flange size 1¼ inch dual 4 bolt type Throttle bore 1 7/16 inch I D Primary venturi ⅜ inch I D Main venturi 1 3/16 inch I D

Vent Inside balance vent tube to bowl in air horn above choke valve

Gasoline Intake Size No 38 (1015 inch) drill hole in needle seat

Idle Tube Jet in venturi assembly size 0255 inch diameter Idle bleed (in venturi cluster screw) size 051 inch diameter Idle restriction (in venturi cluster screw) size 055 inch diam eter Venturi idle bleed in body size 0472 inch diameter

Idle Port Upper slot type length 189 inch width 030 inch

Idle Port Opening 144 to 148 inch above upper edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw) Size 053 to 057 inch diameter

Set Idle Adjustment Screw ½ to 1½ turns open For richer mixture turn screw out With gear shift lever in neutral position idle engine at 500 R P M

Main Nozzle Nozzle is installed permanently DO NOT RE MOVE

Main Vent Tube Side holes 10—size 0433 inch 1—size 0393 inch diameter Main vent in bottom of tube size 0393 inch diameter

Step-Up Rod (Vacuum operated) See parts list for size

Metering Jet See parts list for calibrated flow per minute

Accelerating Pump Pump discharge jets (2—in venturi cluster) size 0275 inch diameter Intake ball check seat size 130 to 140 inch diameter Discharge ball check seat size 110 to 120 inch diameter

Choke Carter Climatic® Control set 1 point rich Butterfly type offset valve Choke heat suction hole in body size 063 inch diameter NOTE Thermostatic coil should not be removed from delayer mounting post If defective replace with complete thermostatic coil and housing assembly

Vacuum Spark Port Horizontal round end type (early prod) 030 by 110 (late prod) 045 by 110 inch Top of port to be (early prod) 035 to 045 inch (late prod) 025 to 035 inch above upper edge of valve with valve closed tight

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter

Spark Plug Gap 035"	Breaker Point Setting 017"	Ignition Timing Breaker Points to Open 6° B T. C At Vibration Damper	Float Setting See Adjustments	Idle Adjustment Screw Setting ½ to 1½ Turns Open Idle Engine at 500 R.P.M

NOTE These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT

CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3655

Float Level 9/32" (gauge T109 239) between top of each float ridge (at center of float) and top surface of body casting
To adjust bend lip on float arm

Pump 1 1/32" from the top of the bowl cover to the top of the plunger shaft Install throttle connector rod in center hole (medium stroke) of throttle leve and inner hole of pump arm
To adjust bend throttle connector rod

Fast Idle Cam Clearance With choke valve closed and lip on inner choke shaft lever contacting lug on outer lever align index mark on cam with adjusting screw
To adjust bend lip on inner choke shaft lever

Fast Idle Throttle Valve Clearance 015" (gauge T109 44) be tween lower edge of valve and bore with adjusting screw on high step of cam

Fast Idle on Car 1300 to 1350 R P M

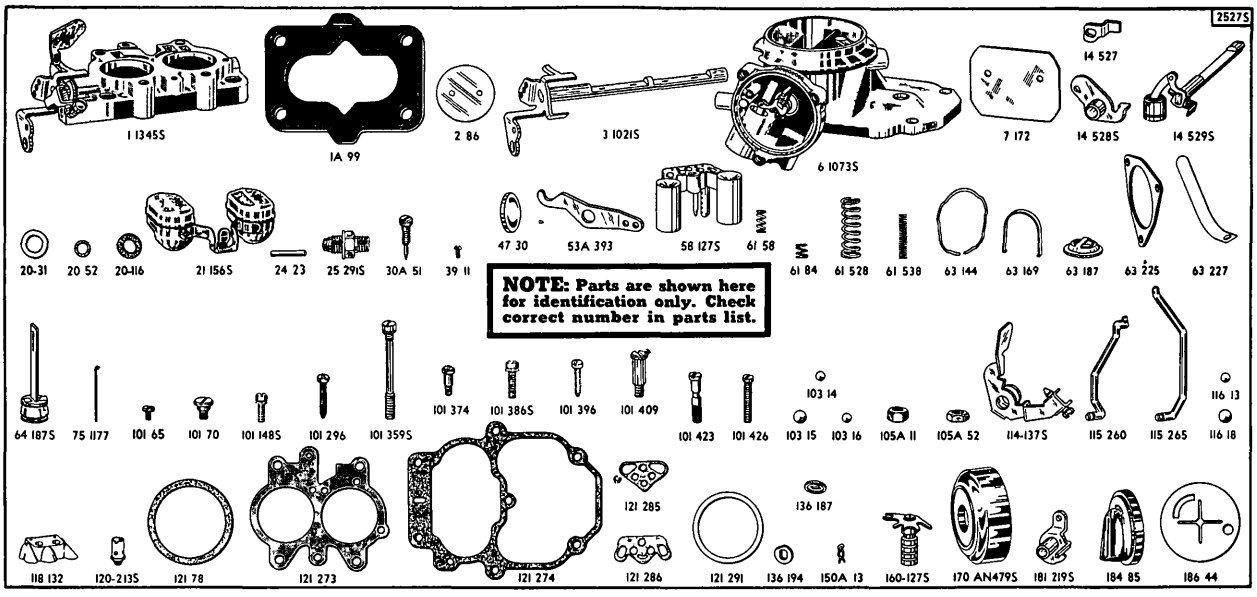
Unloader 3/16" (gauge T109 28) between top edge of choke valve and inner wall of air horn with throttle valves wide open

To adjust bend unloader arm on throttle lever

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Chrysler "V-8"—1957—Carbureter No. 2527S

WHEN SERVICING, USE GASKET ASSORTMENT No. 298; REPAIR PACKAGE No. 1858

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-1345S	Body flange assembly	
1A 99	FLANGE GASKET	
2-86	Throttle valve	(2)
3-1021S	Throttle shaft and lever assembly	
6-1073S	Air horn assembly	
7-172	Choke valve	
14-527	Choke shaft lever	
14-528S	Choke lever assembly	
14-529S	Choke piston lever link and shaft assembly	
20-31	Needle seat gasket	
20-52	STEP UP PISTON GASKET	
20-116	Main metering jet gasket	(2)
21-156S	Float and lever assembly	
24-23	Float lever pin	
25-291S	NEEDLE AND SEAT ASSEMBLY	
30A-51	Idle adjustment screw	(2)
39-11	Choke and throttle valve attaching screw	(6)
47-30	Welsh plug	
53A-393	Pump arm	
58-127S	—Venturi cluster and nozzle assembly	
61-58	Throttle adjusting screw spring	
61-84	Idle adjustment screw spring	(2)
61-528	PUMP SPRING	
61-538	STEP UP PISTON SPRING	
63-144	Delayer plate retainer ring	
63-169	FLOAT LEVER PIN RETAINER	
63-187	INTAKE CHECK BALL RETAINER	
63-225	—Coil housing retainer	
63-227	—Heat tube retainer	
64-187S	PUMP PLUNGER AND ROD ASSEMBLY	
75-1177	Step up rod 026" (Sup by 75 1370)	(2)
75-1370	—Step up rod 028"	
101-65	Choke lever attaching screw	
101-70	Pump arm screw	
101-148S	Air horn attaching screw and washer assembly	(4)
101-296	Throttle adjusting screw	

Part No.	PART NAME	
101-359S	Body attaching screw and washer assembly	(2)
101-374	Step up piston plate guide screw	
101-386S	Body flange attaching screw and washer assembly	(2)
101-396	Fast idle adjusting screw	
101-409	Fast idle cam attaching screw	
101-423	—Venturi cluster screw	(2)
101-426	—Coil housing attaching screw	(3)
103-14	Lead shot	
103-15	Lead shot	(2)
103-16	Lead shot	(2)
105A-11	Flange stud nut	(4)
114-137S	Dash pot lever assembly	
115-260	Choke connector rod	
115-265	Throttle connector rod	
116-13	DISCHARGE CHECK BALL	
116-18	INTAKE CHECK BALL	
118-132	—Venturi cover	
120-212S	Main metering jet assembly 317 to 323 cc 2 sizes lean	(2)
120-213S	MAIN METERING JET ASSEMBLY 337 to 343 cc 1 size lean	(2)
120-214S	MAIN METERING JET ASSEMBLY 356 to 364 cc Standard	(2)
121-78	COIL HOUSING GASKET	
121-273	BODY FLANGE GASKET	
121-274	BODY GASKET	
121-285	—VENTURI HOUSING GASKET	
121-286	—VENTURI COVER GASKET	
121-291	—HEAT TUBE CAP GASKET	
136-187	Pump spring retainer washer	
136-194	Choke shaft washer	
150A-13	PIN SPRING	(3)
160-127S	STEP UP PISTON AND PLATE ASSEMBLY	
170AN479S	—Thermostatic coil and housing assembly	
181-219S	Fast idle cam assembly	
184-85	—Choke heat tube cap	
186-44	Choke baffle plate	

—Parts so marked are new and listed for the first time

NOTE Figures in parentheses indicate number of pieces used in one carbureter **Where no figure is shown, only one is used.**

CHRYSLER "V-8" MARINE

MODEL M-45S

1956

Two Carbureters Per Engine

BBS DOWN-DRAFT **CARBURETER No. 2360S**

CARBURETER SPECIFICATIONS

For Chrysler 8 Cylinder Engine: 3.81 Inch Bore, 3.63 Inch Stroke

Dimensions: Flange size 1½ inch S A E

Throttle bore, 1-11/16 inch
Main venturi, 1-11/32 inch I D.

Vents. Outside none Inside, balance vent tube

Gasoline Intake. Size No 38 (1015 inch) drill in needle seat

Idle Tube: Jet size 0315 inch diameter Idle passage air bleed in body size No 68 (031 inch) drill Restriction in body 0394 inch diameter

Idle Port. Upper slot type length 149 inch; width 030 inch

Idle Port Opening: Top of port located 118 to 122 inch above top edge of valve, with valve tightly closed

Lower Port (For Idle Adjustment Screw): Size 053 to 057 inch diameter.

Set Idle Adjustment Screw. ½ to 1½ turns open For richer mixture turn screw out Idle engine between 450 500 r p m

Main Metering Jet· Calibrated to flow 457 cc per minute (Do not gauge for size, if in doubt replace with new part)

Main Vent Tube. Side holes 6—0354 inch diameter Bleed in top of tube 0315 inch diameter

Step-Up Rod· (Vacuum operated) 026 inch diameter

Accelerating Pump Pump intake passage ball check seat size 115 to 120 inch diameter
Pump discharge passage restriction (under ball check) size 115 to 120 inch diameter in body
Pump (discharge) jet size 0393 inch drill

Choke. Manual—butterfly type offset valve

Vacuum Spark Port: None

Motor Tune-Up—Be Accurate!

CAUTION· Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .017"	Ignition Timing Breaker Points to Open 4° B. T. D. C. At Vibration Damper	Valve Setting (Hot) Intake .008" Exhaust .020"	Float Setting 7/32 Inch (Use Gauge T109-239)	Idle Adjustment Screw Setting ½ to 1½ Turns Open Idle Engine at 450-500 R.P.M. In Neutral

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FLOAT ADJUSTMENT This adjustment must be made with the bowl cover gasket and float pin retainer removed Hold the lip on float arm against the seated intake needle making sure the float pin is at the bottom of its guide slots The distance from the top surface of the body casting to the top of each float should be 7/32 inch (gauge T109 239) If one float is lower than the other equalize by bending the float arm If both floats require the same correction adjust by bending lip on float arm The floats must not rub anywhere against the inner walls of the bowl If necessary bend float arm slightly to provide clearance on all sides of floats

PUMP ADJUSTMENT Back out throttle adjusting screw and open choke valve so that throttle valve seats in bore of carbureter Install throttle connector rod in outer hole (long stroke) of throttle lever The distance from the top of the bowl cover to the top of the plunger shaft (not pump arm) should be 54/64 inch Adjust by bending pump connector rod at lower angle (use tool T109 213)

Chrysler-Marine "V-8"—1956—Carbureter No. 2360S

WHEN SERVICING, USE GASKET ASSORTMENT No. 252

Part No.	PART NAME	
1-1155S	Body flange assembly	
1A-90	Flange gasket—for use without governor	
2-87	Throttle valve	
3-898S	Throttle shaft and lever assembly	
6-953S	Air horn assembly	
7-195S	Choke valve assembly	
11B-79	Rivet passage plug	(6)
11B-220	High speed passage rivet plug	
11B 296	Pump jet rivet plug	
11B-303	Rivet passage plug	
13-149	Choke shaft	
14-350S	Choke lever assembly	
20-31	Needle seat gasket	
20-52	Step up piston gasket	
20-116	Step up jet gasket	
21-144S	Float and lever assembly	
24-23	Float lever pin	
25-44S	Needle and seat assembly	
30A-44	Idle adjustment screw	
39-11	Choke and throttle valve attaching screw	(4)
48-219	Pump jet	
53A-343	Pump arm	
61-291	Throttle lever adjusting screw spring	
61-467	Idle adjustment screw spring	
61-476	Pump spring	
61-484	Step up piston spring	
61-511	Choke pull back spring	
62-199S	Choke tube bracket assembly	

Part No	PART NAME	
63-57	Intake check ball retainer	
63-169	Float lever pin retainer	
64-140S	Pump plunger and rod assembly	
75-991	Step up rod	
100-16	Throttle lever adjusting screw	
101-6	Choke lever clamp screw	
101-10	Wire clamp screw	
101-148S	Bowl cover attaching screw and washer assembly	(2)
101-290	Choke tube bracket attaching screw (early prod (2) (late prod (1)	
101-318	Pump arm screw	
101-359S	Body attaching screw and washer assembly	(4)
101-374	Step up piston plate guide screw	
105-11	Choke tube clamp screw	
105A-8	Choke tube clamp nut	
105A-13	Flange stud nut	(2)
115-196	Throttle connector rod	
116-13	Pump intake and discharge check ball	(2)
120-207S	Main metering jet assembly	
121-225	Body gasket	
121-247	Body flange gasket	
123-65S	Idle orifice tube and plug assembly	
136-161	Pump spring retainer	
145-91	Main vent tube	
150-174	Pump arm pin	
150A-13	Pin spring	(2)
160-124S	Step up piston and plate assembly	

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

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CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

CHRYSLER INDUSTRIAL 2478S
August, 1956

CHRYSLER INDUSTRIAL "V-8"

MODEL – INDUSTRIAL 56

(Gasoline)

1956

TWO CARBURETERS PER ENGINE

BBS DOWN-DRAFT CLIMATIC® CONTROL **CARBURETER No. 2478S**

CARBURETER SPECIFICATIONS

For Chrysler Ind. Eight Cylinder Engine: 3.81 Inch Bore, 3.63 Inch Stroke

Dimensions: Flange size 1½ inch S A E
Throttle bore, 1-11/16 inch
Main venturi, 1-11/32 inch I D

Float Setting: See adjustments

Vents: Outside, none Inside, balance vent tube

Gasoline Intake: Size No 44 (.086 inch) drill in needle seat

Idle Tube: Jet, size 0354 inch diameter Idle passage air bleed in body size 061 inch drill Restriction in body size 057 inch diameter.

Idle Port. Upper, slot type, length 195 inch width 030 inch

Idle Port Opening. Top of port located 140 to 144 inch above top edge of valve, with valve tightly closed

Lower Port (For Idle Adjustment Screw) Size, 053 to 057 inch diameter

Set Idle Adjustment Screw: ¾ to 1¾ turns open For richer mixture turn screw out Idle engine between 450 500 r p m gear shift lever in neutral

Main Metering Jet. Calibrated to flow 453 cc per minute (Do not gauge for size if in doubt, replace with new part)

Main Vent Tube. Side holes, 6—0354 inch diameter Bleed in top of tube 0315 inch diameter

Step-Up Rod. (Vacuum operated) size, 027 inch diameter

Accelerating Pump Pump intake passage, ball check seat, size 110 to 120 inch diameter
Pump discharge passage, ball check seat 110 to 120 inch diameter in body
Pump (discharge) jet size 0276 inch drill
Bleed hole in pump plunger, size 063 inch diameter

Pump Adjustment· See adjustments

Choke. Carter Climatic® Control set on index Choke heat suction hole in body size No 38 (.1015 inch) drill NOTE Thermostatic coil should not be removed from delayer mounting post If defective replace with complete thermostatic coil and housing assembly

Vacuum Spark Port Slot (round end) type Size 030 by 110 inch Top of port 044 to 050 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .017"	Ignition Timing Breaker Points to Open: 8° B. T. C. At Vibration Damper	Float Setting (See Adjustments)	Idle Adjustment Screw Setting ¾ to 1¾ Turns Open Idle engine at 450 to 500 R.P.M.

NOTE: These engines are equipped with hydraulic valve lifters. NO ADJUSTMENT.

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: This adjustment must be made with the bowl cover gasket and float pin retainer removed Hold the lip on float arm against the seated intake needle, making sure the float pin is at the bottom of its guide slots The distance from the top surface of the body casting to the top of each float should be 7/32 inch (gauge T109-239) If one float is lower than the other, equalize by bending the float arm If both floats require the same correction, adjust by bending lip on float arm. The floats must not rub anywhere against the inner walls of the bowl If necessary, bend float arms slightly to provide clearance on all sides of floats

PUMP ADJUSTMENT· Back out throttle adjusting screw and open choke valve so that throttle valve seats in bore of carbureter Install throttle connector rod in center hole of throttle lever The distance from the top of the bowl cover to the top of plunger shaft (not pump arm) should be 54/64 inch. Adjust by bending throttle connector rod at lower angle (use tool T109-213)

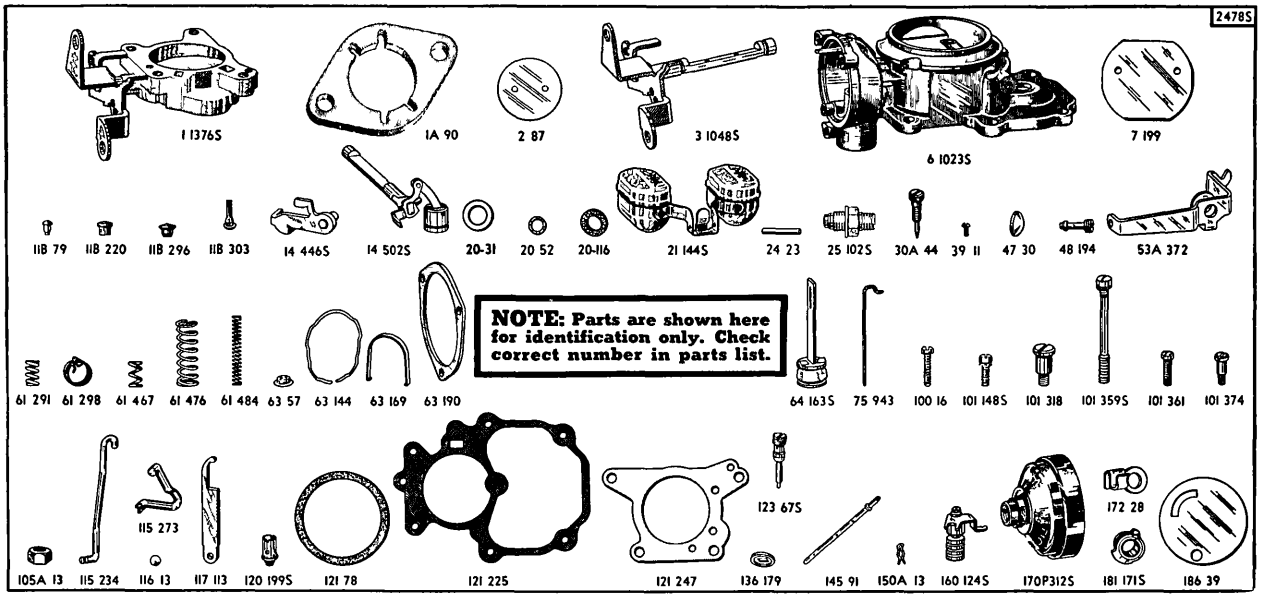
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FAST IDLE ADJUSTMENT Remove thermostatic coil housing assembly, gasket and baffle plate With throttle adjusting screw backed out, crack throttle valve and hold choke valve in fully closed position Then close throttle This will allow fast idle cam to revolve to fast idle position There should now be 016- 020 inch clearance (use gauge T109-44) between throttle valve and bore of carbureter (side opposite idle port) Adjust by bending the choke connector rod at lower angle (use tool T109-213)

UNLOADER ADJUSTMENT This adjustment must be made after the fast idle adjustment Hold throttle valve wide open and close choke valve as far as possible without forcing There should now be 9/64 inch clearance (use gauge T109-34) between upper edge of choke valve and inner wall of air horn Adjust by bending arm on choke trip lever (use tool T109-214) When fast idle and unloader adjustments have been made assemble baffle plate, coil housing gasket and thermostatic coil housing assembly on air horn Set Climatic® Control as specified making sure that hook on coil has picked up coil shaft lever



Chrysler Industrial—1956—Carbureter No. 2478S

WHEN SERVICING, USE GASKET ASSORTMENT No. 252

Part No.	PART NAME	
1-1376S	Body flange assembly	
1A 90	Flange gasket—for use without governor	
2-87	Throttle valve	
3-1048S	Throttle shaft and lever assembly	
6 1023S	Air horn assembly	
7-199	Choke valve	
11B-79	Rivet plug	(6)
11B-220	High speed passage rivet plug	
11B-296	Pump jet rivet plug	
11B-303	Rivet plug	
14-446S	Choke trip lever and pin assembly	
14-502S	Choke piston lever and shaft assembly	
20-31	Needle seat gasket	
20-52	Step up piston gasket	
20-116	Main metering jet gasket	
21-144S	Float and lever assembly	
24-23	Float lever pin	
25-102S	Needle and seat assembly	
30A-44	Idle adjustment screw	
39-11	Choke and throttle valve screw	(4)
47-30	Welsh plug	
48-194	Pump jet	
53A-372	Pump arm	
61-291	Throttle lever adjusting screw spring	
61-298	Fast idle cam spring	
61-467	Idle adjustment screw spring	
61-476	Pump spring	
61-484	Step up piston spring	
63-57	Intake check ball retainer	
63-144	Delayer plate retainer ring	

Part No.	PART NAME	
63-169	Float lever pin retainer	
63-190	Coil housing retainer	
64-163S	Pump plunger and rod assembly	
75-943	Step up rod	
100-16	Throttle adjusting screw	
101 148S	Bowl cover attaching screw and washer assembly	(2)
101-318	Pump arm screw	
101-359S	Air horn attaching screw and washer assembly	(4)
101-361	Coil housing attaching screw	(3)
101-374	Step up piston plate guide screw	
105A-13	Flange stud nut	(2)
115-234	Throttle connector rod	
115-273	Choke connector rod	
116-13	Pump intake and discharge check ball	(2)
117-113	Fast idle link	
120-199S	Main metering jet assembly—Standard	
120-205S	Main metering jet assembly—1 size lean	
120-206S	Main metering jet assembly—2 sizes lean	
121-78	Coil housing gasket	
121-225	Body gasket	
121-247	Body flange gasket	
123-67S	Idle orifice tube and plug assembly	
136-179	Pump spring retainer washer	
145-91	Main vent tube	
150A-13	Pin spring	
160-124S	Step up piston and plate assembly	
170P312S	Thermostatic coil and housing assembly	
172-28	Choke connector rod retainer	
181-171S	Fast idle cam assembly	
186-39	Choke baffle plate	

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

CHRYSLER MARINE "V-8" – 1956

Model M-45 Special

(Two Carbureters Per Engine)

WCFB Four-Bore Down-Draft Climatic® Control **Carbureter No. 2365S**

CARBURETER SPECIFICATIONS

For Chrysler 8 Cylinder Engine 3 81 Inch Bore, 3 63 Inch Stroke

Dimensions Flange size 1⅛ inch Four Bore—4 Bolt type
Primary venturi size 11/32 inch I D
Main venturi size 1 1/16 inch I D

Vents Inside (5) Outside None

Gasoline Intake Size No 42 (0935 inch) drill in needle seat

Low Speed Jet Tube Jet primary and secondary size No 69 (0293 inch) drill By pass in body size primary No 52 (0635 inch) drill secondary (057 inch) diameter Econ omizer plug in body size (0452 inch) diameter Idle bleed n body size primary (059 inch) diameter secondary No 44, (086 inch) drill

Idle Port Upper slot type primary length 175 inch width 030 inch Secondary length 103 inch width 030 inch

Idle Port Opening Primary 116 to 122 inch secondary 059 to 065 inch above top edge of valve with valve tightly closed

Lower Port Primary (for idle adjustment screw) size No 55 (052 inch) drill
Secondary (no idle adjustment screw) s ze No 57 (043 inch) drill

Set Idle Adjustment Screw ¼ to 1¼ turns open For richer mixture turn screw out Do not idle engine below 450 500 R P M

Main Nozzle Installed permanently DO NOT REMOVE Anti percolating jet (4) size No 70 (028 inch) drill

Metering Rod Primary Economy step 073 inch d ameter
Middle step tapers to 062 inch diameter
Power step 048 inch diameter
Secondary none

Metering Rod Jet Primary size 089 inch diameter
Secondary size 053 inch diameter

Accelerating Pump Discharge jet (twin) primary side only size No 74 (0225 inch) drill Intake ball check seat size 115 to 120 inch diameter Discharge needle seat size No 50 (070 inch) drill Relief passage (vent) to fuel chamber s ze No 42 (0935 inch) drill

Choke Manual Butterfly type offset choke valve primary side only

Vacuum Spark Port None

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter

Spark Plug Gap	Set Breaker Points	Ignition Timing Breaker Points to Open	Set Valves (Hot)	Float Setting	Idle Adjustment Screw Setting
.035"	017"	2° B T C	Intake 015" Exhaust 026"	Primary ⅛ Inch (Gauge T109-232) Secondary 3/16 Inch (Gauge T109-222)	¼ to 1¼ Turns Open 450 to 500 R.P.M.

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT Two separate float adjustments must be made—lateral and vertical **LATERAL ADJUST MENT** With bowl cover assembly inverted bowl cover gas ket removed and float resting on seated needle place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting Side of floats should just clear the vertical uprights of float gauge Adjustment should be made by bending arms of floats **VERTICAL ADJUST MENT** With float gauge in same position floats should just clear the horizontal portion of gauge Vertical distance be tween top of float and machined surface of casting must be ⅛ inch (gauge 1109 232) for primary floats and 3/16 inch (gauge T109 222) for secondary floats Adjust by bending float arms

FLOAT DROP ADJUSTMENT With bowl cover held in up right position and measuring from center of floats the dis tance between top of floats and bowl cover should be ⅝ inch for primary floats and 11/16 inch for secondary floats Adjust by bending stop tabs on float bracket

PUMP ADJUSTMENT Install pump connector link in outer hole (long stroke) of pump arm with ends extending toward countershaft arm Back out throttle lever set screw until throttle valves seat in bores of carbureter Hold straight edge across top of dust cover boss at pump arm The flat on top of pump arm should be parallel to straight edge Adjust by bending throttle connector rod at upper angle (Use tool T109 213)

METERING ROD ADJUSTMENT Metering rod adjustment is important and must be made after completing the pump adjustment No metering rod gauges are necessary Pro cedure is as follows 1 Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw 2 With metering rods in place press down on vacumeter link until metering rods bottom in carbureter body casting 3 Holding rods in down ward position and throttle valves seated revolve metering rod arm until finger on arm contacts lip of vacumeter link Hold in place and carefully tighten clamp screw

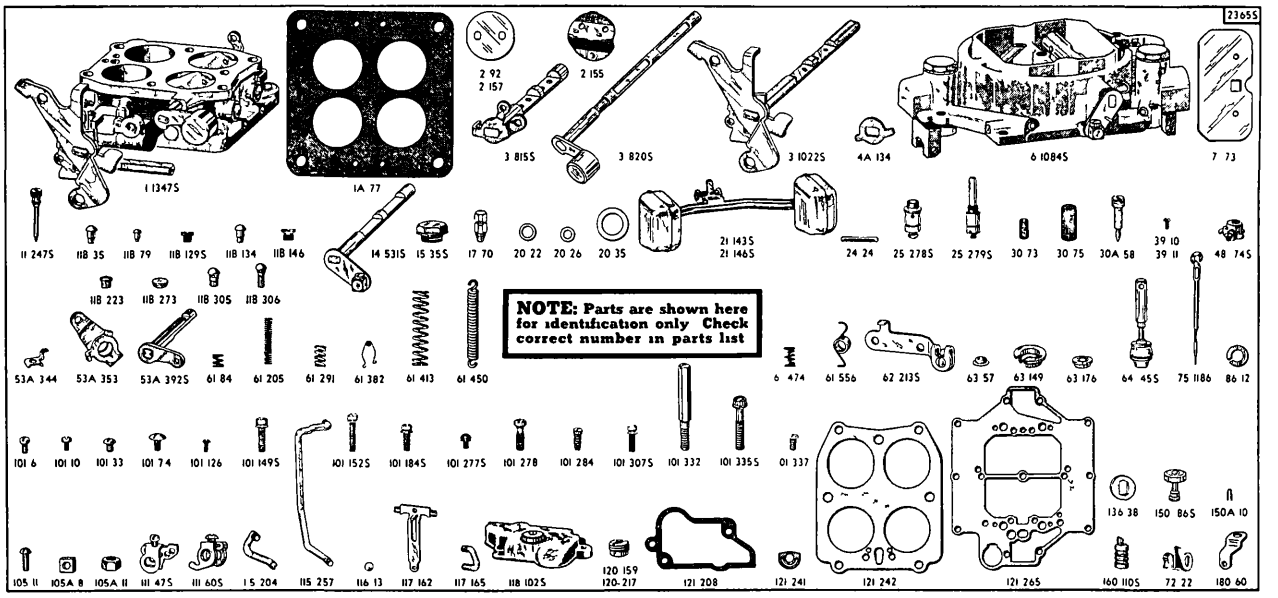
BOWL VAPOR VENT ADJUSTMENT This adjustment should be made after completing pump and metering rod adjustments Install dust cover and dust cover gasket Back out throttle lever stop screw to allow throttle valves to seat in bores of carbureter There should be 1/16 inch (gauge T109 197) between lower edge of bowl vapor vent and dust cover To adjust remove dust cover and bend vapor vent arm

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CARBURETER
TRADE MARK REG U S PAT OFF
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AUXILIARY THROTTLE VALVE ADJUSTMENT (a) Disconnect secondary throttle operating rod (b) Adjust stop lug on secondary throttle lever (use bending tool T109-214) until there is 27/64 inch clearance (gauge T109-242) between lower edge of auxiliary throttle valve and bore when lug is against stop on flange

SECONDARY THROTTLE LEVER ADJUSTMENT The stop lug on both primary and secondary throttle levers should contact boss on flange at the same time To adjust bend secondary throttle operating rod at angle (use bending tool T109-213) NOTE Secondary throttle valves will be a few degrees from wide open position



Chrysler Marine "V-8"—1956—Carbureter No. 2365S

WHEN SERVICING, USE GASKET ASSORTMENT No 269

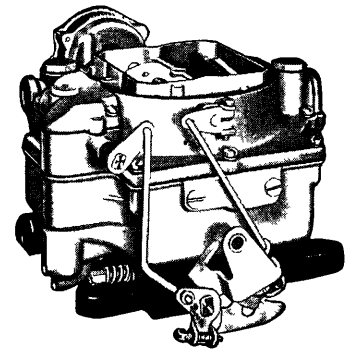
Part No.	PART NAME	
1-1347S	—Body flange assembly	
1A-77	Flange gasket	
2-92	Primary throttle valve	(2)
2-155	Auxiliary throttle valve	(2)
2-157	Secondary throttle valve	(2)
3-815S	Secondary throttle shaft and operating lever assembly	
3-820S	Auxiliary throttle shaft, lever and weight assembly	
3-1022S	—Primary throttle shaft and lever assembly	
4A-134	Primary throttle shaft dog	
6-1084S	—Air horn assembly (Sup by 6-1131S)	
6-1131S	—Air horn assembly	
7-173	Choke valve	
11-247S	Low speed jet assembly	(4)
11B-35	Rivet plug	(6)
11B-79	Rivet plug	(4)
11B-129S	Pump discharge passage plug assembly	
11B-134	Rivet plug	
11B-146	Level sight plug	(2)
11B-223	Nozzle passage and idle port rivet plug	(8)
11B-273	Secondary throttle shaft rivet plug	
11B-305	Rivet plug (early prod (1) late prod (2)	
11B-306	Rivet plug (early prod (2) late prod (1)	
14-531S	—Choke lever and shaft assembly	
15-35S	Strainer nut assembly	(2)
17-70	Pump check needle	
20-22	Needle seat gasket	(2)
20-26	Pump discharge passage gasket	
20-35	Bowl strainer gasket	(2)
21-143S	Primary float and lever assembly	
21-146S	Secondary float and lever assembly	
24-24	Float lever pin	(2)
25-278S	Primary needle and needle seat assembly	
25-279S	Secondary needle and needle seat assembly	
30-73	Primary needle seat strainer	
30-75	Bowl strainer	
30A-58	Idle adjustment screw	(2)
39-10	Primary throttle valve attaching screw	(4)
39-11	Choke valve attaching screw	(2)
48-174S	Pump jet and housing assembly	
53A-344	Vent arm	
53A-353	Primary operating lever	
53A-392S	Pump operating lever and countershaft assembly	
61-84	Idle adjustment screw lock spring	(2)
61-205	Vacuum piston spring	
61-291	Throttle lever adjusting screw spring	
61-382	Metering rod spring	
61-413	Pump spring (upper)	
61-450	Secondary throttle return spring	
61-474	Bowl vent spring	
61-556	—Choke spring	

Part No	PART NAME	
62-213S	—Choke tube bracket assembly	
63-57	Intake check ball retainer	
63-149	Bowl vent spring retainer	
63-176	Pump spring retainer	
64-145S	Pump plunger and rod assembly	
75-1178	Metering rod—1 size lean	(2)
75-1179	Metering rod—2 sizes lean	(2)
75-1186	Metering rod—Standard	(2)
86-12	Flange stud lock washer	(4)
101-6	Pump arm clamp screw	
101-10	Wire clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	
101-126	Auxiliary throttle valve attaching screw	(4)
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet housing attaching screw	
101-284	Choke tube bracket attaching screw (Sup by 101 428)	(2)
101-307S	Bracket and air horn attaching screw and washer assembly	(8)
101-332	Throttle lever adjusting screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-428	—Choke tube bracket attaching screw	(2)
105-11	Tube clamp screw	
105A-8	Tube clamp nut	
105A-11	Flange stud nut	(4)
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
115-204	Throttle operating rod	
115-257	Throttle connector rod	
116-13	Pump intake check ball	
117-162	Vacumeter piston link	
117-165	Pump connector link	
118-102S	Dust cover assembly	
120-159	Primary metering rod jet	(2)
120-217	Secondary metering jet	(2)
121-208	Dust cover gasket	
121-241	Pump jet housing gasket	
121-242	Body flange gasket	
121-265	Air horn gasket	
136-38	Throttle shaft washer	
150-186S	Pin and valve cap assembly	
150A-10	Pin spring	(4)
160-110S	Vacuum piston and pin assembly	
172-22	Throttle connector rod retainer	
180-60	Lever return spring bracket	

—Parts so marked are new and listed for the first time

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

MODEL C-71
(Power Package)
All Transmissions



CHRYSLER "V-8" 1956

WCFB Four-Bore Down-Draft Climatic® Control **Carbureters Nos. 2367S-2367SA**

CARBURETER SPECIFICATIONS

For Chrysler 8 Cylinder Engine 3 81 Inch Bore, 3.63 Inch Stroke

Dimensions Flange size 1¼ inch Four Bore—4 bolt type
Primary venturi size 11/32 inch I D
Main venturi size 1 3/16 inch I D

Vents Outside (4) Inside (5)

Gasoline Intake Size No 42 (0935 inch) drill hole in needle seat

Low Speed Jet Tube Jet (4) size 035 inch diameter
By Pass in body (4) size No 52 (0635 inch) drill
Economizer (4) size 0452 inch diameter
Idle bleed (4) in body size No 52 (0635 inch) drill

Idle Port Upper slot type Primary length 175 inch width 030 inch Secondary length 101 inch width 030 inch

Idle Port Opening Primary 130 to 134 inch above top edge of valve with valve tightly closed Secondary 071 to 077 inch

Lower Port Primary (for idle adjustment screw) size No 53 (0595 inch) drill Secondary constant feed size 040 inch diameter

Set Idle Adjustment Screw ¾ to 1¾ turns open For richer mixture turn screw out Do not idle engine below 500 R P M in neutral

Main Nozzle Installed permanently DO NOT REMOVE Anti-percolating jet (to nozzle well) primary side (to idle well) secondary side size No 70 (028 inch) drill

Metering Rod Primary economy step 075 inch diameter Middle step tapers to 065 inch diameter Power step 042 inch diameter Secondary none

Metering Rod Jet Primary size 096 inch diameter (for metering rod)
Secondary size 055 inch diameter (no metering rod)

Accelerating Pump Discharge jet (twin) primary side only size No 74 (0225 inch) drill
Intake ball check seat size 115 to 120 inch diameter
Discharge needle seat size 070 inch diameter
Relief passage (vent) to fuel chamber No 42 (0935 inch) drill
Discharge relief plug size No 55 (052 inch) drill

Choke Carter Climatic® Control set one point rich Butterfly type offset choke valve primary side only Choke heat suction hole restriction in piston housing size No 47 (0785 inch) drill

Vacuum Spark Port Horizontal slot (round end) 045 by 110 inch Top of port 032 to 042 inch above valve with valve tightly closed

Motor Tune-Up—Be Accurate! Always Use Feeler Gauges!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter

Spark Plug Gap .035"	Breaker Point Setting 017"	Ignition Timing Breaker Points to Open 4° B T C At Vibration Damper	Float Setting Primary 1/8 Inch (Use Gauge T109-232) Secondary 3/16 Inch (Use Gauge T109-222)	Idle Adjustment Screw Setting ¾ to 1¾ Turns Open Idle Engine at 500 R P M. In Neutral

NOTE These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT Two separate float adjustments must be made—lateral and vertical **Lateral Adjustment** Side of floats should just clear the vertical uprights of float gauge Adjustment should be made by bending arms of floats **Vertical Adjustment** With bowl gasket removed vertical distance between top of float and machined surface of casting must be 5/32 inch (gauge T109 236) for primary floats and 7/32 inch (gauge T109 283) for secondary floats Adjust by bending float arms

FLOAT DROP ADJUSTMENT With bowl cover held in upright position and measuring from center of floats the distance between top of floats and bowl cover should be 21/32 inch for primary floats and 23/32 inch for secondary floats Adjust by bending stop tabs on float bracket

PUMP ADJUSTMENT Install pump connector link in outer hole (long stroke) of pump arm with ends extending outward toward countershaft arm Back out throttle lever set screw until throttle valves seat in bores of carbureter Hold straight edge across top of dust cover boss at pump arm The flat on top of pump arm should be parallel to straight edge Adjust by bending throttle connector rod at lower angle (Use tool T109 213)

METERING ROD ADJUSTMENT Metering rod adjustment must be made after pump adjustment 1 Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw 2 With metering rods in place press down on vacumeter link until metering rods bottom in carbureter body casting 3 Holding rods in downward position and throttle valves seated revolve metering rod arm until finger on arm contacts lip of vacumeter link Hold in place and carefully tighten clamp screw

BOWL VAPOR VENT ADJUSTMENT This adjustment should be made after completing pump and metering rod adjustments Install dust cover and dust cover gasket Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter There should be 1/16 inch (gauge T109 197) between lower edge of bowl vapor vent valve and dust cover To adjust remove dust cover and bend vapor vent arm

FAST IDLE ADJUSTMENT (a) Loosen choke lever clamp screw on choke shaft Insert 020 inch wire gauge (T109 29) between lip of fast idle cam and boss of flange casting Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw (b) With choke valve tightly closed tighten fast idle adjusting screw until there is 012 inch (gauge T109 200) opening between throttle valve and bore of carbureter side opposite idle port Be sure fast idle adjusting screw is on high step of cam while making this adjustment

UNLOADER ADJUSTMENT With throttle wide open there should be 3/16 inch (gauge T109 28) clearance between upper edge of choke valve and inner wall of air horn Adjust by bending unloader lip on throttle shaft lever (use bending tool T109 41)

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT This adjustment should be made after completing fast idle adjustment Crack throttle valves and hold choke valve tightly closed Then close throttle Tang on secondary throttle lever should freely engage in notch of lock out dog If necessary to adjust bend tang on secondary throttle lever

PRIMARY THROTTLE SHAFT DOG ADJUSTMENT

Block choke valve wide open

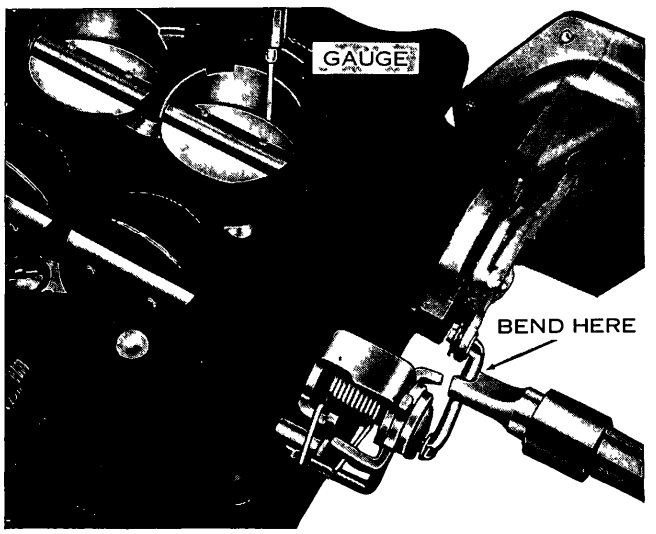


Figure 1

With primary throttle valves in wide open position adjust (use tool T109 213) secondary operating rod so there is 054" to 064" clearance (gauge T109 193) between upper edge of secondary throttle valves (next to idle port) and bore of carbureter (Fig 1)

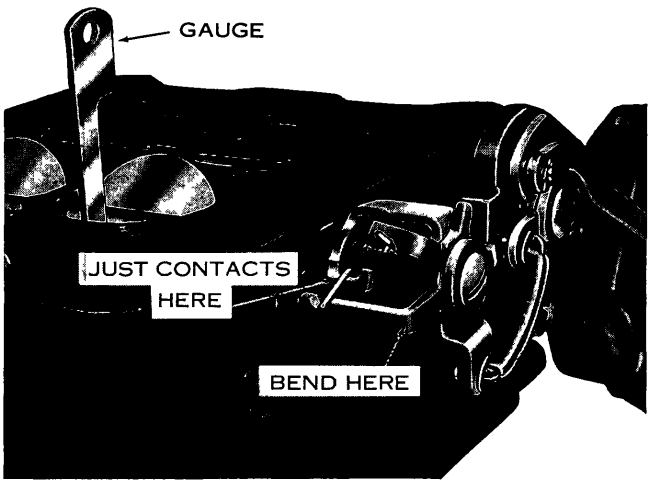


Figure 2

Place 1/4" gauge (tool T109 31) between upper edge of primary throttle valve and bore (next to idle port) and adjust (use tool T109 214) long tang on primary throttle shaft dog so that inner arm of spring just contacts inner lug of secondary operating lever and secondary throttle valves just start to open (Fig 2)

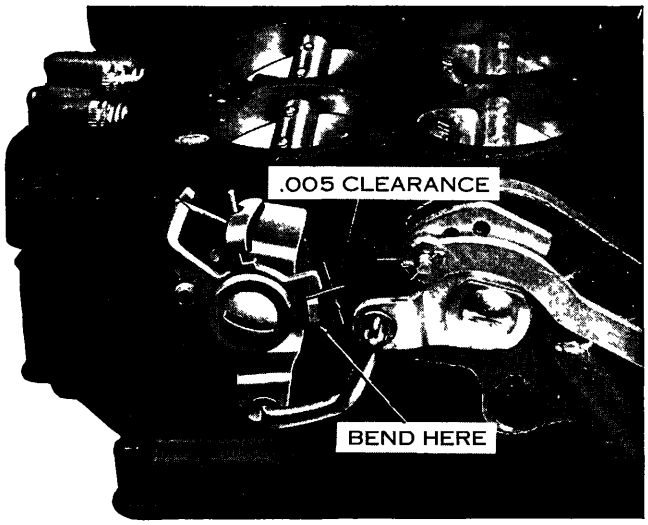


Figure 3

With primary and secondary throttle valves tightly seated, there should be .005" clearance (gauge T109-237) between outer lip on secondary operating lever and stop lug on primary throttle shaft dog.

TO ADJUST: Bend outer lip on secondary operating lever (use tool T109-214).

CAUTION: After bending, be sure secondary operating lever operates freely and does not bind in any position (Fig. 3).

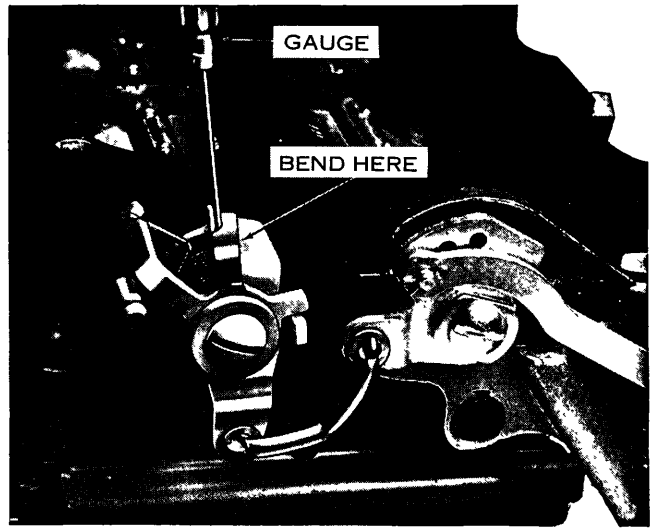
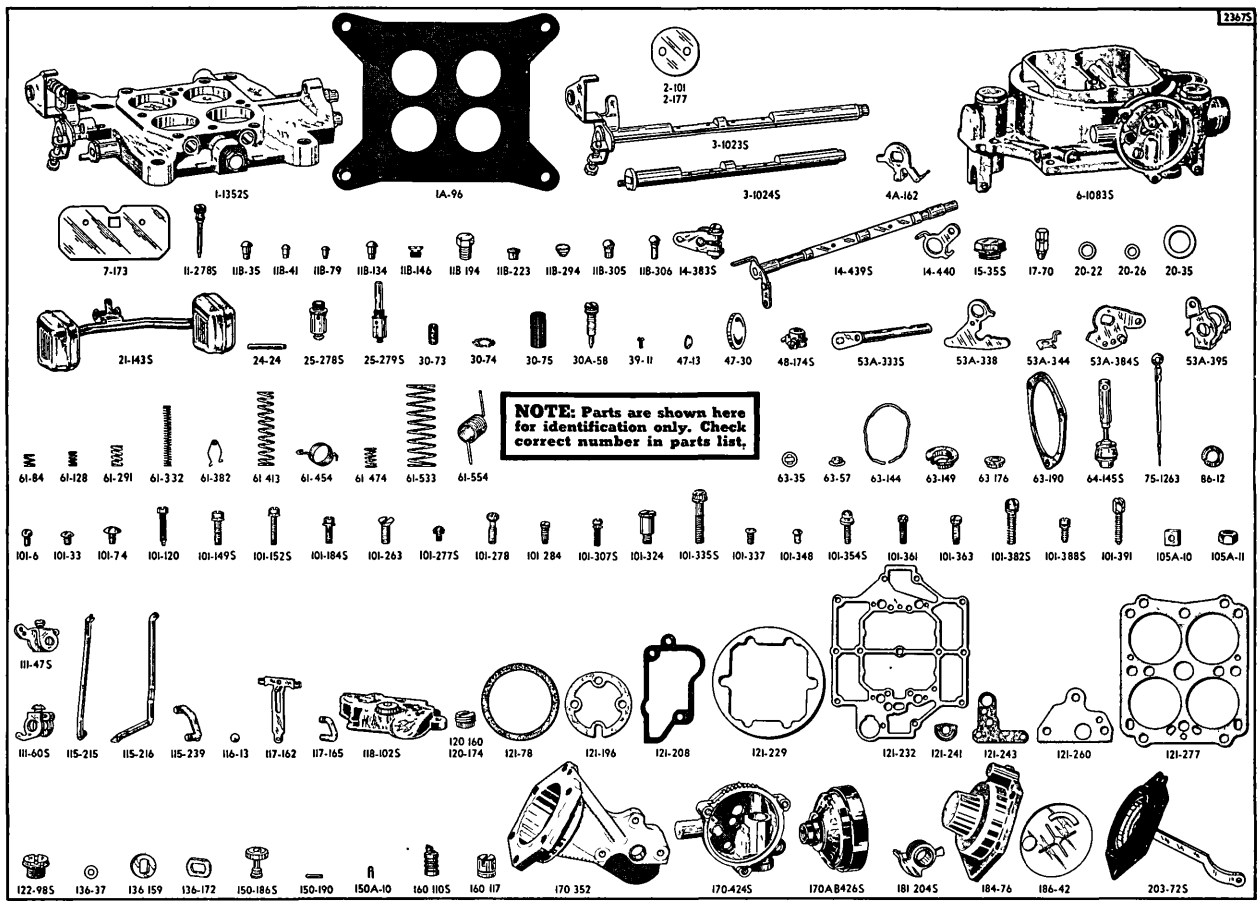


Figure 4

With primary and secondary throttle valves tightly closed, there should be .040" clearance (gauge T109-193) between short tang on primary throttle shaft dog and outer arm of spring.

TO ADJUST: Bend short tang on primary throttle shaft dog (use tool T109-214) (Fig. 4).



Chrysler "V-8"—1956—Carbureters Nos. 2367S-2367SA

(See Page 4 for above parts group identification.)

Chrysler "V-8"—1956—Carbureters Nos. 2367S-2367SA

WHEN SERVICING, USE GASKET ASSORTMENT No. 282A; REPAIR PACKAGE No 1833A

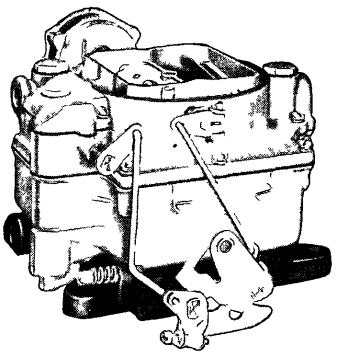
PART NAMES IN CAPITAL LETTERS LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1352S	—Body flange assembly	
1A-96	Flange gasket (Sup by 1A 103)	
1A-103	FLANGE GASKET	
2-101	Primary throttle valve	(2)
2-177	—Secondary throttle valve	(2)
3-1023S	—Primary throttle shaft and lever assembly	
3-1024S	—Secondary throttle shaft and dog assembly	
4A-162	—Primary throttle shaft dog	
6-1083S	—Air horn assembly (Casting No 6 1020)	
6-1174S	—Air horn assembly (Casting No 6 1147)	
7-173	Choke valve	
11-278S	—LOW SPEED JET ASSEMBLY	(4)
11B-35	Rivet plug	(4)
11B-41	Rivet plug (6 1083S (2), (6 1174S (1)	
11B-79	Rivet plug	(5)
11B-134	Rivet plug	
11B-146	Level sight plug	(2)
11B-194	Pipe plug	
11B-223	Nozzle passage rivet plug	(4)
11B-294	Idle port rivet plug	(4)
11B-305	Rivet plug (6 1083S (1) (6 1174S (2)	
11B-306	Rivet plug (6-1083S (2) (6 1174S (1)	
14-383S	Choke lever and screw assembly	
14-439S	Choke piston lever link and shaft assembly	
14-440	Cam trip lever	
15-35S	Strainer nut assembly	(2)
17-70	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	(2)
20-26	Pump relief plug gasket	
20-35	BOWL STRAINER GASKET	(2)
21-143S	Float and lever assembly	(2)
24-24	Float lever pin	(2)
25-278S	PRIMARY NEEDLE AND SEAT ASSEMBLY	
25-279S	SECONDARY NEEDLE AND SEAT ASSEMBLY	
30-73	PRIMARY NEEDLE SEAT STRAINER	
30-74	SECONDARY FUEL INLET STRAINER	
30-75	BOWL STRAINER	
30A-58	Idle adjustment screw	(2)
39-11	Choke valve attaching screw	(2)
47-13	Welsh plug (spark port passage)	
47 30	Welsh plug (choke housing)	
48-174S	Pump jet and housing assembly	
53A-333S	Pump operating lever and countershaft assembly	
53A-338	Lockout arm	
53A-344	VENT ARM	
53A-384S	Secondary throttle operating lever assembly	
53A-395	—Primary throttle operating lever	
61-84	Idle adjustment screw spring	(2)
61-128	Connector rod spring	
61-291	Throttle adjusting screw spring	
61-332	VACUUM PISTON SPRING	
61-382	METERING ROD SPRING	
61-413	UPPER PUMP SPRING	
61-454	Fast idle cam spring	
61-474	Bowl vent spring	
61-533	Diaphragm return spring	
61-554	—Throttle flex spring	
63-35	Connector rod spring retainer	
63-57	INTAKE CHECK BALL RETAINER	
63-144	Delayer plate retainer ring	
63-149	Bowl vent spring retainer	
63-176	Pump spring retainer	
63-190	Coil housing retainer	
64-145S	PUMP PLUNGER AND ROD ASSEMBLY	
75-1180	Metering rod—1 size lean	(2)
75-1181	Metering rod—2 sizes lean	(2)
75-1210	—Metering rod—standard (2367S) (Sup by 75-1263)	(2)
75-1263	—METERING ROD—STANDARD	(2)
75-1278	—Metering rod—1 size rich	(2)
86-12	Flange stud lock washer	(4)
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	(2)
101-120	Fast idle adjustment screw	
101-149S	Body flange attaching screw and washer assembly	
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-263	Diaphragm housing attaching screw	(3)
101-275	Piston housing attaching screw (Use with 6 1174S)	
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet housing attaching screw	
101-284	Piston housing attaching screw (6 1083S)	(2)
101-307S	Air horn attaching screw and washer assembly	(8)
101-324	Fast idle cam attaching screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-348	Primary throttle valve attaching screw	(4)
101-354S	Choke lever clamp screw assembly	
101-361	Coil housing attaching screw	(3)
101-363	Piston housing attaching screw (6 1083S (1), (6 1174S (2)	
101-382S	Body flange attaching screw and washer assembly	(3)
101-388S	Diaphragm housing cover attaching screw and washer assembly	(6)
101-391	Throttle lever adjusting screw	
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
115-215	Choke connector rod	
115-216	THROTTLE CONNECTOR ROD	
115-239	Throttle operating rod	
116-13	PUMP INTAKE CHECK BALL	
117-162	Vacumeter piston link	
117-165	Pump connector link	
118-102S	Dust cover assembly	
120-160	PRIMARY METERING ROD JET	(2)
120-174	SECONDARY METERING JET	(2)
121-78	COIL HOUSING GASKET	
121-196	Delayer plate gasket (2367S)	
121-208	DUST COVER GASKET	
121-229	AIR CLEANER GASKET	
121-232	AIR HORN GASKET	
121-241	PUMP JET HOUSING GASKET	
121-243	PISTON HOUSING GASKET (Use with 6 1083S)	
121-256	Body flange gasket (Sup by 121 277)	
121-260	DIAPHRAGM HOUSING GASKET	
121-277	—BODY FLANGE GASKET	
121-283	PISTON HOUSING GASKET (Use with 6 1174S)	
122-98S	PUMP RELIEF PLUG ASSEMBLY	
136-37	Throttle connector rod and operating rod washer	(5)
136-159	Primary throttle shaft washer	
136-172	Secondary throttle shaft washer	
150-186S	Pin and valve cap assembly	
150-190	Choke piston pin	
150A-10	PIN SPRING	(5)
160-110S	Vacuum piston and pin assembly	
160-117	Choke piston	
170-301S	Piston housing and plug assembly (2367S) (Sup by 170 424S)	
170-352	Diaphragm housing	
170-424S	—Piston housing and plug assembly (Use with 6 1083S)	
170-443S	—Piston housing and plug assembly (Use with 6-1174S)	
170AB323S	Thermostatic coil and housing assembly (2367S) (Sup by 170AB 426S)	
170AB-426S	—Thermostatic coil and housing assembly	
181-204S	Fast idle cam assembly	
184-76	Diaphragm housing cap	
186-42	Choke baffle plate	
203-72S	Secondary throttle shaft diaphragm assembly	

—Parts so marked are new and listed for the first time

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is sh wn nly one is used

MODELS
C-70, C-72, C-73
Power Flite Transmission



CHRYSLER "V-8"
1956

WCFB Four-Bore Down-Draft Climatic® Control **Carbureters Nos. 2314S-2314SA**

CARBURETER SPECIFICATIONS

For Chrysler 8 Cylinder Engine 3 94 Inch Bore, 3.63 Inch Stroke

Dimensions Flange size 1¼ inch Four Bore—4 bolt type
Primary venturi size 11/32 inch I D
Main venturi size 1 3/16 inch I D

Vents Outside (4) Inside (5)

Gasoline Intake Size No 42 (0935 inch) drill hole in needle seat

Low Speed Jet Tube Jet (4) size 035 inch diameter
By Pass in body (4) size No 52 (0635 inch) drill
Economizer (4) size 0452 inch diameter
Idle bleed (4) in body size No 52 (0635 inch) drill

Idle Port Upper slot type Primary length 175 inch width 030 inch Secondary length 101 inch width 030 inch

Idle Port Opening Primary 130 to 134 inch above top edge of valve with valve tightly closed Secondary 071 to 077 inch

Lower Port Primary (for idle adjustment screw) size No 53 (0595 inch) drill Secondary constant feed size 040 inch diameter

Set Idle Adjustment Screw 1 to 2 turns open For richer mixture turn screw out Do not idle engine below 500 R P M in neutral

Main Nozzle Installed permanently DO NOT REMOVE Anti-percolating jet (to nozzle well) primary side (to idle well) secondary side size No 70 (028 inch) drill

Metering Rod Primary economy step 075 inch diameter Middle step tapers to 065 inch diameter Power step 042 inch diameter Secondary none

Metering Rod Jet Primary size 096 inch diameter (for metering rod)
Secondary size 061 inch diameter (no metering rod)

Accelerating Pump Discharge jet (twin) primary side only size No 74 (0225 inch) drill
Intake ball check seat size 115 to 120 inch diameter
Discharge needle seat size 070 inch diameter
Relief passage (vent) to fuel chamber No 42 (0935 inch) drill
Discharge relief plug size No 55 (052 inch) drill

Choke Carter Climatic® Control set one point rich Butterfly type offset choke valve primary side only Choke heat suction hole restriction in piston housing size No 47 (0785 inch) drill

Vacuum Spark Port Horizontal slot (round end) 045 by 110 inch Top of port 032 to 042 inch above valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION **Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.**

Spark Plug Gap .035"	Breaker Point Setting .017"	Ignition Timing Breaker Points to Open 4° B T C At Vibration Damper	Float Setting Primary 5/32 Inch (Use Gauge T109-236) Secondary 7/32 Inch (Use Gauge T109-283)	Idle Adjustment Screw Setting 1 to 2 Turns Open Idle Engine at 500 R P M In Neutral

NOTE **These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT**

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT Two separate float adjustments must be made—lateral and vertical **Lateral Adjustment** Side of floats should just clear the vertical uprights of float gauge Adjustment should be made by bending arms of floats **Vertical Adjustment** With bowl gasket removed vertical distance between top of float and machined surface of casting must be 5/32 inch (gauge T109 236) for primary floats and 7/32 inch (gauge T109 283) for secondary floats Adjust by bending float arms

FLOAT DROP ADJUSTMENT With bowl cover held in upright position and measuring from center of floats the distance between top of floats and bowl cover should be 21/32 inch for primary floats and 23/32 inch for secondary floats Adjust by bending stop tabs on float bracket

PUMP ADJUSTMENT Install pump connector link in outer hole (long stroke) of pump arm with ends extending outward toward countershaft arm Back out throttle lever set screw until throttle valves seat in bores of carbureter Hold straight edge across top of dust cover boss at pump arm The flat on top of pump arm should be parallel to straight edge Adjust by bending throttle connector rod at lower angle (Use tool T109 213)

METERING ROD ADJUSTMENT Metering rod adjustment must be made after pump adjustment 1 Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw 2 With metering rods in place press down on vacumeter link until metering rods bottom in carbureter body casting 3 Holding rods in downward position and throttle valves seated revolve metering rod arm until finger on arm contacts lip of vacumeter link Hold in place and carefully tighten clamp screw

BOWL VAPOR VENT ADJUSTMENT This adjustment should be made after completing pump and metering rod adjustments Install dust cover and dust cover gasket Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter There should be 1/16 inch (gauge T109 197) between lower edge of bowl vapor vent valve and dust cover To adjust remove dust cover and bend vapor vent arm

FAST IDLE ADJUSTMENT (a) Loosen choke lever clamp screw on choke shaft Insert 020 inch wire gauge (T109 29) between lip of fast idle cam and boss of flange casting Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw (b) With choke valve tightly closed tighten fast idle adjusting screw until there is 012 inch (gauge T109 200) opening between throttle valve and bore of carbureter side opposite idle port Be sure fast idle adjusting screw is on high step of cam while making this adjustment

UNLOADER ADJUSTMENT With throttle wide open there should be 3/16 inch (gauge T109 28) clearance between upper edge of choke valve and inner wall of air horn Adjust by bending unloader lip on throttle snaft lever (use bending tool T109 41)

SECONDARY THROTTLE LOCK OUT ADJUSTMENT This adjustment should be made after completing fast idle adjustment Crack throttle valves and hold choke valve tightly closed Then close throttle Tang on secondary throttle lever should freely engage in notch of lock out dog If necessary to adjust bend tang on secondary throttle lever

PRIMARY THROTTLE SHAFT DOG ADJUSTMENT

Block choke valve wide open

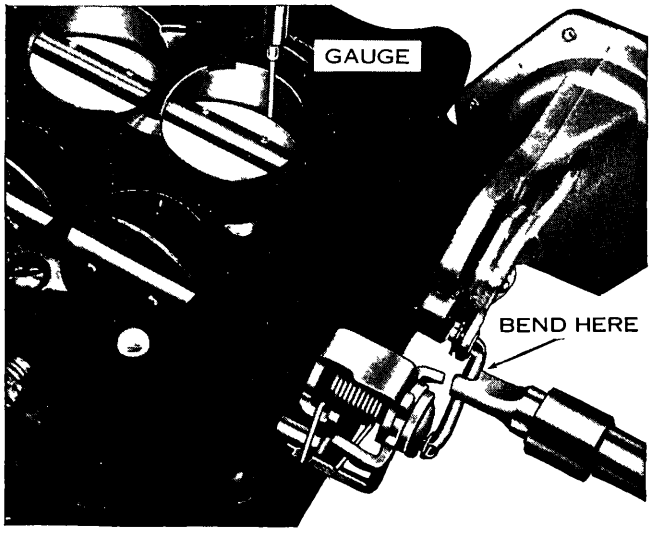


Figure 1

With primary throttle valves in wide open position adjust (use tool T109 213) secondary operating rod so there is 054" to 064" clearance (gauge T109 193) between upper edge of secondary throttle valves (next to idle port) and bore of carbureter (Fig 1)

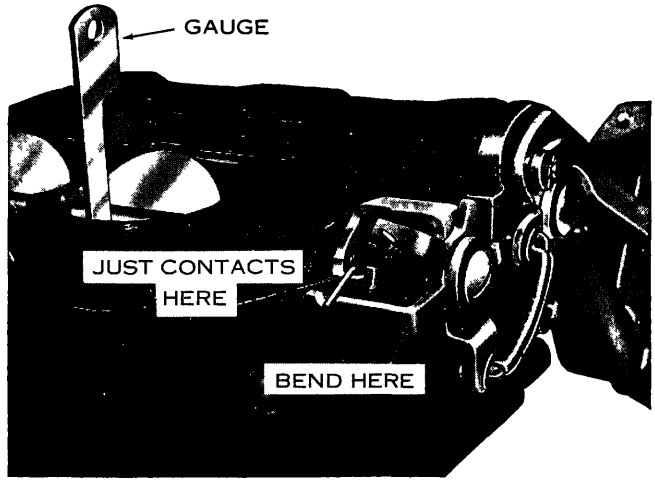


Figure 2

Place 1/4" gauge (tool T109 31) between upper edge of primary throttle valve and bore (next to idle port) and adjust (use tool T109 214) long tang on primary throttle shaft dog so that inner arm of spring just contacts inner lug of secondary operating lever and secondary throttle valves just start to open (Fig 2)

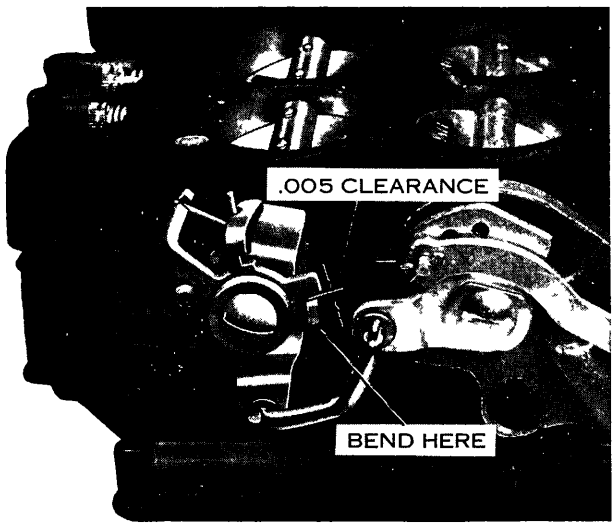


Figure 3

With primary and secondary throttle valves tightly seated, there should be 005" clearance (gauge T109-237) between outer lip on secondary operating lever and stop lug on primary throttle shaft dog

TO ADJUST Bend outer lip on secondary operating lever (use tool T109 214)

CAUTION After bending, be sure secondary operating lever operates freely and does not bind in any position (Fig 3)

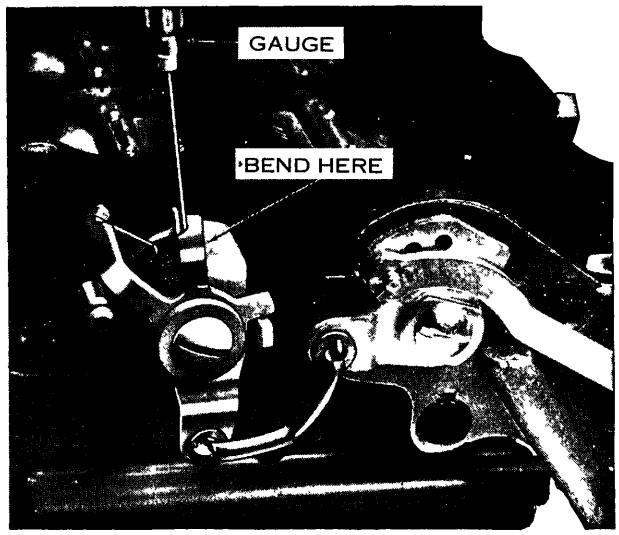
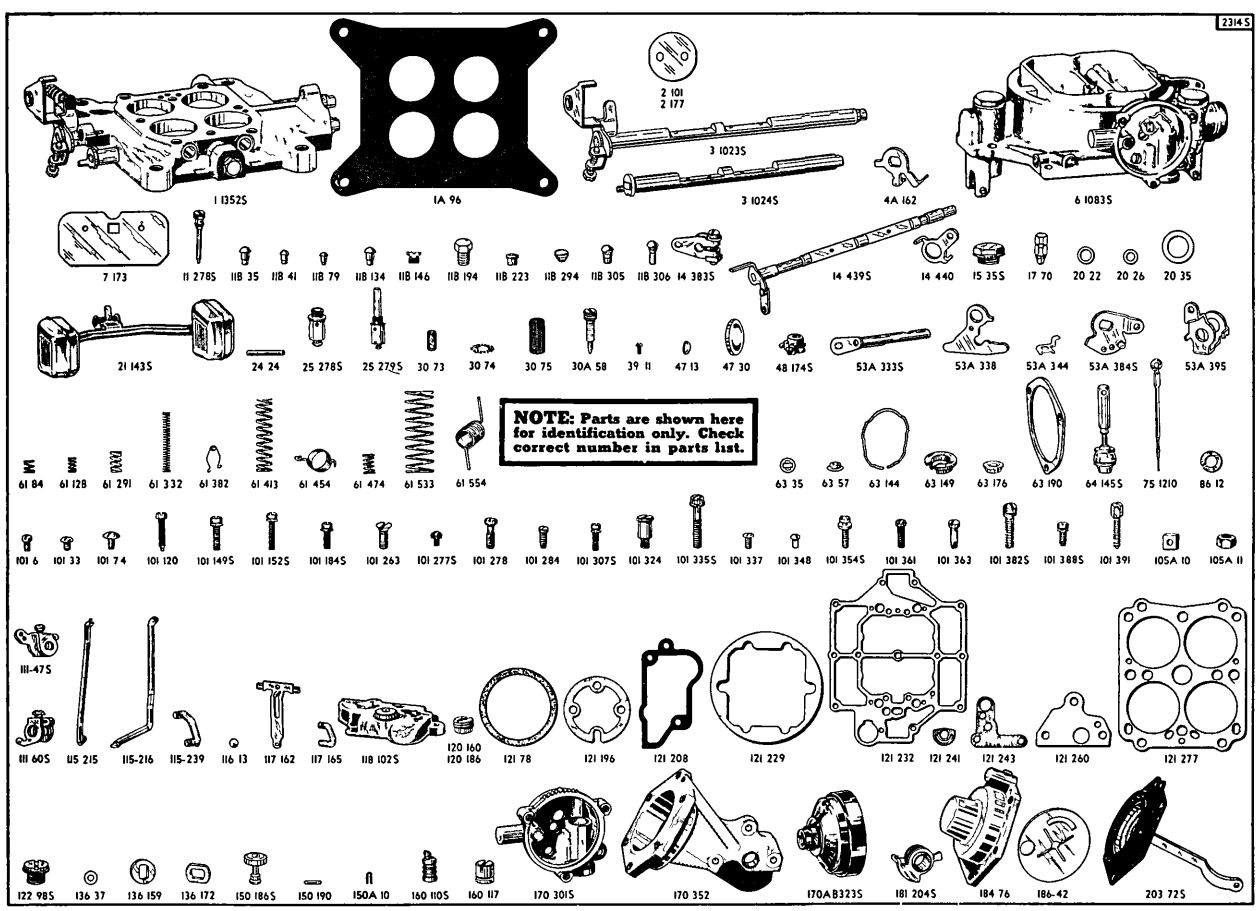


Figure 4

With primary and secondary throttle valves tightly closed, there should be 040" clearance (gauge T109-193) between short tang on primary throttle shaft dog and outer arm of spring

TO ADJUST Bend short tang on primary throttle shaft dog (use tool T109-214) (Fig 4)



Chrysler "V-8"—1956—Carbureters Nos. 2314S-2314SA

(See Page 4 for above parts group identification.)

Chrysler "V-8"—1956—Carbureters Nos. 2314S-2314SA

WHEN SERVICING, USE GASKET ASSORTMENT No. 282A, REPAIR PACKAGE No. 1832A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

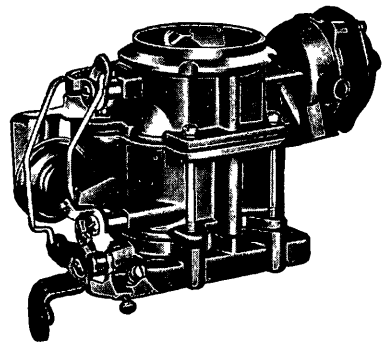
Part No.	PART NAME	
1-1352S	—Body flange assembly	
1A-96	Flange gasket (Sup by 1A 103)	
1A-103	Flange gasket	
2-101	Primary throttle valve	(2)
2-177	—Secondary throttle valve	(2)
3-1023S	—Primary throttle shaft and lever assembly	
3 1024S	—Secondary throttle shaft and dog assembly	
4A-162	—Primary throttle shaft dog	
6 1083S	—Air horn assembly (Casting No 6 1020)	
6-1174S	—Air horn assembly (Casting No 6 1147)	
7-173	Choke valve	
11-278S	—LOW SPEED JET ASSEMBLY	(4)
11B 35	Rivet plug	(4)
11B-41	Rivet plug (6 1083S (2) (6 1174S (1)	
11B-79	Rivet plug	(5)
11B-134	Rivet plug	
11B-146	Level sight plug	(2)
11B-194	Pipe plug	
11B-223	Nozzle passage rivet plug	(4)
11B 294	Idle port rivet plug	(4)
11B 305	Rivet plug (6 1083S (1) (6 1174S (2)	
11B 306	Rivet plug (6 1083S (2) (6 1174S (1)	
14-383S	Choke lever and screw assembly	
14-439S	Choke piston lever link and shaft assembly	
14-440	Cam trip lever	
15-35S	Strainer nut assembly	(2)
17-70	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	(2)
20-26	Pump relief plug gasket	
20 35	BOWL STRAINER GASKET	(2)
21-143S	Float and lever assembly	(2)
24-24	Float lever pin	(2)
25-278S	PRIMARY NEEDLE AND SEAT ASSEMBLY	
25-279S	SECONDARY NEEDLE AND SEAT ASSEMBLY	
30 73	PRIMARY NEEDLE SEAT STRAINER	
30-74	SECONDARY FUEL INLET STRAINER	
30 75	BOWL STRAINER	
30A-58	Idle adjustment screw	(2)
39-11	Choke valve attaching screw	(2)
47-13	Welsh plug (spark port passage)	
47-30	Welsh plug (choke housing)	
48-174S	Pump jet and housing assembly	
53A-333S	Pump operating lever and countershaft assembly	
53A-338	Lockout arm	
53A-344	VENT ARM	
53A-384S	Secondary throttle operating lever assembly	
53A-395	—Primary throttle operating lever	
61-84	Idle adjustment screw spring	(2)
61-128	Connector rod spring	
61-291	Throttle adjusting screw spring	
61-332	VACUUM PISTON SPRING	
61-382	METERING ROD SPRING	
61-413	UPPER PUMP SPRING	
61-454	Fast idle cam spring	
61-474	Bowl vent spring	
61-533	Diaphragm return spring	
61-554	—Throttle flex spring	
63-35	Connector rod spring retainer	
63-57	INTAKE CHECK BALL RETAINER	
63-144	Delayer plate retainer ring	
63-149	Bowl vent spring retainer	
63-176	Pump spring retainer	
63-190	Coil housing retainer	
64-145S	PUMP PLUNGER AND ROD ASSEMBLY	
75-1180	Metering rod—1 size lean	(2)
75-1181	Metering rod—2 sizes lean	(2)
75-1210	—Metering rod—standard (2314S) (Sup by 75-1263)	(2)
75-1263	—METERING ROD—STANDARD	(2)
75-1278	—Metering rod—1 size rich	(2)
86-12	Flange stud lock washer	(4)
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	(2)
101-120	Fast idle adjustment screw	
101-149S	Body flange attaching screw and washer assembly	
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-263	Diaphragm housing attaching screw	(3)
101-275	Piston housing attaching screw (Use with 6 1174S)	
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet housing attaching screw	
101-284	Piston housing attaching screw (6 1083S)	(2)
101-307S	Air horn attaching screw and washer assembly	(8)
101-324	Fast idle cam attaching screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-348	Primary throttle valve attaching screw	(4)
101-354S	Choke lever clamp screw assembly	
101-361	Coil housing attaching screw	(3)
101-363	Piston housing attaching screw (6 1083S (1) (6 1174S (2)	
101-382S	Body flange attaching screw and washer assembly	(3)
101-388S	Diaphragm housing cover attaching screw and washer assembly	(6)
101-391	Throttle lever adjusting screw	
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
115-215	Choke connector rod	
115 216	THROTTLE CONNECTOR ROD	
115-239	Throttle operating rod	
116-13	PUMP INTAKE CHECK BALL	
117-162	Vacumeter piston link	
117-165	Pump connector link	
118-102S	Dust cover assembly	
120-160	PRIMARY METERING ROD JET	(2)
120 186	SECONDARY METERING JET	(2)
121-78	COIL HOUSING GASKET	
121-196	Delayer plate gasket (2314S)	
121-208	DUST COVER GASKET	
121-229	AIR CLEANER GASKET	
121-232	AIR HORN GASKET	
121-241	PUMP JET HOUSING GASKET	
121-243	PISTON HOUSING GASKET (Use with 6 1083S)	
121-256	Body flange gasket (Sup by 121 277)	
121-260	DIAPHRAGM HOUSING GASKET (Sup by 121 297)	
121-277	—BODY FLANGE GASKET	
121-282	Gasket (diaphragm to lower housing)	
121-283	Piston housing gasket (Use with 6 1174S)	
121 297	—Diaphragm housing gasket	
122-98S	PUMP RELIEF PLUG ASSEMBLY	
136-37	Throttle connector rod and operating rod washer	(5)
136-159	Primary throttle shaft washer	
136-172	Secondary throttle shaft washer	
150-186S	Pin and valve cap assembly	
150-190	Choke piston pin	
150A-10	PIN SPRING	(5)
160-110S	Vacuum piston and pin assembly	
160-117	Choke piston	
170-301S	Piston housing and plug assembly (2314S) (Sup by 170 424S)	
170-352	Diaphragm housing	
170-424S	—Piston housing and plug assembly (Use with 6 1083S)	
170-443S	—Piston housing and plug assembly (Use with 6-1174S)	
170AB323S	Thermostatic coil and housing assembly (2314S) (Sup by 170AB 426S)	
170AB-426S	—Thermostatic coil and housing assembly	
181-204S	Fast idle cam assembly	
184-76	Diaphragm housing cap	
186-42	Choke baffle plate	
203-72S	Secondary throttle shaft diaphragm assembly	

—Parts so marked are new and listed for the first time

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used.

2312S
Standard Transmission

2313S
Power Flite Transmission



CHRYSLER "V-8"
MODEL C-71
1956

Use 2313S to replace 2312S
(remove dash pot)

BBD Dual Down-Draft Climatic® Control **Carbureters Nos. 2312S-2313S**

CARBURETER SPECIFICATIONS

For Chrysler 8 Cylinder Engine 3 81 Inch Bore, 3.63 Inch Stroke

Dimensions: Flange size 1¼ inch dual 4 bolt type Throttle bore 1-7/16 inch I. D Primary venturi ⅜ inch I D Main venturi 1-3/16 inch I D

Float Level. See adjustments

Vent Inside balance vent tube to bowl in air horn above choke valve

Gasoline Intake Size No 38 (1015 inch) drill hole in needle seat

Idle Tube Jet size 035 inch diameter Idle bleed (in venturi cluster screw) size 063 inch diameter Idle restriction (in venturi cluster screw) size 0472 inch diameter

Idle Port Upper slot type length 190 inch; width 030 inch

Idle Port Opening 144 to 148 inch above upper edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw): Size 053 to 057 inch diameter

Set Idle Adjustment Screw: ¼ to 1¼ turns open For richer mixture turn screw out With gear shift lever in neutral position idle engine between 450 and 500 RPM

Main Nozzle: Nozzle is installed permanently Do NOT REMOVE

Main Vent Tube. Side holes 8—size 0354 inch diameter Main vent in top of tube size 0256 inch diameter

Step-Up Rod (Vacuum operated) 024 inch diameter

Metering Jet Calibrated to flow 337 to 343 cc per minute (Do not gauge for size if in doubt replace with new part)

Accelerating Pump Pump discharge jets (2—in venturi cluster) size 0275 inch diameter Intake ball check seat size 135 to 140 inch diameter Discharge ball check seat size 110 to 120 inch diameter

Pump Adjustments See adjustments

Choke Carter Climatic® Control set (2312S) on index (2313S) one point rich Butterfly type offset valve Choke heat suction hole in body size No 54 (055 inch) drill NOTE Thermostatic coil should not be removed from delayer mounting post If defective replace with complete thermostatic coil and housing assembly

Vacuum Spark Port Horizontal round end type 030 by 110 inch Top of port to be 035 to 045 inch above upper edge of valve with valve closed tight

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .017"	Ignition Timing Breaker Points to Open. 2° B. T. C. At Vibration Damper	Float Setting See Adjustments	Idle Adjustment Screw Setting ¼ to 1¼ Turns Open Idle Engine at 450 to 500 R.P.M.

NOTE: These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT.

CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3655

Float Level ¼" (Gauge T109 282) between top of each float and top surface of body casting
To adjust bend lip on float arm

Pump 31/32" from the top of the bowl cover to the top of the plunger shaft Install throttle connector rod in center hole (medium stroke) of throttle lever and inner hole of pump arm
To adjust bend throttle connector rod

Fast Idle Cam Clearance: With choke valve closed and lip on inner choke shaft lever contacting lug on outer lever there should be 020" (Gauge T109 29) between lip of fast idle cam and boss on casting Optional adjustment (late production) align index mark on cam with adjusting screw
To adjust bend lip on inner choke shaft lever

Fast Idle Throttle Valve Clearance 015" (Gauge T109 44) between lower edge of valve and bore with adjusting screw on high step of cam

Unloader 3/16" (Gauge T109 28) between top edge of choke valve and inner wall of air horn with throttle valves wide open

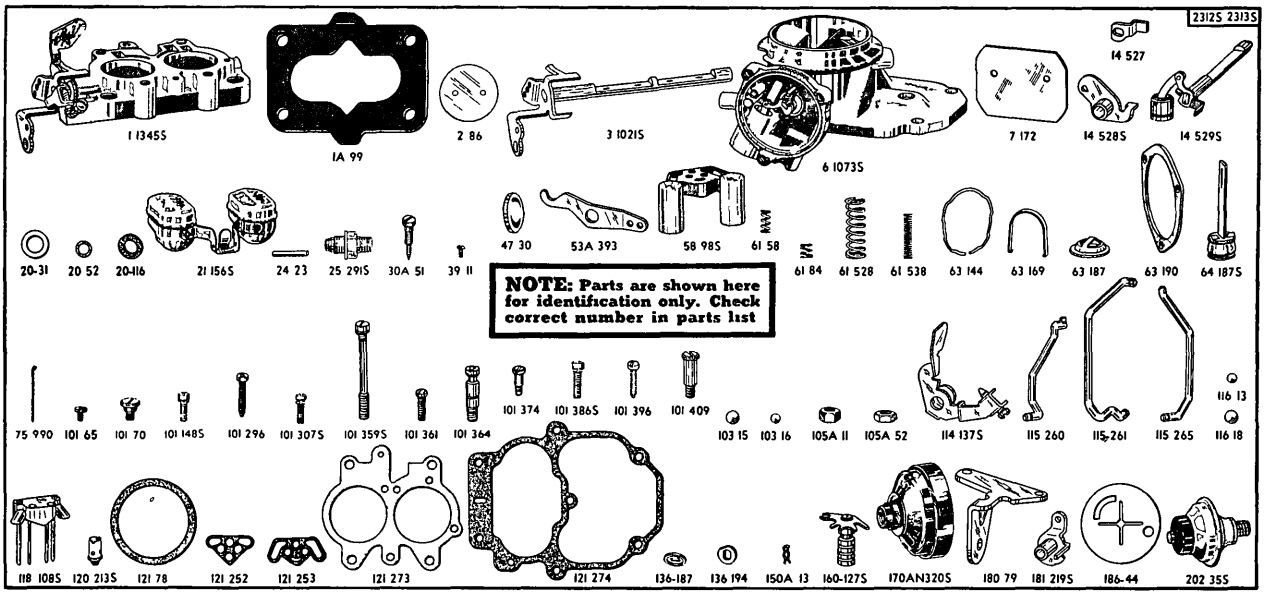
To adjust bend unloader arm on throttle lever

Dash Pot (Slow Closing Throttle): Close throttle valves and bottom plunger shaft with 1/16" gauge between shaft and operating lever

To adjust loosen lock nut and turn dash pot unit in or out

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Chrysler "V-8"—1956—Carbureters Nos. 2312S-2313S

WHEN SERVICING, USE GASKET ASSORTMENT No 278 REPAIR PACKAGE No 1820

PART NAMES IN CAPITAL LETTERS, LISTED BELOW INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-1345S	Body flange assembly	
1A-99	FLANGE GASKET	
2-86	Throttle valve	(2)
3-1021S	Throttle shaft and lever assembly	
6-1073S	Air horn assembly	
7 172	Choke valve	
14-527	Choke shaft lever	
14-528S	Choke lever assembly	
14-529S	Choke piston lever link and shaft assembly	
20-31	Needle seat gasket	
20-52	STEP UP PISTON GASKET	
20-116	Main metering jet gasket	(2)
21-156S	Float and lever assembly	
24-23	Float lever pin	
25-291S	NEEDLE AND SEAT ASSEMBLY	
30A-51	Idle adjustment screw	(2)
39-11	Choke and throttle valve attaching screw	(6)
47-30	Welsh plug	
53A-393	Pump arm	
58-98S	Venturi cluster and nozzle assembly	
61-58	Throttle adjusting screw spring	
61-84	Idle adjustment screw spring	(2)
61-528	PUMP SPRING	
61-538	STEP UP PISTON SPRING	
63-144	Delayer plate retainer ring	
63-169	FLOAT LEVER PIN RETAINER	
63-187	INTAKE CHECK BALL RETAINER	
63-190	Coil housing retainer	
64-187S	PUMP PLUNGER AND ROD ASSEMBLY	
75-990	Step up rod	(2)
75-1177	Step up rod (Sup by 75 990)	(2)
101-65	Choke lever attaching screw	
101-70	Pump arm screw	
101-148S	Air horn attaching screw and washer assembly (2312S) (4) (2313S) (2)	
101-296	Throttle adjusting screw	
101-307S	Air horn attaching screw and washer assembly (2313S)	(2)

Part No.	PART NAME	
101-359S	Body attaching screw and washer assembly	(2)
101-361	Coil housing attaching screw	(3)
101-364	Venturi cluster screw	(2)
101-374	Step up piston plate guide screw	
101-386S	Body flange attaching screw and washer assembly	(2)
101-396	Fast idle adjusting screw	
101-409	Fast idle cam attaching screw	
103-14	Lead shot	
103-15	Lead shot	(2)
103-16	Lead shot	(2)
105A-11	Flange stud nut	(4)
105A-52	Dash pot lock nut (2313S)	
114-137S	Dash pot lever assembly	
115-260	Choke connector rod	
115-261	Throttle connector rod (2313S)	
115-265	Throttle connector rod (2312S)	
116-13	DISCHARGE CHECK BALL	
116-18	INTAKE CHECK BALL	
118-108S	VENTURI COVER AND TUBE ASSEMBLY	
120-209S	Main metering jet assembly—2 sizes lean	(2)
120-212S	Main metering jet assembly—1 size lean	(2)
120-213S	MAIN METERING JET ASSEMBLY—STANDARD	(2)
121-78	COIL HOUSING GASKET	
121-252	VENTURI HOUSING GASKET	
121-253	VENTURI COVER GASKET	
121-273	BODY FLANGE GASKET	
121-274	BODY GASKET	
136-34	Choke shaft washer (Sup by 136 194)	
136-187	Pump spring retainer washer	
136-194	Choke shaft washer	
150A-13	PIN SPRING	(3)
160-127S	STEP UP PISTON AND PLATE ASSEMBLY	
170AN320S	Thermostatic coil and housing assembly	
180-79	Dash pot bracket (2313S)	
181-219S	Fast idle cam assembly	
186-44	Choke baffle plate	
202-35S	Dash pot assembly (2313S)	

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only ne is used

Form 3655A
October, 1955
Revised January, 1956

CARTER CARBURETOR

DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

File Under Chrysler

CARTER MODEL BBD CARBURETER FOR CHRYSLER (SERVICE ADJUSTMENT PROCEDURE)

NOTE: The parts and specification pages referred to are catalog pages. These pages can be obtained from Carter Carburetor Corporation, Catalog Department, St. Louis (7), Missouri. Specify the carbureter number found on the brass identification tag, when requesting specification pages.

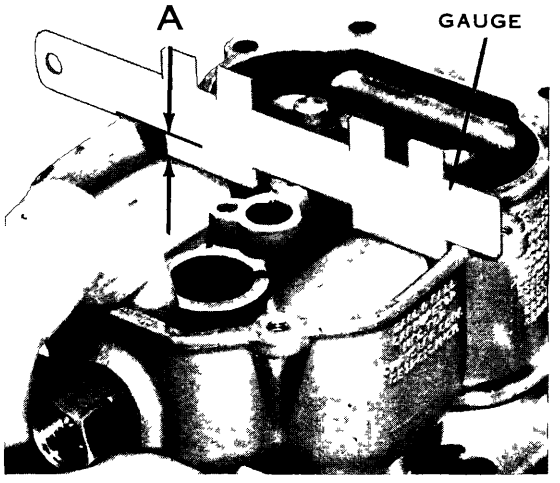


Figure 1
Float Adjustment

FLOAT ADJUSTMENT (Fig. 1):

This adjustment must be made with the bowl cover gasket and float pin retainer removed. Hold the lip on float arm against the seated intake needle, making sure the float pin is at the bottom of its guide slots. The distance (A) from the top surface of the body casting to the top of each float should be as listed on carbureter specification page. If one float is lower than the other, equalize by bending the float arm. If both floats require the same correction, adjust by bending lip on float arm. The floats must not rub anywhere against the inner walls of the bowl. If necessary, bend float arms slightly to provide clearance on all sides of floats.

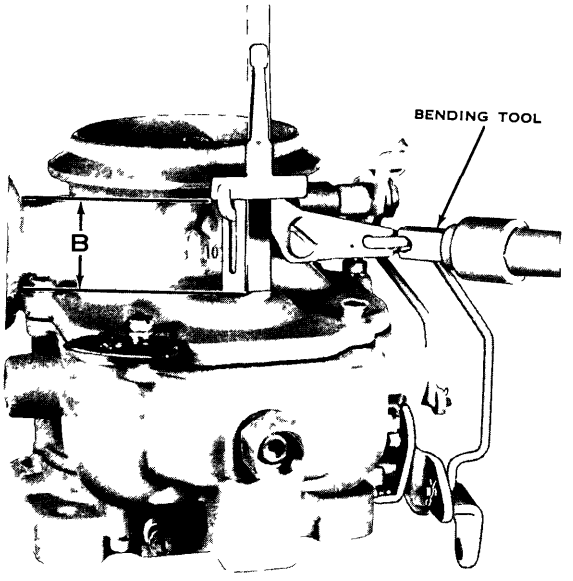


Figure 2
Pump Adjustment

PUMP ADJUSTMENT (Fig. 2):

1. Back out throttle adjustment screw and open choke valve so that throttle valves seat in bores of carbureter.
2. Install throttle connector rod in the holes in the throttle lever and pump arm specified on carbureter specification page.
3. The distance (B) from the top of the bowl cover to the top of the plunger shaft should be as specified on carburetor specification page.
4. Adjust by bending pump connector rod. (Use bending tool T109-213.)

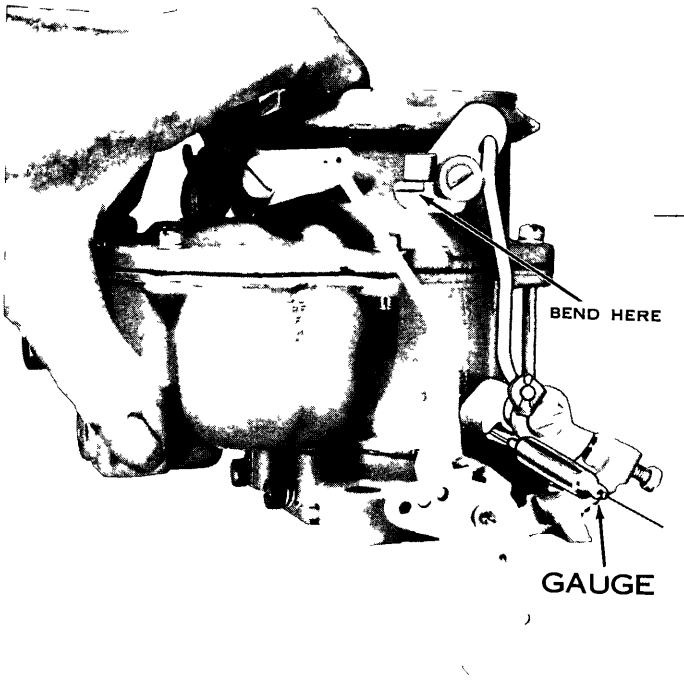


Figure 3
Fast Idle Adjustment

FAST IDLE CAM CLEARANCE ADJUSTMENT (Fig. 3):

1. Hold choke valve tightly closed.
2. With lip on inner choke shaft lever contacting lug on outer lever, there should be the clearance listed on carbureter specification page between lip of fast idle cam and boss on casting. Optional adjustment (late production), align index mark on cam with adjusting screw.
3. Adjust by bending lip on inner choke shaft lever. (Use bending tool T109-22.)

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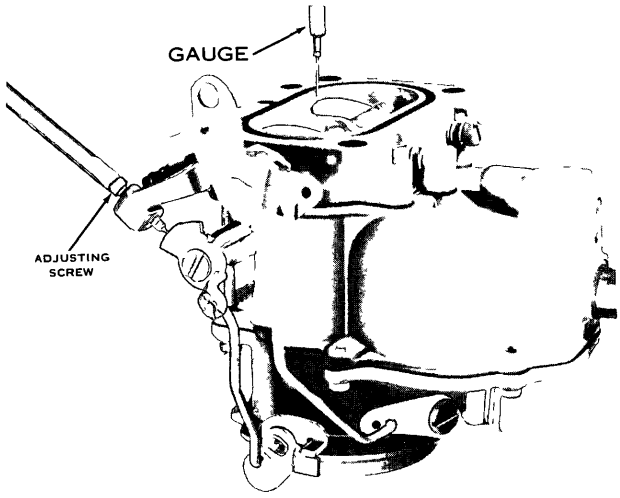


Figure 4
Fast Idle Adjustment

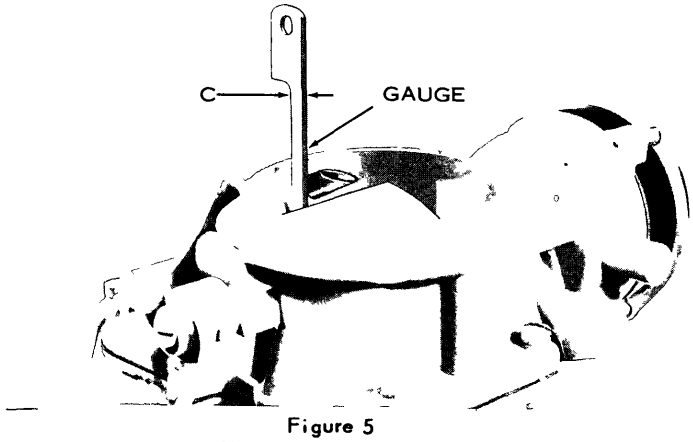


Figure 5
Unloader Adjustment

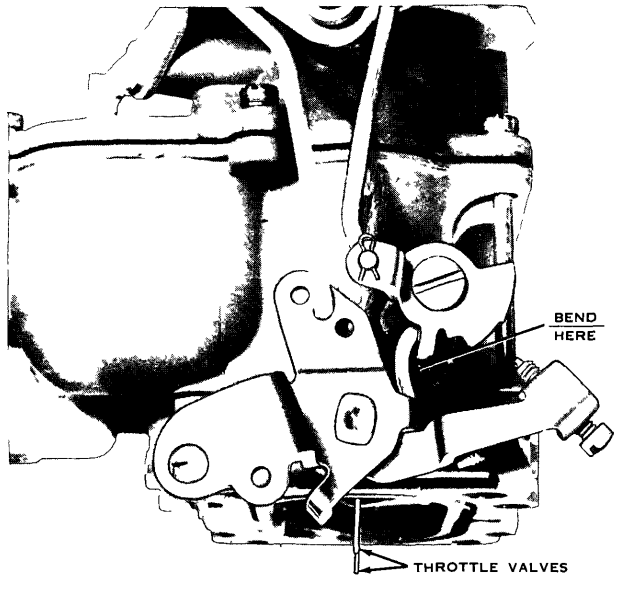


Figure 5A
Unloader Adjustment

UNLOADER ADJUSTMENT (Figs. 5 & 5A):

1. H ld thr ttle valves wide pen.
2. Cl s ch k valv as far as p ssibl without forcing.
3. Cl aranc (C) b tw n t p dg f ch k valv and inn r wall f air h rn (Fig. 5) should b as list d n carbur t r sp cification pag .
4. Adiust by b nding chok unl ad r arm on thr ttl l v r (Fig. 5A). (Us bending tool T109-213.)

FAST IDLE THROTTLE VALVE CLEARANCE ADJUSTMENT (Fig. 4):

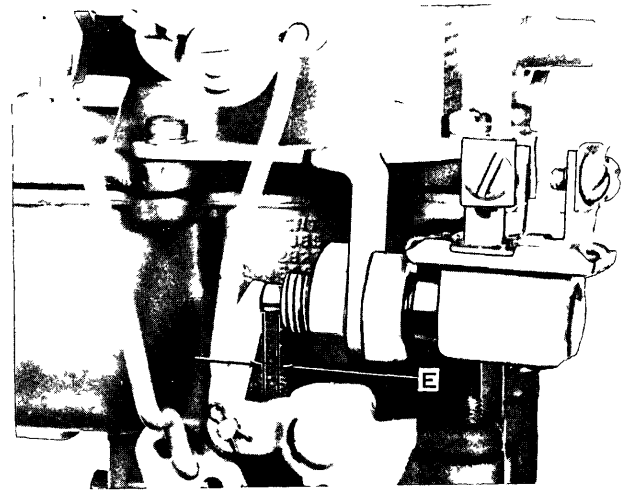
1. B sur chok valv is cl s d.
2. Adjust fast idl adjusting scr w against high st p f cam until th cl aranc b tw en thr ttl valve (sid opposit port) and b re is as list d n carbur t r specificati n page



Figure 6
Dashpot Adjustment

DASH POT (SLOW CLOSING THROTTLE) ADJUSTMENT (Fig. 6):

The purpose of this unit is to prevent the car from stalling when the throttle is released rapidly. Maximum action is obtained by loosening lock nut and adjusting the dash pot unit so that the plunger shaft can be bottomed with a 1/16 inch gauge (D) placed between shaft and operating lever with throttle valves tightly closed.



Figur 7
Ov rdriv Kickdown Switch Adjustm nt

OVERDRIVE KICKDOWN SWITCH ADJUSTMENT (Fig. 7):

With thr ttl valves in wide p n p siti n, adjust h x nuts n switch t hav 1/64 inch t 3/64 inch cl aranc (E) b tw n kickdown l ver and switch stem guid .

CHRYSLER "V-8"

MARINE

MODEL – ROYAL M-44

1955-1956

BBD DOWN-DRAFT **CARBURETER No. 2291S**

CARBURETER SPECIFICATIONS

For Chrysler 8 Cylinder Engine: 3.63 Inch Bore, 3.256 Inch Stroke

Dimensions: Flange size, 1¼ inch dual, 4 bolt type
Throttle bore, 1 7/16 inch I. D
Primary venturi, ⅜ inch I. D
Main venturi, 1 3/16 inch I. D.

Float Level: See Adjustments

Vent: Inside balance vent tube to bowl, in air horn above choke valve.

Gasoline Intake: Size No 38 (.1015 inch) drill hole in needle seat

Idle Tube: Jet size 0295 inch diameter.
Idle bleed (in venturi cluster screw), size 0629 inch diameter
Idle restriction (in venturi cluster screw), size 0472 inch diameter.

Idle Port: Upper slot type, length, .149 inch, width, 030 inch

Idle Port Opening: 102 to .106 inch above upper edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw): Size 053 to 057 inch diameter

Set Idle Adjustment Screw: ¼ to 1¼ turns open For richer mixture turn screw out Idle engine between 450 and 500 r p m

Main Nozzle: Nozzle is installed permanently DO NOT REMOVE

Main Vent Tube: Side holes (4) .0354 inch diameter. **Bleed,** in top of tube, size 0275 inch diameter.

Step-Up Rod: (Vacuum operated) 024 inch diameter. **Length** (end of wire to inside of angle), 1⅜ inch.

Metering Jet: Calibrated to flow 360 cc per minute (Do not gauge for size if in doubt replace with new part.)

Accelerating Pump: Pump discharge jets (2), size .0275 inch diameter
Intake ball check seat, size .110 to 120 inch diameter.
Discharge ball check seat, size 130 to 140 inch diameter.

Pump Adjustment: See Adjustments.

Choke: Manual offset butterfly type, with poppet valve.

Vacuum Spark Port: None.

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .017"	Ignition Timing Breaker Points to Open: 2° B. T. D. C. At Vibration Damper	Valve Setting (Hot) Intake .008" Exhaust .020"	Float Setting See Adjustments	Idle Adjustment Screw Setting ¼ to 1¼ Turns Open Idle engine at 450 to 500 R.P.M.

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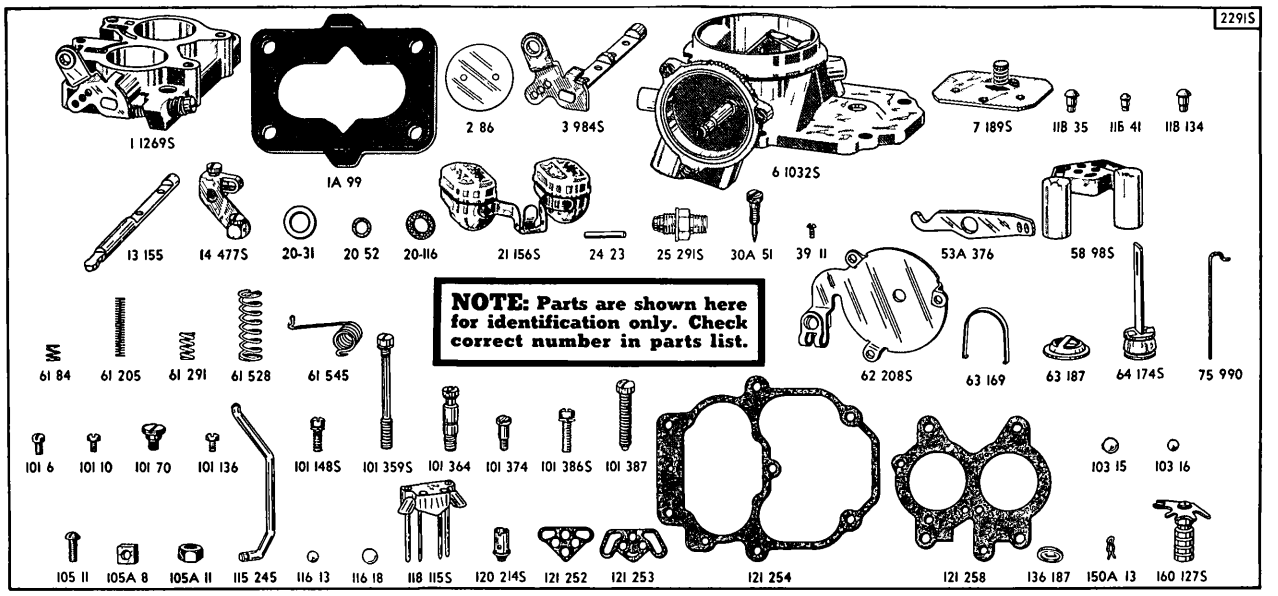
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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT This adjustment must be made with bowl cover gasket and float pin retainer removed Hold the lip on float arm against the seated intake needle, making sure the float pin is at the bottom of its guide slots The distance from the top surface of the body casting to the top of each float should be 7/32 inch (gauge T109 239) If one float is lower than the other, equalize by bending the float arm If both floats require the same correction adjust by bending lip on float arm The floats must not rub anywhere against the inner walls of the bowl If necessary, bend float arms slightly to provide clearance on all sides of floats

PUMP ADJUSTMENT Back out throttle adjusting screw so that throttle valves seat in bores of carbureter Install pump connector rod in outer hole (long stroke) of throttle lever and inner hole of pump arm The distance from the top of the bowl cover to the top of plunger shaft (not pump arm) should be 1-3/32 inch Adjust by bending pump connector rod at lower angle (use Tool T109-213)



Chrysler-Marine—1955-1956—Carbureter No. 2291S

WHEN SERVICING, USE GASKET ASSORTMENT No. 265

Part No.	PART NAME	
1-1269S	—Body flange assembly	
1A-99	Flange gasket	
2-86	Throttle valve	(2)
3-984S	—Throttle shaft and lever assembly	
6-1032S	—Air horn assembly	
7-189S	Choke valve assembly	
11B-35	Rivet plug (early production)	
11B-41	Rivet plug (early production)	(2)
11B-134	Rivet plug (early production)	
13-155	—Choke shaft	
14-477S	Choke lever assembly	
20-31	Needle seat gasket	
20-52	Step up piston gasket	
20-116	Main metering jet gasket	(2)
21-156S	Float and lever assembly	
24-23	Float lever pin	
25-291S	—Needle and seat assembly	
30A-51	Idle adjustment screw	(2)
39-11	Choke and throttle valve attach ng screw	(6)
53A-376	Pump arm	
58-98S	Venturi cluster and nozzle assembly	
61 84	Idle adjustment screw spring	(2)
61-205	Step up piston spring	
61 291	Throttle adjustment screw spring	
61-528	Pump spring	
61-545	—Choke spring	
62 208S	—Choke tube bracket assembly	
63-169	Float lever pin retainer	
63-187	Intake check ball retainer	
64-174S	Pump plunger and rod assembly	
75-990	Step up rod	(2)

Part No	PART NAME	
101-6	Choke tube bracket screw	
101-10	Choke wire clamp screw	
101-70	Pump arm screw	
101-136	Choke tube bracket attaching screw	(3)
101-148S	Air horn attaching screw and washer assembly	(4)
101-359S	Body attaching screw and washer assembly	(2)
101-361	Choke tube bracket attaching screw (Sup by 101 136)	(3)
101-364	Venturi cluster screw	(2)
101-374	Step up piston plate screw	
101-386S	Body flange attaching screw and washer assembly	(2)
101-387	Throttle adjusting screw	
103-15	—Lead shot (late production)	(2)
103-16	—Lead shot (late production)	(2)
105 11	Choke cable clamp screw	
105A-8	Choke cable clamp nut	
105A-11	F ange stud nut	(4)
115 245	Throttle connector rod	
116-13	Discharge check ball	
116-18	Intake check ball	
118 115S	Venturi cover and tube assembly	
120 212S	—Main metering jet assembly—2 s zes lean	(2)
120-213S	Main metering jet assembly—1 size lean	(2)
120-214S	Main metering jet assembly—standard	(2)
121 252	Venturi housing gasket	
121-253	Venturi cover gasket	
121 254	Body gasket (Sup by 121 274)	
121 258	Body flange gasket	
121 274	Body gasket	
136 187	Pump spring retainer washer	
150A 13	Pin spring	(2)
160-127S	Step up piston rod and plate assembly	

—Parts so marked are new and listed for the first time

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

CARBURETER

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CARTER CARBURETOR CORPORATION, ST. LOUIS, MO., U, S. A.

GENERAL BULLETIN

CARBURETER CONTRACT SERVICE ACCOUNTS
FACTORY AND P. I. SCHOOL GRADUATES

BULLETIN NO. 53 - Chrysler

DATE June 8, 1955

SUBJECT: CHRYSLER C-300 - 1955

The 1955 Chrysler Model C-300 is equipped with two (2) WCFB, Model 2317S, Carter Carbureters.

This 300 horsepower Fire - Power V-8 engine includes a full race cam shaft and rocker-arm valve adjustment. We call your attention to some of the things that are different, and need special consideration at the time of tune-up.

(1) Engine idle 700 r.p.m. with the transmission selector in neutral position (idle adjustment should be finalized with engine at normal operating temperature).

(2) A somewhat uneven engine idle is to be expected.

(3) Mechanical valve mechanism (adjustable).

(4) There may be some roughness on down shift with Power-Flite equipped units.

The engine idle r.p.m. should be reduced to 500 before the ignition timing is set to 10° B.T.D.C. After the ignition timing is set, the idle r.p.m. should be brought back to 700 r.p.m. The ignition distributor characteristics are as follows:

VACUUM ADVANCE CURVE
(In inches of Mercury)

Distr. R.P.M.	Distr. Degrees	Distr. Vacuum	Distr. Degrees
300 - 400	0°	5-1/2" to 6-1/2"	1°
400	0° to 3-1/2°	10"	5° - 6.5°
500	3° to 5°	11"	6° - 8°
800	7° to 9°		

V. F. Thompson,
Service Manager

VFT:mlb
CC: Personnel & Extra Copies -
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Chrysler Car Dealers

© IMPORTANT: THIS BULLETIN CONTAINS INFORMATION OF VALUE TO YOU AND WAS PREPARED AT C NSIDERABLE EXPENSE T BE F SERVICE TO YOU. FAILURE TO USE THIS INF RMATION MAY C ST YOU MONEY. WE SUGGEST THAT Y U ISSUE COPIES OF IT TO TH SE OF YOUR STAFF INTERESTED, SO THAT THEY CAN BE FILED IN REGULAR CARTER SALES AND SERVICE MANUAL.

FORM C-2914-D PRINTED IN U. S. A.

CHRYSLER "V-8"

1955-1956

(2317S)
C-68-300

(2445S)
Rear Carbureter
C-72-300, 1956

(2444S)
Front Carbureter
C-72-300, 1956

Two Carbureters Per Engine

WCFB Four-Bore Down-Draft Climatic® Control **Carbs. Nos. 2317S-2444S-2445S**

CARBURETER SPECIFICATIONS

For Chrysler 8 Cylinder Engine 3-13/16 Inch Bore, 3⅝ Inch Stroke (1955)
For Chrysler 8 Cylinder Engine 3 94 Inch Bore, 3 63 Inch Stroke (1956)

Dimensions Flange size 1⅛ inch Four Bore—4 bolt type
Primary venturi size 11/32 inch I D
Main venturi size 1 1/16 inch I D

Float Level See adjustments

Vents Inside (5) outside (none)

Gasoline Intake Size No 42 (0935 inch) drill in needle seat

Low Speed Jet Tube Jet primary and secondary size No 69 (0293 inch) drill By pass in body size primary No 52 (0635 inch) drill secondary (057 inch) diameter Economizer in body size (0452 inch) diameter Idle bleed in body size primary (059 inch) diameter secondary No 44 (086 inch) drill

Idle Port Upper slot type primary length 175 inch width 030 inch Secondary length 103 nch width 030 inch

Idle Port Opening Primary 116 to 122 inch secondary 059 to 065 inch above top edge of valve with valve tightly closed

Lower Port Primary (for idle adjustment screw) size No 55 (052 inch) drill
Secondary (no idle adjustment screw) s ze No 57 (043 inch) drill

Set Idle Adjustment Screw ¼ to 1¼ turns open For richer mix ture turn screw out Do not idle engine below 700 R P M in neutral

Main Nozzle Installed permanently DO NOT REMOVE Anti-percolating jet (4) size No 70 (028 inch) drill

Metering Rod (Vacumeter type) see parts list for size

Metering Rod Jet Primary Size (2317S 2444S) 089 inch (2445S) 0935 inch diameter
Secondary Size (2317S) 053 inch (2444S 2445S) 055 inch diameter

Metering Rod Setting See adjustments

Accelerating Pump Discharge jet (twin) primary side only siz No 74 (0225 inch) drill Intake ball check seat size 115 to 120 inch diameter Discharge needle seat size No 50 (070 inch) drill Relief passage (vent) to fuel chamber size No 42 (0935 inch) drill

Pump Adjustment See adjustments

Choke Carter Climatic® Control set on index Butterfly type offset choke valve primary side only Choke heat suction hole, restriction in piston housing size No 43 (089 inch) drill

Vacuum Spark Port Horizontal slot (round end) 045 x 110 inch Top of port 035 to 045 inch above top edge of valve with valv tightly closed

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open	Valve Setting (Hot)	Float Setting	Idle Adjustment Screw Setting
035"	017"	10° B T D.C (1955) 8° B T D C. (1956) At Vibration Damper With engine idling at 500 R.P.M	Intake .015" Exhaust 025"	See Adjustments	¼ to 1¼ Turns Open Idle engine at 700 R P.M. in neutral

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: Two separate float adjustments must be made—lateral and vertical. LATERAL ADJUSTMENT: With bowl cover assembly inverted, bowl cover gasket removed and float resting on seated needle, place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting. Side of floats should just clear the vertical uprights of float gauge. Adjustment should be made by bending arms of floats. VERTICAL ADJUSTMENT: With float gauge in same position, floats should just clear the horizontal portion of gauge. Vertical distance between top of float and machined surface of casting must be 7/32 inch (gauge T109-283) for primary floats; and 11/32 inch (gauge T109-285) for secondary floats. Adjust by bending float arms.

FLOAT DROP ADJUSTMENT: With bowl cover held in upright position and measuring from center of floats, the distance between top of floats and bowl cover should be 23/32 inch for primary floats and 27/32 inch for secondary floats. Adjust by bending stop tabs on float bracket.

PUMP ADJUSTMENT: Install pump connector link in outer hole (long stroke) of pump arm, with ends extending toward countershaft arm. Back out throttle lever set screw until throttle valves seat in bores of carbureter. Hold straight edge across top of dust cover boss at pump arm. The flat on top of pump arm should be parallel to straight edge. Adjust by bending throttle connector rod at upper angle. (Use tool T109-213.)

METERING ROD ADJUSTMENT: Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows: 1. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw. 2. With metering rods in place, press down on vacumeter link until metering rods bottom in carbureter body casting. 3. Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link. Hold in place and carefully tighten clamp screw.

BOWL VAPOR VENT ADJUSTMENT: This adjustment should be made after completing pump and metering rod adjustments. Install dust cover and dust cover gasket. Back out throttle lever stop screw to allow throttle valves to seat in bores of carbureter. There should be 1/16 inch (gauge T109-197) between lower edge of bowl vapor vent valve and dust cover. To adjust, remove dust cover and bend vapor vent arm.

FAST IDLE ADJUSTMENT: (a) Loosen choke lever clamp screw on choke shaft. Insert .015 inch feeler gauge (T109-44) between lip of fast idle cam and boss of flange casting. Hold choke valve tightly closed and take slack out of linkage by pressing lever towards closed position —hold in place and tighten clamp screw. (b) With choke valve tightly closed, tighten fast idle adjustment screw until there is .006-.010 inch (gauge T109-200) opening between throttle valve and bore of carbureter (side opposite idle port). Be sure fast idle adjusting screw is on high step of cam while making this adjustment.

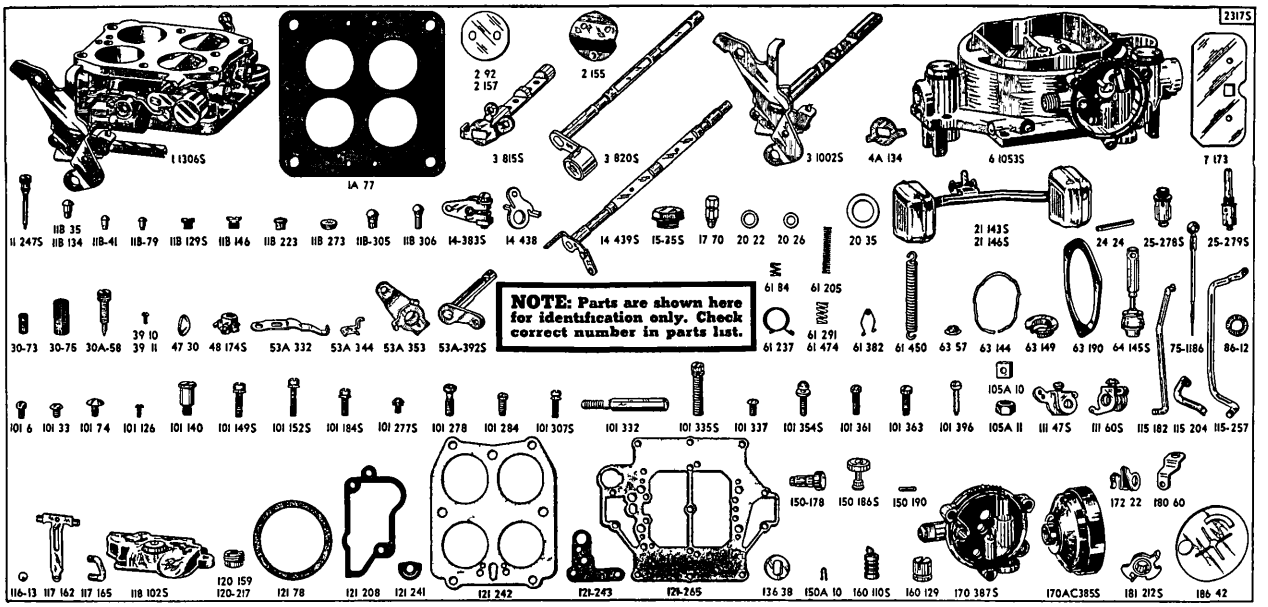
FAST IDLE ON CAR: 1450 to 1500 R.P.M.

UNLOADER ADJUSTMENT: With throttle wide open there should be 3/16 inch clearance between upper edge of choke valve and inner wall of air horn (gauge T109-28). Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41).

AUXILIARY THROTTLE VALVE ADJUSTMENT: (a) Disconnect secondary throttle operating rod. (b) Adjust stop lug on secondary throttle lever (use bending tool T109-214) until there is 27/64 inch clearance (gauge T109-242) between lower edge of auxiliary throttle valve and bore, when lug is against stop on flange.

SECONDARY THROTTLE LEVER ADJUSTMENT: The stop lug on both primary and secondary throttle levers should contact boss on flange at the same time. To adjust bend secondary throttle operating rod at angle (use bending tool T109-213). NOTE: Secondary throttle valves will be a few degrees from wide open position.

AUXILIARY THROTTLE LOCK-OUT ADJUSTMENT: This adjustment should be made after completing fast idle adjustment. 1. With choke valve closed, edge of hook on lock-out arm should contact auxiliary throttle lever, making maximum contact of locking step on lever. 2. Open choke valve. Auxiliary throttle valve should become unlocked a few degrees before the choke reaches wide open position. Adjust by bending lock-out arm.



Chrysler "V-8"—1955-1956—Carbureters Nos. 2317S-2444S-2445S

WHEN SERVICING, USE GASKET ASSORTMENT No. 269A

Part No.	PART NAME	
1-1306S	Body flange assembly (2317S)	
1-1423S	—Body flange assembly (2444S 2445S)	
1A-77	Flange gasket	
2-92	Primary throttle valve (2317S) (Sup by 2-190 on 2444S 2445S)	(2)
2-155	Auxiliary throttle valve	(2)
2-157	Secondary throttle valve	(2)
2-190	—Primary throttle valve (2444S 2445S)	(2)
3-815S	Secondary throttle shaft and operating lever assembly	
3-820S	Auxiliary throttle shaft lever and weight assembly (2317S)	
3-1002S	Primary throttle shaft and lever assembly	
3-1070S	—Auxiliary throttle shaft lever and weight assembly (2444S 2445S)	
4A-134	Primary throttle shaft dog	
6-1053S	Air horn assembly (2317S) (Casting No 6-1020)	
6-1175S	—Air horn assembly (2444S 2445S) (Casting No 6 1147)	
7-173	Choke valve	
11-247S	Low speed jet assembly	(4)
11B-35	Rivet plug	(6)
11B-41	Rivet plug (6 1053S (2) (6 1175S (1)	
11B-79	Rivet plug	(4)
11B-129S	Pump discharge passage plug assembly	
11B-134	Rivet plug	
11B-146	Level sight plug	(2)
11B-223	Nozzle passage and idle port rivet plug	(8)
11B-273	Secondary throttle shaft rivet plug	
11B-305	Rivet plug (2317S (1) (2444S 2445S (2)	

Part No.	PART NAME	
11B-306	Rivet plug (2317S (2) (2444S 2445S (1)	
14-383S	Choke lever and screw assembly	
14-438	Cam trip lever	
14-439S	Choke piston lever, link and shaft assembly	
15-35S	Strainer nut assembly	(2)
17-70	Pump check needle	
20-22	Needle seat gasket	(2)
20-26	Relief valve gasket	
20-35	Bowl strainer gasket	(2)
21-143S	Primary float and lever assembly	
21-146S	Secondary float and lever assembly	
24-24	Float lever pin	(2)
25-278S	Primary needle and seat assembly	
25-279S	Secondary needle and seat assembly	
30-73	Primary needle seat strainer	
30-75	Bowl strainer	
30A-58	Idle adjustment screw	(2)
39-10	Primary throttle valve attaching screw	(4)
39-11	Choke valve attaching screw	(2)
47-30	Welsh plug	
48-174S	Pump jet and housing assembly	
53A-332	Lockout arm	
53A-344	Vent arm	
53A-353	Primary operating lever	
53A-392S	Pump operating lever and countershaft assembly	
61-84	Idle adjustment screw spring	(2)
61-205	Vacuum piston spring	
61-237	Fast idle cam spring	

Part N .	PART NAME	
61-291	Throttle lever adjusting screw spring	
61-382	Metering rod spring	
61-413	Upper pump spring	
61-450	Secondary throttle return spring	
61-474	Bowl vent spring	
63-57	Intake check ball retainer	
63-144	Delayer plate retainer ring	
63-149	Bowl vent spring retainer	
63-176	Pump spring retainer	
63-190	Coil housing retainer	
64-145S	Pump plunger and rod assembly	
75-1178	Metering rod—1 size lean 074" x 063" x 052" (2317S)	(2)
75-1179	Metering rod—2 sizes lean 075" x 065" x 055" (2317S)	(2)
75-1186	Metering rod—standard 073" x 062" x 048" (2317S)	(2)
75 1273	—Metering rod—standard 073" x 062" x 053" (2444S)	(2)
75-1274	—Metering rod—standard 078" x 070" x 045" (2445S)	(2)
86-12	Flange stud lock washer	(4)
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	
101-126	Auxiliary throttle valve attaching screw	(4)
101-140	Fast idle cam screw	
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-275	Piston housing attaching screw (2317S Use with 6 1175S) (2444S 2445S)	
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet housing attaching screw	
101-284	Piston housing attaching screw (2317S (2) (Use with 6 1053S)	
101-307S	Bracket and air horn attaching screw and washer assembly	(8)
101-332	Throttle lever adjusting screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-354S	Choke lever clamp screw and washer assembly	
101-361	Coil housing attaching screw	(3)

Part No.	PART NAME	
101-363	Piston housing attaching screw (2317S (1) with 6 1053S (2) with 6 1175S) (2444S 2445S (2)	
101-396	Fast idle adjustment screw	
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
115-182	Choke connector rod	
115-204	Throttle operating rod	
115-257	Throttle connector rod	
116-13	Pump intake check ball	
117-162	Vacumeter piston link	
117-165	Pump connector link	
118-102S	Dust cover assembly	
120-159	Primary metering rod jet (2317S 2444S)	(2)
120-166	Primary metering rod jet (2445S)	(2)
120 174	Secondary metering jet (2444S 2445S)	(2)
120-217	Secondary meter ng jet (2317S)	(2)
121-78	Coil housing gasket	
121-208	Dust cover gasket	
121-241	Pump jet housing gasket	
121-242	Body flange gasket	
121-243	Piston housing gasket (2317S Use with 6 1053S)	
121-265	Air horn gasket	
121 283	Piston housing gasket (2317S Use with 6 1175S) (2444S 2445S)	
136-38	Throttle shaft washer	
150-178	Auxiliary valve lockout arm pin	
150-186S	Pin and valve cap assembly	
150-190	Choke piston pin	
150A-10	Pin spring	(5)
160-110S	Vacuum piston and pin assembly	
160-129	Choke piston	
170-387S	Piston housing and plug assembly (2317S Use with 6 1053S)	
170 445S	—Piston housing and plug assembly (2317S Use with 6 1175S) (2444S 2445S)	
170AC385S	Thermostatic coil and housing assembly	
172-22	Throttle connector rod retainer	
180-60	Lever return spring bracket	
181-212S	Fast idle cam assembly	
186-42	Choke baffle plate	

—Parts so marked are new and listed for the first time

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

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CHRYSLER INDUSTRIAL
1955-1956
MODELS IND. 30-31-32-33-34-36

B-B DOWN-DRAFT **CARBURETER—MODEL E7T2**

CARBURETER SPECIFICATIONS

FOR CHRYSLER 6 CYL. ENGINE·

IND. 30-31: 3¼ Inch Bore, 4⅝ Inch Stroke
IND. 32-33: 3-7/16 Inch Bore, 4¾ Inch Stroke
IND. 34: 4 Inch Bore, 5 Inch Stroke
IND. 36: 4-1/16 Inch Bore, 5-5/16 Inch Stroke

Dimensions. Flange size, 1½ inch (38 1 mm)
Throttle bore 1-11/16 inch (42 86 mm)
Main venturi 1 11/32 inch (34 13 mm) I D

Float Setting: When using a solid needle the distance from the top of float should be 5/64 inch (1 98 mm) (gauge T109 50) plus or minus 1/64 inch (397 mm) below top surface of carbureter body casting Float setting for spring loaded needle and seat assembly See footnote * on page two

Vents: Outside none Inside balance vent tube 218 inch diameter, (5 54 mm)

Gasoline Intake Needle Triangular horizontal No 44 (086 inch) (2 18 mm) drill in needle seat

Idle Orifice Tube Jet size 0276 inch (70 mm) drill Idle passage air bleed in air horn, size 0465 inch (1 18 mm) diameter Restriction in body, size 0452 inch (1 15 mm) diameter

Idle Ports: Upper port Slot type length 149 inch (3 78 mm) width 030 inch (76 mm) Top of port located 118 to 122 inch (3 00 to 3 10 mm) above top edge of valve Lower port size 053 to 057 inch (1 35 to 1 45 mm) drill (For idle adjustment screw)

Set Idle Adjustment Screw: ½ to 1½ turns open For richer mixture turn screw out Idle engine between 450-500 r p m

Main Metering Jet: Calibrated to flow 315 to 319 cc per minute (Do not gauge for size If in doubt replace with new part)

Main Vent: Through diffuser (air bleed inside bowl) Size 0315 inch (80 mm) drill

Main Vent Tube: Side Holes 4—0354 inch diameter

Step-Up Jet· Power orifice 0413 inch (1 05 mm) drill

Accelerating Pump: Type—delayed action seasonal adjustment Stroke—Summer setting (inner hole, short stroke) Intermediate setting (center hole) Winter setting (outer hole long stroke) Pump intake passage ball check seat size 115 to 120 inch (2 93 to 3 05 mm) diameter in body Pump discharge passage Restriction (under ball check) size 062 to 065 inch (1 57 to 1 65 mm) diameter in body Pump (discharge) jet size 0374 inch (95 mm) drill

Pump Adjustment: 26/64 inch plunger travel—full throttle position medium stroke Use gauge T109 117S

Choke· Offset butterfly type (with poppet valve)

Vacuum Spark Port: Slot (round end) type, size 040 by 110 inch (1 016 by 2 794 mm) Top of port 052 to 058 inch (1 32 to 1 47 mm) above top edge of valve

Motor Tune-Up—Be Accurate!

CAUTION· Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open	Valve Setting (Hot)	Float Setting	Idle Adjustment Screw Setting
.035"	.020"	(32-36) T. D. C (34) 2° A. T D C (30-31-33) 2° B. T. D C	(30-31) Intake .010" Exhaust .014" (32-33-34) Intake .010" Exhaust .018" (36) Hydraulic Lifters	(Use Gauge T109-50) Solid Needle—5/64 Inch Spring Loaded Needle See Footnote (*) on Page 2	½ to 1½ Turns Open 450 to 500 R.P.M.

CARBURETER ADJUSTMENTS

If carbureter loads up after considerable service, check float level Wear on lip of float lever will raise float level Before adjusting float, be sure float lever pin is firmly seated Reset float level by bending lip of float lever away from needle to raise level, or bend lip toward needle to lower float level Bend vertical lip of float only

If motor stalls while idling, set throttle lever adjusting screw so motor runs between 450-500 r p m Then set idle adjustment screw to specifications If these adjustments do not correct the trouble, remove idle orifice tube and plug assembly Clean tube passages with compressed air

If acceleration is not satisfactory, remove pump jet and clean with compressed air However, it is usually advisable to replace the pump jet, as its cost is nominal All jets must be seated gasoline tight Poor acceleration may be due to damaged or worn plunger leather in accelerating pump sediment in pump cylinder or clogged intake ball check at bottom of pump cylinder and discharge ball check in discharge passage If plunger is removed from cylinder, use care in installing to avoid damage to plunger leather

Correct air fuel ratio is provided by a "balance tube' in the air horn The balance tube should be checked each time the

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carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type size or condition of air cleaner Should the cleaner become clogged, the capacity will be reduced but the air-fuel mixture ratio will not be changed

Excessive richness may be caused by a clogged main vent tube After removal of rivet plug beneath float bowl with tool No T109-43, main vent tube can be removed and a new tube inserted with tool No T109-195 Care must be exercised in inserting new tube which must seat tightly Use new rivet to complete the installation

Pump Adjustment: Remove air horn assembly, back out throttle adjustment screw and place pump operating link in center hole of throttle shaft arm Place gauge T109-117S on edge of bowl cover so that lip of gauge extends over top of plunger shaft Turn knurled nut of gauge until lip contacts plunger shaft at closed and wide open throttle positions Difference in readings obtained at closed and wide open throttle positions should be "26" (26/64") plunger travel Adjustments can be made by bending horizontal portion of pump lifter link

Pump stroke adjustable for high or low temperature Set to long stroke for cold weather short stroke for hot weather driving

Chrysler Industrial—1955-1956—Model E7T2

WHEN SERVICING, USE GASKET ASSORTMENT No. 137A; REPAIR PACKAGE No. 1534A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-643S	Body flange assembly (Sup by 1 1164S)	
1-1164S	Body flange assembly	
1A-24	Flange gasket—for use with governor	
1A-31	FLANGE GASKET—FOR USE WITHOUT GOVERNOR	
2-87	Throttle valve	
3-452S	Throttle shaft and arm assembly	
3-459S	Throttle shaft and arm assembly (Sup by 3 452S)	
4-431S	Throttle lever assembly	
6-637S	Air horn assembly	
7-105S	Choke valve assembly	
11B-17	Pump discharge passage plug	
11B-41	Rivet plug	
11B-79	Rivet plug	(2)
11B-108	IDLE PORT RIVET PLUG	
11B-138	PUMP JET RIVET PLUG	
11B-220	HIGH SPEED PASSAGE PLUG	
14-292S	Choke control lever and shaft assembly	
20-26	Gasket	
20-31	Needle seat gasket	
20-51	Step up jet gasket	
20-52	STEP-UP PISTON GASKET	
21-49S	Float and lever assembly (Sup by 21 123S)	
21-123S	Float and lever assembly	
24-23	Float lever pin	
25-102S	Needle and seat assembly (Sup by 25 202S)	
25-202S	*NEEDLE PIN, SPRING AND SEAT ASSEMBLY	
30A-37	Idle adjustment screw	
39-11	Valve attaching screw	(4)
48-75	PUMP JET	
61-84	Idle adjustment screw spring	
61-119	Choke pull-back spring	
61-135	STEP UP PISTON SPRING	
61-145	PUMP SPRING	
61-157	Plunger spring	
61-207	Intake needle spring	
62-77S	Choke tube bracket assembly	
63-24	FLOAT LEVER PIN RETAINER	
63-37	PUMP BALL RETAINER RING	
63-46	Pump spring retainer	
64-60S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49-120)	
86-15	Flange stud lock washer	(2)
101-10	Wire clamp screw	
101-142S	Choke bracket attaching screw and washer assembly	
101-145S	Flange attaching screw and washer assembly	(3)
101-150S	Bowl cover attaching screw and washer assembly	(4)
101-164	Throttle lever clamp screw	
101-279	Throttle lever adjusting screw	
105-11	Choke tube clamp screw	
105A-8	Choke tube clamp nut	
105A-13	Flange nut	(2)
105A-28	Throttle lever clamp nut	
116-13	PUMP INTAKE CHECK BALL	
116-18	PUMP DISCHARGE CHECK BALL	
117-62	PUMP LINK	
117-70	PUMP LIFTER LINK	
121-69	BODY GASKET	
121-160	BODY FLANGE GASKET	(2)
123-31S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
145-13	MAIN VENT TUBE	
149-56S	STEP-UP JET ASSEMBLY	
150-98	Intake needle pin	
150A-13	PIN SPRING	
160-46S	STEP UP PISTON PLATE AND ROD ASSEMBLY	
183-64	Insulator	
224-12S	Main metering jet assembly—3 sizes lean	
224-13S	MAIN METERING JET ASSEMBLY—STANDARD	
224-14S	Main metering jet assembly—1 size lean	
224-15S	Main metering jet assembly—2 sizes lean	
224-28U	Unitized package (For high altitude) (consists of 1—224 12S and 1—61 134)	

*When using a spring loaded needle and seat place a 050" feeler gauge between lip of float and intake needle pin With intake needle spring fully compressed top of float should be 5/64 inch (1 98mm) (Gauge T109 50) below top surface of carbureter body casting Adjust by bending lip on float

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

CHRYSLER "V-8" MARINE

MODELS

IMPERIAL M-45, IMPERIAL SPECIAL M-45S

1954-1956

Two Carbureters Per Engine

(2221S can be used in place of 975S)

BBS DOWN-DRAFT **CARBURETERS Nos. 975S-2221S**

CARBURETER SPECIFICATIONS

For Chrysler 8 Cylinder Engine 3 13/16 Inch Bore, 3⅝ Inch Stroke

Dimensions Flange size 1½ inch S A E
Throttle bore 1 11/16 inch
Main venturi 1 11/32 inch I D

Float Setting See adjustments

Vents Outside none Inside balance vent tube

Gasoline Intake Size (975S) No 38 (1015 inch) (2221S) No 44 (086 inch) drill in needle seat

Idle Tube Jet size 0315 inch diameter Idle passage air bleed in body size (975S early prod) 052 inch diameter (975S late prod) No 60 (040 inch) drill, (2221S) No 68 (031 inch) drill Restriction in body (975S) 055 inch (2221S) 0394 inch diameter

Idle Port Upper slot type length 149 inch width 030 inch

Idle Port Opening Top of port located 118 to 122 inch above top edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw) Size 053 to 057 inch diameter

Set Idle Adjustment Screw ½ to 1½ turns open For richer mixture turn screw out Idle engine between 550 600 r p m

Main Metering Jet Calibrated to flow (975S) 492 cc (2221S) 457 cc per minute (Do not gauge for size if in doubt replace with new part)

Main Vent Tube Side holes 6—0354 inch diameter Bleed in top of tube 0315 inch diameter

Step-Up Rod (Vacuum operated) 026 inch diameter

Accelerating Pump Pump intake passage ball check seat size 115 to 120 inch diameter
Pump discharge passage restriction (under ball check) size 115 to 120 inch diameter in body
Pump (discharge) jet size 0393 inch drill

Pump Adjustment See adjustments

Choke Manual—butterfly type offset valve

Vacuum Spark Port None

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open	Valve Setting (Hot)	Float Setting	Idle Adjustment Screw Setting
035"	017"	4° B T D C At Vibration Damper	Intake 008" Exhaust 020"	See Adjustments	½ to 1½ Turns Open

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT This adjustment must be made with the bowl cover gasket and float pin retainer removed Hold the lip on float arm against the seated intake needle making sure the float pin is at the bottom of its guide slots The distance from the top surface of the body casting to the top of each float should be (975S) 7/32 inch (2221S) 9/32 inch (gauge T109 239) If one float is lower than the other equal ize by bending the float arm If both floats require the same correction adjust by bending lip on float arm The floats must not rub anywhere against the inner walls of the bowl If necessary bend float arm slightly to provide clearance on all sides of floats

PUMP ADJUSTMENT Back out throttle adjusting screw and open choke valve so that throttle valve seats in bore of carbureter Install throttle connector rod in outer hole (long stroke) of throttle lever the distance from the top of the bowl cover to the top of the plunger shaft (not pump arm) should be 54/64 inch Adjust by bending pump connector rod at lower angle (use tool T109-213)

Chrysler-Marine "V-8"—1954-1956—Carbureters Nos. 975S-2221S

WHEN SERVICING USE GASKET ASSORTMENT No 252

Part No	PART NAME	
1-1155S	Body flange assembly	
1A-90	Flange gasket—for use without governor	
2 87	Throttle valve	
3-898S	Throttle shaft and lever assembly	
6-953S	Air horn assembly	
7-195S	Choke valve assembly	
11B 79	Rivet passage plug	(6)
11B 220	High speed passage rivet plug	
11B-296	Pump jet rivet plug	
11B-303	Rivet passage plug	
13-149	Choke shaft	
14 350S	Choke lever assembly	
20-31	Needle seat gasket	
20 52	Step up piston gasket	
20 116	Step up jet gasket	
21-144S	Float and lever assembly	
24-23	Float lever pin	
25-44S	Needle and seat assembly (975S)	
25-48S	Needle and seat assembly (2221S)	
25 235S	Needle and seat assembly (975S) (Sup by 25 44S)	
30A-44	Idle adjustment screw	
39-11	Choke and throttle valve attaching screw	(4)
48-219	Pump jet	
53A-343	Pump arm	
61-291	Throttle lever adjusting screw spring	
61-467	Idle adjustment screw spring	
61 476	Pump spring	
61-484	Step up piston spring	
61-511	Choke pull back spring	
62-199S	Choke tube bracket assembly	
63 57	Intake check ball retainer	
63 169	Float lever pin retainer	
64-140S	Pump plunger and rod assembly	
64-148S	Pump plunger and rod assembly (975S) (Sup by 64 140S)	
64-168S	Pump plunger and rod assembly (975S) (Sup by 64 140S)	
75-991	Step up rod	
100 16	Throttle lever adjusting screw	
101-6	Choke lever clamp screw	
101-10	Wire clamp screw	
101-148S	Bowl cover attaching screw and washer assembly	(2)
101 290	Choke tube bracket attaching screw (early prod (2) (late prod (1)	
101-318	Pump arm screw	
101-359S	Body attaching screw and washer assembly	(4)
101-374	Step up piston plate guide screw	
105-11	Choke tube clamp screw	
105A 8	Choke tube clamp nut	
105A-13	Flange stud nut	(2)
115-196	Throttle connector rod	
116-13	Pump intake and discharge check ball	(2)
120-197S	Main metering jet assembly (975S)	
120-207S	Main metering jet assembly (2221S)	
121-225	Body gasket	
121-247	Body flange gasket	
123-65S	Idle orifice tube and plug assembly	
136-161	Pump spring retainer	
145-91	Main vent tube	
150-174	Pump arm pin	
150A-13	Pin spring	(2)
160-124S	Step up piston and plate assembly	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

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CHRYSLER INDUSTRIAL 1948-1956

6 and 8 (Straight 4 Bolt Airhorn)

B-B DOWN-DRAFT **CARBURETERS Nos. E7D1-E7D2-E7D3**

MODELS IND. 5A-6A-7A-8A-13A-14A-15A-16A-22A-30-31-32-33-34-36 (6 Cyl.), IND. 12A (8 Cyl.)

CARBURETER SPECIFICATIONS

FOR CHRYSLER 6 CYL. ENGINE:

IND. 5A: 3¼ Inch Bore, 4⅜ Inch Stroke
IND. 6A-30-31: 3¼ Inch Bore, 4⅝ Inch Stroke
IND. 7A: 3-7/16 Inch Bore, 4¼ Inch Stroke
IND. 8A: 3-7/16 Inch Bore, 4½ Inch Stroke
IND. 13A: 3¾ Inch Bore, 4⅝ Inch Stroke
IND. 14A. 3¾ Inch Bore, 5 Inch Stroke
IND. 15A-34: 4 Inch Bore, 5 Inch Stroke
IND. 16A-32-33: 3-7/16 Inch Bore, 4¾ Inch Stroke
IND. 22A-36: 4-1/16 Inch Bore, 5-5/16 Inch Stroke

FOR CHRYSLER 8 CYL. ENGINE:
IND. 12A: 3¼ Inch Bore, 4⅞ Inch Stroke

Dimensions: Flange size, 1½ inch S. A. E. Throttle bore, 1-11/16 inch (42.86 mm). Main venturi 1-11/32 inch (34.13 mm).

Float Setting: Top of float 5/64 inch (1.98 mm) plus or minus 1/64 inch (.397 mm) below top surface of carbureter body casting.

Vents: Outside none. Inside balance vent tube .218 inch (5.56 mm) inside diameter.

Gasoline Intake Needle: Triangular, horizontal, needle seat hole No. 44 (2.18 mm) drill.

Idle Orifice Tube: Jet size, .0276 inch (.70 mm). Idle passage air bleed (in air horn), size .059 inch (1.50 mm). Idle restriction in body, size .055 inch (1.40 mm).

Idle Ports: Upper port, slot type. Length, .128 inch (3.251 mm). Width .027 inch (.686 mm). Top of port .104 to .110 inch (2.642 mm to 2.794 mm) above top edge of valve (early production), .096-.100 inch (2.388 mm-2.540 mm) above top edge of valve, (late production). Lower port size .053 to .057 inch (1.35 to 1.45 mm) diameter (For idle adjustment screw).

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture turn screw out. Do not idle engine below 450 to 500 r.p.m. motor speed.

Vacuum Spark Port: Slot (round end) type: size .040 by .110 inch (1.016 by 2.794 mm). Top of port .052 to .058 inch (1.32 to 1.47 mm) above top edge of valve.

Main Metering Jet: Calibrated to flow (E7D1-D2) 344 to 348 cc, (E7D3) 398 to 402 cc per minute. Do not gauge for size. If in doubt, replace with new part.

Main Vent: Fuel chamber to vent tube well (in air horn) size .063 inch (1.60 mm) diameter. In vent tube plug, size .0433 (1.10 mm) diameter.

Main Tube Side Holes: 1—.0354 (.90 mm) diameter 3/32 inch (2.381 mm) from end
1—.0354 (.90 mm) diameter ⅛ inch (3.175 mm) from end.
1—.0236 (.60 mm) diameter ½ inch (12.70 mm) from end
1—.0236 (.60 mm) diameter 17/32 inch (13.49 mm) from end.
1—.0157 (.40 mm) diameter 1-15/32 inch (37.31 mm) from end

Step-Up Jet: Size .0492 (1.25 mm) diameter

Accelerating Pump: Type vacuum operated. Stroke, non-adjustable. Pump intake passage ball check seat, size .115 to .120 inch (2.93 to 3.05 mm) diameter
Pump discharge passage, ball check seat size, .062 to .065 inch (1.58 to 1.65 mm) diameter
Pump discharge jet, size .0315 inch (.80 mm) diameter

Choke: Offset butterfly type with poppet valve.

MOTOR TUNE-UP

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open	Valve Setting (Hot)	Float Setting	Idle Adjustment Screw Setting
1948-49 .025" (6 cyl.) .032"-.034" (8 cyl.) 1950-56 .035" (All)	1948-49 .018" (8 cyl.) All Others .020"	1948-49: (6 cyl.) T.D.C.; (8 cyl.) 2° A.T.D.C. 1950-53: 5A—4° B.T.D.C.; 6A—2° B.T.D.C.; 8A, 15A, 16A—2° A.T.D.C.; 13A—1° A.T.D.C.; 7A, 14A, 22A—T.D.C. 1954-56: 5A, 6A, 30, 31, 33—2° B.T.D.C.; 8A, 14A, 16A, 22A, 32, 36—T.D.C.; 15A, 34—2° A.T.D.C.	1948-49 Intake .010" Exhaust .012" (Std.) / .020" (Sodium) 1950-56 Intake .010" Exhaust 5A-6A-7A-30-31—.014"; 8A-12A-13A-14A-15A-16A-22A-32-33-34—.018" Ind. 36—Hydraulic Lifters	5/64 Inch	½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

Correct float adjustment is important and should be made in the following way:

Place float gauge (No. T109-50) across the carbureter body. Press float lever down to hold float pin against the bottom of the slot in the body casting. Floats should just clear the projections on the gauge. If adjustment is necessary, bend lip on float lever toward intake needle to lower level or away from the needle to raise the float level.

If motor stalls while idling, set throttle lever adjusting screw so motor runs between 450 and 500 R.P.M. Then set idle adjustment screw ½ to 1½ turns open from closed position. If a vacuum gauge is available, adjust to highest steady gauge reading.

Accelerating pump is actuated by the intake manifold vacuum and no adjustment is necessary. However, be sure the bowl cover gasket and flange gasket seal to prevent any air leaks to the pump vacuum passages.

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PARTS LIST

WHEN SERVICING USE GASKET ASSORTMENT No 204 (ALL), REPAIR PACKAGE No 1711 (E7D1-D2)

PART NAMES IN CAPITAL LETTERS LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-591S	Body flange assembly	
1A-24	Flange gasket—for use with governor	
1A-31	FLANGE GASKET—FOR USE WITHOUT GOVERNOR	
2 87	Throttle valve	
4-496	Throttle lever (outer)	
4A-98S	Throttle lever dog assembly (Sup by 4A 114S)	
4A 100S	Throttle shaft dog assembly	
4A-114S	Throttle lever dog assembly	
6-583S	Air horn assembly	
7 105S	Choke valve assembly	
11B-17	PUMP PASSAGE PLUG	
11B-41	Rivet plug	(4)
11B-69	Rivet plug	
11B-79	Rivet plug	
11B-108	Rivet passage plug	
11B-138	PUMP JET RIVET PLUG	
11B-194	Bowl drain plug	
11B-220	HIGH SPEED PASSAGE PLUG	
13-98	Choke shaft	
14-350S	Choke lever assembly	
20 26	Main metering jet gasket	
20 31	NEEDLE SEAT GASKET	
20-51	Step up jet gasket	
20-52	STEP UP PISTON GASKET	
21-91S	Float and lever assembly	
24-23	FLOAT LEVER PIN	
25-102S	NEEDLE AND SEAT ASSEMBLY	
30A-37	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	Throttle valve attaching screw	(2)
48-73	PUMP JET	
54-13	Needle seat lock	
61-58	Throttle lever adjusting screw spring	
61-84	Idle adjustment screw spring	
61-135	STEP UP PISTON SPRING	
61-144	Pump spring (cadmium plated)	
61-157	Pump plunger spring	
61-333	Choke spring	
61-373	Pump spring (for alt only—copper oxide plated)	
62-151S	Choke tube bracket assembly	
63 24	Float lever pin retainer	
63-37	Pump check ball retaining ring	

Part No	PART NAME	
64-117S	PUMP PLUNGER ROD SPRING AND PISTON ASSEMBLY	
64 118S	Pump plunger rod spring and piston assembly (altitude operation only)	
86-9	Throttle lever dog assembly lock washer	
86-10	Choke bracket attaching screw lock washer	
86 15	Flange stud lock washer	(2)
100-15	Throttle shaft dog attaching screw	
101-6	Choke bracket attaching screw	
101-10	Wire clamp screw	
101-12	Clamp screw	
101-38	Choke bracket attaching screw (Special)	
101-58	Throttle shaft dog assembly attaching screw	
101-142S	Choke tube bracket attaching screw and washer assembly	
101-145S	Body flange attaching screw and washer assembly	(2)
101-149S	Air horn attaching screw and washer assembly	(2)
101-150S	Air horn attaching screw and washer assembly	
101-199S	Air horn attaching screw and washer assembly	(2)
101-234S	Body flange attaching screw and washer assembly	
101-248	Throttle lever dog set screw	
101-249	Throttle lever attaching screw	
105A-10	Choke tube clamp nut	
105A-13	*Flange nut	(2)
116-13	PUMP INTAKE CHECK BALL	
116-18	PUMP CHECK BALL	
121-104	MAIN BODY GASKET	
121-114	BODY FLANGE GASKET	
123-47S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
136-82	MAIN VENT TUBE GASKET	
136-98	Choke shaft dust seal retainer	(2)
145-51S	MAIN VENT TUBE AND PLUG ASSEMBLY	
149-99S	STEP UP JET ASSEMBLY	
159-87S	Main metering jet assembly (3 sizes lean) (E7D1 D2)	
159-89S	Main metering jet assembly (2 sizes lean) (E7D1 D2)	
159-93S	Main metering jet assembly (was standard—now 1 size lean) (E7D1 D2)	
159-94S	MAIN METERING JET ASSEMBLY (STANDARD—E7D1 D2) (3 SIZES LEAN—E7D3)	
159-102S	Main metering jet assembly (2 sizes lean) (E7D3)	
159-103S	Main metering jet assembly (1 size lean) (E7D3)	
160-78S	STEP UP PISTON PLATE AND ROD ASSEMBLY	
163-21	Choke shaft dust seal	(2)
224-27S	Main metering jet assembly (standard) (E7D3)	
224-29S	Main metering jet (1 size rich) (E7D3)	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.

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CHRYSLER INDUSTRIAL E7E1-E7E2-E7E3-E7E4—1948-1956

(STRAIGHT 4-BOLT AIR HORN)

BB Down-Draft Carbureter with Governor— E7E1-E7E2-E7E3-E7E4

MODELS IND. 5A, 6A, 7A, 8A, 13A, 14A, 15A, 16A, 22A, 30, 31, 32, 33, (6 cyl.); 12A, (8 cyl.)

Optional Equipment on: 5-250 to 5-255, incl., 7-260 to 7-266, incl., 12-270 to 12-275

CARBURETER SPECIFICATIONS

For Chrysler 6 Cyl. Engine Ind. 5A: 3¼ Inch Bore, 4⅜ Inch Stroke
Ind. 6A, 30, 31: 3¼ Inch Bore, 4⅝ Inch Stroke
Ind. 7A: 3-7/16 Inch Bore, 4¼ Inch Stroke
Ind. 8A: 3-7/16 Inch Bore, 4½ Inch Stroke
Ind. 13A: 3¾ Inch Bore, 4⅝ Inch Stroke
Ind. 14A: 3¾ Inch Bore, 5 Inch Stroke
Ind. 15A: 4 Inch Bore, 5 Inch Stroke
Ind. 16A, 32, 33: 3-7/16 Inch Bore, 4¾ Inch Stroke
Ind. 22A: 4-1/16 Inch Bore, 5-5/16 Inch Stroke
For Chrysler 8 Cyl. Engine Ind. 12A: 3¼ Inch Bore, 4⅞ Inch Stroke

Dimensions: Flange size, 1½ inch S. A. E.
Throttle bore, 1-11/16 inch (42.86 mm).
Main venturi, 1-11/32 inch (3.413 mm).

Float Setting: Top of float 5/64 inch (1.98 mm) plus or minus 1/64 inch (.397 mm) below top surface of carbureter body casting.

Vents: Outside: none. Inside: Balance vent tube .218 inch (5.56 mm) inside diameter.

Gasoline Intake Needle: Triangular, horizontal, needle seat hole No. 44 (2.18 mm) drill.

Idle Orifice Tube: Jet size, .0276 inch (.70 mm).
Idle passage air bleed (in air horn), size .059 inch (1.50 mm)
Idle restriction in body, size .055 inch (1.397 mm).

Idle Ports: Upper port: slot type. Length, .128 inch (3.251 mm). Width, .027 inch (.686 mm).
Top of port .104 inch (2.642 mm) to .110 inch (2.794 mm) above top edge of valve, in slot (early production), .096 inch (2.388 mm) to .100 inch (2.540 mm) above top edge of valve in slot (late production).
Lower port size: .053 to .057 inch (1.35 to 1.45 mm) diameter (For idle adjustment screw).

Set Idle Adjustment: ½ to 1½ turns open. For richer mixture turn screw out. Do not idle engine below 450 to 500 r.p.m. motor speed.

Vacuum Spark Port: Slot (round end) type: size .040 by .110 inch (1.016 by 2.794 mm). Top of port .052 to .058 inch (1.32 to 1.47 mm) above top edge of valve.

Main Metering Jet: (E7E1-E7E2) Calibrated to flow 328 to 332 cc per minute. (E7E3) Calibrated to flow 344 to 348 cc per minute. Do not gauge for size. If in doubt, replace with new part.

Main Vent: Fuel chamber to vent tube well (in air horn), size 063 inch (1.60 mm) diameter. In vent tube plug, size .0433 (1.10 mm) diameter.

Main Vent Tube: Side holes: 1—.0354 (.90 mm) diameter, 3/32 inch (2.381 mm) from end.
1—.0354 (.90 mm) diameter, ⅛ inch (3.175 mm) from end.
1—.0236 (.60 mm) diameter, ½ inch (12.70 mm) from end
1—.0236 (.60 mm) diameter 17/32 inch (13.49 mm) from end
1—.0157 (.40 mm) diameter, 1-15/32 inch (37.31 mm) from end

Step-Up Jet: Size .0492 (1.25 mm) diameter

Accelerating Pump: Type, vacuum operated. Stroke non-adjustable Pump intake passage ball check seat, size .115 to 120 inch (2.93 to 3.05 mm) diameter.
Pump discharge passage, ball check seat size, 062 to 065 inch (1.58 to 1.65 mm) diameter.
Pump discharge jet, size .0315 inch (.80 mm) diameter.

Choke: Offset butterfly type with poppet valve.

FOR GOVERNOR INSTRUCTIONS, SEE FORM 4719D

MOTOR TUNE-UP

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open	Valve Setting (Hot)	Float Setting	Idle Adjustment Screw Setting
1948-49 .026" 035" (Resistor) 1950-56 035"	1948-49 6 Cyl. .020" 8 Cyl. .018" 1950-56 All .020"	1948-49: 6 Cyl. TDC; 8 Cyl. 2° ATDC 1950-53: 5A—4° BTDC; 8A, 15A, 16A—2° ATDC; 13A—1° ATDC; 7A, 14A, 22A—TDC; 6A—2° BTDC 1954-56: 5A, 6A, 30, 31, 33—2° BTDC; 8A, 14A, 16A, 22A, 32—TDC; 15A—2° ATDC	1948-49 Intake .010" Exhaust .012" (Std.) .020" (Sodium) 1950-56 Intake .010" Exhaust: 5A, 6A, 7A, 30, 31—.014" 8A, 12A, 13A, 14A, 15A, 16A, 22A, 32—.018" 33—.020"	5/64 Inch	½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

Correct float adjustment is important and should be made in the following way.

Place float gauge (No. T109-50) across the carbureter body. Press float lever down to hold float pin against the bottom of the slot in the body casting Floats should just clear the projections on the gauge If adjustment is necessary, bend lip on float lever toward intake needle to lower level or away from the needle to raise the float level

If motor stalls while idling, set throttle lever adjusting screw so motor runs between 450 and 500 R P M. Then set idle adjustment screw ½ to 1½ turns open from closed position. If a vacuum gauge is available, adjust to highest steady gauge reading

Accelerating pump is actuated by the intake manifold vacuum and no adjustment is necessary. However, be sure the bowl cover gasket and flange gasket seal to prevent any air leaks to the pump vacuum passages.

If engine misses when load is suddenly increased, remove pump jet and clean with compressed air However, it is usually advisable to replace the pump jet, as its cost is nominal. (All jets must be seated gasoline tight) This condition may also be due to damaged or worn plunger leather in accelerating pump cylinder or discharge check in discharge passage. If plunger is removed from cylinder, use care when installing to avoid damage to plunger leather

Correct air fuel ratio is provided by a "balance tube" in the air horn The balance tube should be checked each time the carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type, size or condition of air cleaner Should the cleaner become clogged, the capacity will be reduced but the air-fuel mixture ratio will not be changed

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PARTS LIST

WHEN SERVICING, USE GASKET ASSORTMENT No. 205; REPAIR PACKAGE No 1711 (E7E1-E2-E3); No. 1768 (E7E4)

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-584S	Body flange and governor assembly (Sup by 1-622S) (E7E1)	
1-622S	Body flange and governor assembly (Stamped No 220-23) (Sup by 1-736S) (E7E1)	
1-736S	Body flange and governor assembly (Stamped No 220-29)	
1A-31	FLANGE GASKET	
3-583S	Throttle lever shaft and arm assembly	
4-491S	Throttle lever assembly	
4A-96	Throttle shaft dog	
6-583S	Air horn assembly	
7-105S	Choke valve assembly	
11B-17	PUMP DISCHARGE PASSAGE PLUG	
11B-41	Rivet passage plug	(4)
11B-69	Rivet passage plug	
11B-79	Rivet passage plug	
11B-108	Idle port rivet plug	
11B-138	PUMP JET RIVET PLUG	
11B-194	Bowl drain plug	
11B-201S	Governor secondary adjusting screw passage plug assembly	
11B-219S	Governor primary adjusting screw passage plug assembly (Sup by 11B 247S)	
11B-220	RIVET PASSAGE PLUG	
11B-247S	Governor primary adjusting screw passage plug assembly	
13-98	Choke shaft	
14-350S	Choke lever assembly	
20-26	Main metering jet gasket	
20-31	NEEDLE SEAT GASKET	
20-35	Governor primary adjusting screw plug gasket	
20-36	Governor secondary adjusting screw plug gasket	
20-51	Step up jet gasket	
20-52	STEP UP PISTON GASKET	
21-91S	Float and lever assembly	
24-23	FLOAT LEVER PIN	
25-102S	NEEDLE AND SEAT ASSEMBLY	
30A-37	Idle adjustment screw	
38A 57S	Primary adjusting nut assembly (Stamped No 27) (Use with 1-736S)	
38A-60S	Primary adjusting nut assembly (Stamped No 33) (Use with 1 622S)	
39-10	Choke valve attaching screw	(2)
48-73	PUMP JET	
54-13	Needle seat lock	
61-84	Idle adjustment screw spring	
61-135	STEP UP PISTON SPRING	
61-144	Pump spring (Identify by cadmium plated spring)	
61-157	Plunger spring	
61-302	Friction spring	
61-308	Governor primary spring (Cadmium plated 043" wire diameter)	
61-316S	Secondary spring assembly (Use with 1 622S)	
61-320S	Secondary spring assembly (Use with 1-736S)	
61-367	Primary spring (Copper plated 043" wire diameter) (Sup by 61 308)	
61-373	Pump spring (For altitude operation only) (Copper oxide plated)	
62-151S	Choke tube bracket assembly	
63-24	Float lever pin retainer	
63-37	Pump check ball retaining ring	
63-85	Secondary spring assembly retainer	
63-104	Throttle shaft retaining ring (Sup by 136 55)	
64 117S	PLUNGER ROD PISTON AND SPRING ASSEMBLY	
64-118S	Plunger rod piston and spring assembly (For altitude operation only)	

Part No	PART NAME	
86-10	Choke bracket attaching screw lock washer	
86-15	Flange stud lock washer	(2)
86-17	Throttle stop screw lock washer	
86-51	Throttle shaft dog lock washer	
86-54	Throttle valve screw lock washer	(2)
101-6	Choke lever clamp screw	
101-10	Wire clamp screw	
101-12	Choke bracket clamp screw	
101-38	Choke bracket attaching screw (Special)	
101-121	Throttle adjusting screw	
101-142S	Choke tube bracket attaching screw and washer assembly	
101-145S	Body flange attaching screw and washer assembly	(2)
101-149S	Shaft housing attaching screw and washer assembly	(5)
101-150S	Air horn attaching screw and washer assembly	
101-160S	Cover to governor housing attaching screw and washer assembly	(6)
101-164	Throttle lever clamp screw	
101-199S	Air horn attaching screw and washer assembly	(2)
101-215	Secondary adjusting screw	
101-231	Throttle valve screw	(2)
101-232	Throttle shaft dog attaching screw	
101-234S	Body flange attaching screw and washer ass y	
101-247	Primary adjusting screw (Stamped No 33 1 29/32" long) (Use with 1 622S)	
101-257	Throttle stop screw	
101-287	Primary adjusting screw (Stamped No 27 1 29/32" long) (Use with 1 736S)	
103-11	Lead shot	
105A-10	Choke tube clamp nut	
105A-13	Flange nut	(2)
105A-28	Throttle lever clamp nut	
116-13	PUMP INTAKE CHECK BALL	
116-18	PUMP DISCHARGE CHECK BALL	
118-57	Governor housing cover	
118-59S	Governor housing cover assy (Sup by 118 57)	
121-104	MAIN BODY GASKET	
121-114	BODY FLANGE GASKET	
121-123	Governor housing cover gasket	
121-141	THROTTLE SHAFT HOUSING GASKET	
123-47S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
136-55	Spring washer (between throttle lever and flange)	
136-82	MAIN VENT PLUG GASKET	
136-98	Choke shaft dust seal washer	
136-105	Throttle lever shaft seal retainer	
136-124	Spring washer (Between throttle lever and flange) (Sup by 63 104)	
145-51S	MAIN VENT TUBE AND PLUG ASSEMBLY	
149-99S	STEP UP JET ASSEMBLY	
159 63S	Main metering jet assembly—3 sizes lean (E7E1 E2 E3)	
159-87S	Main metering jet assembly—2 sizes lean (E7E1 E2 E3)	
159 89S	Main metering jet assembly—1 size lean (E7E1 E2 E3)	
159-93S	Main metering jet assembly (Sup by 159-94S)	
159-94S	MAIN METERING JET ASSEMBLY (Std E7E1-E2 E3) (3 sizes lean—E7E4)	
159-102S	Main metering jet assembly—2 sizes lean (E7E4)	
159-103S	Main metering jet assembly—1 size lean (E7E4)	
160-78S	STEP UP PISTON PLATE AND ROD ASSEMBLY	
163-21	Choke shaft dust seal	
163 37	Car seal	
170 143S	Shaft housing assembly	
224-27S	MAIN METERING JET ASSEMBLY—STD (E7E4)	

NOTE· Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used

CHRYSLER INDUSTRIAL

MODELS IND. 32-33

1955

(Equipped with Fluid Coupling or Automatic Transmission)

B-B DOWN-DRAFT CARBURETER—**E7R1**

CARBURETER SPECIFICATIONS

For Chrysler Six Cylinder Engine 3-7/16 Inch Bore, 4¾ Inch Stroke

Dimensions Flange size 1½ inch
Throttle bore 1 11/16 inch
Main venturi 1 11/32 inch I D

Float Setting When using a solid needle the distance from the top of float should be 5/64 inch (gauge T109 50) plus or minus 1/64 inch below top surface of carbureter body casting Float setting for spring loaded needle and seat assembly See footnote (†) on page two

Vents Outside none Inside balance vent tube 218 inch diameter

Gasoline Intake Needle Triangular horizontal No 44 (086 inch) drill in needle seat

Idle Orifice Tube Jet size 0276 inch drill Idle passage air bleed in air horn size 0465 inch diameter Restriction in body size 0452 inch diameter

Idle Ports Upper port Slot type length 149 inch width 030 inch Top of port located 118 to 122 inch above top edge of valve Lower port size 053 to 057 inch drill (For idle adjustment screw)

Set Idle Adjustment Screw ½ to 1½ turns open For richer mixture turn screw out Idle engine between 450 500 r p m

Main Metering Jet Calibrated to flow 315 to 319 cc per minute (Do not gauge for size If in doubt replace with new part)

Main Vent Through diffuser (air bleed inside bowl) Size 0315 inch drill

Main Vent Tube Side Holes 4—0354 inch diameter

Step-Up Jet Size 0413 inch diameter

Accelerating Pump Type—delayed action seasonal adjustment Stroke—Summer setting (inner hole short stroke) Intermediate setting (center hole) Winter setting (outer hole long stroke) Pump intake passage ball check seat size 115 to 120 inch diameter in body Pump discharge passage Restriction (under ball check) size 062 to 065 inch diameter in body Pump (discharge) jet size 0374 inch drill

Pump Adjustment 26/64 inch plunger travel—full throttle position medium stroke Use gauge T109 117S

Choke Offset butterfly type (with poppet valve)

Slow Closing Throttle Dash pot with discharge (by pass) size 0197 inch drill through plunger shaft

Vacuum Spark Port Slot (round end) type size 040 by 110 inch Bottom of port 012 to 018 inch above top edge of valve

Motor Tune-Up—Be Accurate! Always Use Feeler Gauges!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap	Set Breaker Points	Ignition Timing Breaker Points to Open	Set Valves (Hot)	Float Setting	Idle Adjustment Screw Setting
.035"	020"	(32)—T D C (33)—2° B T D C	Intake 010" Exhaust 018"	(Use Gauge T109-50) Solid Needle—5/64 Inch Spring Loaded Needle See Footnote on Page 2	½ to 1½ Turns Open 450 to 500 R. P M

CARBURETER ADJUSTMENTS

If carbureter loads up after considerable service check float level Wear on lip of float lever will raise float level Before adjusting float be sure float lever pin is firmly seated Reset float level by bending lip of float lever away from needle to raise level or bend lip toward needle to lower float level Bend vertical lip of float only

If motor stalls while idling set throttle lever adjusting screw so motor runs between 450 500 r p m Then set idle adjustment screw to specifications If these adjustments do not correct the trouble remove idle orifice tube and plug assembly Clean tube and passages with compressed air

If acceleration is not satisfactory, remove pump jet and clean with compressed air However it is usually advisable to replace the pump jet as its cost is nominal All jets must be seated gasoline tight Poor acceleration may be due to damaged or worn plunger leather in accelerating pump sediment in pump cylinder or clogged intake ball check at bottom of pump cylinder and discharge ball check in discharge passage If plunger is removed from cylinder use care in installing to avoid damage to plunger leather

Correct air fuel ratio is provided by a balance tube in the air horn The balance tube should be checked each time the carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type size or condition of air cleaner Should the cleaner become clogged the capacity will be reduced but the air fuel mixture ratio will not be changed

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Excessive richness may be caused by a clogged main vent tube After removal of rivet plug beneath float bowl with tool No T109 43 main vent tube can be removed and a new tube inserted with tool No T109 195 Care must be exercised in inserting new tube which must seat tightly Use new rivet to complete the installation

Pump Adjustment Remove air horn assembly back out throt tle adjustment screw and be sure pump operating link is in center hole of throttle shaft arm Place universal pump travel gauge T109 117S on edge of bowl cover so that lip of gauge extends over top of plunger shaft Turn knurled nut of gauge until lip contacts top of plunger shaft with throttle valve seated Take reading indicated on gauge Repeat with throttle valve wide open and plunger pushed to bottom of cylinder The dif ference in reading obtained should be '26 (26/64") plunger travel

Adjust by bending horizontal portion of pump lifter link Pump stroke adjustable for high or low temperatures Set to longest stroke for cold weather shorter stroke for hot weather driving

Dash-Pot Adjustment Engines operating in connection with fluid couplings frequently tend to stall during rapid deceleration unless the throttle closes slowly Slow throttle movement is necessary only during the last part of the closing The dash pot or decelerating pump acts as a snubber to the throttle allowing fast movement to almost closed position then slow closing from that point to the idle position

When the throttle is released the throttle valve closes rapidly until throttle shaft arm contacts the dash pot pick up arm Then the dash pot plunger must be pushed to the bottom of the cyl inder before the throttle can close A ball check located in the lower end of the plunger shaft seals the larger upper opening and the gasoline must leave the cylinder through the small metered hole in lower part of the shaft

This reduces the rate at which plunger can be forced to the bottom of the cylinder making the last part of the throttle clos ing very slow **The adjusting screw** (in top of bowl cover) **should be opened five full turns from closed position** for average con ditions Under extreme driving conditions greater openings may be necessary although extreme dash pot action will affect gear changes and not enough action will allow engine to stall

Be sure plunger leather is soft and pliable and effects a good seal against the cylinder wall

Chrysler Industrial—1955—Carbureter E7R1

WHEN SERVICING, USE GASKET ASSORTMENT No 242

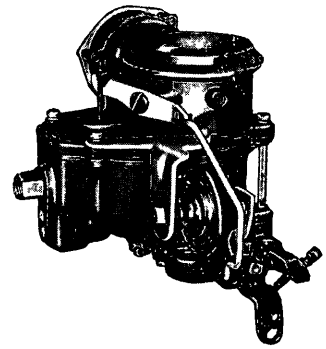
Part No	PART NAME	
1 784S	Body flange assembly	
1A-24	Flange gasket—for use with governor	
1A-31	Flange gasket—for use without governor	
2-87	Throttle valve	
3-700S	Throttle shaft and arm assembly	
4-431S	Throttle lever assembly	
6-686S	Air horn assembly	
7-105S	Choke valve assembly	
11B-17	Pump discharge passage plug	
11B-41	Rivet plug	
11B-79	Rivet plug	(2)
11B-108	Idle port rivet plug	
11B-138	Pump jet rivet plug	
11B-220	High speed passage rivet plug	
14-292S	Choke shaft and lever assembly	
20-26	Main metering jet gasket	
20-31	Needle seat gasket	
20-51	Step up jet gasket	
20-52	Step up piston gasket	
21-49S	Float and lever assembly	
24-23	Float lever pin	
25-102S	Needle and seat assembly	
25-202S	†Needle pin spring and seat assembly	
30A-37	Idle adjustment screw	
39-11	Valve attaching screw	(4)
48-75	Pump jet	
61-84	Idle adjustment screw spring	
61-119	Choke pull back spring	
61-135	Step up piston spring	
61-145	Pump spring	
61 244	Dash pot adjustment screw spring	
61-372	Dash pot pick up arm spring	
62-77S	Choke tube bracket assembly	
63-24	Float lever pin reta ner	
63-37	Pump cylinder ball retainer	
63-46	Spring retainer	
64-60S	Plunger and rod assembly (Identify by shaft No 49 120)	
64-74S	Dash pot plunger and rod assembly	
86-10	Lock washer	
86-15	Flange stud lock washer	(2)
101-10	Wire clamp screw	
101-32	Pump link screw	
101-141	Dash pot adjustment screw	
101-142S	Choke bracket attaching screw and washer assembly	
101-145S	Body flange attaching screw and washer assembly	(3)
101-150S	Air horn attaching screw and washer assembly	(4)
101-164	Throttle lever clamp screw	
101-279	Throttle adjusting screw	
105-11	Tube clamp screw	
105A-8	Choke tube clamp nut	
105A-13	Flange nut	(2)
105A-28	Clamp nut	
114-81	Dash pot pick up arm	
116-13	Pump intake check ball	
116-18	Pump discharge check ball	
117-62	Pump link	
117-70	Pump connector link	
117-144	Dash pot lifter	
121-90	Body gasket	
121-160	Body flange gasket	(2)
123-31S	Idle orifice tube and plug assembly	
145-13	Main vent tube	
149-56S	Step up jet assembly	
150-111	Dash pot pin	
150A-13	Pin spring	(2)
160-46S	Step up piston plate and rod assembly	
183-64	Insulator	
224-12S	Main metering jet assembly—3 sizes lean	
224-13S	Main metering jet assembly—standard	
224-14S	Main metering jet assembly—1 size lean	
224-15S	Main metering jet assembly—2 sizes lean	

†Available for service (Not used in production) When using a spring loaded needle and seat place a 050" feeler gauge between lip of float and intake needle pin With intake needle spring fully compressed top of float should be 5/64 inch (gauge T109 50) below top surface of carbureter body casting Adjust by bending lip on float

NOTE **Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.**

2162S-2162SA-2162SB
Power Flite Transmission

2180S-2180SA-2180SB
Standard Transmission



CHRYSLER "V-8" MODEL WINDSOR C-67 1955

Use 2162SB to replace 2180S-SA-SB—(remove dash pot)

BBD Dual Down-Draft Climatic® Control **Carbureters**
Nos. 2162S-2162SA-2162SB-2180S-2180SA-2180SB

CARBURETER SPECIFICATIONS

For Chrysler 8 Cylinder Engine 3 63 Inch Bore, 3 63 Inch Stroke

Dimensions Flange size 1¼ inch dual 4 bolt type
Throttle bore 1 7/16 inch I D
Primary venturi ⅜ inch I D
Main venturi 1 3/16 inch I D

Float Level See adjustments

Vent Inside balance vent tube to bowl in air horn above choke valve

Gasoline Intake Size No 38 (1015 inch) drill hole in needle seat

Idle Tube Jet size 0334 inch diameter
Idle bleed (in venturi cluster screw) size 063 inch drill
Idle restriction (in venturi cluster screw) size 0472 inch drill

Idle Port Upper slot type length 149 inch width 030 inch

Idle Port Opening 102 to 106 inch above upper edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw) Size 053 to 057 inch diameter

Set Idle Adjustment Screw ¼ to 1¼ turns open For richer mixture turn screw out With gear shift lever in neutral position idle engine between 450 and 500 RPM

Main Nozzle Nozzle is installed permanently DO NOT REMOVE

Main Vent Tube Side holes 6—bottom three holes (from closed end) size 0354 inch next two holes 0236 inch top hole 0197 inch diameter
Main vent in top of tube size 0275 inch diameter

Step Up Rod (Vacuum operated) 022 inch diameter

Metering Jet Calibrated to flow 356 to 364 cc per minute (Do not gauge for size if in doubt replace with new part)

Accelerating Pump Pump discharge jets (2—in venturi cluster) size 0275 inch drill
Intake ball check seat size 135 to 140 inch diameter
Discharge ball check seat size 110 to 120 inch diameter

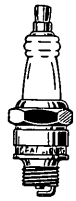
Pump Adjustments See adjustments

Choke Carter Climatic® Control set at index Butterfly type offset valve Choke heat suction hole in body size No 51 (1015 inch) drill
NOTE Thermostatic coil should not be removed from delay mounting post If defective replace with complete thermostatic coil and housing assembly

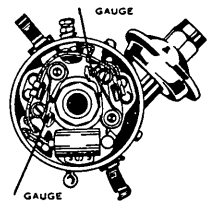
Vacuum Spark Port Horizontal round end type 030 by 110 inch Top of port to be 035 to 045 inch above upper edge of valve with valve closed tight

Motor Tune-Up—Be Accurate!

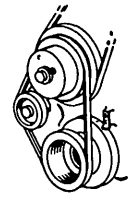
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



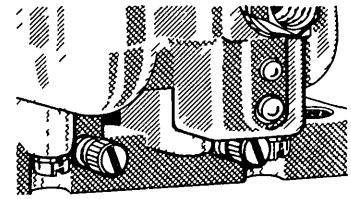
Spark Plug Gap 035"



Breaker Point Setting 017"



Ignition Timing Breaker Points to Open 6° B T D C



Idle Adjustment Screw Setting ¼ to 1¼ Turns Open

NOTE These cars equipped with Hydraulic Valve Lifters NO ADJUSTMENT

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CARBURETER ADJUSTMENTS

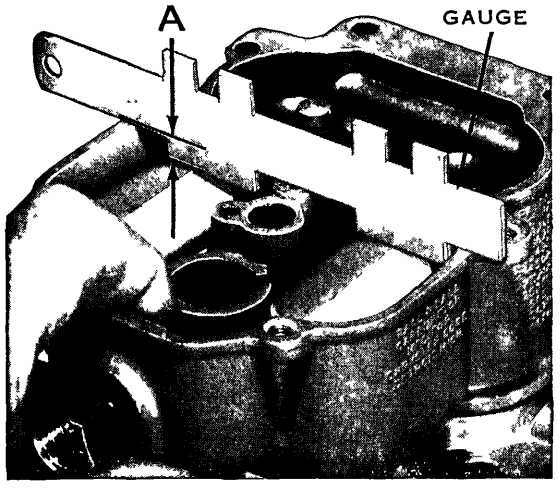


Figure 1
Float Adjustment

FLOAT ADJUSTMENT (Fig. 1):

This adjustment must be made with the bowl cover gasket and float pin retainer removed. Hold the lip on float arm against the seated intake needle, making sure the float pin is at the bottom of its guide slots. The distance (A) from the top surface of the body casting to the top of each float should be 7/32 inch (gauge T109-239). If one float is lower than the other, equalize by bending the float arm If both floats require the same correction, adjust by bending lip on float arm. The floats must not rub anywhere against the inner walls of the bowl. If necessary, bend float arms slightly to provide clearance on all sides of floats.

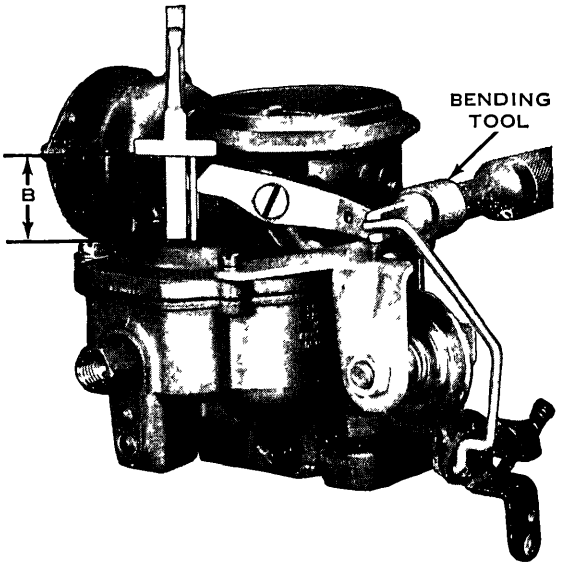


Figure 2
Pump Adjustment

PUMP ADJUSTMENT (Fig. 2):

Back out throttle adjustment screw and open choke valve so that throttle valves seat in bores of carbureter. Install throttle connector rod in outer hole (medium stroke) of throttle lever and inner hole of pump arm. The distance (B) from the top of the bowl cover to the top of plunger shaft (not pump arm) should be 54/64 inch. Adjust by bending pump connector rod (2180S-SA-SB) at lower angle; (2162S-SA-SB) at upper angle (use tool T109-213).

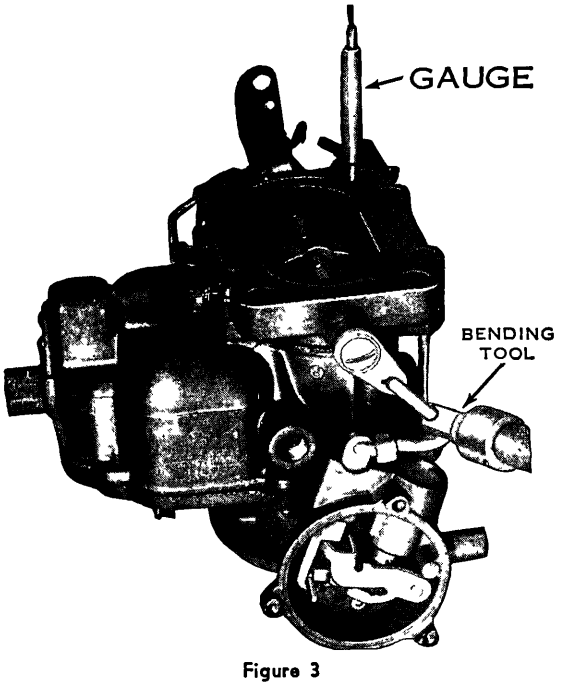


Figure 3
Fast Idl Adjustment

FAST IDLE ADJUSTMENT (Fig. 3):

Remove thermostatic coil housing assembly, gasket and baffle plate. With throttle adjusting screw backed out crack throttle valve and hold choke valve in fully closed position. Then close throttle. This will allow fast idle cam to revolve to fast idle position. There should now be .015"-.019" clearance (use gauge T109-44) between throttle valve and bore of carbureter (side opposite idle port). Adjust by bending the choke connector rod at lower angle (use tool T109-213).

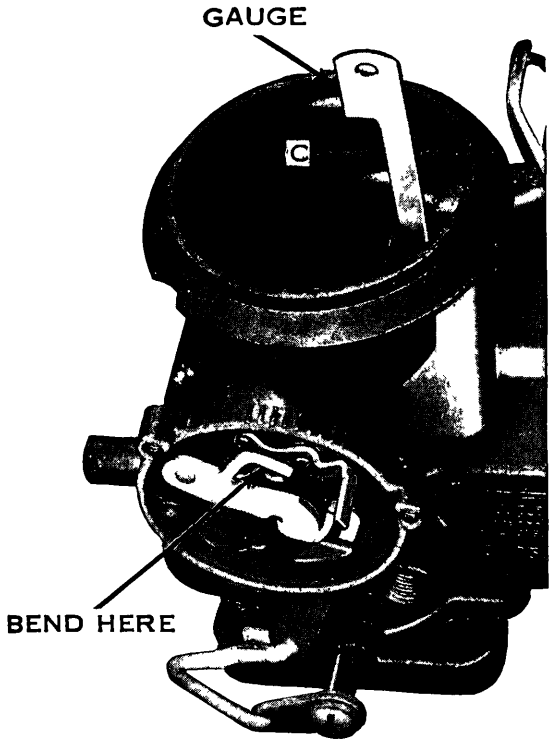


Figure 4
Unloader Adjustment

UNLOADER ADJUSTMENT (Fig. 4):

This adjustment must be made after the fast idle adjustment. Hold throttle valve wide open and close choke valve as far as possible without forcing. There should now be 1/4 inch clearance (C) (use gauge T109-31) between upper edge of choke valve and inner wall of air horn. Adjust by bending arm on the choke trip lever (use tool T109-214). When fast idle and unloader adjustments have been made, assemble baffle plate, coil housing gasket and thermostatic coil housing assembly on air horn. Set Climatic® Control at "Index", making sure that hook on coil has picked up coil shaft lever.

DASH POT (SLOW CLOSING THROTTLE) ADJUSTMENT (2162S-SA-SB ONLY) (Fig. 5):

The purpose of this unit is to prevent the car from stalling when the throttle is released rapidly. Maximum action is obtained by loosening lock nut and adjusting the dash pot unit so that the plunger shaft can be bottomed with a 1/16 inch gauge placed between shaft and operating lever (D) with throttle valves tightly closed.

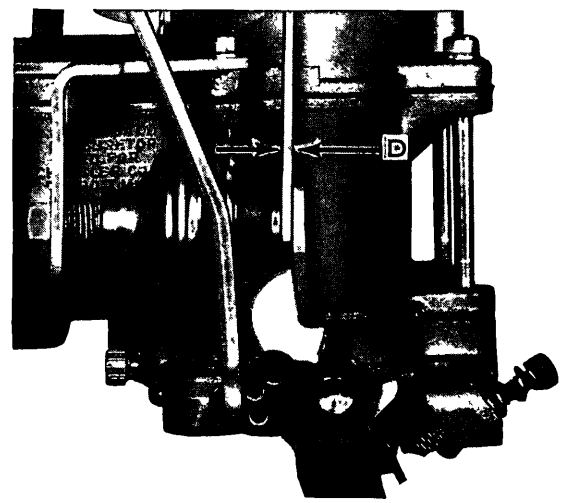
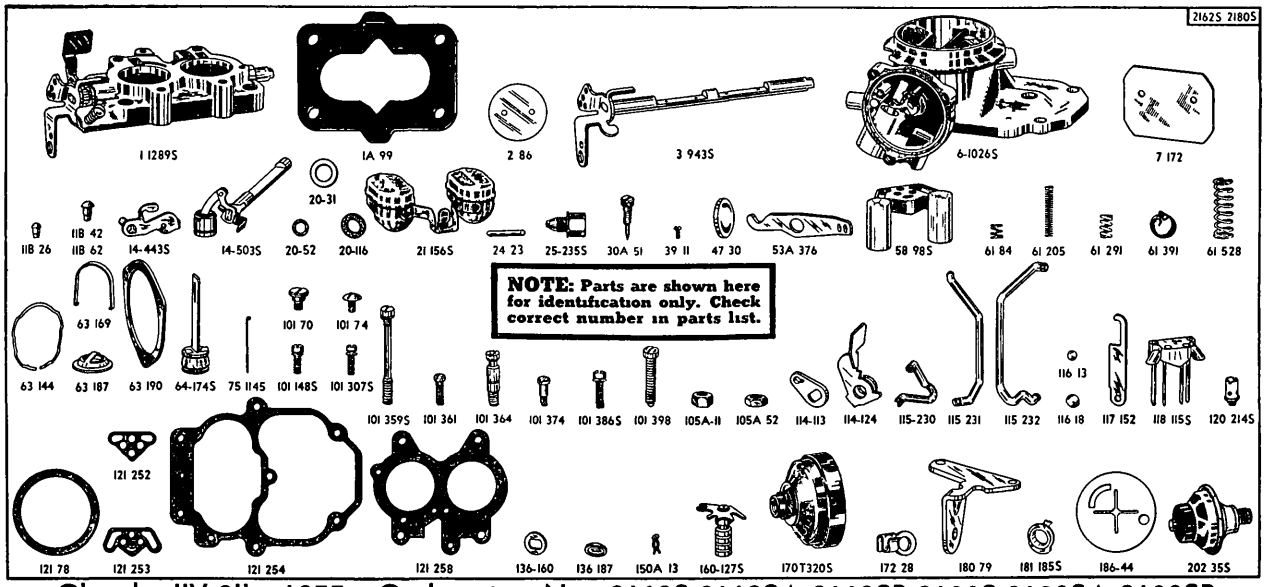


Figure 5
Dash Pot Adjustment



Chrysler "V-8"—1955—Carbureters Nos. 2162S-2162SA-2162SB-2180S-2180SA-2180SB

WHEN SERVICING, USE GASKET ASSORTMENT No. 265, REPAIR PACKAGE No. 1793A (2162S-SA-2180S-SA), No 1793A (WITH 156-29) (2162SB-2180SB)

PART NAMES IN CAPITAL LETTERS LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1235S	Body flange assembly (2180S) (Sup by 1 1289S)	
1-1239S	Body flange assembly (2162S) (Sup by 1 1289S)	
1-1289S	Body flange assembly	
1A-99	FLANGE GASKET	
2-86	Throttle valve	(2)
3-943S	Throttle shaft and lever assembly	
6-1026S	Air horn assembly	
7-172	Choke valve	
11B-26	Rivet plug (early production)	(2)
11B-42	Rivet plug (early production)	
11B-62	Rivet plug (early production)	
14-443S	Choke trip lever and pin assembly	
14-503S	Choke piston lever link and shaft assembly	
20-31	Needle seat gasket	
20-52	STEP UP PISTON GASKET	
20-116	Main metering jet gasket	(2)
21-156S	Float and lever assembly	
24-23	Float lever pin	
25-235S	NEEDLE AND SEAT ASSEMBLY	
25-291S	Needle and seat assembly (2162SB 2180SB) (Sup by 25 235S for service)	
30A-51	Idle adjustment screw	(2)
39-11	Choke and throttle valve attaching screw	(6)
47-30	Welsh plug	
53A-376	Pump arm	
58-98S	Venturi cluster and nozzle assembly	
61-84	Idle adjustment screw spring	(2)
61-205	Step up piston spring (2162S 2180S) (Sup by 61 549)	
61-291	Throttle adjusting screw spring	
61-391	Fast idle cam spring	
61-528	PUMP SPRING	
61-549	†STEP UP PISTON SPRING	
63-144	Delayer plate retainer ring	
63-169	FLOAT LEVER PIN RETAINER	
63-187	INTAKE CHECK BALL RETAINER	
63-190	Coil housing retainer	
64-174S	Pump plunger and rod assembly (2162S 2180S) (Sup by 64 184S)	
64-184S	†PUMP PLUNGER AND ROD ASSEMBLY	
75-1140	†STEP UP ROD	(2)
75-1145	Step up rod (2162S 2180S) (Sup by 75 1140)	(2)
101-70	Pump arm screw	
101-74	Throttle shaft arm attaching screw	
101-148S	Air horn attaching screw and washer assembly (2162S SA SB (2) (2180S SA SB)	(4)
101-307S	Air horn attaching screw and washer assembly (2162S SA SB)	(2)
101-359S	Body attaching screw and washer assembly	(2)
101-361	Coil housing attaching screw	(3)
101-364	Venturi cluster screw	(2)
101-374	Step up piston plate guide screw	
101-386S	Body flange attaching screw and washer assembly	(2)
101-398	Throttle adjusting screw	
103-14	Lead shot	
103-15	Lead shot (late production)	(2)
103-16	Lead shot (late production)	(2)
105A-11	Flange stud nut	(4)
105A-52	Dash pot lock nut (2162S SA SB)	
114-113	Throttle shaft arm	
114-124	Dash pot operating lever (2162S SA SB)	
115-230	Choke connector rod	
115-231	Throttle connector rod (2180S SA) (Sup by 115 262)	
115-232	Throttle connector rod (2162S SA) (Sup by 115 263)	
115-245	Throttle connector rod (2180S) (Sup by 115 231)	
115-246	Throttle connector rod (2162S) (Sup by 115 232)	
115-262	Throttle connector rod (2180S SA SB)	
115-263	Throttle connector rod (2162S SA SB)	
116-13	DISCHARGE CHECK BALL	
116-18	INTAKE CHECK BALL	
117-152	Fast idle link	
118-115S	Venturi cover and tube assembly (2162S 2180S) (Sup by 118 117S)	
118-117S	†VENTURI COVER AND TUBE ASSEMBLY	
120-212S	Main metering jet assembly—2 sizes lean	(2)
120-213S	Main metering jet assembly—1 size lean	(2)
120-214S	MAIN METERING JET ASSEMBLY—STANDARD	(2)
121-78	COIL HOUSING GASKET	
121-252	VENTURI HOUSING GASKET	
121-253	VENTURI COVER GASKET	
121-254	Body gasket (Sup by 121 274)	
121-258	BODY FLANGE GASKET	
121-274	BODY GASKET	
136-160	Throttle shaft washer	
136-187	Pump spring retainer washer	
150A-13	PIN SPRING	(2)
160-127S	STEP UP PISTON ROD AND PLATE ASSEMBLY	
170P320S	Thermostatic coil and housing assembly (Sup by 170T 320S)	
170T-320S	Thermostatic coil and housing assembly	
172-21	Choke connector rod retainer	
172-28	Choke connector rod retainer (Sup by 172 21)	
180-79	Dash pot bracket (2162S SA SB)	
181-185S	Fast idle cam assembly	
186-44	Choke baffle plate	
195-59U	Unitized package	
195 65U	Unitized package (consists of 2—75 990 2—101 413 1—107 48 2—120 213S 1—121 252 1—121 253 1—121 274 and 1—158 76) (2162SA SB 2180SA SB)	
195-66U	Unitized package (consists of 2—75 990 1—107 48 2—120 213S 1—121 274 and 1—158 76) (2162S 2180S)	
202-35S	Dash pot assembly (2162S SA SB)	

†These parts included in 195 59U to convert 2162S 2180S to 2162SA 2180SA

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used.

Form 5132E

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

CHRYSLER 2126S
December, 1954
Revised February, 1957

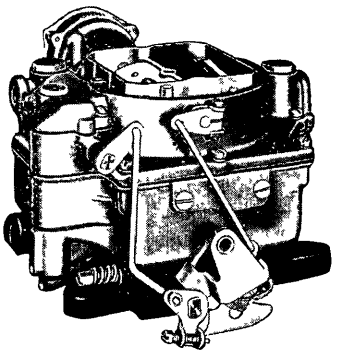
MODELS

CROWN IMPERIAL — C-70

CUSTOM IMPERIAL — C-69

NEW YORKER — C-68

WINDSOR — C-67



CHRYSLER "V-8"

1955

(With Power Flite Transmission)

2210S can also be used

WCFB Four-Bore Down-Draft Climatic® Control **Carbureter No. 2126S**

CARBURETER SPECIFICATIONS

For Chrysler 8 Cylinder Engine: 3.81 Inch Bore, 3.63 Inch Stroke (C-68, C-69, C-70)
For Chrysler 8 Cylinder Engine: 3.63 Inch Bore, 3.63 Inch Stroke (C-67)

Dimensions: Flange size, 1⅛ inch Four Bore—4 bolt type.
Primary venturi size, 11/32 inch I. D.
Main venturi, size, 1-1/16 inch.

Float Level: See adjustments.

Vents: Outside, 2 on primary side, 2 on secondary side. Inside, 2 on primary side, 3 on secondary side.

Gasoline Intake: Size No. 42 (.0935 inch) drill hole in needle seat.

Low Speed Jet Tube: Jet, size No. 69 (.02925 inch) drill.
By Pass, in body, size (.057 inch) drill.
Economizer, size (.0452 inch) drill.
Idle bleed, in body, size No. 44 (.086 inch) drill.

Idle Port: Upper, slot type. Primary, length .136 inch; width .030 inch. Secondary, length .101 inch; width .030 inch.

Idle Port Opening: Primary, .084 to .092 inch above top edge of valve with valve tightly closed. Secondary, .071 to .077 inch.

Lower Port: Primary (for idle adjustment screw), size No. 53 (.0595 inch) drill. Secondary, constant feed, size .040 inch diameter.

Set Idle Adjustment Screw: ¾ to 1¾ turns open. For richer mixture turn screw out. Do not idle engine below 500 RPM. in neutral.

Main Nozzle: Installed permanently. DO NOT REMOVE. Anti-percolating jet (to nozzle well), primary side, (to idle well) secondary side, size No. 70 (.028 inch) drill.

Metering Rod: Primary, economy step .072 inch diameter. Middle step tapers to .060 inch diameter. Power step .050 inch diameter. Secondary, none.

Metering Rod Jet: Primary, size .0935 inch diameter (for metering rod).
Secondary, size (.053 inch) diameter (no metering rod).

Metering Rod Setting: See adjustments.

Accelerating Pump: Discharge jet (twin) primary side only, size No. 70 (.028 inch) drill.
Intake ball check seat, size .115 to .120 inch diameter.
Discharge needle seat, size .070 inch diameter.
Relief passage (vent) to fuel chamber No. 42 (.0935 inch) drill.
Discharge relief plug, size No. 74 (.022 inch) drill.

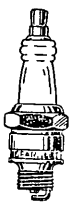
Pump Adjustment: See adjustments.

Choke: Carter Climatic® Control, set on index. Butterfly type, offset choke valve, primary side only. Choke heat suction hole, restriction in piston housing, size No. 40 (.098 inch) drill.

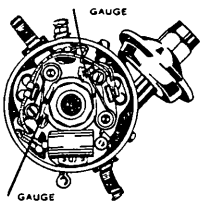
Vacuum Spark Port: Horizontal slot (round end) .045 by .110 inch. Top of port .032 to .042 inch above valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

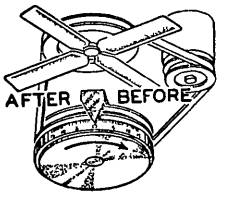
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



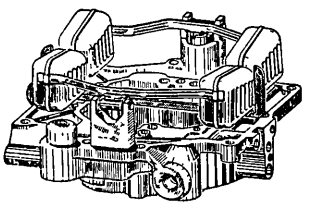
Spark Plug
Gap
.035"



Breaker Point
Setting
.017"

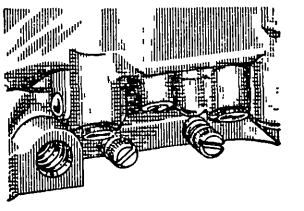


Ignition Timing
Breaker Points to Open:
6° B. T. D. C.



Float Setting

See Adjustments



Idle Adjustment
Screw Setting
¾ to 1¾
Turns Open

NOTE: These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT.

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CARBURETER
TRADE MARK REG. U. S. PAT. OFF.
MARCA REGISTRADA

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: Two separate float adjustments must be made—lateral and vertical.

Lateral Adjustment: With bowl cover assembly inverted, bowl cover gasket removed and float resting on seated needle, place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting. Side of floats should just clear the vertical uprights of float gauge. Adjustment should be made by bending arms of floats.

Vertical Adjustment: With float gauge in same position, floats should just clear the horizontal portion of gauge. Vertical distance between top of float and machined surface of casting must be 1/8 inch (gauge T109-232) for primary floats; and 3/16 inch (gauge T109-222) for secondary floats. Adjust by bending float arms.

FLOAT DROP ADJUSTMENT: With bowl cover held in upright position and measuring from center of floats, the distance between top of floats and bowl cover should be 5/8 inch for primary floats and 11/16 inch for secondary floats. Adjust by bending stop tabs on float bracket.

PUMP ADJUSTMENT: Install pump connector link in outer hole (long stroke) of pump arm, with ends extending outward toward countershaft arm. Back out throttle lever set screw until throttle valves seat in bores of carbureter. Hold straight edge across top of dust cover boss at pump arm. The flat on top of pump arm should be parallel to straight edge. Adjust by bending throttle connector rod at lower angle. (Use tool T109-213.)

METERING ROD ADJUSTMENT: Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows: 1. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw. 2. With metering rods in place, press down on vacumeter link until metering rods bottom in carbureter body casting. 3. Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link. Hold in place and carefully tighten clamp screw.

BOWL VAPOR VENT ADJUSTMENT: This adjustment should be made after completing pump and metering rod adjustments. Install dust cover and dust cover gasket. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter. There should be 1/16 inch (gauge T109-197) between lower edge of bowl vapor vent valve and dust cover. To adjust, remove dust cover and bend vapor vent arm.

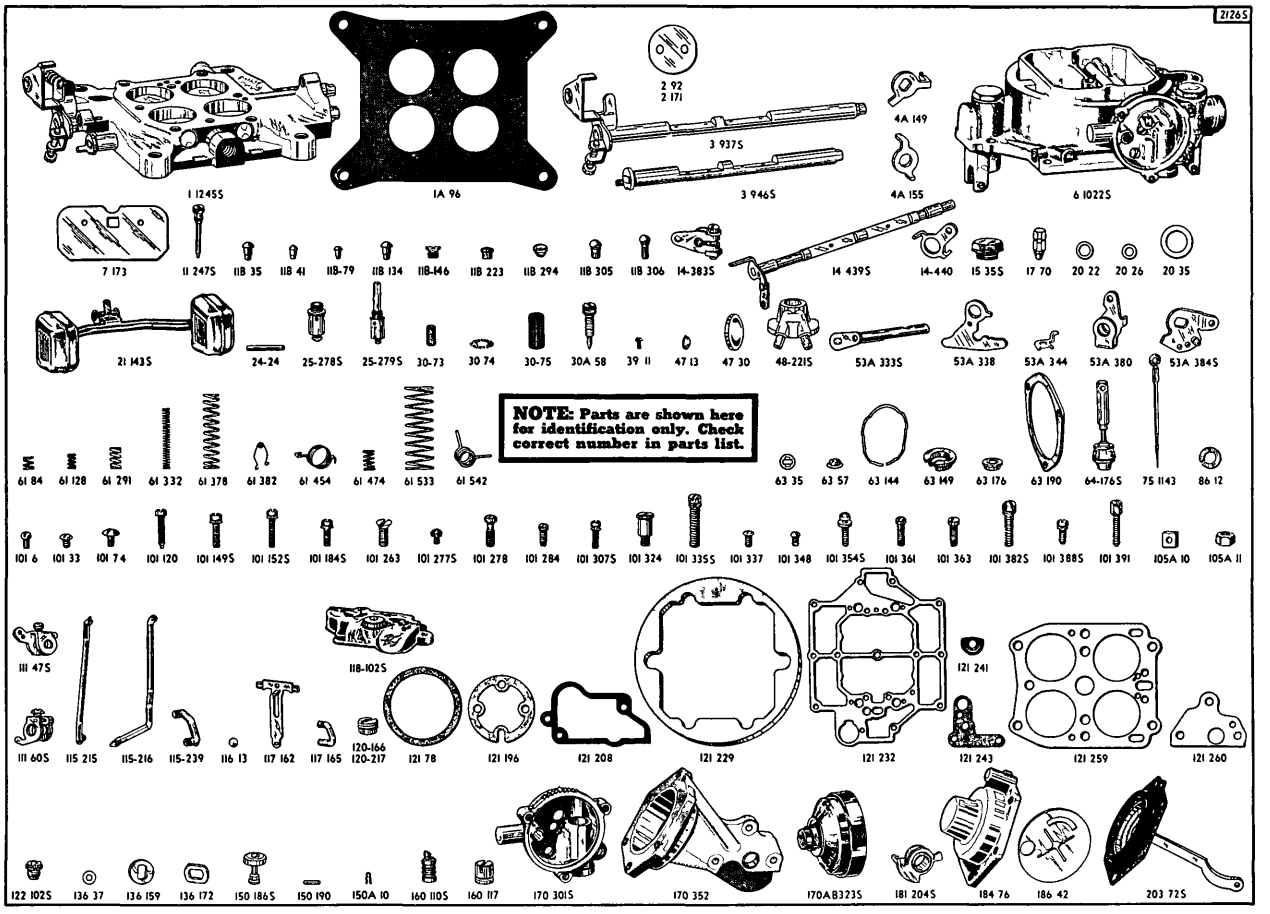
FAST IDLE ADJUSTMENT: (a) Loosen choke lever clamp screw on choke shaft. Insert .010 inch wire gauge (T109-200) between lip of fast idle cam and boss of flange casting. Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position — hold in place and tighten clamp screw. (b) With choke valve tightly closed, tighten fast idle adjusting screw until there is .018 inch (gauge T109-44) opening between throttle valve and bore of carbureter, side opposite idle port. Be sure fast idle adjusting screw is on high step of cam while making this adjustment.

UNLOADER ADJUSTMENT: With throttle wide open there should be 3/16 inch (gauge T109-28) clearance between upper edge of choke valve and inner wall of air horn. Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41).

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: This adjustment should be made after completing fast idle and secondary throttle lever adjustments. Crack throttle valves and manually open and close the choke valve. Tang on secondary throttle lever should freely engage in notch of lock-out dog. If necessary to adjust, bend tang on secondary throttle lever.

SECONDARY THROTTLE LEVER ADJUSTMENT

1. Block choke valve wide open.
2. Back out throttle lever stop screw so that primary valves seat in carbureter bores.
3. While holding the secondary throttle open slightly, close the primary valves. The primary and secondary valves should become tightly closed at the same time. Check to be sure that secondary throttle valves are tightly closed by attempting to open the secondary throttle valves while holding the primary throttle valves closed.
4. To adjust, bend the throttle operating rod slightly.



Chrysler "V8"—1955—Carbureter No. 2126S

WHEN SERVICING, USE GASKET ASSORTMENT No. 264; REPAIR PACKAGE No. 1786

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1244S	Body flange and vacuum unit assembly (complete)	
1-1245S	Body flange assembly	
1A-96	FLANGE GASKET	
2-92	Primary throttle valve	(2)
2-161	Secondary throttle valve (Sup by 2 171)	(2)
2-171	Secondary throttle valve	(2)
3-937S	Primary throttle shaft and lever assembly	
3-946S	Secondary throttle shaft and dog assembly	
4A-149	Throttle shaft dog	
4A-155	Primary throttle flex dog (loose)	
6-1022S	Air horn assembly	
7-173	Choke valve	
11-247S	LOW SPEED JET ASSEMBLY	(4)
11B-35	Rivet plug	(4)
11B-41	Rivet plug	(2)
11B 79	Rivet plug	(5)
11B-134	Rivet plug	
11B-146	Level sight plug	(2)
11B-194	Pipe plug	
11B-223	Nozzle passage rivet plug	(4)
11B-294	Idle port rivet plug	(4)
11B-305	Rivet plug	
11B-306	Rivet plug	(2)
14-383S	Choke lever and screw assembly	

Part No.	PART NAME	
14-439S	Choke piston lever link and shaft assembly	
14-440	Cam trip lever	
15-35S	Strainer nut assembly	(2)
17-70	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	(2)
20-26	Pump relief plug gasket	
20-35	BOWL STRAINER GASKET	(2)
21-143S	Float and lever assembly	(2)
24-24	Float lever pin	(2)
25-278S	PRIMARY NEEDLE AND SEAT ASSEMBLY	
25-279S	SECONDARY NEEDLE AND SEAT ASSEMBLY	
30-73	PRIMARY NEEDLE SEAT STRAINER	
30-74	SECONDARY FUEL INLET STRAINER	
30 75	BOWL STRAINER	
30A 58	Idle adjustment screw	(2)
39-11	Choke valve attaching screw	(2)
47-13	Welsh plug (spark port passage)	
47-30	Welsh plug (choke housing)	
48-221S	Pump jet and housing assembly	
53A-333S	Pump operating lever and countershaft assembly	
53A-338	Lockout arm	
53A-344	Vent arm	
53A-380	Primary throttle operating lever	
53A-384S	Secondary throttle operating lever assembly	

Part N .	PART NAME	
61-84	Idle adjustment screw spring	(2)
61-128	Connector rod spring	
61-291	Throttle adjusting screw spring	
61-332	VACUUM PISTON SPRING	
61-378	UPPER PUMP SPRING	
61-382	METERING ROD SPRING	
61-454	Fast idle cam spring	
61-474	Bowl vent spring	
61-533	Diaphragm return spring	
61-534	Throttle flex spring (Sup by 61 542)	
61-542	Throttle flex spring	
63-35	Connector rod spring retainer	
63-57	INTAKE CHECK BALL RETAINER	
63-144	Delayer plate retainer ring	
63-149	Bowl vent spring retainer	
63-176	Pump spring retainer	
63-190	Coil housing retainer	
64-176S	PUMP PLUNGER AND ROD ASSEMBLY	
75-1143	METERING ROD—STANDARD	(2)
75 1178	Metering rod—1 size lean	(2)
75-1179	Metering rod—2 sizes lean	(2)
86-12	Flange stud lock washer	(4)
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	(2)
101-120	Fast idle adjustment screw	
101-149S	Body flange attaching screw and washer assembly	
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-263	Diaphragm housing attaching screw	(3)
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet housing attaching screw	
101-284	Piston housing attaching screw	(2)
101-307S	Air horn attaching screw and washer assembly	(8)
101-324	Fast idle cam attaching screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-348	Primary throttle valve attaching screw	(4)
101-354S	Choke lever clamp screw assembly	
101-361	Coil housing attaching screw	(3)
101-363	Piston housing attaching screw	

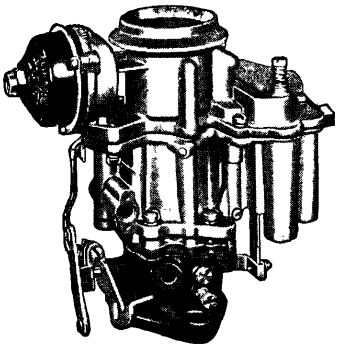
Part No.	PART NAME	
101-382S	Body flange attaching screw and washer assembly	(3)
101-388S	Diaphragm housing cover attaching screw and washer assembly	(6)
101-391	Throttle lever adjusting screw	
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
115-215	Choke connector rod	
115-216	THROTTLE CONNECTOR ROD	
115-239	Throttle operating rod	
116-13	PUMP INTAKE CHECK BALL	
117-162	Vacumeter piston link	
117-165	Pump connector link	
118-102S	Dust cover assembly	
120-166	PRIMARY METERING ROD JET	(2)
120-217	SECONDARY METERING JET	(2)
121-78	COIL HOUSING GASKET	
121-196	Delayer plate gasket	
121-208	DUST COVER GASKET	
121-229	AIR CLEANER GASKET	
121-232	AIR HORN GASKET	
121-241	PUMP JET HOUSING GASKET	
121-243	PISTON HOUSING GASKET	
121-259	BODY FLANGE GASKET	
121-260	D aphragm housing gasket (Sup by 121 297)	
121 297	DIAPHRAGM HOUSING GASKET	
122-102S	Pump relief plug assembly	
136-37	Throttle connector rod and operating rod washer	(5)
136-159	Primary throttle shaft washer	
136 172	Secondary throttle shaft washer	
150 186S	Pin and valve cap assembly	
150-190	Choke piston pin	
150A 10	PIN SPRING	(5)
158 74	Vacuum unit jet	
160-110S	Vacuum piston and pin assembly	
160-117	Choke piston	
170 301S	Piston housing and plug assembly	
170-352	Diaphragm housing	
170AB323S	Thermostatic coil and housing assembly	
181 204S	Fast idle cam assembly	
184-76	Diaphragm housing cap	
186-42	Choke baffle plate	
203-72S	Secondary throttle shaft diaphragm assembly	

NOTE **Figures in parentheses indicate number of pieces used in** one carbureter **Where no figure is shown only one is used**

CARBURETER
TRADE MARK REG U S PAT OFF
MARCA REGISTRADA

CARTER CARBURETOR
DIVISION OF ACF INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

CHRYSLER E9B1
November, 1953
Revised December, 1954



CHRYSLER 6

MODEL C-62

(With Power Flite Transmission)

1954

BB DOWN-DRAFT CLIMATIC® CONTROL CARBURETER No. E9B1

CARBURETER SPECIFICATIONS

For Chrysler 6 Cylinder Engine: 3-7/16 Inch Bore, 4¾ Inch Stroke

Dimensions: Flange Size 1½ inch S.A.E. Throttle bore, 1-11/16 inch. Main Venturi, 1-11/32 inch I.D.

Float Setting: See adjustments.

Vents: Outside, none. Inside, balance vent tube in air horn above choke valve.

Gasoline Intake: Size No. 44 (.086 inch) drill in needle seat.

Idle Orifice Tube: Jet, size .0295 in. diameter. Idle passage air bleed, in air horn, size No. 56 (.0465 inch) diameter. Restriction in body, size .0492 inch diameter.

Idle Port: Upper port, slot type, length .149 inch; width .030 inch.

Idle Port Opening: Top or port located .118 to .122 inch above top edge of valve, with valve tightly closed.

Lower Port (For Idle Adjustment Screw): Size .053 to .057 inch diameter.

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture turn screw out. Idle engine at 500 r.p.m.

Main Metering Jet: Calibrated to flow 315 to 319 cc per minute. (Do not gauge for size. If in doubt replace with new part.)

Main Vent: Through diffuser (air bleed inside bowl). Size .0315 inch diameter.

Main Vent Tube: Side holes, 4—.0354 inch diameter.

Step-Up Jet: Power orifice .0374 inch diameter.

Accelerating Pump: Pump intake passage, ball check seat, size .107 to .112 inch diameter. Pump discharge passage, restriction (under ball check), size .062 to .065 inch diameter. Pump (discharge) jet, size .0413 inch diameter.

Pump Adjustment: See adjustments.

Choke: Carter Climatic ® Control, set on Index. Choke heat suction hole, in flange insulator, size No. 38 (.1015 inch) drill.

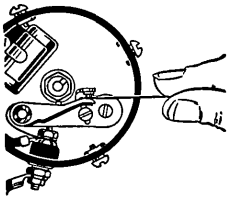
Vacuum Spark Port: Slot, round end type, size .040 by .110 inch. Top of port .012 to .018 inch above top edge of valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

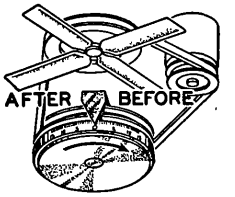
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and tests compression before adjusting carbureter.



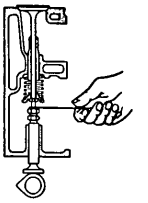
Spark Plug Gap .035"



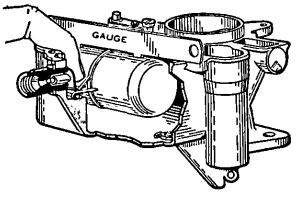
Breaker Point Setting .020"



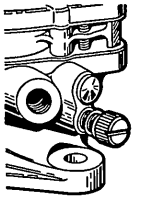
Ignition Timing Breaker Points to Open 2° B.T.D.C.



Valve Setting (Hot) Intake .008" Exhaust .010"



Float Setting 5/64 Inch ± 1/64 Inch (Use Gauge T109-50)



Idle Adjustment Screw Setting ½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

Float Adjustment: This adjustment must be made with the bowl cover gasket and float pin retainer removed. Hold the lip on float arm against the seated intake needle, making sure the float pin is at the bottom of its guide slots. The distance from the top surface of the body casting to the top of the float should be 5/64 inch (gauge T109-50). To adjust bend lip on float arm.

Pump Adjustment: No gauge is necessary. Pump lifter arm should be at a right angle to pump lifter shaft. Adjustment can be made by bending pump lifter arm up or down (Use tool T109-41). Pump Stroke adjustable for high or low temperatures. Set to longest stroke for cold weather, shorter stroke for hot weather driving.

Fast Idle Adjustment: Remove thermostatic coil housing assembly, gasket and baffle plate. With throttle adjusting screw backed out, crack throttle valve and hold choke valve in fully closed position. Then close throttle. This will allow fast idle cam to revolve to fast idle position. There should now be .015"-.019" clearance (use gauge T109-44) between throttle valve and bore of carbureter, side opposite idle port. Adjust by bending the choke connector rod at lower angle (use tool T109-41).

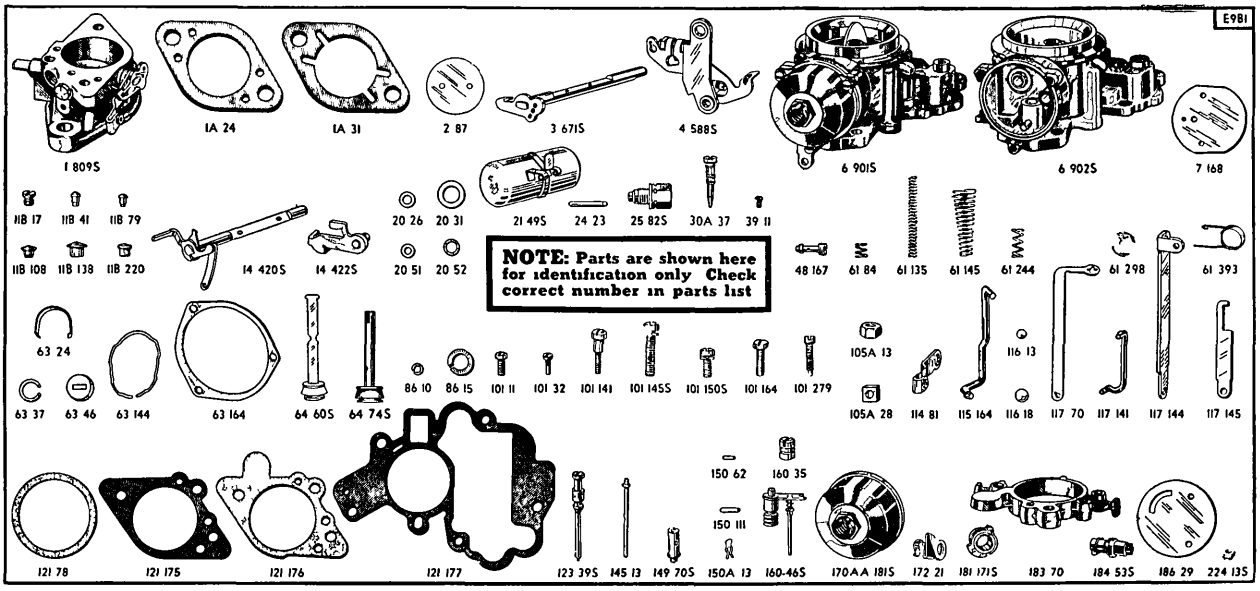
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CARBURETER
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Unloader Adjustment This adjustment must be made after the fast idle adjustment Hold throttle valve wide open and close choke valve as far as possible without forcing There should now be 5/32 clearance (use gauge T109 154) between upper edge of choke valve and inner wall of air horn Adjust by bending arm on choke trip lever (use tool T109 214) When fast idle and unloader adjustments have been made assemble baffle plate coil housing gasket and thermostatic coil housing assembly on air horn Set Climatic ® Control at Index making sure that hook on coil has picked up coil shaft lever

Dash-Pot Adjustment. Tighten adjustment screw — then turn counter clockwise 5 turns Further adjustment outward will increase the action of th dash-pot and lengthen its retarding effect



Chrysler 6—1954—Carbureter No. E9B1

WHEN SERVICING, USE GASKET ASSORTMENT No. 213A, REPAIR PACKAGE No. 1579

Part Names in CAPITAL LETTERS, Listed Below, Indicate Contents of Repair Package

Part No	PART NAME
1-809S	Body flange assembly
1A-24	Flange gasket—for use with governor
1A-31	FLANGE GASKET—FOR USE WITHOUT GOVERNOR
2-87	Throttle valve
3-671S	Throttle shaft and arm assembly
4 588S	Throttle lever assembly
6-901S	Air horn and Climatic® control assembly
6 902S	Air horn assembly
7-168	Choke valve
11B 17	Pump discharge passage plug
11B-41	Rivet plug
11B-79	Rivet plug (2)
11B-108	IDLE PORT RIVET PLUG
11B-138	PUMP JET RIVET PLUG
11B 220	HIGH SPEED PASSAGE RIVET PLUG
14-420S	Choke piston lever and shaft assembly
14-422S	Choke trip lever and pin assembly
20 26	Gasket
20-31	Needle seat gasket
20-51	Step up jet gasket
20-52	STEP UP PISTON GASKET
21-49S	Float and lever assembly
24-23	Float lever pin
25-82S	NEEDLE AND SEAT ASSEMBLY
30A-37	Idle adjustment screw
39-11	Choke and Throttle valve attaching screw (4)
48-167	PUMP JET
61-84	Idle adjustment screw spring
61-135	STEP UP PISTON SPRING
61-145	PUMP SPRING
61-244	Dash pot adjustment screw spring
61-298	Fast idle cam spring
61-393	Dash pot arm spring
63-24	FLOAT LEVER PIN RETAINER
63-37	INTAKE BALL CHECK RETAINER RING
63-46	Pump spring retainer
63-144	Delayer plate retainer ring
63-164	Coil housing retainer (Use with 170AA181S)
63-190	Coil housing retainer (Use with 170AA312S)
64-60S	PUMP PLUNGER AND ROD ASSEMBLY
64-74S	Dash pot plunger and rod assembly
86-10	Dash pot lifter link attaching screw lock washer
86-15	Flange stud lock washer (2)

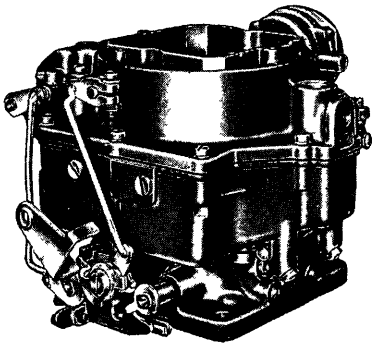
Part No	PART NAME
101-11	Coil housing attaching screw (Use with 170AA181S) (3)
101-32	Dash pot lifter link attaching screw
101-141	Dash pot adjustment screw
101-145S	Body flange attaching screw and washer assy (3)
101-150S	Attaching screw and washer assembly (5)
101-164	Throttle lever clamp screw
101-279	Throttle adjusting screw
101-361	Coil housing attaching screw (Use with 170AA312S) (3)
105A-13	Flange stud nut (2)
105A-28	Throttle lever clamp nut
114 81	Dash pot pick up arm
115-164	Choke connector rod
116-13	PUMP INTAKE CHECK BALL
116-18	PUMP DISCHARGE CHECK BALL
117-70	PUMP LIFTER LINK
117-141	PUMP LINK
117-144	Dash-pot lifter link
117-145	Fast idle link
121-78	THERMOSTATIC COIL HOUSING GASKET
121-175	BODY FLANGE GASKET
121-176	CARBURETER BODY TO INSULATOR GASKET
121-177	BODY GASKET
123-39S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY
145-13	MAIN VENT TUBE
149-70S	STEP-UP JET ASSEMBLY
150-62	Choke piston pin
150-111	Dash pot pin
150A-13	PIN SPRING
160-35	Choke piston
160-46S	STEP UP PISTON PLATE AND ROD ASSEMBLY
170AA181S	Thermostatic coil and housing assembly (Sup by 170AA312SU)
170AA312S	Thermostatic coil and housing assembly
170AA312SU	Unitized package (Consists of 1—170AA312S 1—63 190 3—101 361 and 1—121 78)
172-21	Choke connector rod retainer clip
181-171S	Fast idle cam assembly
183-70	Insulator
184-53S	Terminal block and retainer clip assembly
186-29	Choke baffle plate
224-13S	MAIN METERING JET ASSEMBLY—STANDARD
224-14S	Main metering jet assembly—1 size lean
224-15S	Main metering jet assembly—2 sizes lean

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where n figure is shown only ne is used.

MODELS
CROWN IMPERIAL—C-66

CUSTOM IMPERIAL—C-64

NEW YORKER DE LUXE—C-63-2



CHRYSLER "V-8"

1954

WCFB Four-Bore Down-Draft Climatic® Control **Carbureter No. 2041S**

CARBURETER SPECIFICATIONS

For Chrysler 8 Cylinder Engine: 3-13/16 Inch Bore, 3⅝ Inch Stroke

Dimensions: Flange size, 1⅛ inch Four Bore—bolt tye.
Primary venturi size, 11/32 inch I. D.
Main venturi size, 1-1/16 inch I. D.

Float Level: See adjustments.

Vents: Inside, primary side (2), secondary side (3). Outside, primary side (2) size No. 38 (.1015 inch) drill; secondary (2) size No. 42 (.0935 inch) drill.

Gasoline Intake: Size No. 42 (.0935 inch) drill hole in needle seat.

Low Speed Jet Tube: Jet, size No. 69 (.0292 inch) drill. By-pass (2 in low speed jet), size No. 56 (.0465 inch) drill Economizer in body size No. 56 (.0465 inch) drill.
Idle bleed, in body, size .059 inch diameter.

Idle Port: (Upper) Slot type. Primary, length .140 inch; width .030 inch. Secondary length .103 inch; width .030 inch.

Idle Port Opening: Primary, .091 to .097 inch, secondary, .067 to .073 inch, above upper edge of valve, with valve tightly closed.

Lower Port: Primary (For Idle Adjustment Screw) size No. 53 (.0595 inch) drill. Secondary (None).

Set Idle Adjustment Screw: 1 to 2 turns open. For richer mixture turn screw out. Do not idle engine below 500 R.P.M with shift lever in neutral position.

Main Nozzle: Installed permanently. Do not remove. Anti-percolating jet, size No. 70 (.028 inch) drill.

Metering Rod: Primary, economy step .071 inch diameter. Middle step tapers to .062 inch diameter. Power step .058 inch diameter.

(These rods designed with stabilizing flats on economy step.)
Secondary, none.

Metering Rod Jet: Primary, size .0935 inch diameter (for metering rod).

Secondary, size .0595 inch diameter (no metering rod).

Metering Rod Setting: See adjustments.

Accelerating Pump: Discharge jet (twin) primary only, size No 68 (.031 inch) drill. Intake ball check seat size .115 to .120 inch diameter. Discharge needle seat size .070 inch diameter.

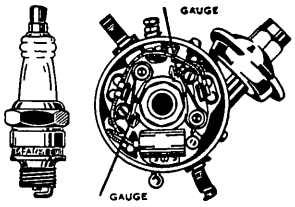
Pump Adjustment: See adjustments.

Choke: Carter Climatic® Control, set on Index. Butterfly type offset choke valve, primary side only. Choke heat suction hole, restriction in piston housing, size No. 40 (.098 inch) drill.

Vacuum Spark Port: Horizontal slot (round end) .045 x .110 inch. Top of port .035 to .045 inch above valve, with valve tightly closed.

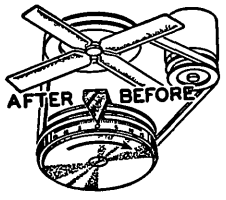
Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

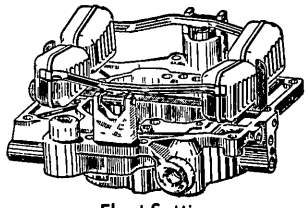


Spark Plug Gap .035"

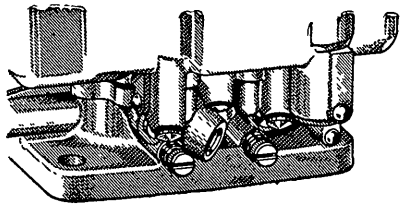
Breaker Point Setting .017"



Ignition Timing Breaker Points to Open: 4° B.T.D.C.



Float Setting Primary ⅛ Inch (Use Gauge T109-232) Secondary ¼ Inch (Use Gauge T109-223)



Idle Adjustment Screw Setting 1 t 2 Turns Open

NOTE: These cars equipped with hydraulic valve lifters.—No adjustment.

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CARBURETER ADJUSTMENTS

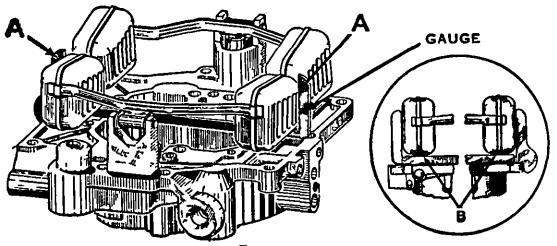


Figure 1
Float Adjustment

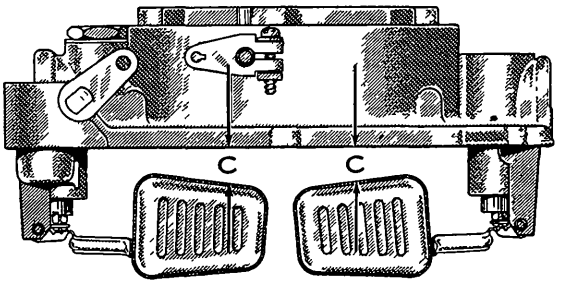


Figure 2
Float Drop Adjustment

FLOAT ADJUSTMENT (Fig. 1):

Two separate float adjustments must be be made—lateral and vertical

Lateral Adjustment: With bowl cover assembly inverted, bowl cover gasket removed and float resting on seated needle place float gauge directly under center of floats with notched portions of gauge fitted over edges of casting Side of floats should just clear the vertical upright of float gauge (A) Adjustment should be made by bending arms of floats

Vertical Adjustment: With float gauge in same position, floats should just clear the horizontal portion of gauge The vertical distance (B) between top of float and machined surface of casting must be 1/8 inch (gauge T109-232) for primary floats and 1/4 inch (gauge T109 223) for secondary floats Adjust by bending float arms

FLOAT DROP ADJUSTMENT (Fig. 2):

With bowl cover held in upright position and measuring from center of float (C), the distance between top of floats and bowl cover should be 5/8 inch for primary floats and 3/4 inch for secondary floats Adjust by bending stop tabs on float bracket

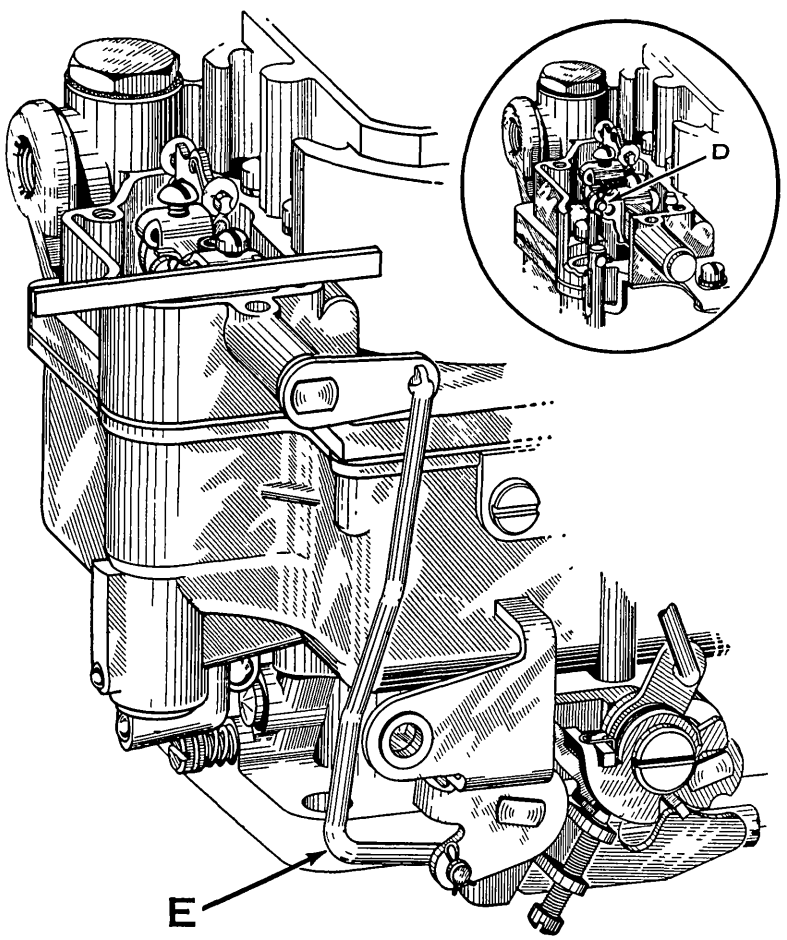


Figure 3
Pump Adjustment

PUMP ADJUSTMENT (Fig. 3):

Install pump connector link in outer hole (long stroke) of pump arm (D), with ends extending toward countershaft arm. Back out throttle lever set screw until throttle valves seat in bores of carbureter. Hold straight edge across top of dust cover boss at pump arm. The flat on top of pump arm should be parallel to straight edge. Adjust by bending throttle connector rod at lower angle (E). (Use tool T109-213).

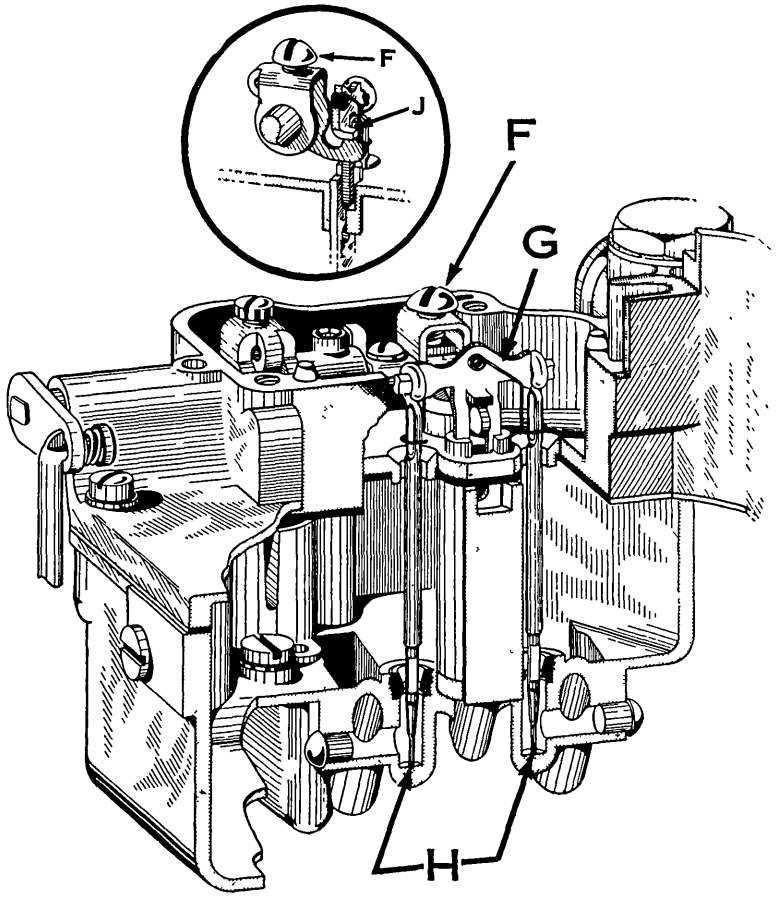


Figure 4
Metering Rod Adjustment

METERING ROD ADJUSTMENT (Fig. 4):
Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows: 1. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw (F) 2. With metering rods in place, press down on vacumeter link (G) until metering rods bottom in carbureter body casting (H). 3. Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link (J). Hold in place and carefully tighten clamp screw (F).

BOWL VAPOR VENT ADJUSTMENT (Fig. 5):
This adjustment should be made after completing pump and metering rod adjustments. Install dust cover gasket and dust cover. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter. There should be 1/16 inch (K) (gauge T109-197) between lower edge of bowl vapor vent valve and dust cover. To adjust, remove dust cover and bend vapor vent arm (L).

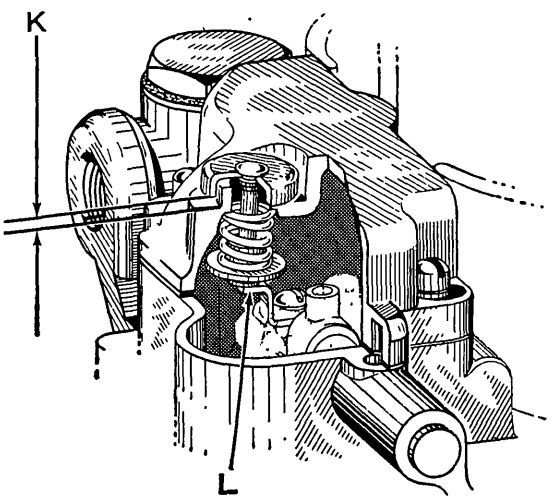


Figure 5
Bowl Vapor Vent Adjustment

FAST IDLE AND SECONDARY THROTTLE LOCKOUT ADJUSTMENT (Fig. 6):
1. Preliminary Adjustment: Loosen choke clamp screw (M) on choke shaft. Insert .020 inch feeler gauge (T109-29) between lip of fast idle cam and boss of flange casting (N). Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw (M). 2. Secondary Throttle Lock-Out Adjustment: (a) With choke valve tightly closed, tighten fast idle adjusting screw until there is .015 inch (P) (gauge T109-44) opening between primary throttle valve and bore of carbureter (side opposite idle port). Lock pawl should now be in unlocked position; if not, adjust by bending tang (R) on lock pawl (use bending tool T109-105). (b) Hold primary throttle valves half way open. Open choke valve fully, then open primary throttle valves all the way. Tang (S) on secondary throttle arm should engage in notch (T) on lock out lever (U) preventing secondary throttle shaft movement. Keep choke valve in wide open position. Close primary throttle valves so that lock pawl is unlocked, then open primary throttle valves all the way. Lock-out lever (U) should fall free allowing secondary throttle valves to be open before primary throttle valves are fully open. If necessary, bend tang (S) on secondary throttle lever to provide clearance for proper operation of lock-out lever.

Part N .	PART NAME	
61-413	UPPER PUMP SPRING	
61-453	Throttle flex spring	
61-454	Fast idle cam spring	
61-474	Bowl vent spring	
61-483	SECONDARY THROTTLE RETURN SPRING	
63-35	CONNECTOR ROD SPRING RETAINER	
63-57	INTAKE BALL CHECK RETAINER	
63-144	Delayer plate retainer ring	
63-149	Bowl vent spring retainer	
63-164	Thermostatic coil housing retainer (Use with 170AB303S)	
63-176	Pump spring retainer	
63-190	Thermostatic coil housing retainer (Use with 170AB323S)	
64-145S	PUMP PLUNGER AND ROD ASSEMBLY	
75-941	Metering rod (standard) (Sup by 75 1106)	(2)
75-963U	Metering rod and jet unit—1 size lean (consists of 2—75 961 2—120 193)	
75-964U	Metering rod and jet unit—2 sizes lean (consists of 2—75 962 2—120 193)	
75-1106	METERING ROD (STANDARD)	(2)
86-12	Flange stud lock washer	(4)
101-6	Pump arm clamp screw	
101-10	Pump arm clamp screw (Sup by 101 6)	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	(2)
101-136	Thermostatic coil housing attaching screw (Use with 170AB303S)	(3)
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	
101-160S	Air horn attaching screw and washer assembly (early prod)	(8)
101-184S	Dust cover attaching screw and washer assembly	(2)
101-276	Fast idle adjustment screw (Sup by 101 383)	
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet housing attaching screw	
101-284	Coil housing attaching screw	(2)
101-296	Fast idle adjustment screw	
101-307S	Air horn attaching screw and washer assembly (late prod)	(8)
101-324	Fast idle cam screw	
101-332	Throttle lever adjustment screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-348	Primary throttle valve attaching screw	(4)

Part No.	PART NAME	
101-354S	Choke lever clamp screw assembly	
101-361	Thermostatic coil housing attaching screw (Use with 170AB323S)	
101-363	Piston housing attaching screw	
101-383	Fast idle adjustment screw (Sup by 101 296)	
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
114-96	Inner throttle shaft arm	
114-97	Outer throttle shaft arm	
115-189	Choke connector rod	
115-197	THROTTLE CONNECTOR ROD	
115-208	Throttle operating rod	
116-13	PUMP INTAKE CHECK BALL	
117-155	Vacumeter piston link	
117-165	PUMP CONNECTOR LINK	
118-98S	Dust cover assembly	
120-166	PRIMARY METERING ROD JET	(2)
120-185	Secondary metering jet (Sup by 120 196)	(2)
120-196	SECONDARY METERING JET	(2)
121-78	COIL HOUSING GASKET	
121-196	Delayer plate gasket	
121-208	DUST COVER GASKET	
121-229	AIR CLEANER GASKET	
121-232	AIR HORN GASKET	
121-241	PUMP JET HOUSING GASKET	
121-242	BODY FLANGE GASKET	
121-243	PISTON HOUSING GASKET	
136-37	Throttle operating rod washer	(5)
136-84	Throttle shaft spring washer	
136-159	Primary throttle shaft washer	
136-172	Secondary throttle shaft washer	
150-186S	Pin and valve cap assembly	
150-190	Choke piston pin	
150A-10	PIN SPRING	(5)
160-110S	Vacuum piston and pin assembly	
160-117	Choke piston	
170-301S	Piston housing and plug assembly	
170AB303S	Thermostatic coil and housing assembly (Sup by 170AB323SU)	
170AB323S	Thermostatic coil and housing assembly	
170AB323SU	Unitized package (consists of 1—170AB323S 1—63 190 3—101 361 and 1—121 78)	
181-204S	Fast idle cam assembly	
186-42	Choke baffle plate	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

CARBURETER
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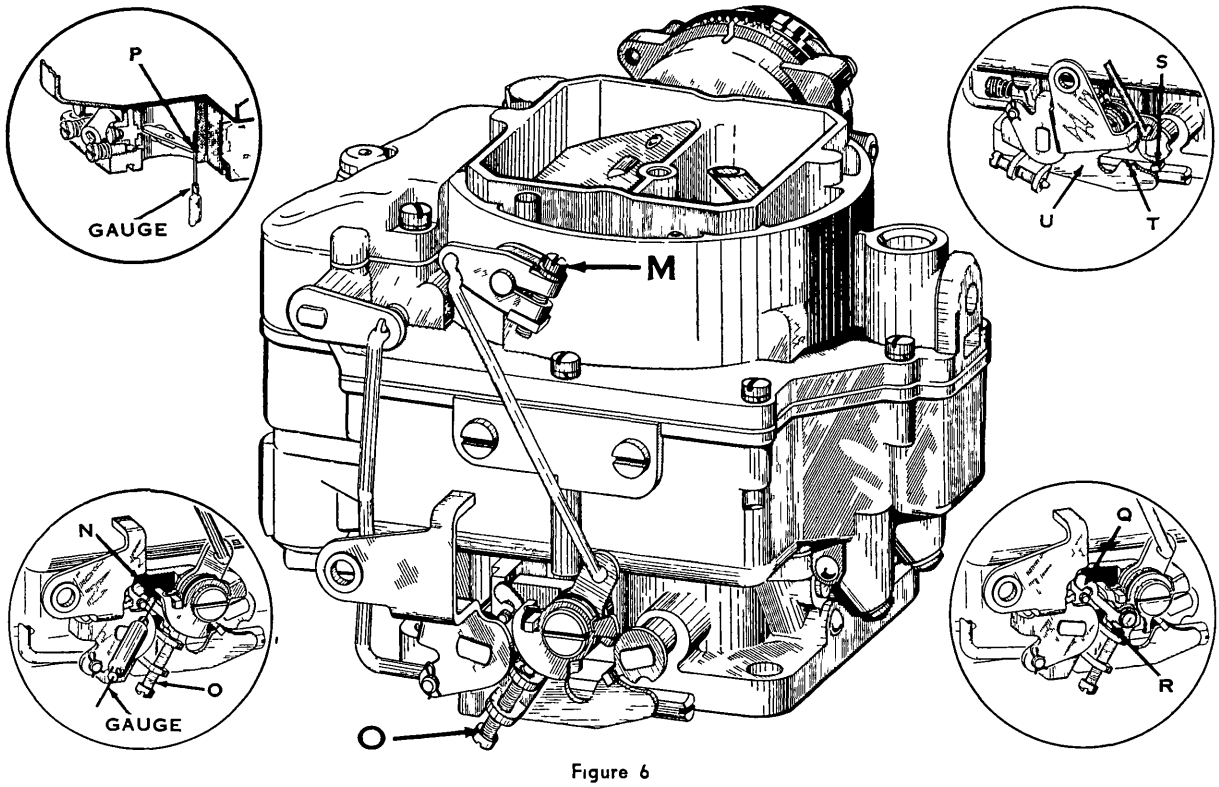


Figure 6
Fast Idle and Secondary Throttle Lock-Out Adjustment

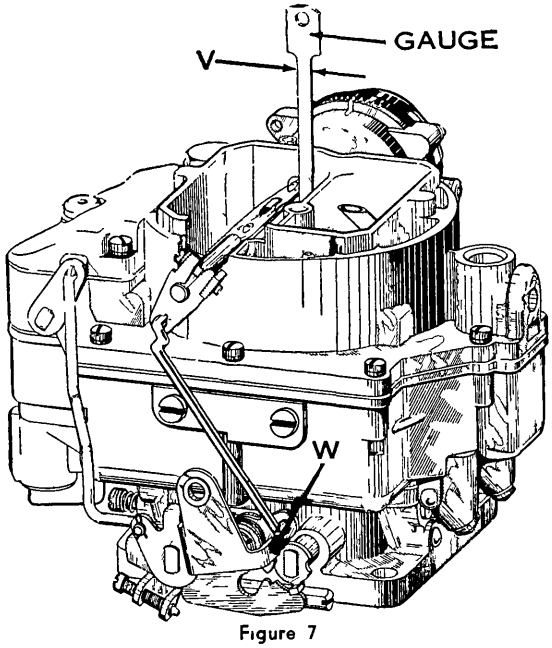


Figure 7
Unloader Adjustment

UNLOADER ADJUSTMENT (Fig. 7)

With throttle wide open there should be 3/16 inch (gauge T109 28) clearance (V) between upper edge of choke valve and inner wall of air horn Adjust by bending unloader lip (W) on throttle shaft lever (use bending tool T109 41)

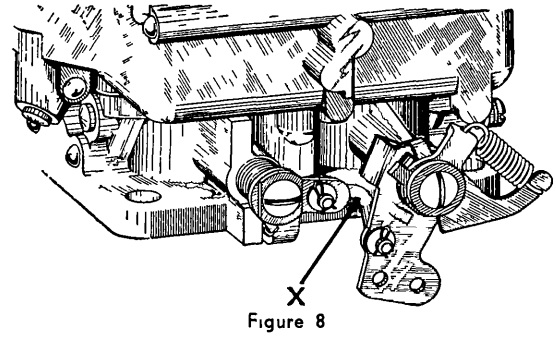
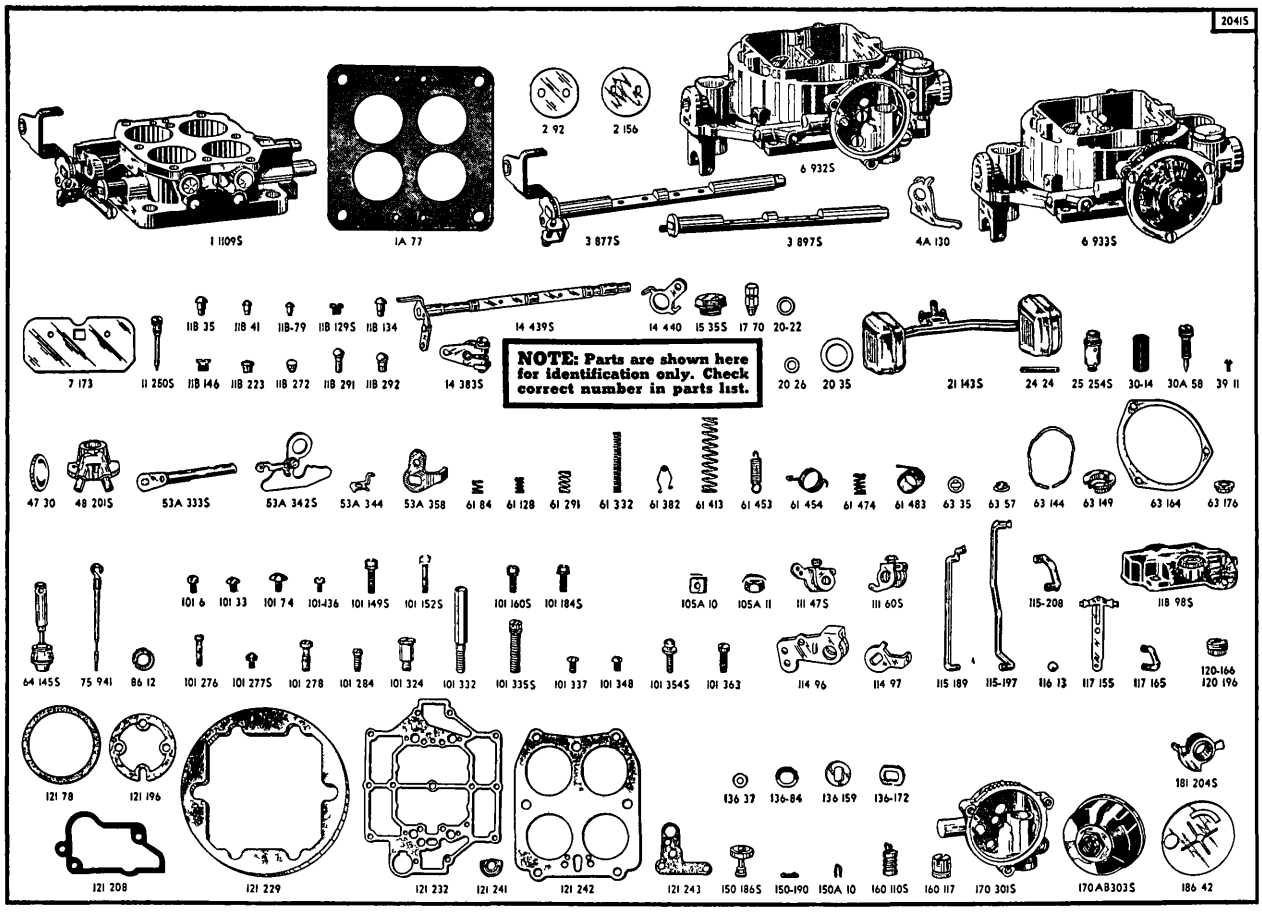


Figure 8
Secondary Throttle Lever Adjustment

SECONDARY THROTTLE LEVER ADJUSTMENT (Fig. 8)

Primary and secondary throttle valves should reach wide open position at the same time To adjust bend throttle operating rod at upper angle (X) (Use bending tool T109-213)



Chrysler "V8"—1954—Carbureter No. 2041S

WHEN SERVICING, USE GASKET ASSORTMENT No. 244; REPAIR PACKAGE No. 1752

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

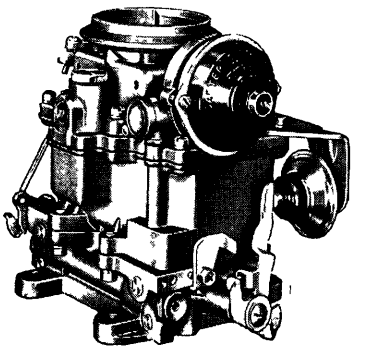
Part No.	PART NAME	
1-1109S	Body flange assembly	
1A-77	FLANGE GASKET	
2-92	Primary throttle valve	(2)
2-156	Secondary throttle valve	(2)
3-877S	Primary throttle shaft and lever assembly	
3-897S	Secondary throttle shaft and dog assembly	
4A-130	Throttle shaft dog	
6-932S	Air horn assembly	
6-933S	Air horn and Climatic® control assembly	
7-173	Choke valve	
11-250S	LOW SPEED JET ASSEMBLY	(4)
11B-35	Rivet plug (early prod (5) (late prod)	(6)
11B-41	Rivet plug	(2)
11B-79	Rivet plug	(4)
11B-129S	Pump discharge passage plug assembly	
11B-134	Rivet plug	
11B-146	Level sight plug	(2)
11B-223	Nozzle passage rivet plug	(8)
11B-272	Rivet plug (early prod)	
11B-291	Rivet plug	(2)
11B-292	Rivet plug	
14-383S	Choke lever and screw assembly	
14-439S	Choke piston lever, link and shaft assembly	

Part No.	PART NAME	
14-440	Cam trip lever	
15-35S	Strainer nut assembly	
17-70	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	(2)
20-26	Pump passage plug gasket	
20-35	BOWL STRAINER GASKET	
21-143S	Float and lever assembly	(2)
24-24	Float lever pin	(2)
25-254S	NEEDLE AND SEAT ASSEMBLY	(2)
30-14	BOWL STRAINER	
30A-58	Idle° adjustment screw	(2)
39-11	Choke valve attaching screw	(2)
47-30	Welsh plug	
48-201S	Pump jet and housing assembly	
53A-333S	Pump operating lever and countershaft assembly	
53A-342S	Lockout arm and pawl assembly	
53A-344	Vent arm	
53A-358	Secondary operating lever	
61-84	Idle adjustment screw spring	(2)
61-128	CONNECTOR ROD SPRING	
61-291	Throttle lever adjusting screw spring	
61-332	VACUUM PISTON SPRING	
61-382	METERING ROD SPRING	

With

Power Flite

Transmission



CHRYSLER

MODELS
CUSTOM IMPERIAL C-58,
CROWN IMPERIAL C-59
1953

NEW YORKER C-63-1
1954

WCD DOWN-DRAFT CLIMATIC® CONTROL **CARBURETERS Nos. 2039S-2039SA**

CARBURETER SPECIFICATIONS

For Chrysler 8 Cylinder Engine: 3-13/16 Inch Bore, 3⅝ Inch Stroke

Dimensions: Flange size 1¼ inch S A E dual, 4 bolt (water jacket) type
Throttle bore, 1-7/16 inch
Primary venturi, 11/32 inch I D
Main venturi, 1-3/16 inch I D

Float Level: See adjustments

Vents: Inside None. Outside Two—3/16 inch diameter vents in air horn

Gasoline Intake: Size No 38 (1015 inch) drill hole in needle seat

Low Speed Jet Tube: Jet size 0295 inch drill Bypass, size No 58 (042 inch) drill Economizer size 0452 inch drill Idle bleed, size No 58 (042 inch) drill

Idle Port: Upper port, length .175 inch; width 030 inch

Idle Port Opening: .136 to .140 inch above upper edge of valve with valve tightly closed.

Lower Port (For Idle Adjustment Screw): Size .0615 to 0655 inch diameter

Set Idle Adjustment Screw: ½ to 1 turn open For richer mixture turn screw out With gear shift lever in neutral position idle engine at 500 r p m

Main Nozzle: Nozzles are installed permanently Do not remove

Metering Rod: Vacumeter type Economy step 0695 inch diameter Middle step tapers to 0665 inch diameter Power step 056 inch diameter These rods designed with stabilizing flats on economy step

Metering Rod Jet: 089 inch diameter

Metering Rod Setting: See adjustments

Accelerating Pump: Pump discharge jet (twin) size (0315 inch) drill Intake ball check seat size No 32 (116 inch) drill Discharge needle seat size No 50 (070 inch) drill

Pump Adjustment: See adjustments

Choke: Carter Climatic® Control—Set at index Butterfly type, offset valve Choke heat suction hole in bowl cover size No 43 (089 inch) drill

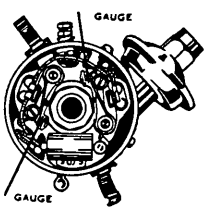
Vacuum Spark Port: 030 x .110 inch Top of port to be 035 to 041 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

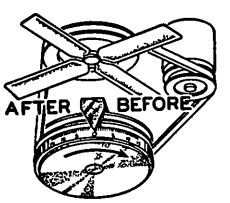
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



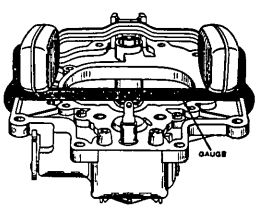
Spark Plug Gap .035"



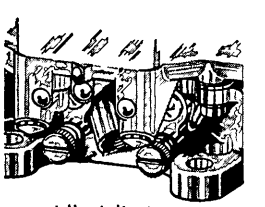
Breaker Point Setting .017"



Ignition Timing Breaker Points to Open: 4° B. T. D. C. At Vibration Damper



Float Setting (See Adjustments)



Idle Adjustment Screw Setting ½ to 1 Turn Open

NOTE· These cars equipped with hydraulic valve lifters—No adjustment.

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: Two separate float adjustments must be made—lateral and vertical.

Lateral Adjustment: With bowl cover assembly inverted, bowl cover gasket removed and float resting on seated needle, place float gauge T109-205 directly under float with notched portions of gauge fitted over edges of casting. Sides of floats should barely touch the vertical uprights of float gauge. Adjustment should be made by bending arms of floats.

Vertical Adjustment: With float gauge in same position shown, floats should just clear the horizontal portion of gauge. Vertical distance between top of float and machined surface of casting should be 11/64 inch (gauge T109-205). Adjustment can be made by bending arms of floats. Carefully remove float assembly, install bowl cover gasket and then reinstall float assembly. Floats should have a free movement of 1/2" at free end of float. Adjust by bending lip of float bracket. A fast check of the fuel level can be made on the car by removing the inspection hole plug in the side of carbureter body. Fuel should just run out of the hole with engine idling.

PUMP ADJUSTMENT: The total distance the plunger head (not shaft) moves from closed to wide open throttle position determines the amount of fuel discharged. Correct pump plunger travel is important and should be checked each time the carbureter is disassembled or when leaner than standard metering rods are installed. Procedure is as follows: Install pump connector link in outer hole (long stroke) of pump arm. Back out throttle lever set screw until throttle valves seat in bores of carbureter. Be sure fast idle adjusting screw does not hold throttle open. With air horn assembly removed, place Universal pump travel gauge T109-117S, inverted on edge of dust cover boss of bowl cover. Turn knurled nut of gauge until finger just touches upper end of plunger shaft. Number indicated on gauge should be "29". Hold the gauge vertical to insure correct reading. Adjust by bending throttle connector rod at upper angle. (Use tool T109-213.)

Optional Adjustment: With throttle valves seated in bores of carbureter, the distance from the top of the plunger shaft to the top of the dust cover boss should be 17/64". Adjust as mentioned above.

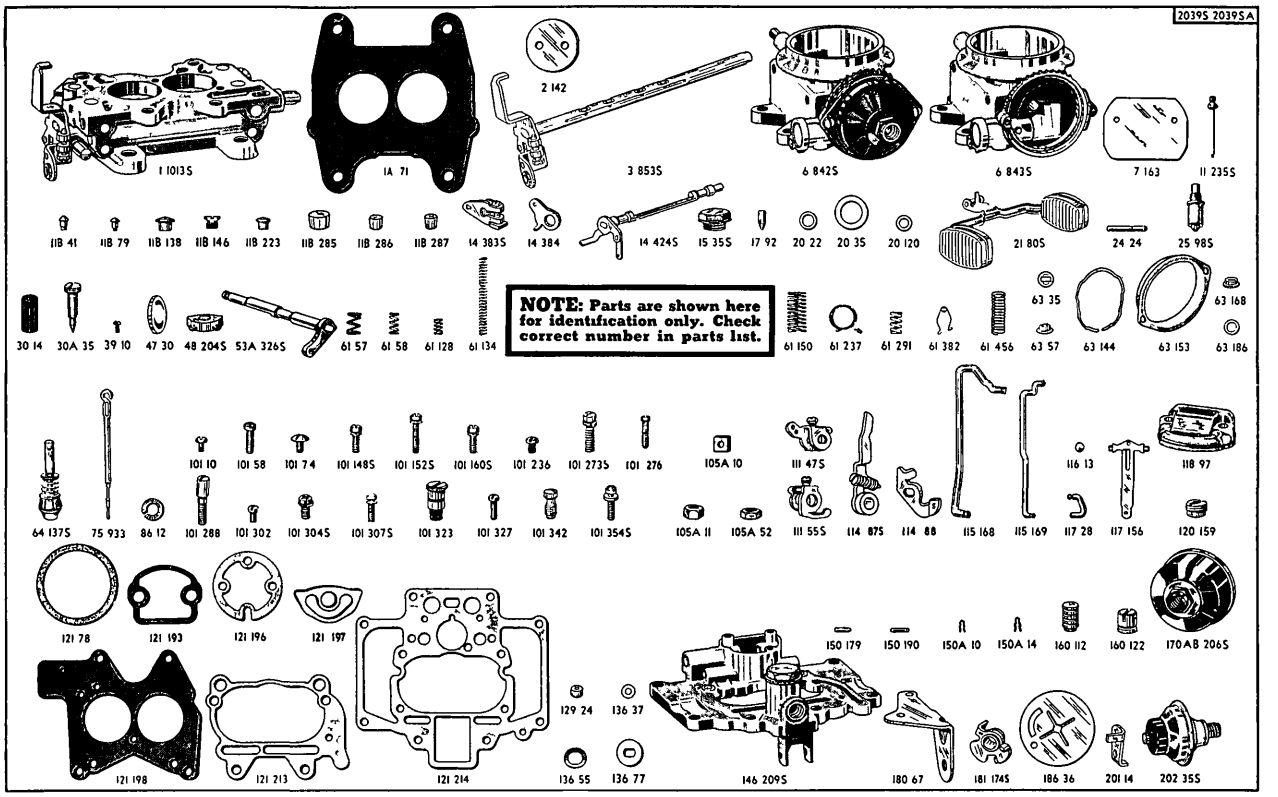
METERING ROD ADJUSTMENT: Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows: Backout throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw. With metering rods in place, press down on vacumeter link until metering rods bottom in carbureter body casting. Holding rods in downward position and throttle valves seated revolve metering rod arm until finger on arm contacts lip of vacumeter link. Hold in place and carefully tighten clamp screw.

FAST IDLE ADJUSTMENT: 1. Loosen choke lever clamp screw on choke shaft. Insert .040" feeler gauge T109-193 between lip of fast idle cam and boss of flange casting. Hold choke valve tightly closed and take slack out of linkage by pressing choke lever toward closed position—hold in place and tighten clamp screw. 2. With choke valve tightly closed, tighten fast idle adjusting screw until there is .017"-.021" opening (wire gauge T109-44 may be used) between throttle valve and bore of carbureter (side opposite idle port). Be sure fast idle adjusting screw is on high step of cam while making this adjustment.

UNLOADER ADJUSTMENT: With throttle wide open there should be 7/32" clearance between upper edge of choke valve and inner wall of air horn (gauge T109-106). Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41).

DASHPOT (SLOW CLOSING THROTTLE) ADJUSTMENT: (a) The distance from the inner side of bracket to the diaphragm housing should be 3/16 inch. To adjust loosen lock nut, turn diaphragm assembly to specified amount and tighten lock nut. (b) With dashpot operating lever adjusting screw backed out and throttle valves seated, fully depress diaphragm by pressing against dashpot operating lever. Tighten screw until it just contacts throttle shaft arm, then back out 1/4 turn. (c) With throttle valves in wide open position there should be 3/64 inch clearance between dashpot operating lever and stop. Adjust by bending stop (use tool T109-22).

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Chrysler "V8"—1953-1954—Carbureters Nos. 2039S-2039SA

WHEN SERVICING, USE GASKET ASSORTMENT No 237, REPAIR PACKAGE No 1748

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-1013S	Body flange assembly	
1A-71	FLANGE GASKET	
2-142	Throttle valve	(2)
3-853S	Throttle shaft and lever assembly	
6-842S	Air horn and Climatic® control assembly	
6-843S	Air horn assembly	
7-163	Choke valve	
11-235S	LOW SPEED JET ASSEMBLY	(2)
11B-41	Rivet plug	(2)
11B-79	Rivet plug	(6)
11B-138	IDLE PORT RIVET PASSAGE PLUG	(2)
11B-146	Level sight plug	
11B-223	Nozzle passage rivet plug	(2)
11B-285	Rivet plug (Approx 9/16" dia)	(2)
11B-286	Rivet plug (Approx 3/8" dia)	(5)
11B-287	Rivet plug (Approx 5/16" dia)	(3)
14-383S	Choke lever and screw assembly	
14-384	Cam trip lever	
14-424S	Choke piston lever link and shaft assembly	
15-35S	Strainer nut assembly	
17-92	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	
20-35	BOWL STRAINER GASKET	
20-120	VACUMETER PISTON GASKET	
21-80S	Float and lever assembly	
24-24	Float lever pin	
25-98S	NEEDLE AND SEAT ASSEMBLY	
30-14	BOWL COVER STRAINER	
30A-35	Idle adjustment screw	(2)

Part No	PART NAME	
39-10	Choke valve attaching screw	(2)
47-30	WELSH PLUG	
48-204S	Pump jet housing assembly	
53A-326S	Pump operating lever and countershaft assembly	
61-57	Idle adjustment screw spring	(2)
61-58	Dash pot adjusting screw spring	
61-128	CONNECTOR ROD SPRING	
61-134	Vacuum piston spring (lower) (Sup by 61 485)	
61-150	PUMP SPRING (LOWER)	
61-237	Fast idle cam spring	
61-291	Throttle lever adjusting screw spring	
61-382	METERING ROD SPRING	
61-456	Vacuum piston spring (upper)	
61-485	VACUUM PISTON SPRING (LOWER)	
63-35	SPRING RETAINER	
63-57	INTAKE BALL CHECK RETAINER	
63-144	Delayer plate retainer ring	
63-153	Thermostatic coil housing retainer (Use with 170AB206S)	
63-168	Piston link spring retainer	
63-186	Vacuum piston spring retainer	
63-189	Thermostatic coil housing retainer (Use with 170AB317S)	
64-137S	PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
75-811	Metering rod—standard (2039S) (Sup by 75 933)	(2)
75-813	Metering rod—1 size lean (2039S) (Sup by 75 934)	(2)
75-875	Metering rod—2 sizes lean (2039S) (Sup by 75 935)	(2)
75-933	METERING ROD—STANDARD	(2)

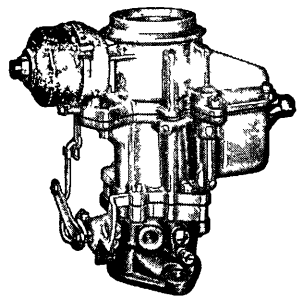
Part No	PART NAME	
75-934	Metering rod—1 size lean	(2)
75-935	Metering rod—2 sizes lean	(2)
86-12	Flange stud lock washer	(4)
101-6	Pump arm clamp screw	
101-10	Pump arm clamp screw (Sup by 101 6)	
101-19	Choke lever clamp screw (Sup by 101 354S)	
101-58	Dash pot arm adjusting screw	
101-74	Throttle shaft lever attaching screw	
101-148S	Dust cover attaching screw and washer assembly	(2)
101-152S	Air horn attaching screw and washer assembly	(4)
101-160S	Bowl cover attaching screw and washer assembly	(4)
101-236	Metering rod arm clamp screw	
101-273S	Body flange attaching screw and washer assembly	(4)
101-276	Fast idle adjustment screw	
101-288	Throttle lever adjustment screw	
101-302	THROTTLE VALVE ATTACHING SCREW	(4)
101-304S	Dash pot lever stop attach ng screw and washer assemoly	
101-307S	Dash pot bracket attaching screw and washer assembly	(2)
101-323	Fast idle cam attaching screw	
101-327	Thermostatic coil hous ng attach ng screw (Use with 170AB206S)	(2)
101-342	Pump jet housing attaching screw	
101-354S	Choke lever clamp screw assembly	
101-361	Thermostatic coil housing attaching screw (Use with 170AB317S)	(2)
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
105A-52	Dash pot lock nut	
111-47S	Pump arm and screw assembly	
111-55S	Metering rod arm and screw assembly	
114-87S	Dash pot operating lever assembly	
114-88	Throttle shaft arm	

Part No	PART NAME	
115-168	THROTTLE CONNECTOR ROD	
115-169	Choke connector rod	
116-13	INTAKE CHECK BALL	
117-28	Pump connector link (Sup by 117 170)	
117-156	Vacumeter piston link	
117-170	Pump connector link	
118-97	Dust cover	
120-159	METERING ROD JET	(2)
121-78	COIL HOUSING GASKET	
121-193	DUST COVER GASKET	
121-196	Delayer plate gasket (Discontinued)	
121-197	PUMP JET HOUSING GASKET	
121-198	BODY FLANGE GASKET	
121-213	AIR HORN GASKET	
121-214	BOWL COVER GASKET	
129-24	Metering rod disk	(2)
136-37	Connector rod washer	
136-55	Throttle centering spring washer (early production)	
136-77	Throttle shaft arm attaching screw washer	
146-209S	Bowl cover and strainer assembly	
150-179	Vacumeter link pin	
150-190	Choke piston pin	
150A-10	PIN SPRING	(3)
160-112	Vacuum piston	
160-122	Choke piston	
170AB206S	Thermostatic coil and housing assembly (Sup by 170AB317SU)	
170AB317S	Thermostat c coil and housing assembly	
170AB317SU	Unitized package (Consists of 1—170AB317S 1—63 189 2—101 361 and 1—121 78)	
180-67	Dash pot mounting bracket	
181-174S	Fast idle cam assembly	
186-36	Choke baffle plate	
201-14	Dash pot operating lever stop	
202-35S	Dash pot assembly	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

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This Carbureter also used on DeSoto "S-15", "S-18" and "S-20" Cars equipped with Standard Clutch and Standard Transmission



CHRYSLER "6" MODELS C-51, C-60, C-62 1951-1954

(Standard Clutch and Transmission)

BB DOWN-DRAFT **CARBURETERS Nos. E9C-E9C1**

CARBURETER SPECIFICATIONS

For Chrysler 6 Cylinder Engine 3 7/16 Inch Bore 4½ Inch Stroke (1951)

For Chrysler 6 Cylinder Engine 3 7/16 Inch Bore 4¾ Inch Stroke (1952 54)

Dimensions Flange size 1½ inch (38 1 mm) Throttle bore 1 11/16 inch (42 86 mm) Main venturi 1 11/32 inch (34 13 mm) I D

Float Setting Top of float 5/64 inch (1 98 mm) below top surface of carbureter body casting Plus or minus 1/64 inch (397 mm)

Vents Outside none Inside balance vent tube in a r horn above choke valve

Gasoline Intake Needle Triangular horizontal No 44 (2 18 mm) drill in needle seat

Idle Orifice Tube Jet size 0295 inch (75 mm) drill Idle passage air bleed in air horn size No 56 (1 18 mm) drill diameter Restriction in body 0492 inch (1 25 mm) diameter

Idle Ports Upper port Slot type length 149 inch (3 78 mm) width 030 inch (76 mm) Top of port located 118 to 122 inch (3 00 to 3 10 mm) above top edge of valve Lower port size 053 to 057 inch (1 35 to 1 45 mm) drill (For idle adjustment screw)

Set Idle Adjustment Screw ½ to 1½ turns open For richer mix ture turn screw out Idle engine between 450 and 500 r p m

Main Metering Screw Calibrated to flow 315 to 319 cc per minute (Do not gauge for size If in doubt replace with new part)

Main Vent Through diffuser (air bleed inside bowl) Size 0315 inch (80 mm) dr ll

Main Vent Tube Side Holes 4—0354 inch d ameter

Step Up Jet Power orifice 0374 inch (95 mm) drill

Accelerating Pump Type—delayed action seasonal adjustment Stroke—Summer setting (inner hole short stroke) Intermediate setting (center hole) Winter setting (outer hole long stroke) Pump intake passage ball check seat size 107 to 112 inch (2 72 to 2 845 mm) diameter in body Pump discharge passage Re striction (under ball check) size 062 to 065 inch (1 57 to 1 65 mm) diameter in body Pump (discharge) jet size 0413 inch (1 05 mm) drill

Pump Adjustment None

Choke Carter Climatic® Control Set at Index Choke heat suc tion hole in flange insulator Size No 38 drill

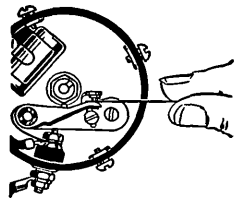
Vacuum Spark Port Slot (round end) type size 040 by 110 inch (1 016 by 2 794 mm) Top of port 012 to 018 inch (305 to 457 mm) above top edge of valve

Motor Tune-Up—Be Accurate!

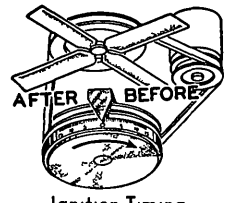
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



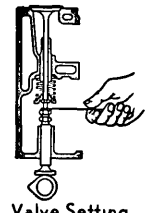
Spark Plug Gap 035"



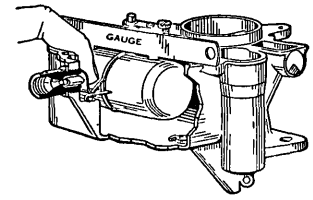
Breaker Point Setting 020"



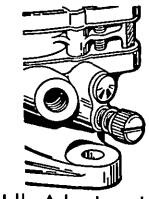
Ignition Timing Breaker Points to Open 1951-53—T D C 1954—2° B T D C



Valve Setting (Hot) Intake 008" Exhaust 010"



Float Setting (Gauge T109-50) 5/64" ± 1/64"



Idle Adjustment Screw Setting ½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

If carbureter loads up after considerable service, check float level Wear on lip of float lever will raise float level Before adjusting float be sure float lever pin is firmly seated Reset float level by bending lip of float lever away from needle to raise level or bend lip toward needle to lower float level Bend vertical lip of float only

If motor stalls while idling, set throttle lever adjusting screw so motor runs 450-500 r p m Then set idle adjustment screw to specifications If these adjustments do not correct the trouble remove idle orifice tube and plug assembly Clean tube passages with compressed air

If acceleration is not satisfactory, remove pump jet and clean with compressed air However, it is usually advisable to replace the pump jet, as its cost is nominal All jets must be seated gasoline tight Poor acceleration may be due to damaged or worn plunger leather in accelerating pump, sediment in pump cylinder or clogged intake ball check at bottom of pump cylinder and discharge ball check in discharge passage If plunger is removed from cylinder, use care in installing to avoid damage to plunger leather

Correct air fuel ratio is provided by a 'balance tube" in the air horn The balance tube should be checked each time the carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type size or condition of air cleaner Should the cleaner become clogged the capacity will be reduced but the air fuel mixture ratio will not be changed

Excessive richness above 50 miles per hour may be caused by a clogged main vent tube After removal of rivet plug beneath float bowl with tool No T109 43 main vent tube can be removed and a new tube inserted with tool No T109-195 Care must be exercised in inserting new tube which must seat tightly Use new rivet to complete the installation

Pump Adjustment No gauge is necessary Pump lifter arm should be at a right angle to pump lifter shaft Adjustment can be made by bending pump lifter arm up or down (use tool T109-41)

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CARBURETER
TRADE MARK REG U S PAT OFF
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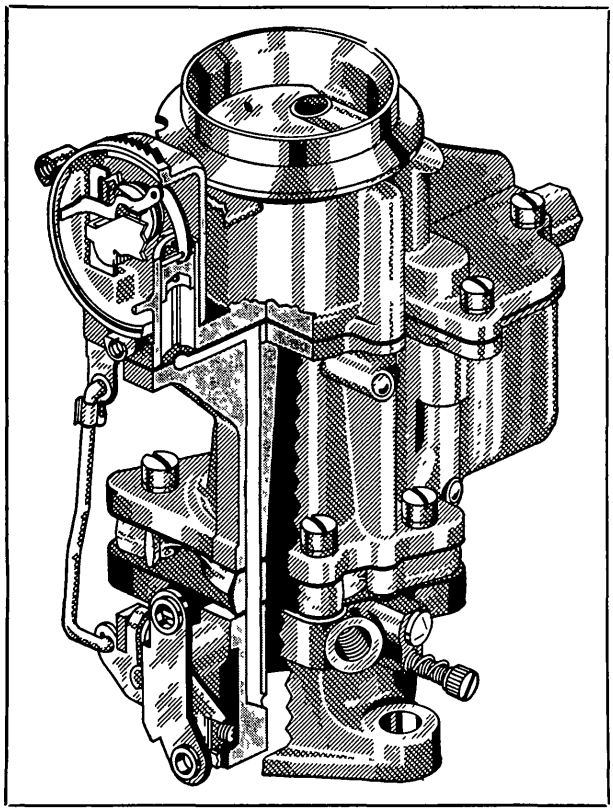


Figure 1

CARTER CLIMATIC® CONTROL CHOKE

The Carter Climatic® Control principle used in this unit is essentially the same as that used in WE type Carter carbureters. The fast idle cam assembly, unloader mechanism, etc., are located in the Climatic® Control housing. In this way all these parts are protected from dirt and other foreign matter. (Fig. 1) However, two important changes have been made Hot air is introduced at the **center** of the Climatic® Control housing, is drawn through three passages in the housing, around the delayer plate to the thermostatic coil, and then to the manifold

A **delayer plate** has been added to control the action of the choke, providing longer choke operation during warm-up and preventing the choke from closing too rapidly after the engine is shut off It should not be necessary to remove the delayer plate and thermostatic coil assembly from the coil housing when servicing the choke. The thermostatic coil **must not** be removed from the delayer plate

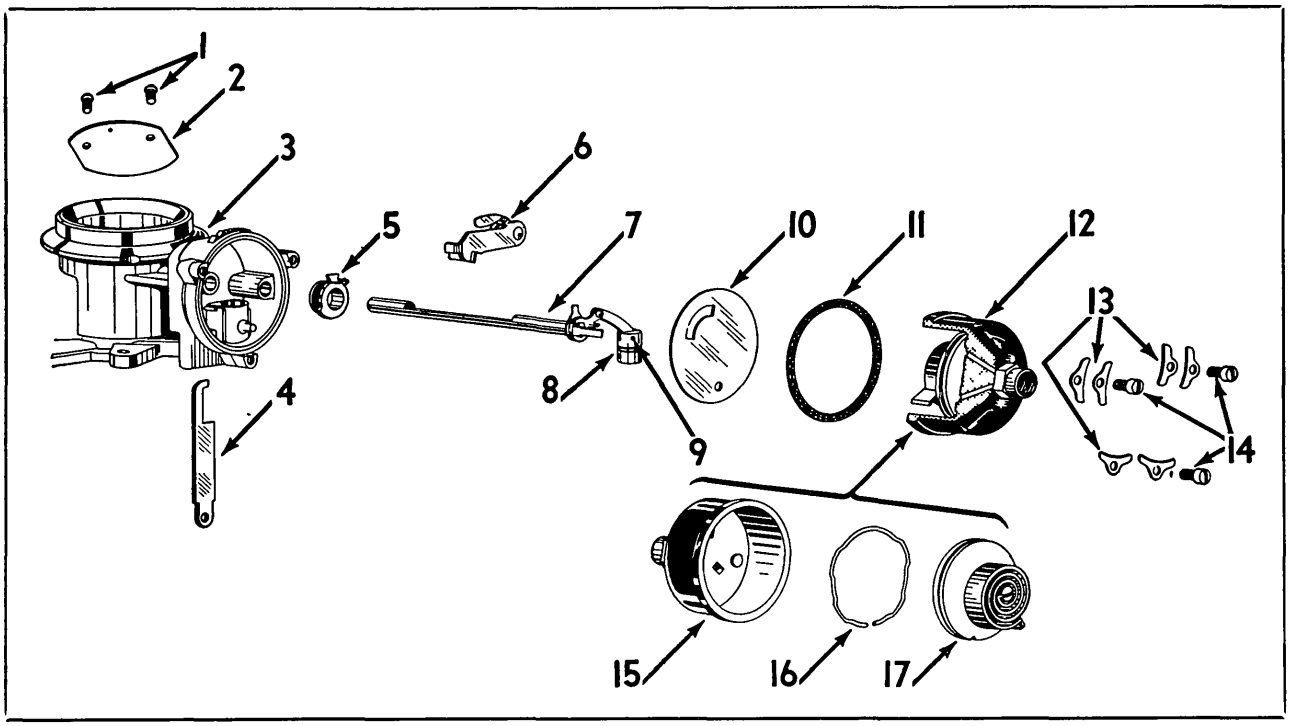


Figure 2

1. Choke Valve Screws
2. Choke Valve
3. Air Horn
4. Fast Idle Link
5. Fast Idle Cam Assembly
6. Choke Trip Lever
7. Choke Piston Lever, Link and Shaft Assy.
8. Choke Piston
9. Choke Piston Pin
10. Choke Baffle Plate
11. Coil Housing Gasket
12. Thermostatic Coil and Housing Assy.
13. Coil Housing Retainers
14. Coil Housing Screws
15. Thermostatic Coil Housing
16. Delayer Plate Retainer Ring
17. Delayer Plate and Thermostatic Coil Assembly

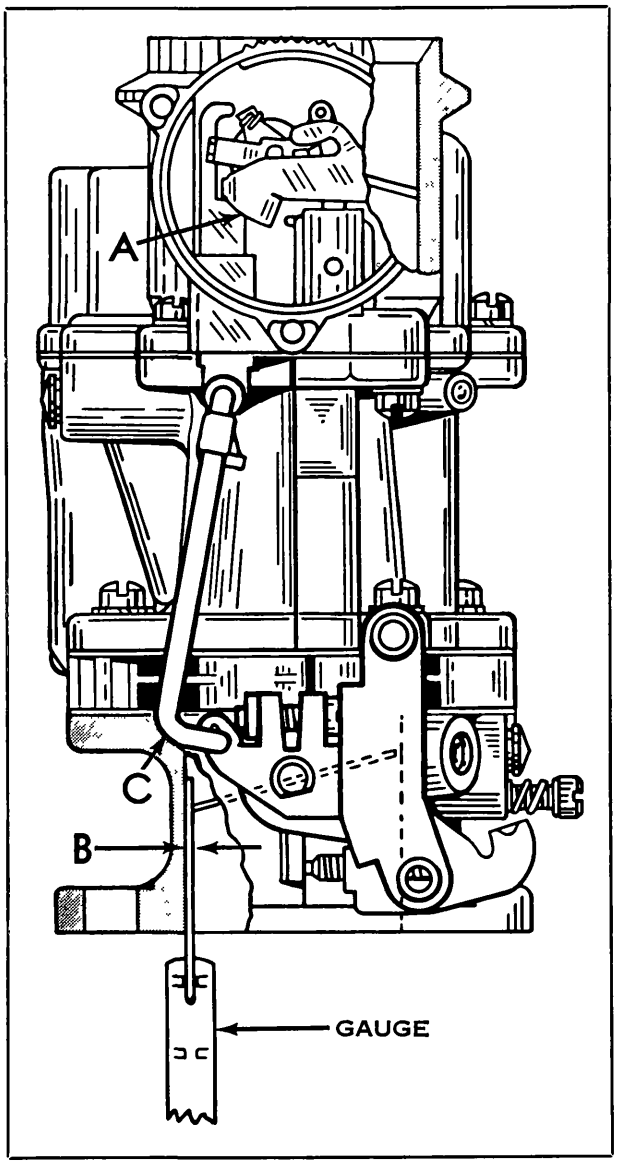


Figure 3
Fast Idle Adjustment

FAST IDLE ADJUSTMENT (Fig. 3):

Remove thermostatic coil housing assembly, gasket and baffle plate. With throttle adjusting screw backed out, crack throttle valve and hold choke valve in fully closed position. Then close throttle. This will allow fast idle cam to revolve to fast idle position ("A"—Fig. 3). There should now be .015"-.019" clearance (use gauge T109-44) between throttle valve and bore of carbureter, side opposite idle port ("B"-Fig. 3). Adjust by bending the choke connector rod at lower angle ("C"-Fig. 3) (use tool T109-41).

UNLOADER ADJUSTMENT (Fig. 4):

This adjustment must be made after the fast idle adjustment. Hold throttle valve wide open and close choke valve as far as possible without forcing. There should now be 5/32" clearance ("D"-Fig. 4) (use gauge T109-154) between upper edge of choke valve and inner wall of air horn. Adjust by bending arm on choke trip lever ("E"-Fig. 4) (use tool T109-187). When fast idle and unloader adjustments have been made assemble baffle plate, coil housing gasket and thermostatic coil housing assembly on air horn. Set Climatic® Control at "Index", making sure that hook on coil has picked up coil shaft lever.

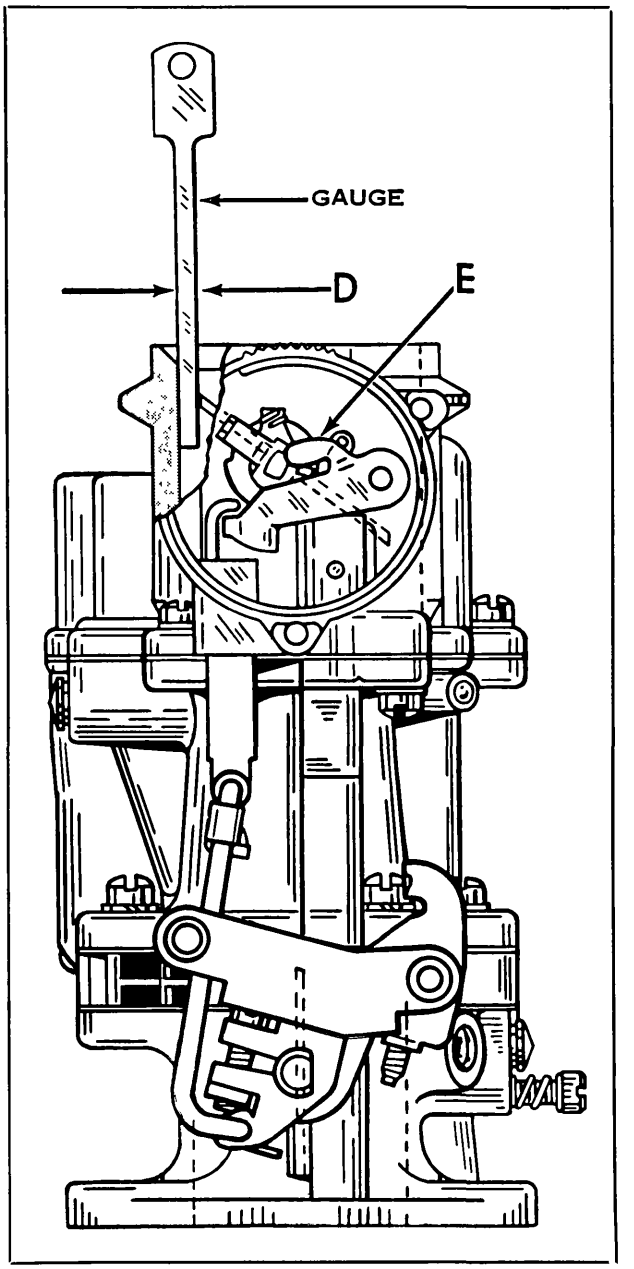
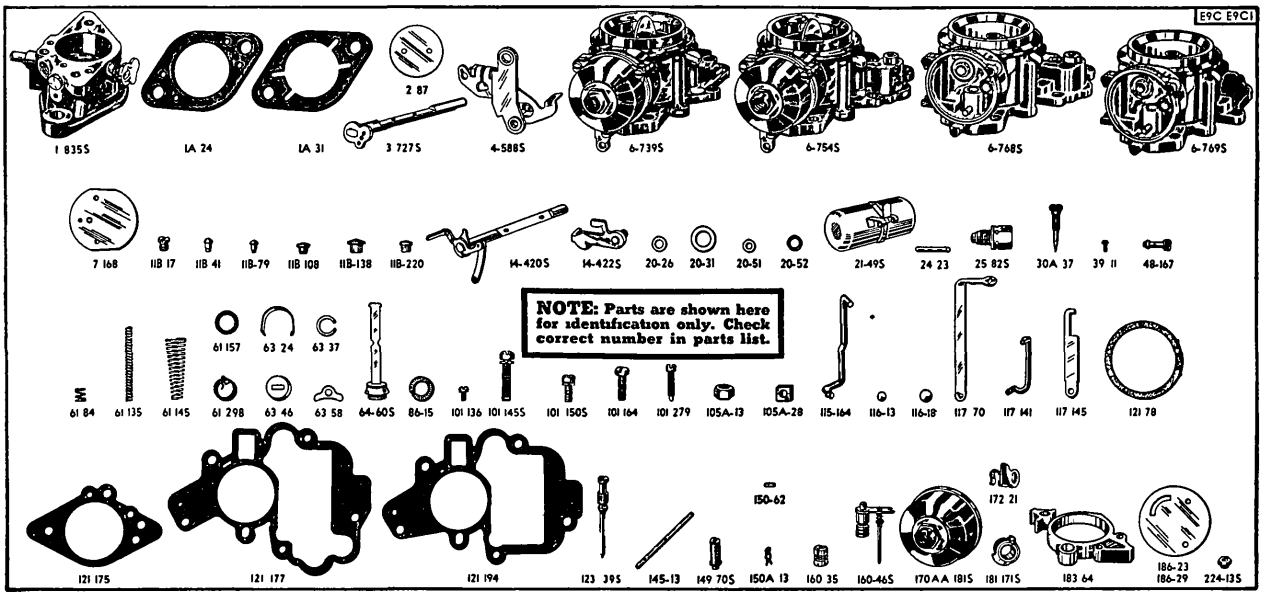


Figure 4
Unloader Adjustment



Chrysler "6"—1951-1954—Carbureters Nos. E9C-E9C1

WHEN SERVICING, USE GASKET ASSORTMENT No 214A, REPAIR PKG No 1578 FOR E9C1

PART NAMES IN CAPITAL LETTERS, LISTED BELOW INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-835S	Body flange assembly	
1A-24	Flange gasket for use with governor	
1A-31	FLANGE GASKET FOR USE WITHOUT GOVERNOR	
2-87	Throttle valve	
3-727S	Throttle shaft and arm assembly	
4-588S	Throttle lever assembly	
6-739S	Air horn and Climatic® control assembly (E9C1)	
6-754S	Air horn and Climatic® control assembly (E9C)	
6-768S	Air horn assembly (E9C)	
6-769S	Air horn assembly (E9C1)	
7-168	Choke valve	
11B-17	Pump discharge passage plug	
11B-41	Rivet plug	
11B-79	Rivet plug	(2)
11B-108	IDLE PORT RIVET PLUG	
11B-138	PUMP JET RIVET PLUG	
11B-220	HIGH SPEED PASSAGE RIVET PLUG	
14-420S	Choke piston lever and shaft assembly	
14-422S	Choke trip lever and pin assembly	
20-26	Gasket	
20 31	Needle seat gasket	
20 51	Step up jet gasket	
20-52	STEP UP PISTON GASKET	
21-49S	Float and lever assembly	
24-23	Float lever pin	
25 82S	NEEDLE AND SEAT ASSEMBLY	
30A-37	Idle adjustment screw	
39 11	Valve attaching screw	(4)
48-167	PUMP JET	
61-84	Idle adjustment screw spring	
61-135	STEP UP PISTON SPRING	
61-145	PUMP SPRING	
61-157	Plunger spring	
61-298	Fast idle cam spring	
63-24	FLOAT LEVER PIN RETAINER	
63-37	PUMP CYLINDER BALL RETAINER	
63 46	Spring retainer	
63 58	Coil housing retainer (Sup by 63 164)	
63-164	Coil housing retainer (use with 170AA181S)	(3)
63-190	Coil housing retainer (use with 170AA312S)	
64-60S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49 120)	

Part No	PART NAME	
86-15	Flange stud lock washer	(2)
101-11	Coil housing attaching screw (use with 170AA181S)	(3)
101-136	Coil housing attaching screw (Sup by 101 11)	(3)
101-145S	Body flange attaching screw and washer assembly	(3)
101-150S	Air horn attaching screw and washer assembly	(5)
101-164	Throttle lever clamp screw	
101-279	Throttle adjusting screw	
101-361	Coil housing attaching screw (use with 170AA312S)	(3)
105A-13	Flange nut	(2)
105A-28	Throttle lever clamp nut	
115-164	Choke connector rod	
116-13	PUMP CHECK BALL	
116-18	PUMP DISCHARGE CHECK BALL	
117-70	PUMP LIFTER	
117-141	PUMP LINK	
117-145	Fast idle link	
121-78	THERMOSTATIC COIL HOUSING GASKET	
121-175	BODY FLANGE GASKET	(2)
121-177	Body gasket (E9C)	
121-194	BODY GASKET (E9C1)	
123-39S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
145-13	MAIN VENT TUBE	
149-70S	STEP UP JET ASSEMBLY	
150-62	Choke piston pin	
150A-13	PIN SPRING	
160-35	Choke piston	
160-46S	STEP UP PISTON PLATE AND ROD ASSEMBLY	
170AA-181S	Thermostatic coil and housing assembly (Sup by 170AA312SU)	
170AA312S	Thermostatic coil and housing assembly	
170AA312SU	Unitized package (consists of 1—170AA312S 1—63 190 3—101-361 and 1—121 78)	
172-21	Connector rod retainer	
181-171S	Fast idle cam assembly	
183-64	Insulator	
186-23	Baffle plate (Sup by 186 29)	
186-29	Baffle plate	
224-13S	MAIN METERING JET ASSEMBLY (STANDARD)	
224-14S	Main metering jet assembly (1 size lean)	
224-15S	Main metering jet assembly (2 sizes lean)	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

CHRYSLER "V-8"

FIRE SIREN

1953

Model Ind. 20A

WCD DOWN-DRAFT CLIMATIC® CONTROL **CARBURETER No. 979S**

CARBURETER SPECIFICATIONS

For Chrysler 8 Cylinder Engine 3 13/16 Inch Bore 3⅝ Inch Stroke

Dimensions Flange size 1¼ inch S A E dual 4 bolt (water jacket) type
Throttle bore 1 7/16 inch
Primary venturi 11/32 inch I D
Main venturi 1 3/16 inch I D

Float Level See adjustments

Vents Inside None Outside Two—3/16 inch diameter vents in air horn

Gasoline Intake Size No 38 (1015 inch) drill hole in needle seat

Low Speed Jet Tube Jet size 0295 inch drill Bypass size No 58 (042 inch) drill Economizer size 0452 inch drill Idle bleed size No 58 (042 inch) drill

Idle Port Upper port length 175 inch width 030 inch

Idle Port Opening 136 to 140 inch above upper edge of valve with valve tightly closed

Lower Port (for Idle Adjustment Screw) Size 0615 to 0655 inch diameter

Set Idle Adjustment Screw ½ to 1 turn open For richer mixture turn screw out Idle engine at 500 r p m

Main Nozzle Nozzles are installed permanently Do not remove

Metering Rod Vacumeter type Economy step 0695 inch diameter Middle step tapers to 06675 inch diameter Power step 062 inch diameter

Metering Rod Jet 089 inch diameter

Metering Rod Setting See adjustments

Accelerating Pump Pump discharge jets (twin) size (0315 inch) drill Intake ball check seat size No 32 (116 inch) drill Discharge needle seat size No 50 (070 inch) drill

Pump Adjustment See adjustments

Choke Carter Climatic® Control—Set at index Butterfly type offset valve Choke heat suction hole in bowl cover size No 43 (089 inch) drill

Vacuum Spark Port 030 x 110 inch Top of port to be 035 to 041 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open	Float Setting	Idle Adjustment Screw Setting
035"	017"	4° B T D C At vibration damper	11/64" (Use Gauge T109-205)	½ to 1 Turn Open

NOTE These engines are equipped with hydraulic valve lifters—NO ADJUSTMENT

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT Two separate float adjustments must be made—lateral and vertical

Lateral Adjustment With bowl cover assembly inverted, bowl cover gasket removed and float resting on seated needle place float gauge T109-205 directly under float with notched portions of gauge fitted over edges of casting Sides of floats should barely touch the vertical uprights of float gauge Adjustment should be made by bending arms of floats

Vertical Adjustment With float gauge in same position floats should just clear the horizontal portion of gauge Vertical distance between top of float and machined surface of casting should be 11/64 inch (gauge T109 205) Adjustment can be made by bending arms of floats Carefully remove float assembly, install bowl cover gasket and then reinstall float assembly Floats should have a free movement of ½ at free end of float Adjust by bending lip of float bracket A fast check of the fuel level can be made on the engine by removing the inspection hole plug in the side of carbureter body Fuel should just run out of the hole with engine idling

PUMP ADJUSTMENT The total distance the plunger head (not shaft) moves from closed to wide open throttle position determines the amount of fuel discharged Correct pump plunger travel is important and should be checked each time the carbureter is disassembled or when leaner than standard metering rods are installed Procedure is as follows Install pump connector link in outer hole (long stroke) of pump arm Back out throttle lever set screw until throttle valves seat in bores of carbureter Be sure fast idle adjusting screw does not hold throttle open With air horn assembly removed place Universal pump travel gauge T109 117S inverted on edge of dust cover boss of bowl cover Turn knurled nut of gauge until finger just touches upper end of plunger shaft Number indicated on gauge should be 29 Hold the gauge vertical to insure correct reading Adjust by bending throttle connector rod at upper angle (Use tool T109-213)

Optional Adjustment With throttle valves seated in bores of carbureter the distance from the top of the plunger shaft to the top of the dust cover boss should be 17/64 Adjust as mentioned above

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METERING ROD ADJUSTMENT. Metering rod adjustment is important and must be made after completing the pump adjustment No metering rod gauges are necessary Procedure is as follows Backout throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw With metering rods in place press down on vacumeter link until metering rods bottom in carbureter body casting Holding rods in downward position and throttle valves seated revolve metering rod arm until finger on arm contacts lip of vacumeter link Hold in place and carefully tighten clamp screw

FAST IDLE ADJUSTMENT 1 Loosen choke lever clamp screw on choke shaft Insert 040" feeler gauge T109-193 between lip of fast idle cam and boss of flange casting Hold choke valve tightly closed and take slack out of linkage by pressing choke lever toward closed position—hold in place and tighten clamp screw 2 With choke valve tightly closed tighten fast idle adjusting screw until there is 017"- 021" opening (wire gauge T109-44 may be used) between throttle valve and bore of carbureter (side opposite idle port) Be sure fast idle adjusting screw is on high step of cam while making this adjustment

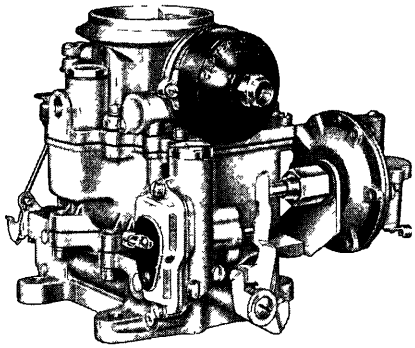
UNLOADER ADJUSTMENT: With throttle wide open there should be 7/32" clearance between upper edge of choke valve and inner wall of air horn (gauge T109-106) Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41)

Chrysler "V-8"—1953—Carbureter No. 979S

WHEN SERVICING, USE GASKET ASSORTMENT No 212D

Part No	PART NAME	
1-1013S	Body flange assembly	
1A-71	Flange gasket	
2-142	Throttle valve	(2)
3 751S	Throttle shaft and lever assembly (Sup by 3 853S)	
3-853S	Throttle shaft and lever assembly	
6-842S	Air horn and Climatic ® control assembly	
6-843S	Air horn assembly	
7-163	Choke valve	
11-235S	Low speed jet assembly	(2)
11B-41	Rivet plug	(2)
11B 79	Rivet plug	(8)
11B 138	Idle port rivet plug	(2)
11B-146	Level sight plug	
11B-223	Nozzle rivet plug	(2)
11B-257	Flange rivet plug (Sup by 11B 285)	(2)
11B-258	Flange rivet plug (Sup by 11B 286)	(5)
11B 259	Flange rivet plug (Sup by 11B 287)	(3)
11B-285	Rivet plug (Approx 9/16" dia)	(2)
11B 286	Rivet plug (Approx 3/8" dia)	(5)
11B 287	Rivet plug (Approx 5/16" dia)	(3)
14 383S	Choke lever and screw assembly	
14 384	Cam trip lever	
14 424S	Choke piston lever link and shaft assembly	
15-35S	Strainer nut assembly	
17-92	Pump check needle	
20 22	Needle seat gasket	
20 35	Bowl strainer gasket	
20 120	Vacumeter piston gasket	
21-80S	Float and lever assembly	
24 24	Float lever pin	
25 98S	Needle and seat assembly	
30 14	Bowl cover strainer	
30A 35	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
47 30	Welsh plug	
48 204S	Pump jet housing assembly	
53A 326S	Pump operating lever and countershaft assembly	
61 57	Idle adjustment screw lock spring	(2)
61 58	Kickdown switch lever adjusting screw lock spring	
61-128	Connector rod spring	
61-134	Vacuum piston spring	
61-150	Pump spring (lower)	
61-237	Fast idle cam spring	
61-291	Throttle lever adjusting screw lock spring	
61 382	Metering rod spring	
61-456	Vacumeter piston spring	
63-35	Connector rod spring retainer	
63-57	Intake ball check retainer	
63-144	Delayer plate retainer ring	
63-153	Thermostatic coil housing retainer (Use with 170AB206S)	
63-168	Piston link spring retainer	
63 186	Vacuum piston spring retainer	
63-189	Thermostatic coil housing retainer (Use with 170AB335S)	
64-137S	Pump plunger rod spring and retainer assembly	
75-811	Metering rod (standard)	(2)
75-813	Metering rod—1 size lean	(2)
75-875	Metering rod—2 sizes lean	(2)
86 12	Flange stud lock washer	(4)
101-6	Pump arm clamp screw	
101-10	Pump arm clamp screw (Sup by 101 6)	
101-19	Choke lever clamp screw (Sup by 101 354S)	
101-58	Kickdown switch lever adjusting screw	
101-74	Throttle shaft lever arm attaching screw	
101-148S	Dust cover attaching screw and washer assembly	(2)
101-152S	Air horn attaching screw and washer assembly	(4)
101-160S	Bowl cover attaching screw and washer assembly	(4)
101-236	Metering rod arm clamp screw	
101-273S	Body flange attaching screw and washer assembly	(4)
101 276	Fast idle adjustment screw	
101-288	Tnrottle lever adjustment screw	
101-302	Tnrottle valve attaching screw	(4)
101-307S	Throttle guard bracket attaching screw and washer assembly	(2)
101-323	Fast idle cam attaching screw	
101-327	Thermostatic coil housing attaching screw (Use with 170AB206S)	(2)
101 342	Pump jet housing attaching screw	
101-354S	Choke lever clamp screw assembly	
101-361	Thermostatic coil housing attaching screw (Use with 170AB335S)	(2)
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
111-47S	Pump arm and screw assembly	
111-55S	Metering rod arm and screw assembly	
114-87S	Kickdown switch lever and collar assembly	
114 88	Throttle shaft arm	
115-168	Throttle connector rod	
115-169	Choke connector rod	
116-13	Intake check ball	
117-28	Pump connector link (Sup by 117 170)	
117-156	Vacumeter piston link	
117-170	Pump connector link	
118-97	Dust cover	
120-159	Metering rod jet	(2)
121-78	Coil housing gasket	
121-193	Dust cover gasket	
121-196	Delayer plate gasket	
121-197	Pump jet housing gasket	
121-198	Body flange gasket	
121-213	Air horn gasket	
121-214	Bowl cover gasket	
129-24	Metering rod disk	(2)
136-37	Throttle connector rod washer	
136-55	Throttle shaft spring washer (Early Prod)	
136-77	Throttle shaft arm washer	
136-169	Vacuum piston washer (Sup by 63 186)	
146-209S	Bowl cover and strainer assembly	
150-170	Choke piston pin (Sup by 150 190)	
150-179	Vacumeter link pin	
150-190	Choke piston pin	
150A-10	Pin spring	(3)
160-102	Choke piston (Sup by 160 122)	
160-122	Choke piston	
170AB206S	Thermostatic coil and housing assembly (Sup by 170AB335SU)	
170AB335S	Thermostatic coil and housing assembly	
170AB335SU	Unitized package (Consists of 1—170AB335S 1—63 189 2—101 361 and 1—121 78)	
180-66	Throttle guard bracket	
181-174S	Fast idle cam assembly	
186 36	Baffle plate	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used



CHRYSLER "V-8"
MODELS
NEW YORKER C-56
CUSTOM IMPERIAL C-58
1953

WCD DOWN-DRAFT CLIMATIC® CONTROL **CARBURETERS Nos. 935S-935SA**

CARBURETER SPECIFICATIONS

For Chrysler 8 Cylinder Engine: 3-13/16 Inch Bore, 3⅝ Inch Stroke

Dimensions: Flange size 1¼ inch S. A. E. dual, 4 bolt (water jacket) type.
Throttle bore, 1-7/16 inch
Primary venturi, 11/32 inch I. D.
Main venturi, 1-3/16 inch I. D.

Float Level: See adjustments

Vents: Inside None. Outside Two—3/16 inch diameter vents in air horn.
Vent to kickdown switch in air horn on automatic choke side

Gasoline Intake: Size No 38 (.1015 inch) drill hole in needle seat.

Low Speed Jet Tube: Jet size .0295 inch drill Bypass, size No. 58 (.042 inch) drill. Economizer size 0452 inch drill. Idle bleed, size No. 58 (.042 inch) drill.

Idle Port: Upper port, length .175 inch; width .030 inch.

Idle Port Opening: .136 to .140 inch above upper edge of valve with valve tightly closed

Lower Port (for Idle Adjustment Screw): Size 0615 to 0655 inch diameter

Set Idle Adjustment Screw: ½ to 1 turn open. For richer mixture, turn screw out With gear shift lever in neutral position idle engine at 500 r.p.m.

Main Nozzle: Nozzles are installed permanently Do not remove

Metering Rod: Vacumeter type Economy step 0695 inch diameter Middle step tapers to 0665 inch diameter Power step 056 inch diameter These rods designed with stabilizing flats on economy step

Metering Rod Jet: 089 inch diameter

Metering Rod Setting: See adjustments.

Accelerating Pump: Pump discharge jet: (twin) size 0315 inch drill Intake ball check seat, size No. 32 (.116 inch) drill Discharge needle seat size No. 50 (0.70 inch) drill.

Pump Adjustment: See adjustments.

Choke: Carter Climatic® Control—Set at index Butterfly type, offset valve Choke heat suction hole in bowl cover, size No 43 (.089 inch) drill

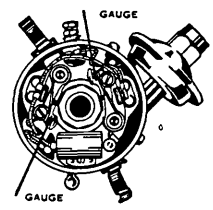
Vacuum Spark Port: 030 x 110 inch. Top of port to be 035 to 041 inch above top edge of valve, with valve tightly closed

Motor Tune-Up—Be Accurate!

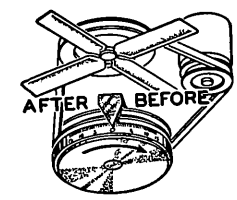
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



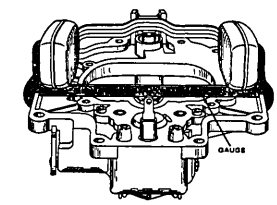
Spark Plug Gap .035"



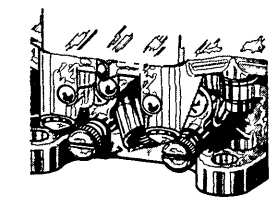
Breaker Point Setting .017"



Ignition Timing Breaker Points to Open: 4° B. T. D. C.



Float Setting See Adjustments



Idle Adjustment Screw Setting ½ to 1 Turn Open

NOTE: These cars are equipped with hydraulic valve lifters.—NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: Two separate float adjustments must be made—lateral and vertical.

Lateral Adjustment: With bowl cover assembly inverted, bowl cover gasket removed and float resting on seated needle, place float gauge T109-205 directly under float with notched portions of gauge fitted over edges of casting. Sides of floats should barely touch the vertical uprights of float gauge. Adjustment should be made by bending arms of floats.

Vertical Adjustment: With float gauge in same position, floats should just clear the horizontal portion of gauge. Vertical distance between top of float and machined surface of casting should be 11/64 inch (gauge T109-205). Adjustment can be made by bending arms of floats. Carefully remove float assembly, install bowl cover gasket and then reinstall float assembly. Floats should have a free movement of 1/2" at free end of float. Adjust by bending lip of float bracket. A fast check of the fuel level can be made on the car by removing the inspection hole plug in the side of carbureter body. Fuel should just run out of the hole with engine idling.

PUMP ADJUSTMENT: The total distance the plunger head (not shaft) moves from closed to wide open throttle position determines the amount of fuel discharged. Correct pump plunger travel is important and should be checked each time the carbureter is disassembled or when leaner than standard metering rods are installed. Procedure is as follows: Install pump connector link in outer hole (long stroke) of pump arm. Back out throttle lever set screw until throttle valves seat in bores of carbureter. Be sure fast idle adjusting screw does not hold throttle open. With air horn assembly removed, place Universal pump travel gauge T109-117S, inverted on edge of dust cover boss of bowl cover. Turn knurled nut of gauge until finger just touches upper end of plunger shaft. Number indicated on gauge should be "29". Hold the gauge vertical to insure correct reading. Adjust by bending throttle connector rod at upper angle. (Use tool T109-213.)

Optional Adjustment: With throttle valves seated in bores of carbureter, the distance from the top of the plunger shaft to the top of the dust cover boss should be 17/64". Adjust as mentioned above.

METERING ROD ADJUSTMENT: Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows: Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw. With metering rods in place, press down on vacumeter link until metering rods bottom in carbureter body casting. Holding rods in downward position and throttle valves seated revolve metering rod arm until finger on arm contacts lip of vacumeter link. Hold in place and carefully tighten clamp screw.

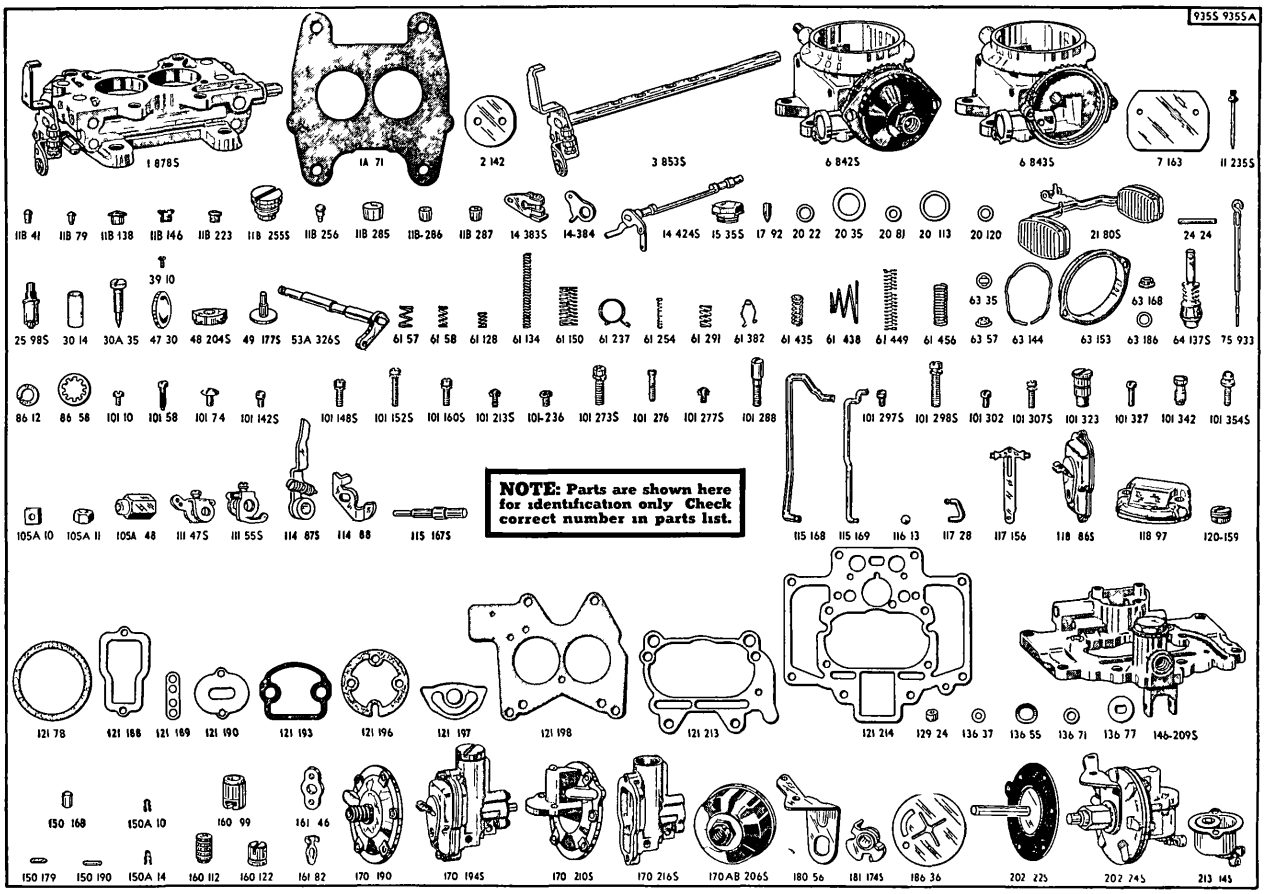
FAST IDLE ADJUSTMENT: 1. Loosen choke lever clamp screw on choke shaft. Insert .040" feeler gauge (T109-193) between lip of fast idle cam and boss of flange casting. Hold choke valve tightly closed and take slack out of linkage by pressing choke lever toward closed position — hold in place and tighten clamp screw. 2. With choke valve tightly closed, tighten fast idle adjusting screw until there is .017"-.021" opening (wire gauge T109-44 may be used) between throttle valve and bore of carbureter (side opposite idle port). Be sure fast idle adjusting screw is on high step of cam while making this adjustment.

UNLOADER ADJUSTMENT: With throttle wide open there should be 7/32" clearance between upper edge of choke valve and inner wall of air horn (gauge T109-106). Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41).

DASHPOT (SLOW CLOSING THROTTLE) ADJUSTMENT: The purpose of the dashpot is to prevent the car from stalling when the throttle is released rapidly. Maximum dashpot action is obtained by adjusting screw so that the dashpot plunger shaft can be moved inward approximately 1/16" after engine and throttle have returned to normal idle. This adjustment should be made with the carbureter on the car, with engine running and transmission in driving range.

Service parts and complete unit assemblies are available for servicing the dashpot and kickdown switch units.

CARBURETER
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Chrysler "V-8"—1953—Carbureters Nos. 935S-935SA

WHEN SERVICING, USE GASKET ASSORTMENT No 212D, REPAIR PACKAGE No 1740

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1 878S	Body flange assembly	
1A-71	FLANGE GASKET	
2 142	Throttle valve	(2)
3-751S	Throttle shaft and lever assembly (Sup by 3 853S)	
3-853S	Throttle shaft and lever assembly	
6-842S	Air horn and Climatic ® control assembly	
6-843S	Air horn assembly	
7-163	Choke valve	
11-235S	LOW SPEED JET ASSEMBLY	(2)
11B-41	Rivet plug	(2)
11B-79	Rivet plug	(7)
11B-138	IDLE PORT RIVET PLUG	(2)
11B-146	Level sight plug	
11B-223	Nozzle rivet plug	(2)
11B-255S	Kickdown switch plug assembly	
11B 256	Dashpot check ball retainer plug	
11B-257	Rivet plug (9/16" dia) (Sup by 11B 285)	
11B-258	Rivet plug (3/8" dia) (Sup by 11B 286)	
11B-259	Rivet plug (5/16" dia) (Sup by 11B 287)	
11B-285	Rivet plug (approx 9/16" dia)	(2)
11B-286	Rivet plug (approx 3/8" dia)	(5)
11B-287	Rivet plug (approx 5/16" dia)	(3)
14-383S	Choke lever and screw assembly	
14-384	Cam trip lever	
14-424S	Choke piston lever link and shaft assembly	
15-35S	Strainer nut assembly	
17-92	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	
20-35	BOWL STRAINER GASKET	

Part No	PART NAME	
20-81	KICKDOWN SWITCH PLUNGER GASKET	
20 113	KICKDOWN SWITCH PLUG GASKET	
20 120	VACUMETER PISTON GASKET	
21-80S	Float and lever assembly	
24-24	Float lever pin	
25-98S	NEEDLE AND SEAT ASSEMBLY	
30-14	BOWL COVER STRAINER	
30A 35	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
47-30	WELSH PLUG	
48 204S	Pump jet housing assembly	
49-177S	Electro magnet plunger assembly	
53A-326S	Pump operating lever and countershaft assembly	
61-57	Idle adjustment screw lock spring	(2)
61-58	Dashpot adjusting screw lock spring	
61-128	CONNECTOR ROD SPRING	
61-134	VACUUM PISTON SPRING	
61-150	PUMP SPRING (LOWER)	
61 237	Fast idle cam spring	
61-254	Dashpot armature spring	
61-291	Throttle lever adjusting screw lock spring	
61-382	METERING ROD SPRING	
61-435	Kickdown switch push rod spring	
61-438	Dashpot diaphragm return spring	
61-449	Kickdown switch piston spring	
61-456	Vacumeter piston spring	
63-35	CONNECTOR ROD SPRING RETAINER	
63 57	INTAKE CHECK BALL RETAINER	
63-144	Delayer plate retainer ring	

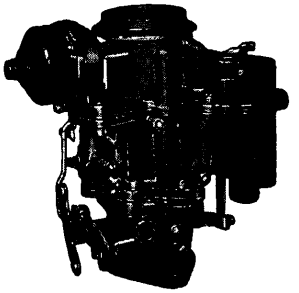
Part No	PART NAME	
63-153	Thermostatic coil housing retainer (Use with 170AB206S)	
63-168	Piston link spring retainer	
63-186	Vacuum piston spring retainer	
63-189	Thermostatic coil housing retainer (Use with 170AB335S)	
64-137S	PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
75-811	Metering rod—standard (935S) (Sup by 75 933)	(2)
75-813	Metering rod—1 size lean (935S) (Sup by 75 934)	(2)
75-875	Metering rod—2 sizes lean (935S) (Sup by 75 935)	(2)
75-933	METERING ROD—STANDARD	(2)
75-934	Metering rod—1 size lean	(2)
75-935	Metering rod—2 sizes lean	(2)
86-12	Flange stud lock washer	(4)
86-58	Dashpot bracket nut lock washer	
101-6	Pump arm clamp screw	
101-10	Pump arm clamp screw (Sup by 101 6)	
101-19	Choke lever clamp screw (Sup by 101 354S)	
101-58	Dashpot arm adjusting screw	
101-74	Throttle shaft lever attaching screw	
101 142S	Electro magnet housing attaching screw and washer assembly	(2)
101-148S	Dust cover attaching screw and washer assembly	(2)
101-152S	Air horn attaching screw and washer assembly	(4)
101-160S	Bowl cover attaching screw and washer assembly	(5)
101-213S	Diaphragm cover attaching screw and washer assembly	(6)
101-236	Metering rod arm clamp screw	
101-273S	Body flange attaching screw and washer assembly	(4)
101-276	Fast idle adjustment screw	
101-277S	Kickdown switch push rod plate screw assembly	(2)
101-288	Throttle lever adjustment screw	
101-297S	Kickdown switch cover attaching screw assembly	(2)
101-298S	Kickdown switch attaching screw assembly	
101-302	THROTTLE VALVE ATTACHING SCREW	(4)
101-307S	Dashpot bracket attaching screw and washer assembly	(2)
101-323	Fast idle cam attaching screw	
101-327	Thermostatic coil housing attaching screw (Use with 170AB206S)	(2)
101-342	Pump jet housing attaching screw	
101-354S	Choke lever clamp screw assembly	-
101-361	Thermostatic coil housing attaching screw (Use with 170AB335S) -	(2)
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
105A-48	Dashpot bracket nut	
111-47S	Pump arm and screw assembly	
111-55S	Metering rod arm and screw assembly	
114 87S	Kickdown switch lever and collar assembly	

Part No.	PART NAME	
114-88	Throttle shaft arm	
115-167S	Kickdown switch push rod assembly	
115-168	THROTTLE CONNECTOR ROD	
115-169	Choke connector rod	
116-13	INTAKE CHECK BALL	(2)
117-28	Pump connector link (Sup by 117 170)	
117-156	Vacumeter piston link	
117-170	Pump connector link	
118-86S	Kickdown snap switch and cover assembly	
118-97	Dust cover	
120-159	METERING ROD JET	(2)
121-78	COIL HOUSING GASKET	
121-188	KICKDOWN SWITCH COVER PLATE GASKET	
121-189	KICKDOWN SWITCH HOUSING GASKET	
121-190	ELECTRO MAGNET HOUSING GASKET	
121-193	DUST COVER GASKET	
121-196	Delayer plate gasket	
121-197	PUMP JET HOUSING GASKET	
121-198	BODY FLANGE GASKET	
121-213	AIR HORN GASKET	
121-214	BOWL COVER GASKET	
129-24	Metering rod disk	(2)
136-37	Throttle connector rod washer	
136-55	Throttle centering spring washer (935S 935SA early production)	
136-71	Kickdown switch push rod washer	
136-77	Throttle shaft lever attaching screw washer	
136-169	Vacuum piston washer (Sup by 63 186)	
146-209S	Bowl cover and strainer assembly	
150-168	Dashpot air bleed pin	
150-170	Choke piston pin (Sup by 150 190) -	
150-179	Vacumeter link pin	
150-190	Choke piston pin	
150A-10	PIN SPRING	(3)
160-99	Kickdown switch piston	
160-102	Choke piston (Sup by 160 122) -	
160-112	Vacuum piston	
160-122	Choke piston	
161-46	Kickdown switch push rod plate	
161-82	Kickdown switch blocker plate	
170-190	Diaphragm housing (inner)	
170-194S	Kickdown switch assembly (complete) -	
170-210S	Dashpot diaphragm outer housing assembly	
170-216S	Kickdown switch piston housing and plug assembly	
170AB206S	Thermostatic coil and housing assembly (Sup by 170AB335SU)	
170AB335S	Thermostatic coil and housing assembly	
170AB335SU	Unitized package (consists of 1—170AB335S 1—63 189 2—101 361 and 1—121 78)	
180-56	Dashpot mounting bracket	
181-174S	Fast idle cam assembly	
186-36	Choke baffle plate	
202-22S	Diaphragm shaft and retainer assembly	
202-24S	Dashpot unit (complete)	
213-14S	Electro magnet and housing assembly -	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

CARBURETER
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This Carbur ter also used on DeSoto "S-15" and "S-18" Cars Equipped with Fluid Drive or Torque Converter and M6 Transmission



CHRYSLER 6
MODEL C-51, C-60
(Fluid Drive and M6 Trans.)
1951-1953

BB DOWN-DRAFT **CARBURETER No. E9A1**

CARBURETER SPECIFICATIONS

For Chrysler 6 Cylinder Engine: 3-7/16 Inch Bore, 4½ Inch Stroke (1951)

For Chrysler 6 Cylinder Engine: 3-7/16 Inch Bore, 4¾ Inch Stroke (1952-53)

Dimensions: Flange size, 1½ inch S. A. E. Throttle bore, 1-11/16 inch (42.86 mm). Main venturi, 1-11/32 inch (34.13 mm) I. D.

Float Setting: Top of float 5/64 inch (1.98 mm) below top surface of carbureter body casting. Plus or minus 1/64 inch (.397 mm). (Gauge T109-50.)

Vents: Outside none. Inside balance vent tube in air horn, above choke valve.

Gasoline Intake Needle: No. 44 (2.18 mm) drill in needle seat.

Idle Orifice Tube: Jet size, .0295 inch (.75 mm) drill.
Idle passage air bleed, in air horn, size No. 56 (1.18 mm) drill diameter. Restriction in body .0492 inch (1.25 mm) diameter.

Idle Ports: Upper port. Slot type: length .149 inch (3.78 mm), width .030 inch (.76 mm). Top of port located .118 to .122 inch (3.00 to 3.10 mm) above top edge of valve.
Lower port size .053 to .057 inch (1.35 to 1.45 mm) drill. (For idle adjustment screw.)

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture, turn screw out. With gear shift lever in neutral position, idle engine between 450 to 500 r.p.m.

Main Metering Screw: Calibrated to flow 315 to 319 cc per minute. (Do not gauge for size. If in doubt replace with new part.)

Main Vent: Through diffuser (air bleed inside bowl). Size .0315 inch (.80 mm) drill.

Vent Tube: Side holes: 4—.0354 inch diameter.

Step-Up Jet: Power orifice .0374 inch (.95 mm) drill.

Accelerating Pump: Type—delayed action, seasonal adjustment. Stroke—Summer setting (inner hole, short stroke). Intermediate setting (center hole). Winter setting (outer hole, long stroke). Pump intake passage, ball check seat, size .107 to .112 inch (2.72 to 2.845 mm) diameter in body. Pump discharge passage: Restriction (under ball check) size .062 to .065 inch (1.57 to 1.65 mm) diameter in body. Pump (discharge) jet size, .0413 inch (1.05 mm) drill.

Pump Adjustment: None.

Choke: Carter Climatic® Control. Set at index. Choke heat suction hole, in flange insulator. Size No. 38 drill.

Slow Closing Throttle: Dash pot with discharge (by-pass), size .018 to .020 inch (.457 to .508 mm) drill, through valve cage.

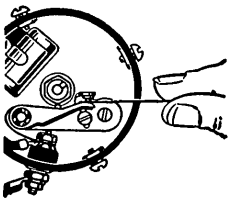
Vacuum Spark Port: Slot (round end) type; size .040 by .110 inch (1.016 by 2.794 mm). Top of port .012 to .018 inch (.305 to .457 mm) above top edge of valve.

Motor Tune-Up—Be Accurate!

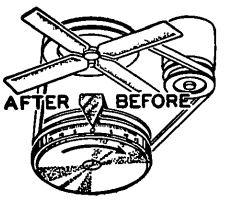
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



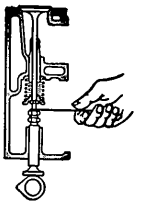
Spark Plug Gap .035"



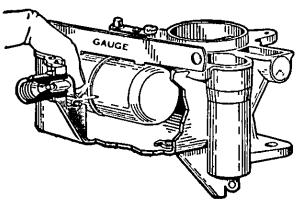
Breaker Point Setting .020"



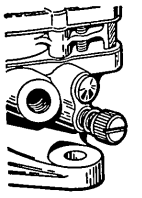
Ignition Timing Breaker Points to Open T. D. C.



Valve Setting (Hot) Intake .008" Exhaust .010"



Float Setting 5/64 Inch ± 1/64 Inch (Use Gauge T109-50)



Idle Adjustment Screw Setting ½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

If carbureter loads up after considerable service, check float level. Wear on lip of float lever will raise float level. Before adjusting float, be sure float lever pin is firmly seated. Reset float level by bending lip of float lever away from needle to raise level, or bend lip toward needle to lower float level. Bend vertical lip of float only.

If motor stalls while idling, set throttle lever adjusting screw so motor runs 450-500 r.p.m., with gear shift lever in neutral position. Then set idle adjustment screw to specifications. If these adjustments do not correct the trouble, remove idle orifice tube and plug assembly. Clean tube passages with compressed air.

If acceleration is not satisfactory, remove pump jet and clean with compressed air. However, it is usually advisable to replace the pump jet, as its cost is nominal. All jets must be seated gasoline tight. Poor acceleration may be due to damaged or worn plunger leather in accelerating pump, sediment in pump cylinder or clogged intake ball check at bottom of pump cylinder and discharge ball check in discharge passage. If plunger is removed from cylinder, use care in installing to avoid damage to plunger leather.

Correct air fuel ratio is provided by a "balance tube" in the air horn. The balance tube should be checked each time the carbureter is serviced to see that the passage is open. The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type, size or condition of air cleaner. Should the cleaner become clogged, the capacity will be reduced but the air-fuel mixture ratio will not be changed.

Excessive richness above 50 miles per hour may be caused by a clogged main vent tube. After removal of rivet plug beneath float bowl with tool No. T109-43, main vent tube can be removed and a new tube inserted with tool No. T109-195. Care must be exercised in inserting new tube which must seat tightly. Use new rivet to complete the installation.

Pump Adjustment: No gauge is necessary. Pump lifter arm should be at a right angle to pump lifter shaft. Adjustment can be made by bending pump lifter arm up or down (use tool T109-41).

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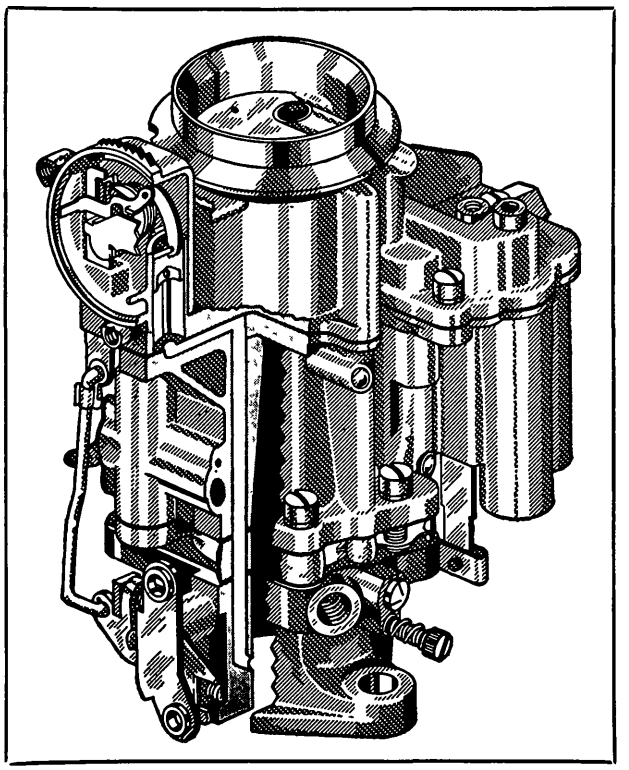


Figure 1

CARTER CLIMATIC® CONTROL CHOKE

The Carter Climatic® Control principle used in this unit is essentially the same as that used in WE type Carter carbureters. The fast idle cam assembly, unloader mechanism, etc., are located in the Climatic® Control housing. In this way all these parts are protected from dirt and other foreign matter (Fig. 1).

However, two important changes have been made (Fig. 2) Hot air is introduced at the **center** of the Climatic® Control housing, is drawn through three passages in the housing, around the delayer plate to the thermostatic coil, and then to the manifold.

A **delayer plate** has been added to control the action of the choke, providing longer choke operation during warm-up and preventing the choke from closing too rapidly after the engine is shut off. It should not be necessary to remove the delayer plate and thermostatic coil assembly from the coil housing when servicing the choke. The thermostatic coil **must not** be removed from the delayer plate.

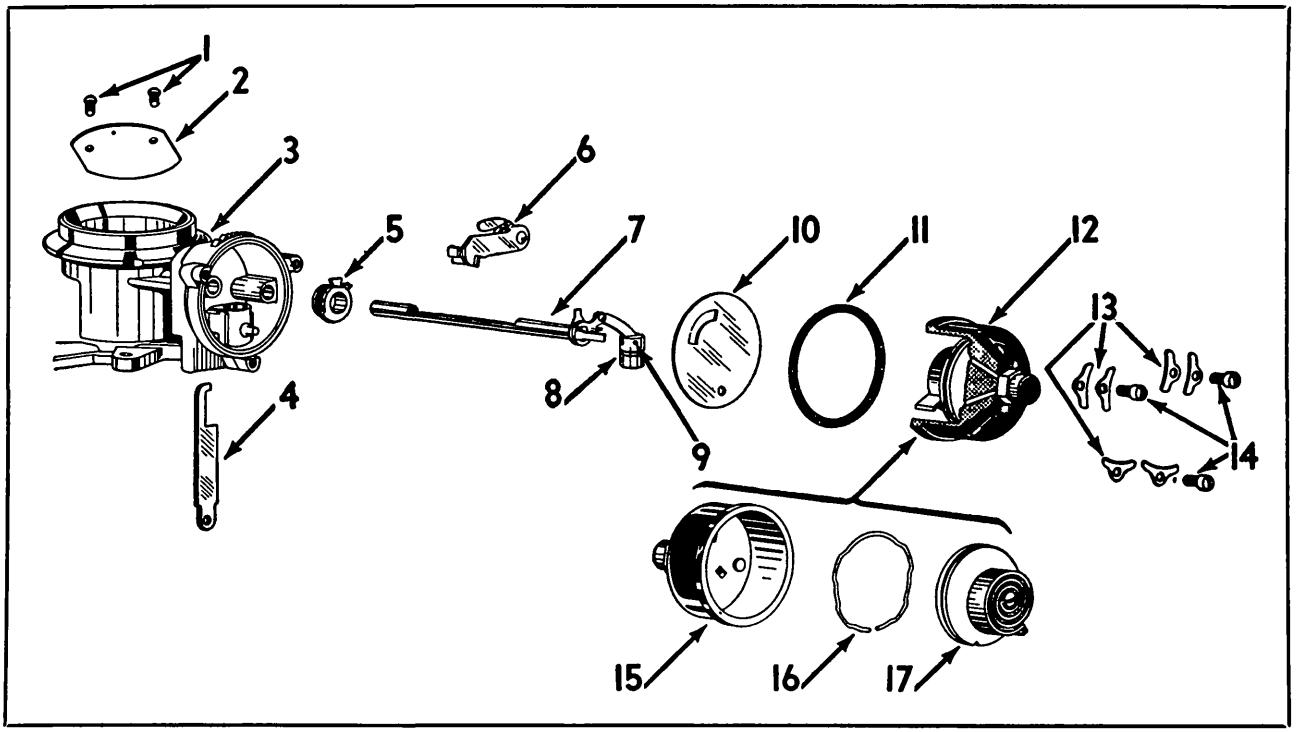


Figure 2

1. Choke Valve Screws
2. Choke Valve
3. Air Horn
4. Fast Idle Link
5. Fast Idle Cam Assembly
6. Choke Trip L v r
7. Choke Piston Lever, Link and Shaft Assy.
8. Choke Piston
9. Choke Piston Pin
10. Choke Baffle Plate
11. Coil Housing Gasket
12. Thermostatic Coil and Housing Assy.
13. Coil Housing Retainers
14. Coil Housing Screws
15. Thermostatic Coil Housing
16. Delayer Plate Retainer Ring
17. Delayer Plate and Therm static Coil Ass mbly

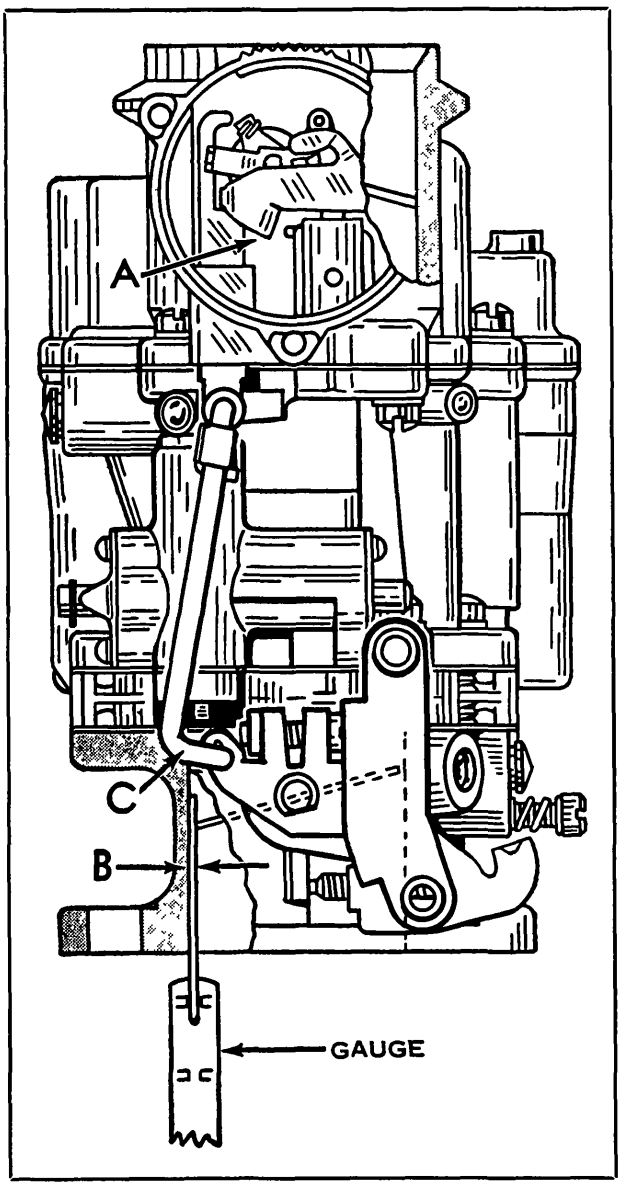


Figure 3
Fast Idle Adjustment

FAST IDLE ADJUSTMENT (Fig. 3):

Remove thermostatic coil housing assembly, gasket and baffle plate. With throttle adjusting screw backed out, crack throttle valve and hold choke valve in fully closed position. Then close throttle. This will allow fast idle cam to revolve to fast idle position ("A"—Fig. 3). There should now be .015"-.019" clearance ("B") (use gauge T109-44) between throttle valve and bore of carburetor, side opposite idle port. Adjust by bending the choke connector rod at lower angle ("C") (use tool T109-41).

UNLOADER ADJUSTMENT (Fig. 4):

This adjustment must be made after the fast idle adjustment. Hold throttle valve wide open and close choke valve as far as possible without forcing. There should now be 5/32" clearance ("D"—Fig. 4) (use gauge T109-154) between upper edge of choke valve and inner wall of air horn. Adjust by bending arm on choke trip lever ("E"—Fig. 4) (use tool T109-187). When fast idle and unloader adjustments have been made assemble baffle plate, coil housing gasket and thermostatic coil housing assembly on air horn Set Climatic® Control at "Index", making sure that hook on coil has picked up coil shaft lever.

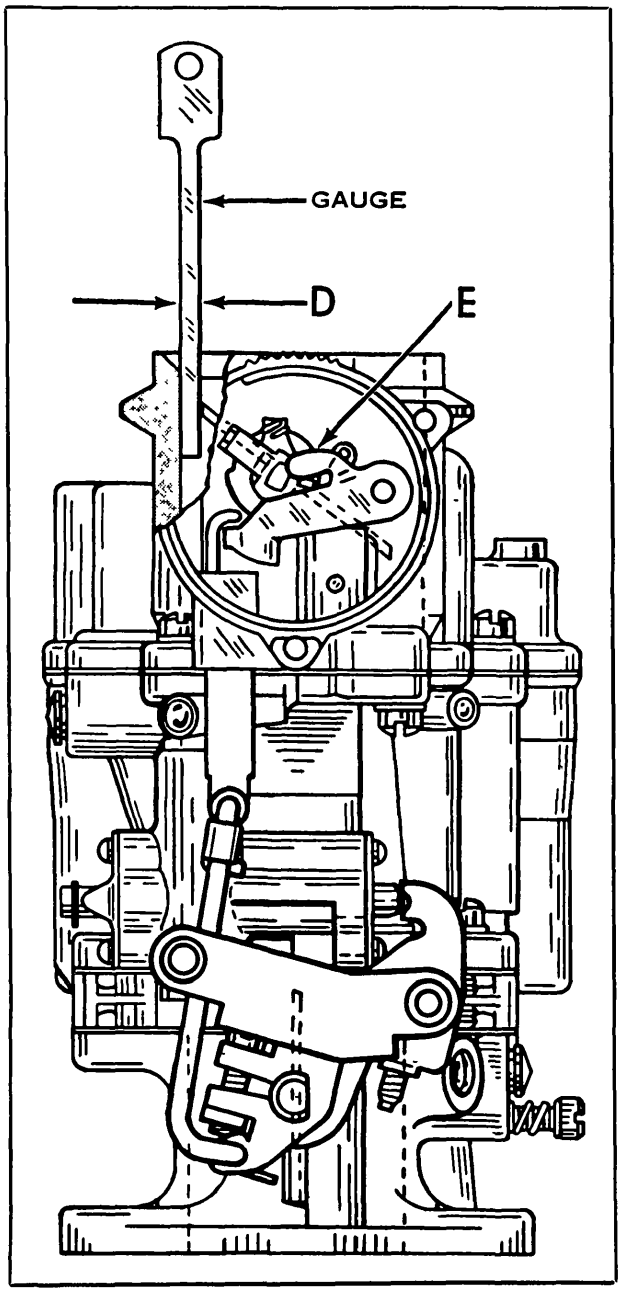
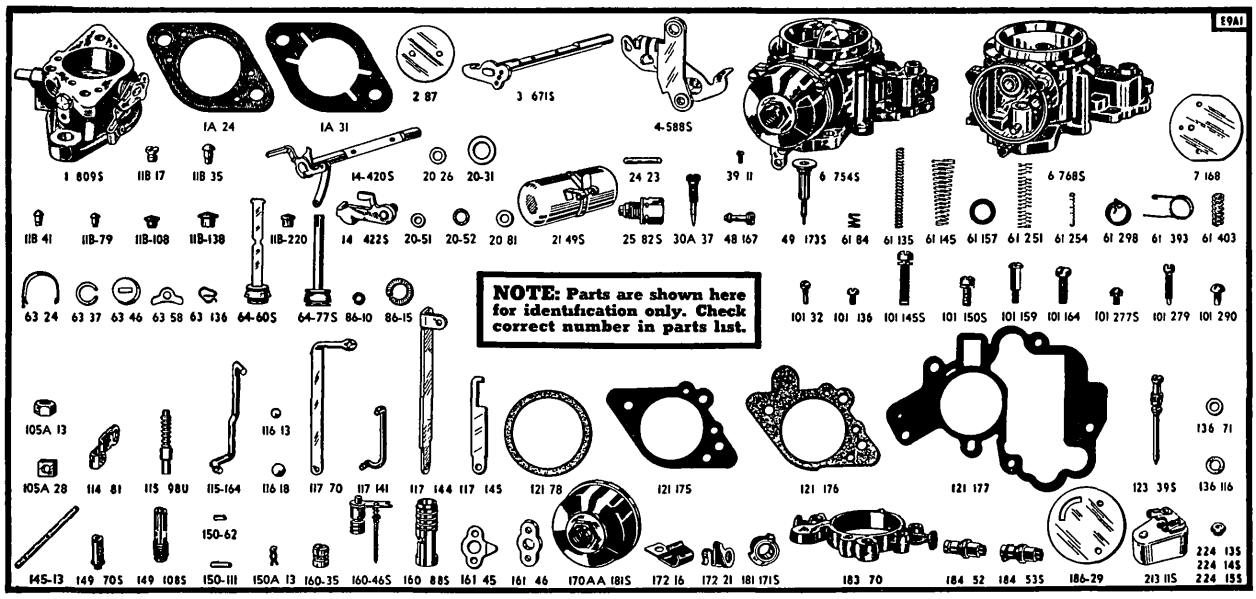


Figure 4
Unloader Adjustment



Chrysler 6—1951-1953—Carbureter No. E9A1

WHEN SERVICING, USE GASKET ASSORTMENT No 213A REPAIR PACKAGE No 1579

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-809S	Body flange assembly	
1A-24	Flange gasket (for use with governor)	
1A-31	FLANGE GASKET (FOR USE WITHOUT GOVERNOR)	
2-87	Throttle valve	
3-671S	Throttle shaft and arm assembly	
4-588S	Throttle lever assembly	
6-754S	Air horn and Climatic® control assembly	
6-768S	Air horn assembly	
7-168	Choke valve	
11B-17	Pump discharge passage plug	
11B 35	Rivet plug	
11B-41	Rivet plug	
11B-79	Rivet plug	(3)
11B-108	IDLE PORT RIVET PLUG	
11B-188	PUMP JET RIVET PLUG	
11B-220	HIGH SPEED PASSAGE RIVET PLUG	
14-420S	Choke piston lever and shaft assembly	
14-422S	Choke trip lever and pin assembly	
20-26	Gasket	
20-31	Needle seat gasket	
20-51	Step-up jet gasket	
20 52	STEP-UP PISTON GASKET	
20-81	SWITCH PLUNGER GASKET	
21-49S	Float and lever assembly	
24-23	Float lever pin	
25-82S	NEEDLE AND SEAT ASSEMBLY	
30A-37	Idle adjustment screw	
39-11	Valve attaching screw	(4)
48-167	PUMP JET	
49 173S	Valve plunger rod and plate assembly	
61-84	Idle adjustment screw spring	
61-135	STEP-UP PISTON SPRING	
61-145	PUMP SPRING	
61-157	Plunger spring	(2)
61-251	Switch piston spring	
61-254	Plunger operating spring	
61-298	Fast idle cam spring	
61-393	Dash-pot pick-up arm spring	
61-403	Push rod sleeve spring	
63-24	FLOAT LEVER PIN RETAINER	
63-37	PUMP CYLINDER BALL RETAINER	
63 46	Spring retainer	
63-58	Coil housing retainer (Sup by 63-164)	
63 136	Connector retainer clip	
63 144	Delayer plate retainer	
63 164	Coil housing retainer (Use with 170AA181S)	(3)
63-190	Coil housing retainer (Use with 170AA312S)	
64-60S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49-120)	
64-77S	Dash-pot plunger and rod assembly	
86-10	Throttle shaft arm lock washer	
86-15	Flange stud lock washer	(2)
101-11	Coil housing attaching screw (Use with 170AA181S)	(3)
101-32	Throttle shaft arm screw	
101-136	Coil housing attaching screw (Sup by 101-11)	(3)
101-145S	Body flange attaching screw and washer assembly	(3)
101-150S	Air horn attaching screw and washer assembly	(5)
101-159	Electro magnet assembly attaching screw	
101-164	Throttle lever clamp screw	
101-277S	Plate attaching screw and washer assembly	(4)
101-279	Throttle adjusting screw	
101 290	Terminal attaching screw	
101-361	Coil housing attaching screw (Use with 170AA312S)	(3)
105A-13	Flange nut	(2)
105A-28	Throttle lever clamp nut	
114-81	Throttle shaft arm	
115-98U	Push rod assembly and spring unit (Consists of 61-403 and 115-79S)	
115-164	Choke connector rod	
116-13	PUMP CHECK BALL	
116-18	PUMP DISCHARGE CHECK BALL	
117-70	PUMP LIFTER	
117-141	PUMP LINK	
117-144	Dash-pot lifter	
117-145	Fast idle link	
121-78	THERMOSTATIC COIL HOUSING GASKET	
121-175	BODY FLANGE GASKET	
121-176	CARBURETER BODY TO INSULATOR GASKET	
121-177	BODY GASKET	
123-39S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
136-71	Plunger washer	
136-116	Terminal attaching screw washer	
145-13	MAIN VENT TUBE	
149-70S	STEP-UP JET ASSEMBLY	
149-108S	Dash-pot valve cage assembly	
150-62	Choke piston pin	
150-111	Dash-pot pin	
150A-13	PIN SPRING	
160-35	Choke piston	
160-46S	STEP-UP PISTON, PLATE AND ROD ASSEMBLY	
160-88S	Kick-down switch piston assembly	
161-45	Switch terminal end plate	
161-46	Switch push rod end plate	
170AA-181S	Thermostatic coil and housing assembly (Sup by 170AA312SU)	
170AA312S	Thermostatic coil and housing assembly	
170AA312SU	Unitized package (Consists of 1—170AA312S, 1—63-190 3—101-361 and 1—121-78)	
172-16	Cable clip	
172-21	Connector rod retainer	
181-171S	Fast idle cam assembly	
183-70	Insulator	
184-52	Terminal block (Sup by 184-53S)	
184 53S	Terminal block and clip assembly	
186-29	Baffle plate	
195-47U	Unitized package (for kick-down switch)	
213-11S	Electro magnet and housing assembly	
224-13S	MAIN METERING JET ASSEMBLY—STANDARD	
224 14S	Main metering jet assembly—1 size lean	
224-15S	Main metering jet assembly—2 sizes lean	

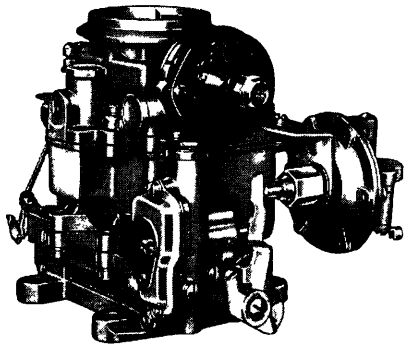
NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

CARBURETER
TRADE MARK REG U S PAT OFF
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Form 4924L

CARTER CARBURETOR
DIVISION OF **acf** INDUSTRIES INCORPORATED
ST LOUIS MO U S A

CHRYSLER 931S 931SA 931SB 931SC
July, 1952
Revised March 1957



CHRYSLER "V-8" MODELS C-52, C-53, C-54, C-55 1951-1952

WCD Down-Draft Climatic® Control **Carbureters Nos. 931S-931SA-931SB-931SC**

CARBURETER SPECIFICATIONS

For Chrysler 8 Cylinder Engine 3 13/16 Inch Bore 3⅝ Inch Stroke

Dimensions Flange size 1¼ inch S A E dual 4 bolt (water jacket) type
Throttle bore 1 7/16 inch (36 51 mm)
Primary venturi 11/32 inch (8 73 mm) I D
Main venturi 1 3/16 inch (30 16 mm) I D

Float Level See adjustments

Vents (Early Production) Inside balance vent tube to bowl in air horn above choke valve Outside none (Late Production) Outside in air horn 2 holes size 3/16 inch (4 77mm)

Gasoline Intake Size No 38 (1015 inch) (2 58 mm) drill hole in needle seat

Low Speed Jet Tube Jet size 0295 inch (75 mm) drill By pass size No 58 (042 inch) (1 07 mm) drill Economizer size 0452 inch (1 15 mm) drill Idle bleed size No 58 (042 inch) (1 07 mm) drill

Idle Port Upper port length 175 inch (4 45 mm) width 030 inch (76 mm)

Idle Port Opening 136 to 140 inch (3 46 to 3 56 mm) above upper edge of valve with valve tightly closed

Lower Ports (for Idle Adjustment Screws) Size 0615 to 0655 inch (1 56 to 1 66 mm) diameter

Set Idle Adjustment Screw ½ to 1 turn open For richer mixture turn screw out With gear shift lever in neutral position idle engine at 500 r p m

Main Nozzle Nozzles are installed permanently **Do not remove**

Metering Rod Vacumeter type Economy step 0695 inch (1 77 mm) diameter Middle step tapers to 0667 inch (1 70 mm) diameter Power step 062 inch (1 58 mm) diameter These rods designed with idle stabilizing flats on economy step

Metering Rod Jet 089 inch (2 26 mm) diameter

Metering Rod Setting See adjustments

Accelerating Pump Pump discharge jets (twin) size (0315 inch) (80 mm) drill Intake ball check seat size No 32 (116 inch) (2 95 mm) drill Discharge needle seat size No 50 (070 inch) (1 78 mm) drill

Pump Adjustment See adjustments

Choke Carter Climatic® Control—set at index Butterfly type offset valve Choke heat suction hole in bowl cover size No 43 (089 inch) (2 26 mm) drill

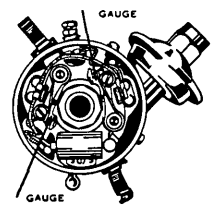
Vacuum Spark Port 030 x 110 inch (76 x 2 80 mm) Top of port to be 035 to 041 inch (89 to 1 04 mm) above top edge of valve

Motor Tune-Up—Be Accurate!

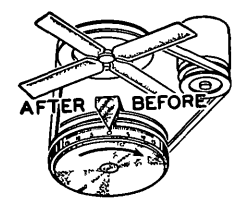
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



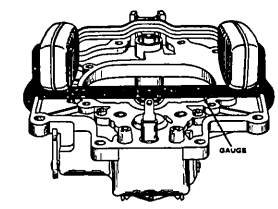
Spark Plug Gap 035"



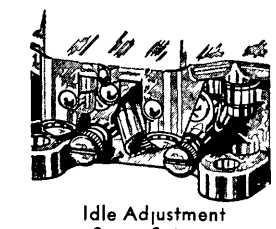
Breaker Point Setting 017"



Ignition Timing Breaker Points to Open 4° B T D C



Float Setting 11/64" (Use gauge T109 205)



Idle Adjustment Screw Setting ½ to 1 Turn Open

NOTE These cars equipped with hydraulic valve lifters—No adjustment

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT (Fig. 1):

Two separate float adjustments must be made—lateral and vertical.

Lateral Adjustment: With bowl cover assembly inverted, bowl cover gasket removed and lip of float resting on seated needle, place float gauge T109-205 directly under float with notched portions of gauge fitted over edges of casting. Sides of floats should barely touch the vertical uprights of float gauge (A). Adjustment should be made by bending arms of floats.

Vertical Adjustment: With float gauge in position shown, floats should just clear the horizontal portion of gauge (B). Vertical distance between top of float and machined surface of casting should be 11/64 inch (gauge T109-205). Adjustment can be made by bending arms of floats. Carefully remove float assembly, install bowl cover gasket and then reinstall float assembly. Floats should have a free movement of 1/2" at free end of float. Adjust by bending lip of float bracket. A fast check of the fuel level can be made on the car by removing the inspection hole plug in the side of carbureter body. Fuel should just run out of the hole with engine idling.

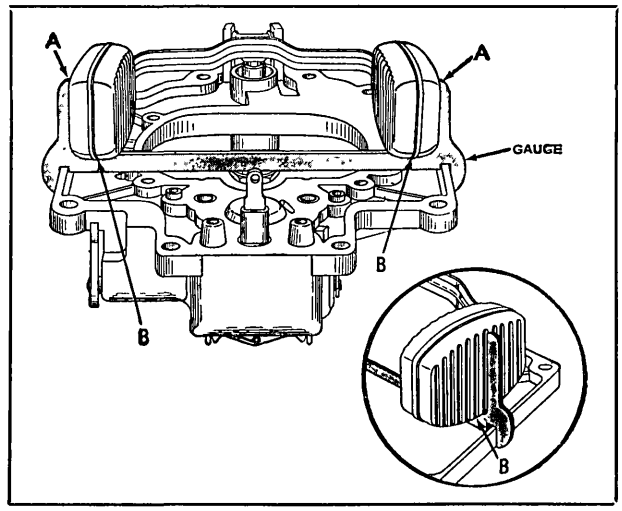


Figure 1
Float Adjustment

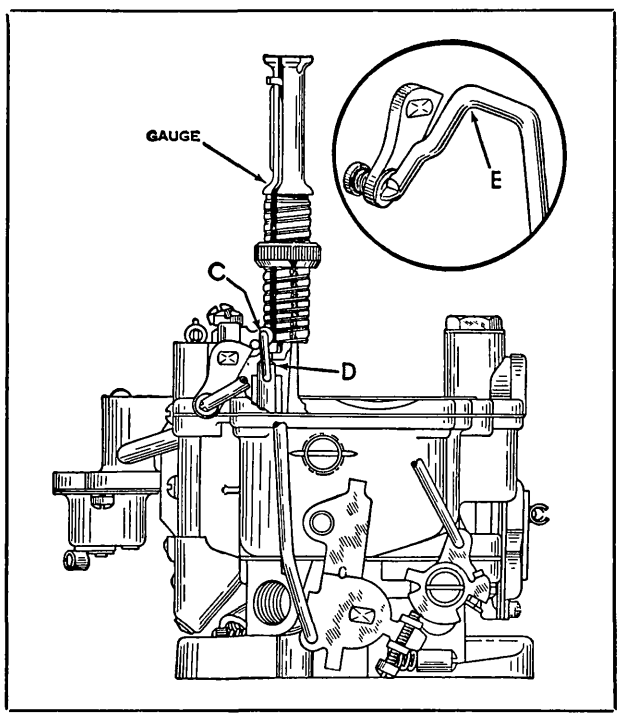


Figure 2
Pump Adjustment

PUMP ADJUSTMENT (Fig. 2):

The total distance the plunger head (not shaft) moves from closed to wide open throttle position determines the amount of fuel discharged. Correct pump plunger travel is important and should be checked each time the carbureter is disassembled or when leaner than standard metering rods are installed. Procedure is as follows: Install pump connector link in outer hole (long stroke) of pump arm (C). Back out throttle lever set screw until throttle valves seat in bores of carbureter. Be sure fast idle adjusting screw does not hold throttle open. With air horn assembly removed, place Universal pump travel gauge T109-117S, inverted on edge of dust cover boss of bowl cover. Turn knurled nut of gauge until finger just touches upper end of plunger shaft (D). Number indicated on gauge should be "29". Hold the gauge vertical to insure correct reading. Adjust by bending throttle connector rod at upper angle (E). (Use tool T109-213.)

Optional Adjustment: With throttle valves seated in bores of carbureter, the distance from the top of the plunger shaft to the top of the dust cover boss should be 17/64". Adjust as mentioned above.

METERING ROD ADJUSTMENT (Fig. 3):

Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows: Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw (F). With metering rods in place, press down on vacumeter link (G) until metering rods bottom in carbureter body casting (H). Holding rods in downward position and throttle valves seated revolve metering rod arm until finger on arm contacts lip of vacumeter link (J). Hold in place and carefully tighten clamp screw (F).

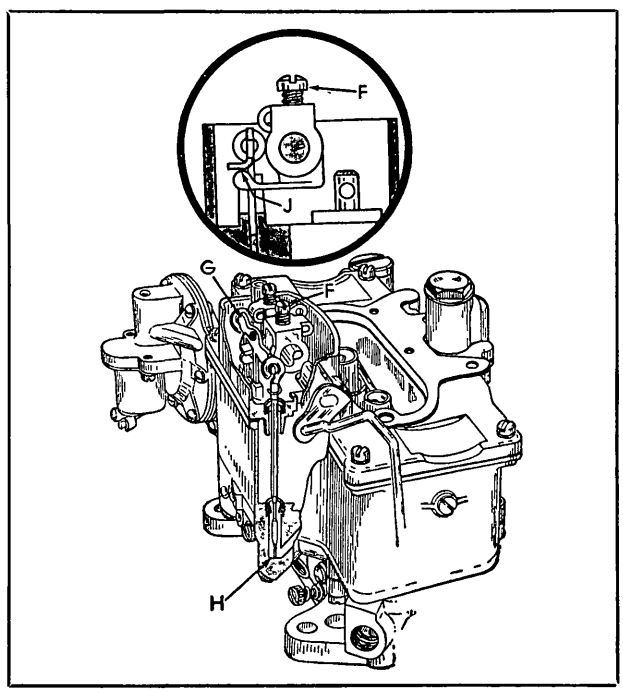


Figure 3
Metering Rod Adjustment

FAST IDLE ADJUSTMENT (Fig. 4):

1. Loosen choke lever clamp screw (K) on choke shaft. Insert .040" feeler gauge T109-193 between lip of fast idle cam and boss of flange casting (L). Hold choke valve tightly closed and take slack out of linkage by pressing choke lever toward closed position — hold in place and tighten clamp screw (K).

2. With choke valve tightly closed, tighten fast idle adjusting screw (M) until there is .017"-.021" opening (N) (wire gauge T109-44 may be used) between throttle valve and bore of carbureter (side opposite idle port). Be sure fast idle adjusting screw is on high step of cam (O) while making this adjustment.

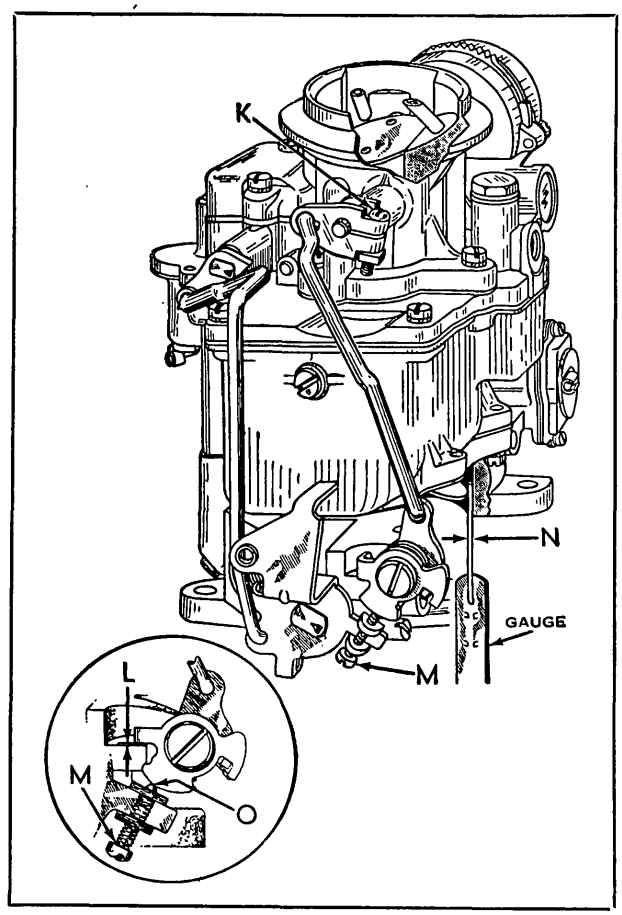


Figure 4
Fast Idle Adjustment

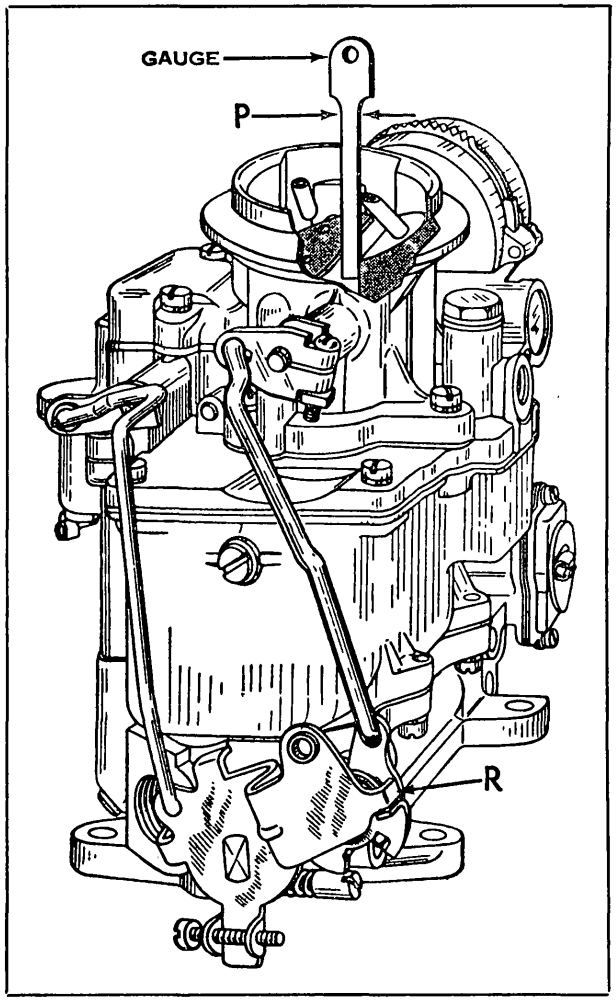


Figure 5
Unloader Adjustment

UNLOADER ADJUSTMENT (Fig. 5):

With throttle wide open there should be 7/32" clearance between upper edge of choke valve and inner wall of air horn (P) (gauge T109-106). Adjust by bending unloader lip on throttle shaft lever (R) (use bending tool T109-41).

DASHPOT (SLOW CLOSING THROTTLE) ADJUSTMENT (Fig. 6):

The purpose of the dashpot is to prevent the car from stalling when the throttle is released rapidly. Maximum dashpot action is obtained by adjusting screw (S) so that the dashpot plunger shaft (T) can be moved inward approximately 1/16" after engine and throttle have turned to normal idle. This adjustment should be made with the carbureter on the car, with engine running and transmission in driving range.

Service parts and complete unit assemblies are available for servicing the dashpot and kickd wn switch units pictured in Fig. 6.

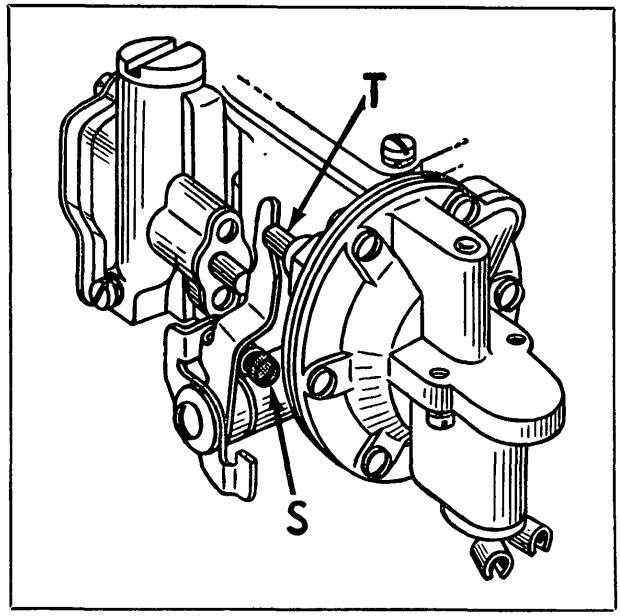


Figure 6
Dashpot Adjustment

Part No	PART NAME	
121-189	KICKDOWN SWITCH HOUSING GASKET	
121-190	ELECTRO MAGNET HOUSING GASKET	
121 193	DUST COVER GASKET	
121-196	Delayer plate gasket	
121-197	PUMP JET HOUSING GASKET	
121-198	BODY FLANGE GASKET	
121 213	AIR HORN GASKET	
121-214	BOWL COVER GASKET	
129-24	Metering rod disk	(2)
136 37	Throttle connector rod washer	
136 49	Vacuum piston washer (Sup by 136 169)	
136 55	Throttle centering spring washer (931S SA SB SC early prod)	
136-71	Kickdown switch push rod washer	
136-77	Throttle shaft lever attaching screw washer	
136 169	Vacuum piston washer (931SA SB SC) (Sup by 63 186)	
146 209S	Bowl cover and strainer assembly	
150-168	Dashpot air bleed pin	
150 170	Choke piston pin (Sup by 150 190)	
150 179	Vacumeter link pin (931SA SB SC)	
150 190	Choke piston	
150A 10	PIN SPRING	(3)
160 99	Kickdown switch piston	

Part No	PART NAME
160-101S	Vacuum piston and pin assembly (931S)
160 102	Choke piston (Sup by 160 122)
160 112	Vacuum piston (931SA SB SC)
160-122	Choke piston
161-46	Kickdown switch push rod plate
161-82	Kickdown switch blocker plate
170-190	Diaphragm housing (inner) (Sup by 170 509)
170-194S	Kickdown switch assembly (complete)
170-210S	Dashpot diaphragm outer housing assembly
170 216S	Kickdown switch piston housing and plug assembly
170-509	Diaphragm housing (inner)
170AB 206S	Thermostatic coil and housing assembly (Sup by 170AB335SU)
170AB335S	Thermostatic coil and housing assembly
170AB335SU	Unitized package (consists of 1—170AB335S 1—63 189 2—101 361 and 1—121 78)
180-56	Dashpot mounting bracket
181-174S	Fast idle cam assembly
186-36	Choke baffle plate
202-22S	Diaphragm shaft and retainer assembly
202 24S	Dashpot unit (complete)
213-14S	Electro magnet and housing assembly

*11B 223 used as idle port rivet plug on 931S and 931SA early production

NOTE **Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used**

CARBURETER
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CARTER CLIMATIC CONTROL CHOKE

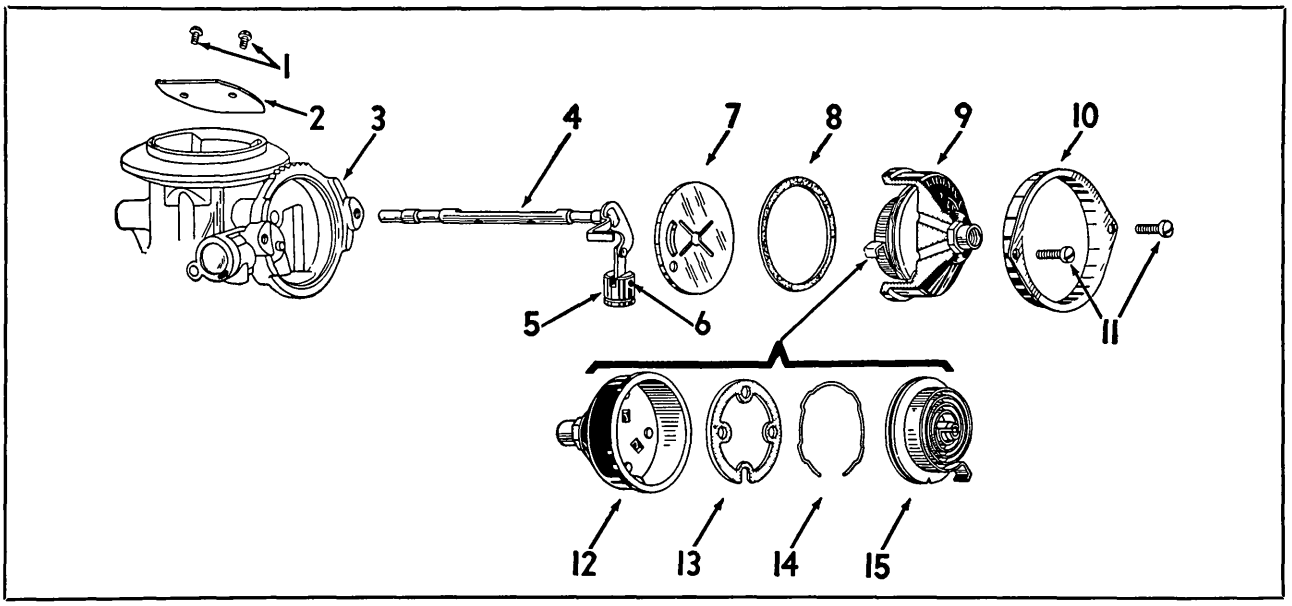
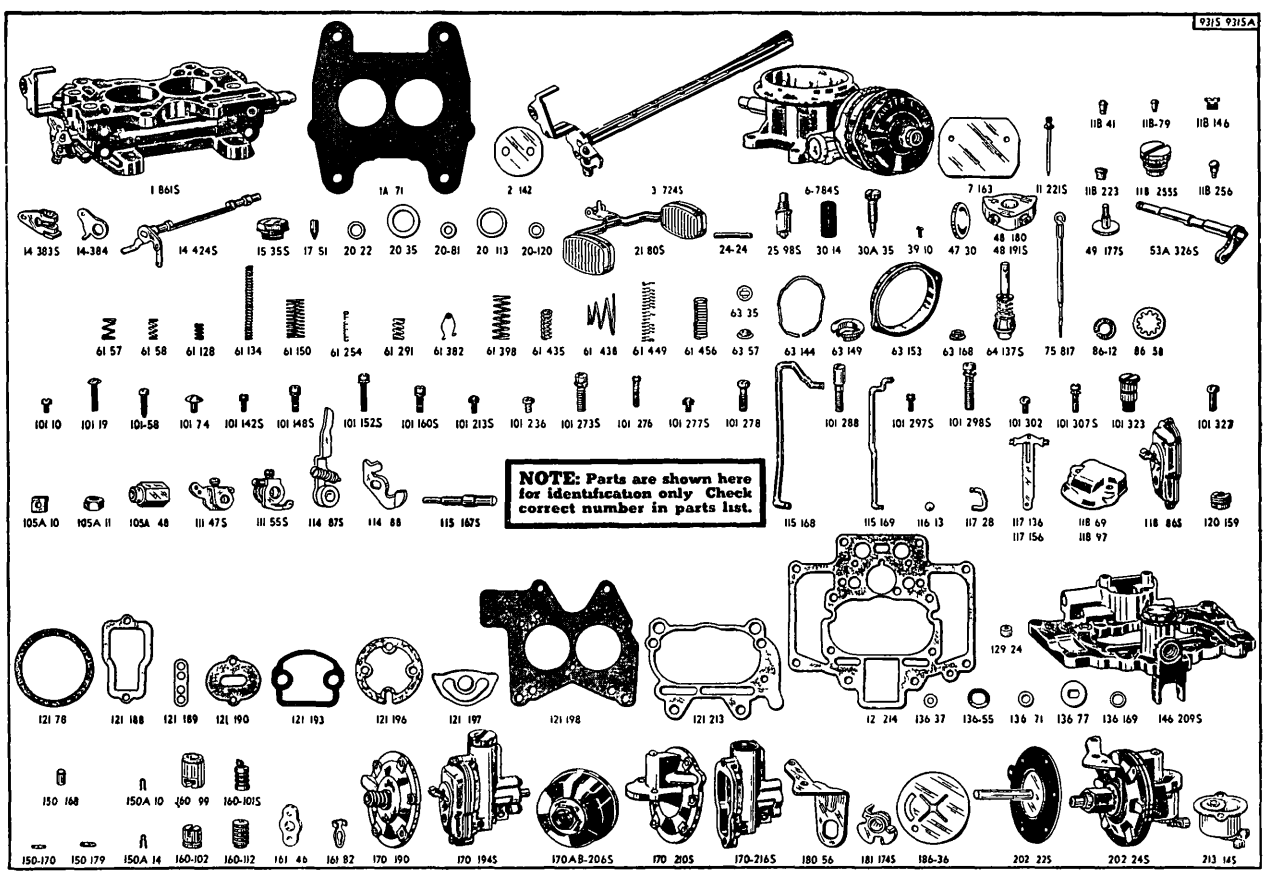


Figure 7

1 Choke valve screws
2 Choke valve
3 Air horn
4 Choke piston lever link and shaft assy
5 Choke piston
6 Choke piston pin
7 Choke baffle plate
8 Coil housing gasket
9 Thermostatic coil and housing assy
10 Coil housing retainer
11 Coil housing screws
12 Thermostatic coil housing
13 Delayer plate gasket
14 Delayer plate retainer ring
15 Delayer plate and thermostatic coil assembly

The Carter Climatic® Control principle used in this unit is essentially the same as that used in other WCD carbureters However heat is introduced at the center of the thermostatic coil housing Hot air is drawn through three passages in the coil housing through the center of the delayer plate and then to the manifold

The purpose of the delayer plate is to control the action of the choke providing longer choke operation during warm up and preventing the choke from closing too rapidly after the engine is shut off Should it be necessary to replace the delayer plate gasket the relayer plate and thermostatic coil assembly may be removed by striking the coil housing assembly sharply against the cupped palm of the hand Care should be taken during removal and reassembly to avoid damage to the thermostatic coil The thermostatic coil **must not** be removed from the delayer plate



Chrysler "V8"—1951-1952—Carbureters Nos. 931S-931SA-931SB-931SC

WHEN SERVICING, USE GASKET ASST No 212D, REPAIR PKG No 1705B

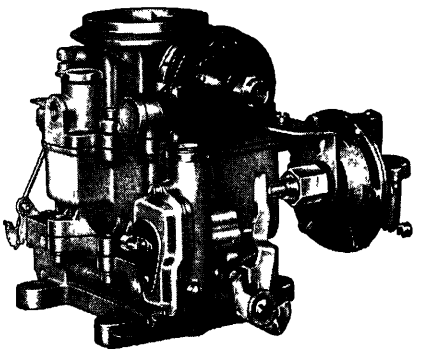
PART NAMES IN CAPITAL LETTERS LISTED BELOW INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-861S	Body flange assembly	
1A-71	FLANGE GASKET	
2-142	Throttle valve	(2)
3-724S	Throttle shaft and lever assembly	
6-784S	Air horn and Climatic ® control assembly (Sup by 6 842S)	
6-842S	Air horn and Climatic ® control assembly (Use with 75 811)	
6-843S	Air horn assembly (Use with 75 811)	
7-163	Choke valve	
11-221S	Low speed jet assembly (Sup by 11 235S)	
11-235S	LOW SPEED JET ASSEMBLY	
11B-41	Rivet plug	(2)
11B-79	Rivet plug	(7)
11B-138	IDLE PORT RIVET PLUG (931SA late prod —931SB SC)	(2)
11B-146	Level sight plug	
11B-223	*NOZZLE RIVET PLUG	(2)
11B-255S	Kickdown switch plug assembly	
11B-256	Dashpot check ball retainer plug	
11B-257	Body flange rivet plug (Sup by 11B 285)	
11B-258	Body flange rivet plug (Sup by 11B 286)	
11B-259	Body flange rivet plug (Sup by 11B 287)	
11B-285	Rivet plug (approx 9/16" dia)	(2)
11B-286	Rivet plug (approx 3/8" dia)	(5)
11B-287	Rivet plug (approx 5/16" dia)	(3)
14-383S	Choke lever and screw assembly	
14 384	Cam trip lever	
14 424S	Choke piston lever link and shaft assembly	
15-35S	Strainer nut assembly	
17-51	PUMP CHECK NEEDLE	
17-92	Pump check needle (Sup by 17 51)	
20 22	Needle seat gasket	
20-35	BOWL STRAINER GASKET	
20 81	KICKDOWN SWITCH PLUNGER GASKET	
20-113	KICKDOWN SWITCH PLUG GASKET	
20-120	VACUMETER PISTON GASKET (931SA SB SC)	
21-80S	Float and lever assembly	
24-24	Float lever pin	
25 98S	NEEDLE AND SEAT ASSEMBLY	
30-14	BOWL COVER STRAINER	
30A-35	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
47-30	WELSH PLUG	
48-180	Pump jet housing (Sup by 48 191S)	
48-191S	Pump jet housing assembly (931S SA) (Sup by 48 204S)	
48-204S	Pump jet and housing assembly	
49-177S	Electro magnet plunger assembly	
53A 326S	Pump operating lever and countershaft assembly	
61-57	Idle adjustment screw lock spring	(2)
61-58	Dashpot adjusting screw lock spring	
61-128	CONNECTOR ROD SPRING	
61-134	VACUUM PISTON SPRING	
61-150	PUMP SPRING (LOWER)	
61-254	Dashpot armature spring	
61-291	Throttle lever adjustment screw lock spring	
61-382	METERING ROD SPRING	
61-398	Pump spring (upper)	
61-435	Kickdown switch push rod spring	
61-438	Dashpot diaphragm return spring	
61-449	Kickdown switch piston spring	
61-456	Vacumeter piston spring (931SA SB SC)	
63-35	CONNECTOR ROD SPRING RETAINER	
63-57	INTAKE CHECK BALL RETAINER	
63-144	Delayer plate retainer ring	
63-149	Upper pump spring retainer	
63-153	Thermostatic coil housing retainer (Use with 170AB206S)	
63-168	Piston link spring retainer (931SA)	
63 186	Vacuum piston spring retainer (931SA SB SC)	
63-189	Thermostatic coil housing retainer (Use with 170AB335S)	
64 137S	PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
75 811	Metering rod—standard (Use with 6 842S or 6 843S)	(2)
75 813	Metering rod—1 size lean	(2)
75 817	Metering rod—Standard (931S 931SA) (Sup by 75 870U)	(2)
75 855	Metering rod—standard (931SB) (Sup by 75 870U)	
75 870U	UNITIZED PACKAGE (CONSISTS OF (2) 75 811 (1) 11B 228)	
75-875	Metering rod—2 sizes lean	(2)
86 12	Flange stud lock washer	(4)
86 58	Dashpot bracket nut lock washer	
101 6	Pump arm clamp screw	
101-10	Pump arm clamp screw (Sup by 101 6)	
101-19	Choke lever clamp screw (Sup by 101 354S)	
101-58	Dashpot arm adjusting screw	
101-74	Throttle shaft lever attaching screw	
101-142S	Electro magnet housing attaching screw assembly	(2)
101 148S	Dust cover attaching screw and washer assembly	(2)
101-152S	Air horn attaching screw and washer assembly	(4)
101-160S	Bowl cover and kickdown housing attaching screw and washer assembly	(5)
101-213S	Diaphragm cover attaching screw assembly	(6)
101-236	Metering rod arm clamp screw	
101-273S	Body flange attaching screw and washer assembly	(4)
101-276	Fast idle adjustment screw	
101-277S	Kickdown switch push rod plate screw assembly	(2)
101-278	Pump jet housing attaching screw (931S SA) (Sup by 101 342)	
101-288	Throttle lever adjustment screw	
101-297S	Kickdown switch cover attaching screw assembly	(2)
101 298S	Kickdown attaching screw assembly	
101-302	THROTTLE VALVE ATTACHING SCREW	(4)
101-307S	Dashpot bracket attaching screw and washer assembly	(2)
101-323	Fast idle cam attaching screw	
101-327	Thermostatic coil housing attaching screw (Use with 170AB206S)	(2)
101-342	Pump jet housing attaching screw	
101-354S	Choke lever clamp screw assembly	
101-361	Thermostatic coil housing attaching screw (Use with 170AB335S)	
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
105A-48	Dashpot bracket nut	
111-47S	Pump arm and screw assembly	
111-55S	Metering rod arm and screw assembly	
114-87S	Kickdown switch lever and collar assembly	
114-88	Throttle shaft arm	
115-167S	Kickdown switch push rod assembly	
115-168	THROTTLE CONNECTOR ROD	
115-169	Choke connector rod	
116-13	INTAKE CHECK BALL	(2)
117-28	Pump connector link (Sup by 117 170)	
117-136	Vacumeter piston link (931S)	
117-156	Vacumeter piston link (931SA)	
117-170	Pump connector link	
118 69	Dust cover (931S)	
118 86S	Kickdown snap switch and cover assembly	
118-97	Dust cover (931SA-SB-SC)	
120-159	METERING ROD JET	(2)
121-78	COIL HOUSING GASKET	
121-188	KICKDOWN SWITCH COVER PLATE GASKET	

PARTS LIST CONTINUED ON PAGE 6.

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

CHRYSLER 830S-830SA-830SB
March, 1951
Revised August, 1955



Cut shows 830SA Carbureter

CHRYSLER "V-8" MODELS C-52, C-53, C-54 1951

(931SC can also be used)

WCD Down-Draft Climatic® Control **Carbureters Nos. 830S-830SA-830SB**

CARBURETER SPECIFICATIONS

For Chrysler 8 Cylinder Engine: 3-13/16 Inch Bore, 3⅝ Inch Stroke

Dimensions: Flange size 1¼ inch S. A. E. dual, 4 bolt (water jacket) type.
Throttle bore, 1-7/16 inch (36.51 mm).
Primary venturi, 11/32 inch, (8.73 mm) I. D.
Main venturi, 1-3/16 inch, (30.16 mm) I. D.

Float Level: See adjustments.

Vents: Inside; balance vent tubes (2) in air horn, above choke valve. Outside; none.

Gasoline Intake: Size No. 38 (.1015 inch) (2.58 mm) drill hole in needle seat.

Low Speed Jet Tube: Jet size .0295 inch (.75 mm) drill.
By-pass, size No. 58 (.042 inch) (1.07 mm) drill.
Economizer, size .0452 inch (1.15 mm) drill.
Idle bleed, size No. 58 (.042 inch) (1.07 mm) drill.

Idle Port: Upper port, length .175 inch (4.45 mm), width .030 inch (.76 mm).

Idle Port Opening: .136 to .140 inch (3.46 to 3.56 mm) above upper edge of valve with valve tightly closed.

Lower Ports (for Idle Adjustment Screws): Size .0615 to .0655 inch (1.56 to 1.66 mm) diameter.

Set Idle Adjustment Screw: ½ to 1 turn open. For richer mixture, turn screw out. With gear shift lever in neutral position, idle engine between 475 to 500 r.p.m.

Main Nozzle: Nozzles are installed permanently. **Do not remove.**

Metering Rod: Vacumeter type. Economy step .0665 inch (1.69 mm) diameter. Middle step tapers to .063 inch (1.60 mm) diameter. Power step, .058 inch (1.47 mm) diameter.

Metering Rod Jet: .089 inch (2.26 mm) diameter.

Metering Rod Setting: See adjustments.

Accelerating Pump: Pump discharge jets: (twin) size (.0315 inch) drill.
Intake ball check seat, size No. 32 (.116 inch) drill.
Discharge needle seat, size No. 50 (.070 inch) drill.

Pump Adjustment: See adjustments.

Choke: Carter Climatic® Control—set at index. Butterfly type, offset valve. Choke heat suction hole, in bowl cover, size No. 43 (.089 inch) (2.26 mm) drill.

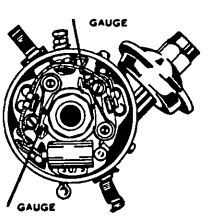
Vacuum Spark Port: .030 x .110 inch (.76 x 2.80 mm). Top of port to be (early production 830S) .067 to .073 inch (1.70 to 1.86 mm); (late production 830S and 830SA) .035 to .041 inch (.89 to 1.04 mm) above top edge of valve.

Motor Tune-Up—Be Accurate!

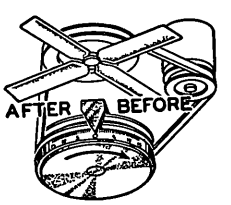
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



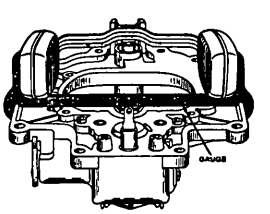
Spark Plug Gap .035"



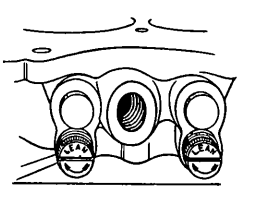
Breaker Point Setting .015"-.017"



Ignition Timing Breaker Points to Open: T. D. C.



Float Setting 11/64" (Use gauge T109-205)



Idle Adjustment Screw Setting ½ to 1 Turn Open

NOTE: These cars equipped with hydraulic valve lifters.—No adjustment.

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT (Fig. 1):

Two separate float adjustments must be made—lateral and vertical.

Lateral Adjustment: With bowl cover assembly inverted, bowl cover gasket removed and lip of float resting on seated needle, place float gauge T109-205 directly under float with notched portions of gauge fitted over edges of casting. Sides of floats should barely touch the vertical uprights of float gauge (A). Adjustment should be made by bending arms of floats.

Vertical Adjustment: With float gauge in position shown, floats should just clear the horizontal portion of gauge (B). Vertical distance between top of float and machined surface of casting should be 11/64 inch (gauge T109-205). Adjustment can be made by bending arms of floats. Carefully remove float assembly, install bowl cover gasket and then reinstall float assembly.

Floats should have a free movement of 1/2" at free end of float. Adjust by bending lip of float bracket.

A fast check of the fuel level can be made on the car by removing the inspection hole plug in the side of carbureter body. Fuel should just run out of the hole with engine idling.

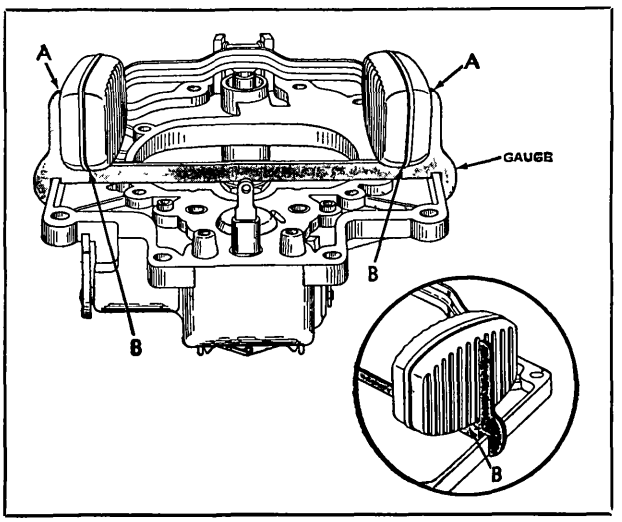


Figure 1
Float Adjustment

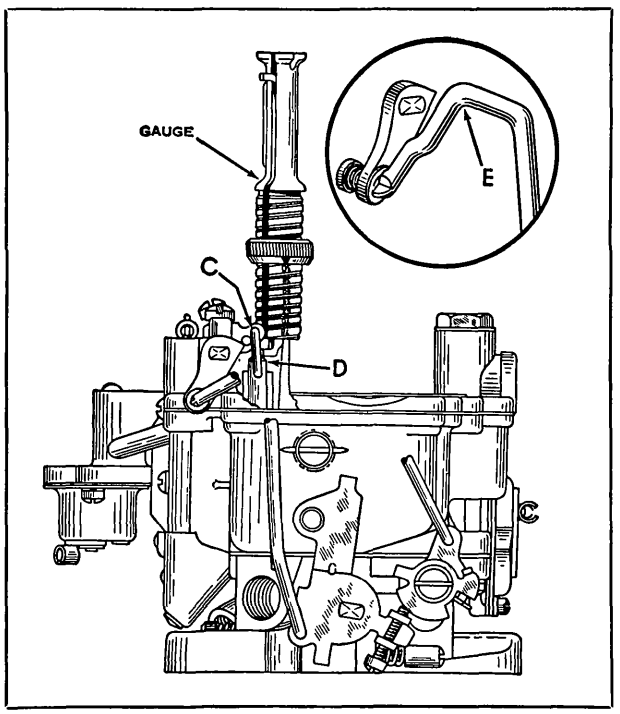


Figure 2
Pump Adjustment

PUMP ADJUSTMENT (Fig. 2):

The total distance the plunger head (not shaft) moves from closed to wide open throttle position determines the amount of fuel discharged. Correct pump plunger travel is important and should be checked each time the carbureter is disassembled or when leaner than standard metering rods are installed. Procedure is as follows:

Install pump connector link in outer hole (long stroke) of pump arm (C). Back out throttle lever set screw until throttle valves seat in bores of carbureter. Be sure fast idle adjusting screw does not hold throttle open. With air horn assembly removed, place universal pump travel gauge T109-117S, inverted on edge of dust cover boss of bowl cover. Turn knurled nut of gauge until finger just touches upper end of plunger shaft (D). Number indicated on gauge should be "29". Hold the gauge vertical to insure correct reading. Adjust by bending throttle connector rod at upper angle (E). (Use tool T109-213.)

Optional Adjustment: With throttle valves seated in bores of carbureter, the distance from the top of the plunger shaft to the top of the dust cover boss should be 17/64". Adjust as mentioned above.

METERING ROD ADJUSTMENT (Fig. 3):

Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows:

Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw (F). With metering rods in place, press down on vacumeter link (G) until metering rods bottom in carbureter body casting (H). Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link (J). Hold in place and carefully tighten clamp screw (F).

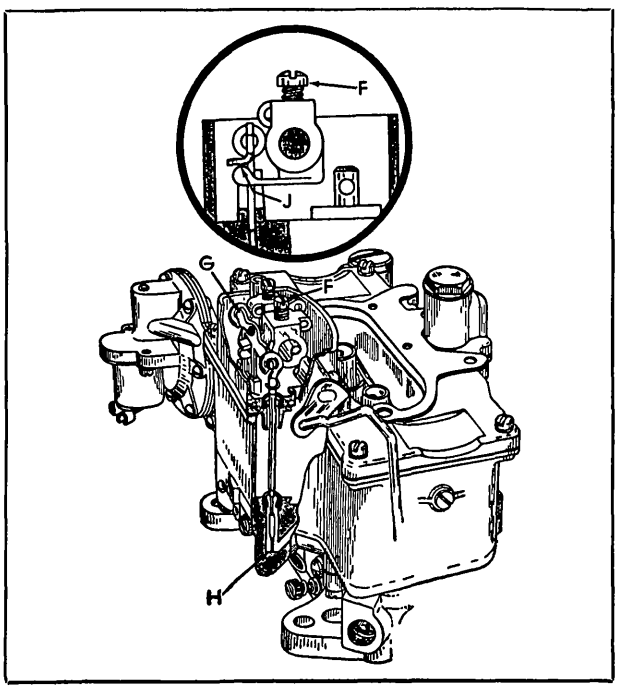


Figure 3
Metering Rod Adjustment

FAST IDLE ADJUSTMENT (Fig. 4):

1. Loosen choke lever clamp screw (K) on choke shaft. Insert .040" feeler gauge T109-193 between lip of fast idle cam and boss of flange casting (L). Hold choke valve tightly closed and take slack out of linkage by pressing choke lever toward closed position — hold in place and tighten clamp screw (K).

2. With choke valve tightly closed, tighten fast idle adjusting screw (M) until there is .017"-.021" opening (N) (wire gauge T109-44 may be used) between throttle valve and bore of carbureter (side opposite idle port). Be sure fast idle adjusting screw is on high step of cam (O) while making this adjustment.

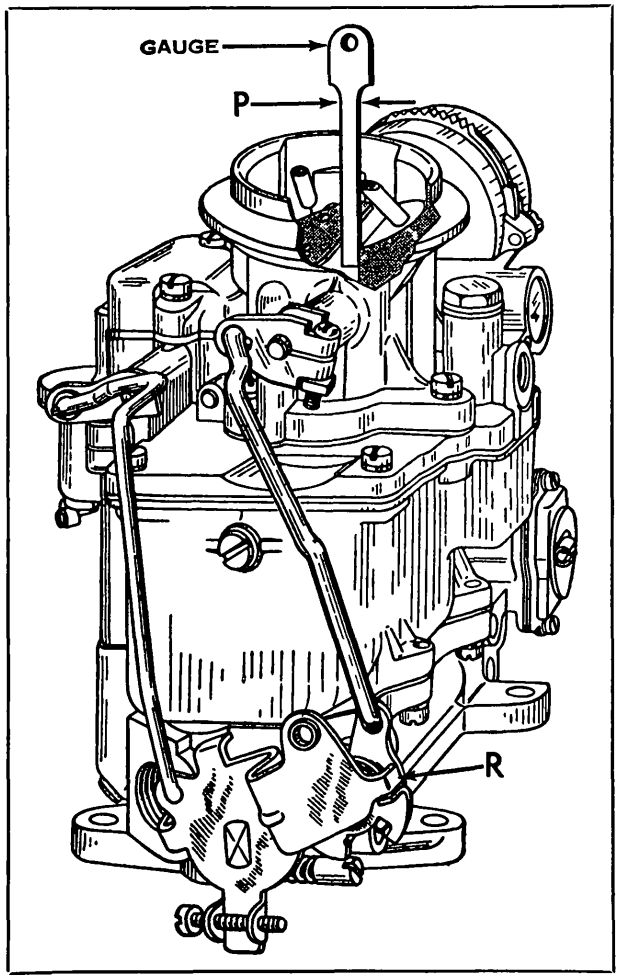


Figure 5
Unloader Adjustment

DASH POT (SLOW CLOSING THROTTLE) ADJUSTMENT (Fig. 6):

The purpose of the dashpot is to prevent the car from stalling when the throttle is released rapidly. Maximum dashpot action is obtained by adjusting screw (S) so that the dashpot plunger shaft (T) can be moved inward approximately 1/16" after engine and throttle have returned to normal idle. This adjustment should be made with the carbureter on the car, with engine running and transmission in driving range.

Service parts and complete unit assemblies are available for servicing the dashpot and kickdown switch units pictured in Fig. 6.

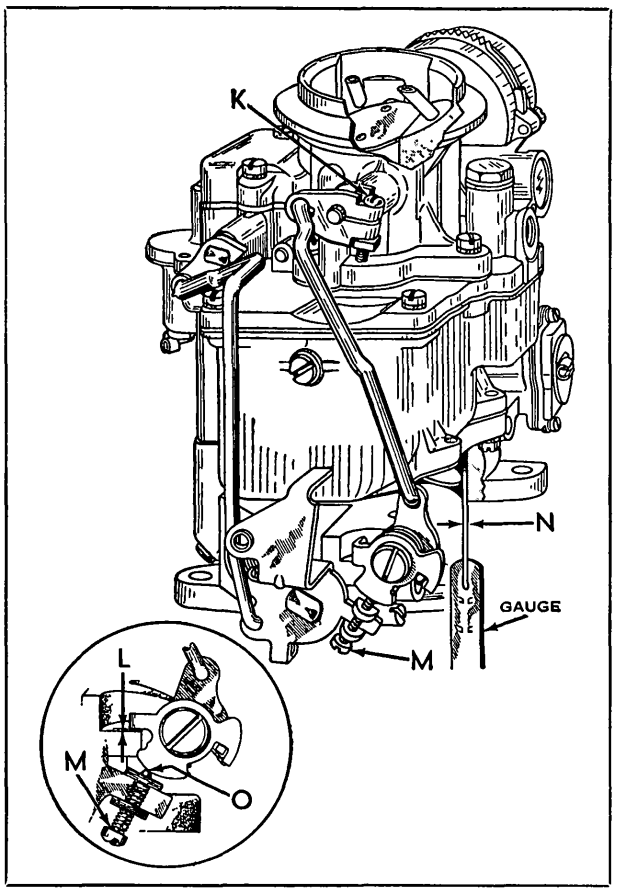


Figure 4
Fast Idle Adjustment

UNLOADER ADJUSTMENT (Fig. 5):

With throttle wide open there should be 7/32" clearance between upper edge of choke valve and inner wall of air horn (P) (gauge T109-106). Adjust by bending unloader lip on throttle shaft lever (R) (use bending tool T109-41).

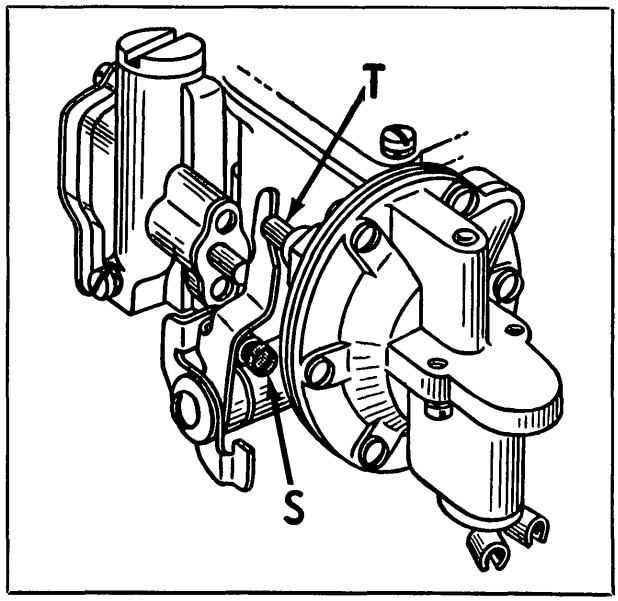


Figure 6
Dashp t Adjustment

Part No	PART NAME	
121-213	AIR HORN GASKET	
121-214	BOWL COVER GASKET	
129-24	Metering rod disk	(2)
136-37	Throttle connector rod washer	
136-71	Kickdown switch push rod washer	
136 77	Throttle shaft lever attaching screw washer	
146 199S	Bowl cover and strainer assembly	
150 62	Choke piston pin	
150 168	Dashpot air bleed pin	
150A-10	PIN SPRING	(3)
150A 14	COUNTERSHAFT PIN SPRING	
160 67S	Vacuum piston and pin assembly (Sup by 160 101S)	
160 91	Choke piston	
160 99	Kickdown switch piston	
160 101S	Vacuum piston and pin assembly	
161 46	Kickdown switch push rod plate	
161-82	Kickdown switch blocker plate	

Part No	PART NAME
170-190	Diaphragm housing (inner)
170-194S	Kickdown switch assembly (complete)
170-210S	Dashpot diaphragm outer housing assembly
170-216S	Kickdown switch piston housing and plug assembly
170AB 206S	Thermostatic coil and housing assembly (Sup by 170AB335SU)
170AB335S	Thermostatic coil and housing assembly
170AB335SU	Unitized package (consists of 1—170AB335S 1—63 189, 2—101 361 and 1—121 78)
180 53	Dashpot mounting bracket (830S)
180-56	Dashpot mounting bracket (830SA)
181-174S	Fast idle cam assembly
186-30	Choke baffle plate
202-22S	Diaphragm shaft and retainer assembly
202-23S	Dashpot unit (complete) (830S) (Sup by 202 24S)
202-24S	Dashpot unit (complete)
213-14S	Electro magnet and housing assembly

*830S and 830SA can be converted to 830SB by using 75 820U

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

CARBURETER
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CARTER CLIMATIC® CONTROL CHOKE

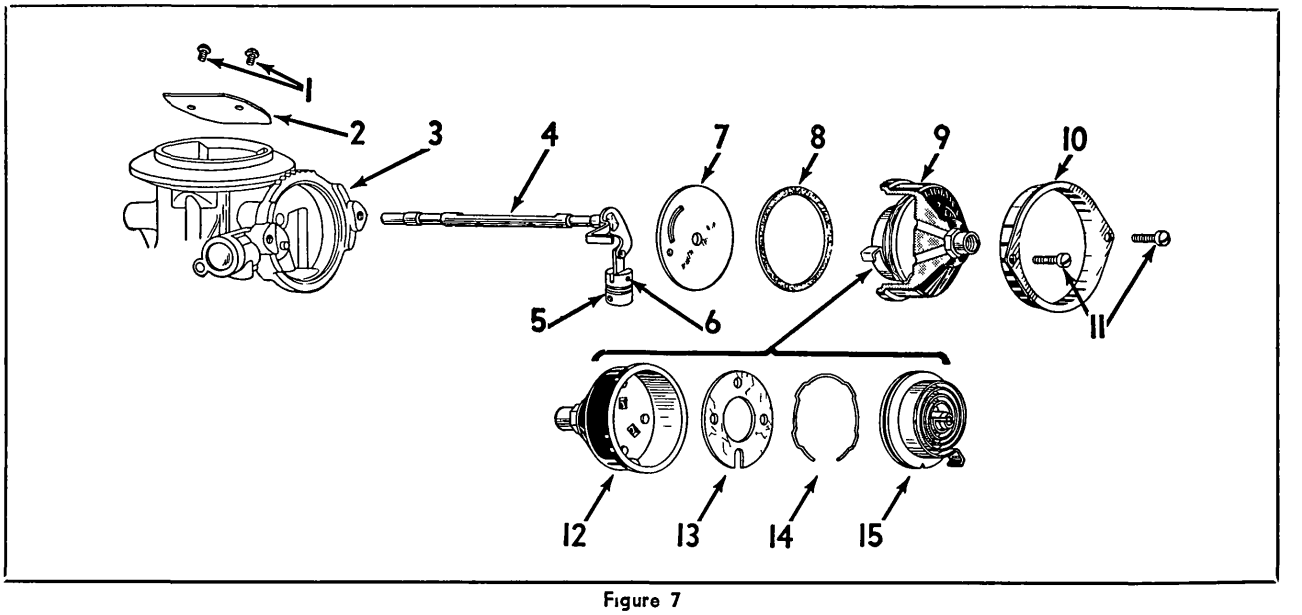
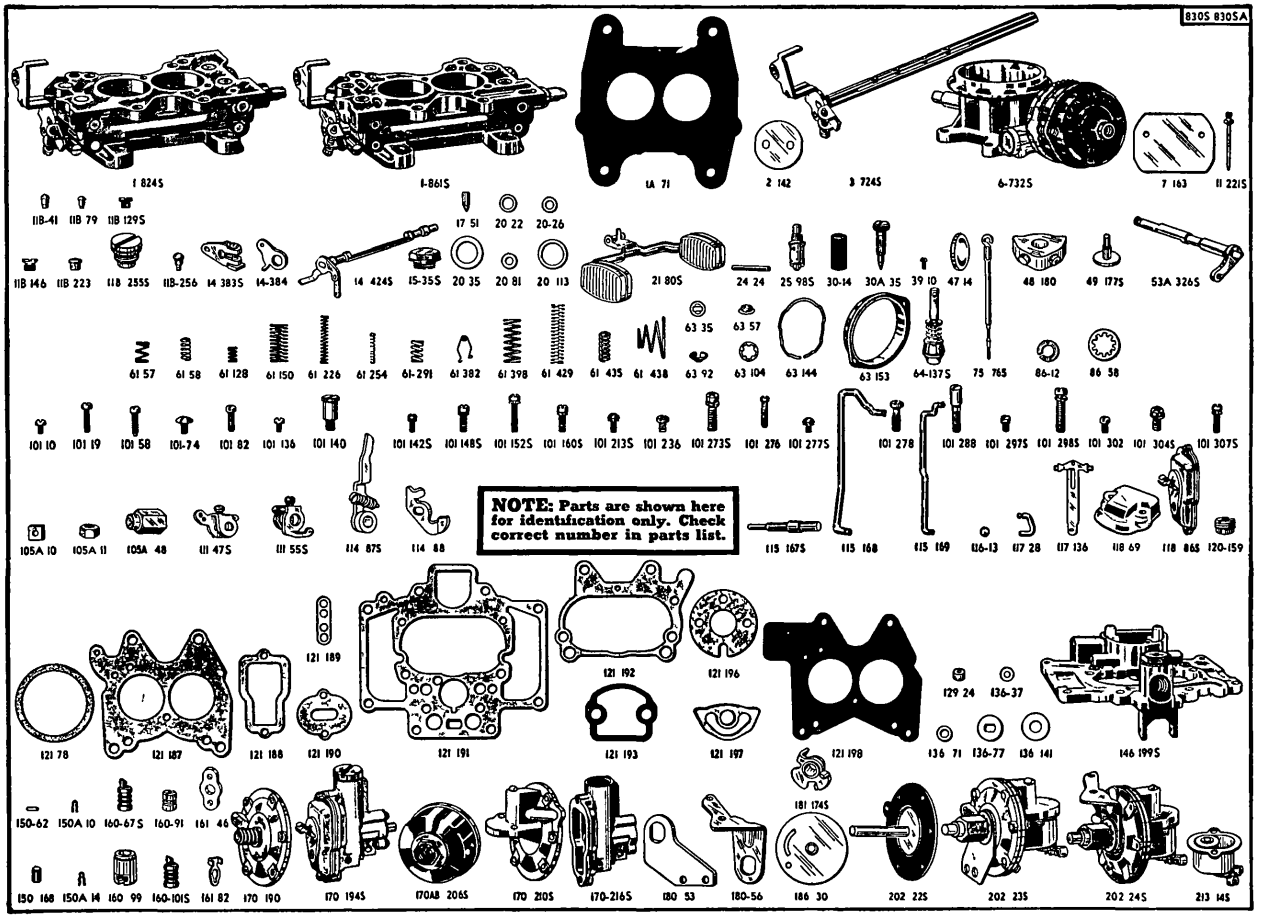


Figure 7

1 Choke valve screws
2 Choke valve
3 Air horn
4 Choke piston lever link and shaft assy
5 Choke piston
6 Choke piston pin
7 Choke baffle plate
8 Coil housing gasket
9 Thermostatic coil and housing assy
10 Coil housing retainers
11 Coil housing screws
12 Thermostatic coil housing
13 Delayer plate gasket
14 Delayer plate retainer ring
15 Delayer plate and thermostatic coil assembly

The Carter Climatic® Control principle used in this unit is essentially the same as that used in other WCD carbureters However heat is introduced at the center of the thermostatic coil housing Hot air is drawn through three passages in the coil housing through the center of the delayer plate and then to the manifold

The purpose of the delayer plate is to control the action of the choke providing longer choke operation during warm up and preventing the choke from closing too rapidly after the engine is shut off Should it be necessary to replace the delayer plate gasket the delayer plate and thermostatic coil assembly may be removed by striking the coil housing assembly sharply against the cupped palm of the hand Care should be taken during removal and reassembly to avoid damage to the thermostatic coil The thermostatic coil **must not** be removed from the delayer plate



Chrysler "V-8"—1951—Carbureters Nos. 830S-830SA-830SB

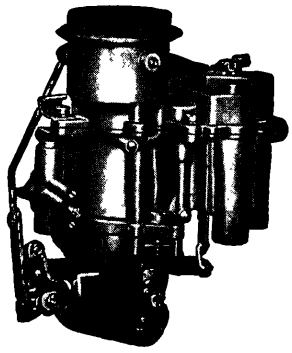
WHEN SERVICING, USE GASKET ASSORTMENT No. 212D, REPAIR PKG. No. 1577A (830S-SA)

PART NAMES IN CAPITAL LETTERS, LISTED BELOW INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-824S	Body flange assembly (830S)	
1 861S	Body flange assembly (830SA)	
1A-71	FLANGE GASKET	
2 142	Throttle valve	(2)
3 724S	Throttle shaft and lever assembly	
6 732S	Air horn and Climatic® control assembly (Sup by 6-786S)	
6-786S	Air horn and Climatic® control assembly	
7-163	Choke valve	
11-215S	Low speed jet assembly (Sup by 11 221S)	(2)
11-221S	LOW SPEED JET ASSEMBLY	(2)
11B-41	Rivet plug	(2)
11B-79	Rivet plug (9) 830S (8) 830SA	
11B 129S	Pump passage plug assembly (830S)	
11B-146	Level sight plug	
11B 223	IDLE PORT AND NOZZLE RIVET PLUG	(4)
11B 256S	Kickdown switch plug assembly	
11B-256	Dashpot check ball retainer plug	
11B-257	Body flange rivet plug (Sup by 11B 285)	
11B-258	Body flange rivet plug (Sup by 11B 286)	
11B-259	Body flange rivet plug (Sup by 11B 287)	
11B 285	Rivet plug (Approx 9/16" dia) (830S SA)	(2)
11B 286	Rivet plug (Approx 3/8" dia) (830S SA)	(5)
11B-287	Rivet plug (Approx 5/16" dia) (830S SA)	(3)
14 383S	Choke lever and screw assembly	
14-384	Cam trip lever	
14 424S	Choke piston lever link and shaft assembly	
15 35S	Strainer nut assembly	
17-51	PUMP CHECK NEEDLE	
20 22	Needle seat gasket	
20-26	Pump passage plug gasket (830S)	
20-35	BOWL STRAINER GASKET	
20 81	KICKDOWN SWITCH PLUNGER GASKET	
20-113	KICKDOWN SWITCH PLUG GASKET	
21 80S	Float and lever assembly	
24 24	Float lever pin	
25-98S	NEEDLE AND SEAT ASSEMBLY	
30-14	BOWL COVER STRAINER	
30A-35	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
47-14	WELSH PLUG	
48 180	Pump jet housing (Sup by 48 191S)	
48-191S	Pump jet housing assembly (Sup by 48 204S)	
48-204S	Pump jet and housing assembly	
49-177S	Electro magnet plunger assembly	
53A-326S	Pump operating lever and countershaft assembly	
61-57	Idle adjustment screw lock spring	(2)
61 58	Dashpot adjusting screw lock spring	
61-128	CONNECTOR ROD SPRING	
61-150	PUMP SPRING (LOWER)	
61 226	VACUUM PISTON SPRING	
61 254	Dashpot armature spring	
61 291	Throttle lever adjustment screw lock spring	
61-382	METERING ROD SPRING	
61-398	Pump spring (upper)	
61-429	Kickdown switch piston spring (Sup by 61 449)	
61 435	Kickdown switch push rod spring	
61 438	Dashpot diaphragm return spring	
61-449	Kickdown switch piston spring	
63-35	CONNECTOR ROD SPRING RETAINER	
63 57	INTAKE CHECK BALL RETAINER	
63 58	Thermostatic coil housing retainer (830S) (Sup by 63-155U)	(2)
63 92	Upper pump spring retainer (Sup by 63 149)	
63-104	Throttle shaft retaining ring	
63-144	Delayer plate retainer ring	
63-149	Upper pump spring retainer	
63-153	Thermostatic coil housing retainer (use with 170AB206S)	
63-155U	Unitized package (Consists of 1—63 153 2—101-82 and 1—121-78) (use with 170AB206S)	
63-189	Thermostatic coil housing retainer (use with 170AB335S)	
64-126S	Pump plunger rod spring and retainer assembly (Sup by 64 137S)	
64-137S	PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
75-765	METERING ROD STANDARD	(2)
75-769	Metering rod 1 size lean	(2)
75-770	Metering rod 2 sizes lean	(2)
75-820U	*Unitized Package (consists of (2) 11B 228 and (2) 75 769)	
86-12	Flange stud lock washer	(4)
86-58	Dashpot bracket nut lock washer	
101-10	Pump arm clamp screw	
101-19	Choke lever clamp screw (Sup by 101 354S)	
101-58	Dashpot arm adjusting screw	
101-74	Throttle shaft lever attaching screw	
101-82	Thermostatic coil housing attaching screw (Use with 63 153)	(2)
101-136	Thermostatic coil housing attaching screw (830S) (Sup by 63-155U)	(2)
101 140	Fast idle cam attaching screw (Sup by 101 323)	
101-142S	Electro magnet housing attaching screw assembly	(2)
101-148S	Dust cover attaching screw and washer assembly	(2)
101-152S	Air horn attaching screw and washer assembly	(4)
101 160S	Bowl cover and kickdown housing attaching screw assembly (7) 830S (5) 830SA	
101-213S	Diaphragm cover attaching screw assembly	(6)
101 236	Metering rod arm clamp screw	
101-273S	Body flange attaching screw and washer assembly	(4)
101-276	Fast idle adjustment screw	
101 277S	Kickdown switch push rod plate screw assembly	(2)
101-278	Pump jet housing attaching screw	
101-288	Throttle lever adjustment screw	
101-297S	Kickdown switch cover attaching screw assembly	(2)
101-298S	Kickdown attaching screw assembly	
101-302	Throttle valve attaching screw	(4)
101-304S	Dashpot bracket attaching screw and washer assembly (830S)	(2)
101-307S	Dashpot bracket attaching screw and washer assembly (830SA)	(2)
101-323	Fast idle cam attaching screw	
101-354S	Choke lever clamp screw assembly	
101-361	Thermostatic coil housing attaching screw (use with 170AB335S)	(2)
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
105A-48	Dashpot bracket nut	
111-47S	Pump arm and screw assembly	
111-55S	Metering rod arm and screw assembly	
114-87S	Kickdown switch lever and collar assembly	
114-88	Throttle shaft arm	
115-167S	Kickdown switch push rod assembly	
115 168	THROTTLE CONNECTOR ROD	
115-169	Choke connector rod	
116-13	INTAKE CHECK BALL	
117-28	Pump connector link	
117-136	Vacumeter piston link	
118-69	Dust cover	
118-86S	Kickdown snap switch and cover assembly	
120-159	METERING ROD JET	(2)
121-78	COIL HOUSING GASKET	
121-187	Body flange gasket (Sup by 121-198)	
121-188	KICKDOWN SWITCH COVER PLATE GASKET	
121 189	KICKDOWN SWITCH HOUSING GASKET	
121-190	ELECTRO MAGNET HOUSING GASKET	
121-191	Bowl cover gasket (Sup by 121-214)	
121-192	Air horn gasket (Sup by 121 213)	
121-193	DUST COVER GASKET	
121-196	Delayer plate gasket	
121 197	PUMP JET HOUSING GASKET	
121-198	BODY FLANGE GASKET	

PARTS LIST CONTINUED ON PAGE 6

MOTOR SERIAL NUMBERS
1001 and higher



CHRYSLER "8"

MODEL "C-46"—1949
MODELS "C-49", "C-50"—1950

FLUID DRIVE &
M6 TRANSMISSION

1949-1950

B-B DOWN-DRAFT CARBURETERS—**MODELS E7J1-E7J2-E7J3-E7J4**

CARBURETER SPECIFICATIONS

For Chrysler Eight Cylinder Engine: 3¼ Inch Bore, 4⅞ Inch Stroke

Dimensions: Flange size, 1½ inch (38.1 mm).
Throttle bore, 1-13/16 inch (46.04 mm).
Main venturi, 1⅜ inch (34.93 mm) I. D.

Float Setting: Top of float 5/64 inch (1.98 mm) below top surface of carbureter body casting. Plus or minus 1/64 inch (.397 mm).

Vents: Outside none. Inside balance vent .218 inch diameter (5.54 mm).

Gasoline Intake Needle: Triangular, horizontal No. 38 (2.58 mm) drill in needle seat.

Idle Orifice Tube: Jet size, .0276 inch (.70 mm) drill.
(E7J1) Idle passage air bleed, in body, size .063 inch (1.60 mm) diameter. Idle passage air bleed, in air horn, .063 inch (1.60 mm) diameter. Restriction in body, size .053 inch (1.35 mm) diameter.
(E7J2-J3-J4) Idle passage air bleed, in air horn, size .053 inch (1.35 mm) diameter. Restriction in body .057 inch (1.45 mm).

Idle Ports: Upper port, slot type: length .161 inch (4.09 mm); width .030 inch (.79 mm).
(E7J1) Top of port located .125 to .129 inch (3.175 to 3.275 mm) above top edge of valve.
(E7J2-J3-J4) Top of port located .130 to .134 inch (3.302 to 3.404 mm) above top edge of valve.
Lower port size .053 to .057 inch (1.35 to 1.45 mm) drill. (For idle adjustment screw.)

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture turn screw out. With gear shift lever in neutral position, idle engine between 450 to 500 r.p.m.

Main Metering Screw: Calibrated to flow 332 to 336 cc per minute. (Do not gauge for size. If in doubt replace with new part.) (10° included-tapered jet.)

Main Vent: Through diffuser (air bleed inside bowl). Size .0354 inch (.90 mm) drill.

Main Vent Tube: Side Holes: 4—.0354 inch diameter.

Step-Up Jet: (E7J1-J2-J3) Power orifice .0492 inch (1.25 mm) drill.
(E7J4) Power orifice .0433 (1.10 mm) drill.

Accelerating Pump: Type—delayed action.
Stroke—Summer setting (inner hole, short stroke).
Intermediate setting (center hole).
Winter setting (outer hole, long stroke).
Pump intake passage, size .115 to .120 inch (2.93 to 3.05 mm) diameter in body.
Pump discharge passage: Restriction (under ball check) size .062 to .065 inch (1.57 to 1.65 mm) diameter in body.
Pump (discharge) jet size, .0374 inch (.95 mm) drill.

Pump Adjustment: 26/64 inch plunger travel—full throttle position, medium stroke. Use gauge T109-117S.

Choke: Offset butterfly type with poppet valve interconnected to open throttle valve to fast idle position when choke is used.

Slow Closing Throttle: Dash pot with discharge (By-pass), size .0197 inch (.5 mm) drill, through valve cage.

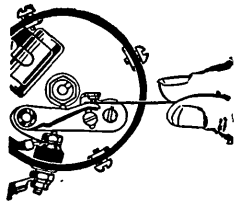
Vacuum Spark Port: Slot (round end) type; size .040 by .110 inch (1.016 by 2.794 mm). Top of port .052 to .058 inch (1.32 to 1.47 mm) above top edge of valve.

Motor Tune-Up—Be Accurate!

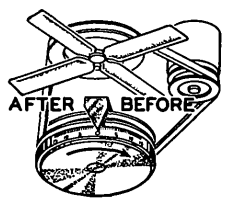
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



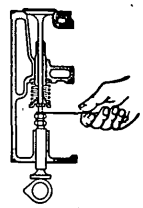
Spark Plug Gap .038"



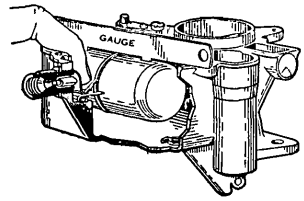
Breaker Point Setting .018"



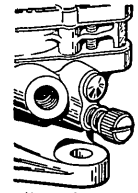
Ignition Timing Breaker Points to Open: 2° A. T. D. C.



Valve Setting (Hot) Intake .008" Exhaust .010"



Float Setting (Use Gauge) 5/64 Inch



Idle Adjustment Screw Setting ½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

If carbureter loads up after considerable service, check float level. Wear on lip of float lever will raise float level. Before adjusting float, be sure float lever pin is firmly seated. Reset float level by bending lip of float lever away from needle to raise level, or bend lip toward needle to lower float level. Bend vertical lip of float only.

If motor stalls while idling, set throttle lever adjusting screw so motor runs between 450-500 r. p. m. Then set idle adjustment screw to specifications. If these adjustments do not correct the trouble, remove idle orifice tube and plug assembly. Clean tube passages with compressed air.

If acceleration is not satisfactory, remove pump jet and clean with compressed air. However, it is usually advisable to replace the pump jet, as its cost is nominal. All jets must be seated gasoline tight. Poor acceleration may be due to damaged or worn plunger leather in accelerating pump, sediment in pump cylinder or clogged intake ball check at bottom of pump cylinder and discharge ball check in dis-

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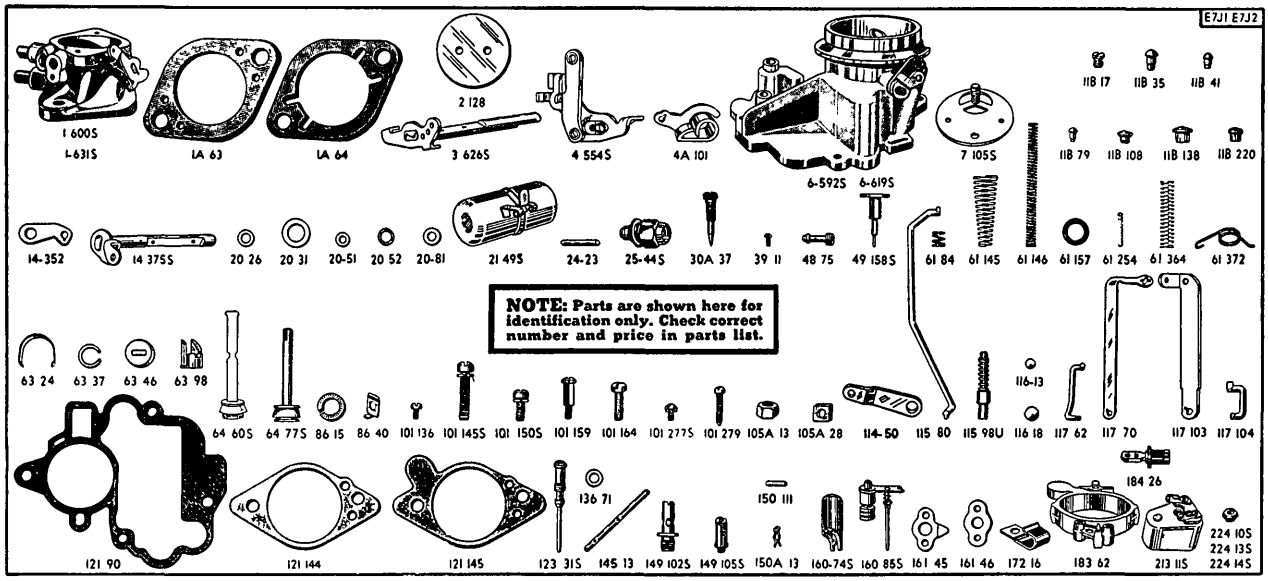
charge passage If plunger is removed from cylinder, use care in installing to avoid damage to plunger leather

Correct air fuel ratio is provided by a "balance tube" in the air horn The balance tube should be checked each time the carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type, size or condition of air cleaner Should the cleaner become clogged, the capacity will be reduced but the air-fuel mixture ratio will not be changed

Excessive richness above 50 miles per hour may be caused by a clogged main vent tube After removal of rivet plug beneath float bowl with tool No T109-43, main vent tube can be removed and a new tube inserted with tool No T109-195 Care must be exercised in inserting new tube which must seat tightly Use new rivet to complete the installation

Pump Adjustment Remove air horn assembly, back out throttle adjustment screw, and place pump operating link in center hole of throttle shaft arm Place gauge T109-117S on edge of bowl cover so that lip of gauge extends over top of plunger shaft Turn knurled nut of gauge until lip contacts plunger shaft at closed and wide open throttle positions Difference in readings obtained at closed and wide open throttle positions should be '26 (26/64) plunger travel Adjustments can be made by bending horizontal portion of pump lifter link

Pump stroke adjustable for high or low temperature Set to long stroke for cold weather, short stroke for hot weather driving



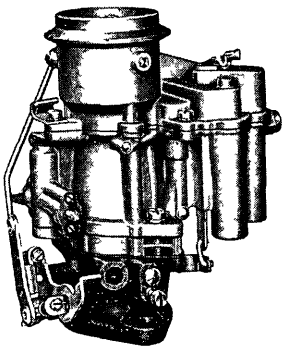
Chrysler—1949-50—Nos. E7J1-E7J2-E7J3-E7J4

WHEN SERVICING, USE GASKET ASSORTMENT No 194A, REPAIR PACKAGE No. 1511A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-600S	Body flange assembly (E7J1)	
1-631S	Body flange assembly (Sup by 1-688S)	
1-688S	Body flange assembly (E7J2-J3-J4)	
1A-63	Flange gasket—for use with governor	
1A-64	FLANGE GASKET—FOR USE WITHOUT GOVERNOR	
2-128	Throttle valve	
3-626S	Throttle shaft and arm assembly	
4-546S	Throttle lever assembly	
4A-101	Fast idle cam	
6-592S	Air horn assembly (E7J1)	
6-619S	Air horn assembly (E7J2-J3-J4)	
7-105S	Choke valve assembly	
11B-17	Pump discharge passage plug	
11B-35	Rivet passage plug	
11B-41	Rivet passage plug	
11B-79	Rivet passage plug	(3)
11B-108	IDLE PORT RIVET PLUG	
11B-138	PUMP JET RIVET PLUG	
11B-220	HIGH SPEED PASSAGE PLUG	
14-352	Choke lever (loose)	
14-375S	Choke lever and shaft assembly	
20-26	Gasket	
20-31	Needle seat gasket	
20-51	Step-up jet gasket	
20-52	STEP-UP PISTON GASKET AND KICK DOWN SWITCH GASKET	(2)
20-81	GASKET	
21-49S	Float and lever assembly	
24-23	Float lever pin	
25-44S	NEEDLE AND SEAT ASSEMBLY	
30A-37	Idle adjustment screw	
39-11	Valve attaching screw	(4)
48-75	PUMP JET	
49-158S	Valve plunger rod and plate assembly (E7J1-J2-J3)	
49-173S	Valve plunger rod and plate assembly (E7J4)	
61-84	Idle adjustment screw spring	
61-145	PUMP SPRING	
61-146	STEP-UP PISTON SPRING	
61-157	Plunger spring	(2)
61-254	Plunger operating spring	
61-336	Push rod sleeve spring (Sup by 61-403)	
61-364	Switch piston spring	
61-372	Dash-pot arm spring	
61-403	Push rod sleeve spring	
63-24	FLOAT LEVER PIN RETAINER	
63-37	PUMP RETAINER RING	
63-46	Spring retainer	
63-98	Switch piston locator (Use with 160-74S)	
63-136	Connector retainer clip (Use with 184-53S)	
64-60S	PUMP PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49-120)	
64-77S	Dash-pot plunger and rod assembly	
86-15	Flange stud lock washer	(2)
86-40	Switch connection lock washer (Use with 184-26)	
101-136	Terminal connector screw (Use with 184-26)	
101-145S	Switch plate attaching screw and washer assembly	(2)
101-150S	Air horn attaching screw and washer assembly	(4)
101-159	Electro magnet and housing assembly attaching screw	
101-164	Throttle lever clamp screw	
101-277S	Switch plate attaching screw and washer assembly	(4)
101-279	Throttle adjusting screw	
101-290	Terminal attaching screw	
105A-13	Flange nut	(2)
105A-28	Clamp nut	
114-50	Throttle shaft arm (loose)	
115-80	Fast idle rod	
115-98U	Push rod assembly and spring unit (Consists of 61-403 and 115-79S, the entire step-down switch plunger assembly and spring)	
116-13	PUMP INTAKE CHECK BALL	
116-18	PUMP DISCHARGE CHECK BALL	
117-62	PUMP LINK	
117-70	PUMP LIFTER	
117-103	Dash-pot lifter	
117-104	Dash-pot link	
121-90	BODY GASKET	
121-144	Body flange gasket (Sup by 121-161)	
121-145	Body to insulator gasket (Sup by 121-162)	
121-161	BODY FLANGE GASKET	
121-162	BODY TO INSULATOR GASKET	
123-31S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
136-71	Switch plunger washer	
136-116	Terminal attaching screw washer	
145-13	MAIN VENT TUBE	
149-102S	Dash-pot valve cage assembly (E7J1-J2-J3)	
149-105S	STEP-UP JET ASSEMBLY (E7J1-J2-J3)	
149-108S	Dash-pot valve cage assembly (E7J4)	
149-110S	Step-up jet assembly (E7J4)	
150-111	Dash-pot pin	
150A-13	PIN SPRING	(2)
160-74S	Switch piston assembly (Sup by 160-88S)	
160-85S	STEP-UP PISTON PLATE AND ROD ASSEMBLY	
160-88S	Kick-down switch piston assembly	
161-45	Switch terminal end plate	
161-46	Switch push rod end plate	
172-16	Cable clip	
183-62	Insulator (Sup by 183-65)	
183-65	Insulator	
184-26	Terminal block (Sup. by 184-53S, 101-290 and 136-116)	
184-52	Terminal block (Sup by 184-53S)	
184-53S	Terminal block and clip assembly	
213-11S	Electro magnet and housing assembly	
224-10S	MAIN METERING JET ASSEMBLY (STANDARD)	
224-13S	Main metering jet assembly (1 size lean)	
224-14S	Main metering jet assembly (2 sizes lean)	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.



MOTOR SERIAL NUMBERS
1001 and higher

CHRYSLER "6"

MODELS

"C-45"—1949 "C-48"—1950

FLUID DRIVE &
M6 TRANSMISSION

1949-1950

B-B DOWN-DRAFT CARBURETERS—**MODELS E7L1-L2-L3-L4**

CARBURETER SPECIFICATIONS

For Chrysler Six Cylinder Engine 3 7/16 Inch Bore, 4¾ Inch Stroke

Dimensions Flange size 1½ inch (38 1 mm)
Throttle bore 1 11/16 inch (42 86 mm)
Main venturi 1 11/32 inch (34 13 mm) I D

Float Setting Top of float 5/64 inch (1 98 mm) below top surface of carbureter body casting Plus or minus 1/64 inch (397 mm)

Vents Outside none Inside balance vent tube 218 inch diam eter (5 54 mm)

Gasoline Intake Needle Triangular horizontal No 44 (2 18 mm) drill in needle seat

Idle Orifice Tube Jet size 0276 inch (70 mm) drill (E7L1) Idle passage air bleed in air horn size 0531 inch (1 35 mm) diameter Restriction in body size 0531 inch (1 35 mm) diameter (E7L2 L3 L4) Idle passage air bleed in air horn size No 56 (1 18 mm) drill diameter Restriction in body 0452 inch (1 15 mm) diameter

Idle Ports Upper port Slot type length 149 inch (3 78 mm) width 030 inch (76 mm) Top of port located 118 to 122 inch (3 00 to 3 10 mm) above top edge of valve Lower port size 053 to 057 inch (1 35 to 1 45 mm) drill (For idle ad justment screw)

Set Idle Adjustment Screw ½ to 1½ turns open For richer mixture turn screw out With gear shift lever in neutral posi tion idle engine between 450 to 500 r p m

Main Metering Screw Calibrated to flow 315 to 319 cc per minute (Do not gauge for size If in doubt replace with new part)

Main Vent Through diffuser (air bleed inside bowl) Size 0315 inch (80 mm) drill

Main Vent Tube Side Holes 4—0354 inch diameter

Step Up Jet Power orifice 0413 inch (1 05 mm) drill

Accelerating Pump Type—delayed action seasonal adjustment Stroke—Summer setting (inner hole short stroke) Interme diate setting (center hole) Winter setting (outer hole long stroke)
Pump intake passage ball check seat size 115 to 120 inch (2 93 to 3 05 mm) diameter in body Pump discharge passage Restriction (under ball check) size 062 to 065 inch (1 57 to 1 65 mm) diameter in body Pump (discharge) jet size (E7L1 L2) 0334 inch (85 mm) drill Pump (discharge) jet size (E7L3 L4) 0413 inch (1 05 mm) drill

Pump Adjustment (E7L1 L2) 20/64 inch plunger travel—full throttle position medium stroke Use gauge T109 117S (E7L3 L4) None

Choke Offset butterfly type (with poppet valve) interconnected to open throttle valve to fast idle position when choke is used

Slow Closing Throttle Dash pot with discharge (By pass) size 018 to 020 inch (457 to 508 mm) drill through valve cage.

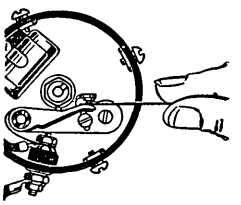
Vacuum Spark Port Slot (round end) type size 040 by 110 inch (1 016 by 2 794 mm) Top of port 052 to 058 inch (1 32 to 1 47 mm) above top edge of valve (early prod); 012 to 018 inch (305 to 457 mm) above top edge of valve (late prod)

Motor Tune-Up—Be Accurate!

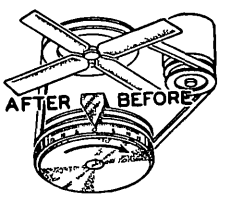
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



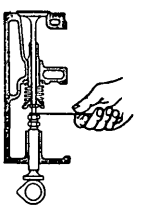
Spark Plug Gap 038"



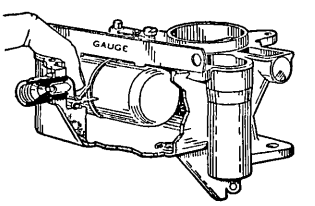
Breaker Point Setting 020"



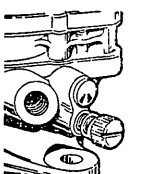
Ignition Timing Breaker Points to Open T D C



Valve Setting (Hot) Intake 008" Exhaust 010"



Float Setting (Use Gauge) 5/64 Inch



Idle Adjustment Screw Setting ½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

If carbureter loads up after considerable service check float level Wear on lip of float lever will raise float level Before adjusting float, be sure float lever pin is firmly seated Reset float level by bending lip of float lever away from needle to raise level, or bend lip toward needle to lower float level Bend vertical lip of float only

If motor stalls while idling set throttle lever adjusting screw so motor runs 450-500 r p m with gear shift lever in neutral position Then set idle adjustment screw to specifica tions If these adjustments do not correct the trouble re move idle orifice tube and plug assembly Clean tube pas sages with compressed air

If acceleration is not satisfactory, remove pump jet and clean with compressed air However it is usually advisable to replace the pump jet, as its cost is nominal All jets must be seated gasoline tight Poor acceleration may be due to damaged or worn plunger leather in accelerating pump sediment in pump cylinder or clogged intake ball check at bottom of pump cylinder and discharge ball check in dis-charge passage If plunger is removed from cylinder use care in installing to avoid damage to plunger leather

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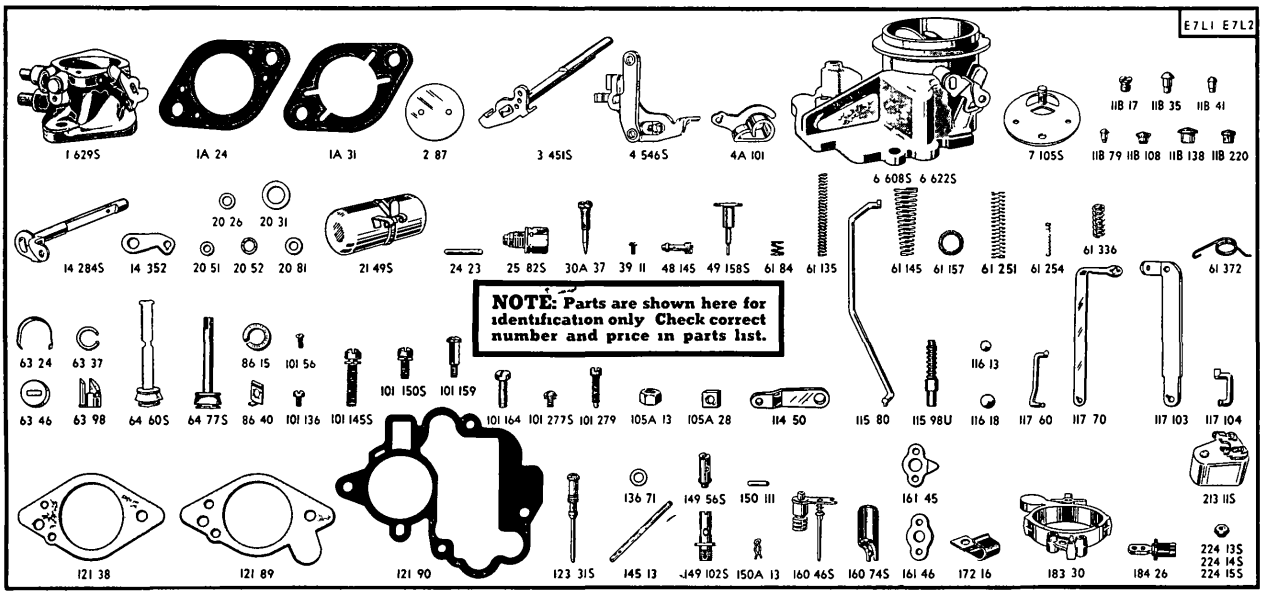
Correct air fuel ratio is provided by a balance tube in the air horn The balance tube should be checked each time the carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type size or condition of air cleaner Should the cleaner become clogged the capacity will be reduced but the air fuel mixture ratio will not be changed

Excessive richness above 50 miles per hour may be caused by a clogged main vent tube After removal of rivet plug beneath float bowl with tool No T109 43 main vent tube can be removed and a new tube inserted with tool No T109-195 Care must be exercised in inserting new tube which must seat tightly Use new rivet to complete the installation

Pump Adjustment (E7L1-L2) Remove air horn assembly, back out throttle adjustment screw and place pump operating link in center hole of throttle shaft arm Place gauge T109-117S on edge of bowl cover so that lip of gauge extends over top of plunger shaft Turn knurled nut of gauge until lip contacts plunger shaft at closed and wide open throttle positions Difference in readings should be "20 20/64 inch plunger travel

(E7L3-L4) No gauge is necessary Be sure pump lifter link arm is at right angle to lifter link shaft Adjustments can be made by bending horizontal portion of pump lifter link

Pump stroke adjustable for high or low temperature Set to long stroke for cold weather short stroke for hot weather driving



Chrysler—1949-1950—Nos. E7L1-L2-L3-L4

WHEN SERVICING, USE GASKET ASSORTMENT No. 164A, REPAIR PACKAGE (E7L1-L2) No 1510A, (E7L3-L4) No. 1528
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-629S	Body flange assembly (E7L1-L2)	
1-663S	Body flange assembly (Sup by 1-687S)	
1-687S	Body flange assembly (E7L3-L4)	
1A-24	Flange gasket—for use with governor	
1A 31	FLANGL GASKLT—FOR USE WITHOUT GOVERNOR	
2 87	Throttle valve	
3-451S	Throttle shaft and arm assembly (E7L1-L2)	
3-671S	Throttle shaft and arm assembly (E7L3-L4)	
4 546S	Throttle lever assembly	
4A-101	Fast idle cam	
6-608S	Air horn assembly (E7L1)	
6 622S	Air horn assembly (E7L2-L3-L4)	
7 105S	Choke valve assembly	
11B-17	Pump discharge passage plug	
11B-35	Rivet plug	
11B-41	Rivet plug	
11B-79	Rivet plug	(3)
11B 108	IDLE PORT RIVET PLUG	
11B-138	PUMP JET RIVET PLUG	
11B 220	HIGH SPEED PASSAGE RIVET PLUG	
14-284S	Choke lever and shaft assembly	
14 352	Choke lever (loose)	
20 26	Main metering jet gasket	
20-31	Needle seat gasket	
20-51	Step up jet gasket	
20 52	STEP-UP PISTON GASKET	
20-81	SWITCH PLUNGER GASKET	
21-49S	Float and lever assembly	
24-23	Float lever pin	
25 82S	NEEDLE AND SEAT ASSEMBLY	
30A 37	Idle adjustment screw	
39-11	Valve attaching screw	(4)
48 145	PUMP JET (E7L1-L2)	
48-167	PUMP JET (E7L3-L4)	
49 158S	Valve plunger rod and plate assembly (E7L1-L2 L3)	
49-173S	Valve plunger rod and plate assembly (E7L4)	
61-84	Idle adjustment screw spring	
61 135	STEP-UP PISTON SPRING	
61 145	PUMP SPRING	
61-157	Plunger spring	(2)
61-251	Switch piston spring	
61-254	Plunger operating spring	
61-336	Push rod sleeve spring (Sup by 61-403)	
61-372	Dash pot pick up arm spring (E7L1-L2)	
61-393	Dash-pot pick-up arm spring (E7L3-L4)	
61 403	Push rod sleeve spring	
63-24	FLOAT LEVER PIN RETAINER	
63-37	PUMP CYLINDER BALL RETAINER	
63-46	Spring retainer	
63-98	Switch piston locator (Use with 160-74S)	
63-136	Connector retainer clip (Use with 184-53S)	
64 60S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49-120)	
64-77S	Dash-pot plunger and rod assembly	
76-77	Grounding wire	
86-15	Flange stud lock washer	(2)

Part No.	PART NAME	
86-40	Terminal lock washer (Use with 101-136)	
101-136	Terminal connector screw (Use with 184-26)	
101-145S	Body flange attaching screw and washer assy	(2)
101-150S	Air horn attaching screw and washer assy	(4)
101-159	Electro magnet assembly attaching screw	
101-164	Throttle lever clamp screw	
101-277S	Attaching screw and washer assembly	(4)
101-279	Throttle adjusting screw	
101-290	Terminal attaching screw	
105A-13	Flange nut	(2)
105A 28	Throttle lever clamp nut	
114-50	Dash-pot pick-up arm	
115-80	Fast idle rod	
115-98U	Push rod assembly and spring unit (Consists of 61 403 and 115-79S)	
116-13	PUMP INTAKE CHECK BALL	
116-18	PUMP DISCHARGE CHECK BALL	
117-60	PUMP LINK (E7L1-L2)	
117-70	PUMP LIFTER	
117-103	Dash-pot lifter link	
117-104	Dash-pot connector link	
117-141	PUMP LINK (E7L3-L4)	
121-38	Body flange gasket (Sup by 121-160)	
121-89	Carbureter body to insulator gasket (Sup by 121-163)	
121-90	BODY GASKET	
121-160	BODY FLANGE GASKET	
121-163	BODY TO INSULATOR GASKET	
123-31S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
136-71	Washer	
136-116	Terminal attaching screw washer	
145-13	MAIN VENT TUBE	
149-56S	STEP-UP JET ASSEMBLY	
149 102S	Dash-pot valve cage assembly (E7L1-L2-L3)	
149-108S	Dash-pot valve cage assembly (E7L4)	
150 111	Dash-pot pin	
150A-13	PIN SPRING	(2)
160-46S	STEP-UP PISTON, PLATE AND ROD ASSEMBLY	
160-74S	Kick-down switch piston assembly (Sup by 160-88S)	
160 88S	Kick-down switch piston assembly	
161 45	Terminal end plate	
161 46	Push rod end plate	
172 16	Cable clip	
183-30	Insulator (Sup by 183-66)	
183-66	Insulator	
184-26	Terminal block (E7L1-L2) (Sup by 184-53S, 101 290 and 136-116)	
184-52	Terminal block (All) (Sup by 184-53S)	
184 53S	Terminal block and clip assembly (All)	
195-42U	Unitized package (E7L1-L2) (Sup by 195-47U)	
195 47U	Unitized package (For kick-down switch) (All)	
213-11S	Electro magnet and housing assembly	
224 13S	MAIN METERING JET ASSEMBLY	
224-14S	Main metering jet assembly—1 size lean	
224-15S	Main metering jet assembly—2 sizes lean	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

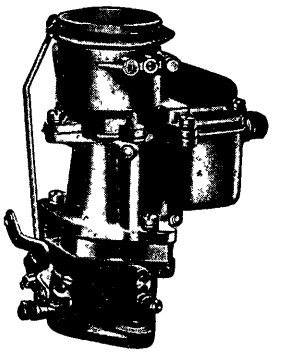
Form 4679P

CARTER CARBURETOR CHRYSLER EX1-EX2-EX3-EX1R-EX2R-EX3R

DIVISION OF acf INDUSTRIES INCORPORATED August, 1946

ST. LOUIS, MO., U. S. A. Revised December, 1953

These Carbureters also used on DeSoto "S11C", "S11S", "S13", "S14" Cars equipped with Standard Transmission



CHRYSLER

MODELS

"C38" — "C45" — "C48"

1946-1950

Casting No. 263 on face of flange

B-B Down-Draft Carbureters—**Models EX1-EX2-EX3-EX1R-EX2R-EX3R**

CARBURETER SPECIFICATIONS

For Chrysler Six Cylinder Engine: 3-7/16 Inch Bore, 4½ Inch Stroke

Dimensions: Flange size, 1½ inch (38.1 mm). Throttle bore, 1-11/16 inch (42.86 mm). Main venturi, 1-11/32 inch (34.13 mm) I. D.

Float Setting: Top of float 5/64 inch (1.98 mm) below top surface of carbureter body casting. Plus or minus 1/64 inch (.397 mm).

Vents: Outside, none. Inside, balance vent tube .218 inch diameter (5.54 mm).

Gasoline Intake Needle: Triangular, horizontal No. 44 (2.18 mm) drill in needle seat.

Idle Orifice Tube: Jet size .0276 inch (.70 mm) drill. Idle passage air bleed, in body, size .063 inch (1.60 mm) diameter (EX1-EX2-EX1R-EX2R). Idle passage air bleed, in air horn, size .0465 inch (1.18 mm) diameter (EX3-EX3R). Restriction in body, size .053 inch (1.35 mm) diameter (EX1-EX2-EX1R-EX2R), size .0452 inch (1.15 mm) diameter (EX3-EX3R).

Idle Ports: Upper port. Keyhole type: length, .128 inch (3.25 mm); width .027 inch (.69 mm). .063 inch (1.60 mm) diameter hole at top (EX1-EX2-EX1R-EX2R). Slot type: length .149 inch (3.78 mm); width .030 inch (.76 mm) (EX3-EX3R). Top of port located .088 to .092 inch (2.24 to 2.34 mm) (EX1-EX2-EX1R-EX2R), and .118 to .122 inch (3.00 to 3.10 mm) (EX3-EX3R) above top edge of valve. Lower port size .053 to .057 inch (1.35 to 1.45 mm) drill. (For idle adjustment screw.)

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture, turn screw out. Idle engine between 450 and 500 r.p.m.

Main Metering Screw: Calibrated to flow 312 to 316 cc per minute (EX1-EX2-EX1R-EX2R); 315 to 319 cc per minute (EX3-EX3R). (Do not gauge for size. If in doubt replace with new part.)

Main Vent: Through diffuser (air bleed inside bowl). Size .0315 inch (.80 mm) drill.

Main Vent Tube: Side holes, 4—.0354 inch diameter.

Step-Up Jet: Power orifice .0413 inch (1.05 mm) drill.

Accelerating Pump: Type—delayed action, seasonal adjustment. Stroke—Summer setting (inner hole, short stroke). Intermediate setting (center hole). Winter setting (outer hole, long stroke). Pump intake passage ball check seat, size .107 to .112 inch (2.72 to 2.85 mm) diameter in body. Pump discharge passage: Restriction (under ball check) size .062 to .065 inch (1.57 to 1.65 mm) diameter in body. Pump (discharge) jet size, .0374 inch (.95 mm) drill 48-75 (EX1-EX1R); .0334 inch (.85 mm) drill 48-145 (EX2-EX2R); .0413 (1.05 mm) drill 48-167 (EX3-EX3R).

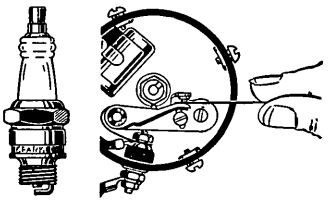
Pump Adjustment: 26/64 inch plunger travel (early production), 20/64 inch plunger travel (late production)—full throttle position, medium stroke. Use gauge T109-117S (EX1-EX2-EX1R-EX2R). Pump adjustment (EX3-EX3R): None.

Choke: Offset butterfly type (with poppet valve) interconnected to open throttle valve to fast idle position when choke is used.

Vacuum Spark Port: Slot (round end) type; size .040 by .110 inch (1.016 by 2.794 mm). Top of port .052 to .058 inch (1.32 to 1.47 mm) above top edge of valve.

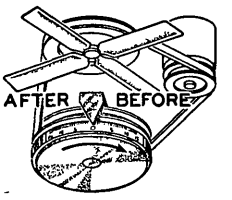
Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

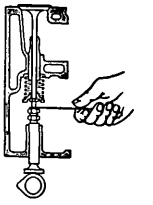


Spark Plug Gap .030"

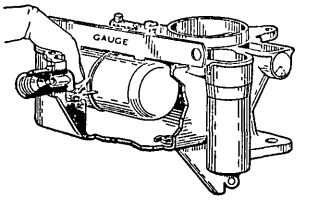
Breaker Point Setting .017"-.019"



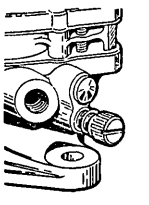
Ignition Timing Breaker Points to Open 2° B. T. D. C.



Valve Setting (Hot) Intake .008" Exhaust .010"



Float Setting (Use Gauge) 5/64 Inch



Idle Adjustment Screw Setting ½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

If carbureter loads up after considerable service, check float level. Wear on lip of float lever will raise float level. Before adjusting float, be sure float lever pin is firmly seated. Reset float level by bending lip of float lever away from needle to raise level, or bend lip toward needle to lower float level. Bend vertical lip of float only.

If motor stalls while idling, set throttle lever adjusting screw so motor runs approximately 300 r. p. m. Then set idle adjustment screw to specifications. If these adjustments do not correct the trouble, remove idle orifice tube and plug assembly. Clean tube and passages with compressed air.

If acceleration is not satisfactory remove pump jet and clean with compressed air. However, it is usually advisable to replace the pump jet, as its cost is nominal. All jets must be seated gasoline tight. Poor acceleration may be due to damaged or worn plunger leather in accelerating pump, sediment in pump cylinder or clogged intake ball check at bottom of pump cylinder and discharge ball check in discharge passage. If plunger is removed from cylinder, use care in installing to avoid damage to plunger leather.

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CARBURETER

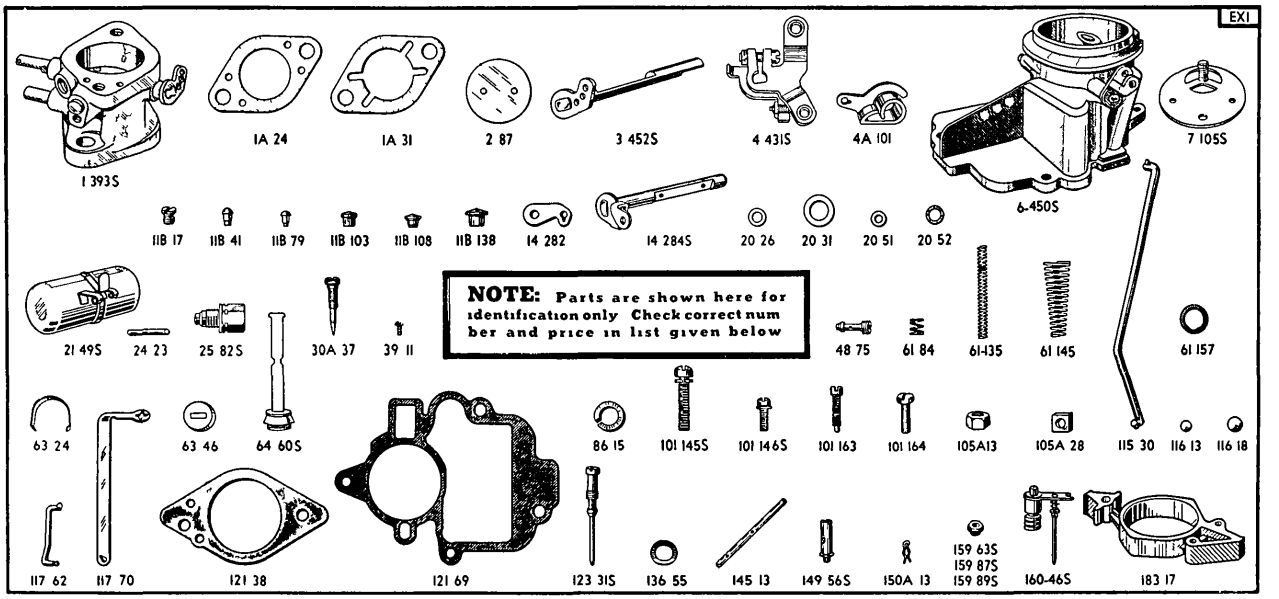
TRADE MARK REG. U. S. PAT. FF.
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Correct air fuel ratio is provided by a "balance tube' in the air horn The balance tube should be checked each time the carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type, size or condition of air cleaner Should the cleaner become clogged, the capacity will be reduced but the air-fuel mixture ratio will not be changed

Excessive richness above 50 miles per hour may be caused by a clogged main vent tube After removal of rivet plug beneath float bowl with tool No T109-43, main vent tube can be removed and a new tube inserted with tool No T109-195 Care must be exercised in inserting new tube which must seat tightly Use new rivet to complete the installation

Pump Adjustment Remove air horn assembly, back out throttle lever adjustment screw and install pump operating link in center hole of throttle shaft arm Place pump travel gauge T109-117S on upper surface of body casting with lip of gauge extending over top of plunger shaft Turn knurled nut of gauge until lip rests on top of plunger shaft Difference in readings obtained at closed and wide open throttle should be '26 (early production) "20' (late production) Adjustment can be made by bending horizontal portion of pump lifter link



Chrysler—1946-1950—Nos. EX1-EX2-EX3-EX1R-EX2R-EX3R

WHEN SERVICING, USE GASKET ASSORTMENT No. 137A, REPAIR PACKAGE No 1594

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-393S	Body flange assembly (EX1 2 1R 2R)	
1-685S	Body flange assembly (EX3 3R)	
1A-24	Flange gasket—for use with governor	
1A-31	FLANGE GASKET—FOR USE WITHOUT GOVERNOR	
2-87	Throttle valve	
3-452S	Throttle shaft and arm assembly (Use with 1 393S)	
3-682S	Throttle shaft and arm assembly (Use with 1-685S)	
4-431S	Throttle lever assembly	
4A-101	Fast idle cam	
6-450S	Air horn assembly (Sup by 6 560S)	
6-560S	Air horn assembly (EX1 2 1R 2R)	
6-639S	Air horn assembly (EX3 3R)	
7-105S	Choke valve assembly	
11B-17	Pump discharge passage screw plug	
11B-41	Rivet plug	
11B-79	Rivet plug	(2)
11B-103	Main vent tube passage rivet plug (Sup by 11B 220)	
11B 108	IDLE PORT RIVET PLUG	
11B-138	PUMP JET RIVET PLUG	
11B-220	MAIN VENT TUBE PASSAGE RIVET PLUG	
14-282	Choke lever (loose) (Sup by 14 352)	
14-284S	Choke lever and shaft assembly	
14-352	Choke lever (loose)	
20-26	Main metering jet gasket	
20-31	Needle seat gasket	
20 51	Step up jet gasket	
20-52	STEP UP PISTON GASKET	
21 49S	Float and lever assembly	
24-23	Float lever pin	
25 82S	NEEDLE AND SEAT ASSEMBLY	
30A-37	Idle adjustment screw	
39-11	Valve attaching screw	(4)
48-75	Pump jet (Sup by 48 145)	
48-145	Pump jet (Sup by 48 167)	
48-167	PUMP JET	
61-84	Idle adjustment screw spring	
61-135	STEP UP PISTON SPRING	
61-145	PUMP SPRING	
61-157	Plunger spring	
63-24	FLOAT PIN RETAINER	
63-37	CYLINDER BALL RETAINER	
63-46	Pump spring retainer	
64-60S	PUMP PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49 120)	
86-15	Flange stud lock washer	
101-145S	Flange attaching screw and washer assembly	(2)
101-146S	Bowl cover attaching screw and washer assembly (Sup by 101 150S)	
101-150S	†Bowl cover attaching screw and washer assembly	(4)
101-163	Throttle lever adj screw (Sup by 101 279)	
101-164	Throttle lever clamp screw	
101-279	Throttle lever adjusting screw	
105A-13	Flange nut	
105A-28	Throttle lever clamp nut	
115-30	Fast idle rod	
116-13	PUMP INTAKE CHECK BALL	
116-18	PUMP DISCHARGE BALL	
117-60	PUMP LINK (USE WITH 1 393S)	
117-62	Pump link (Sup by 117 60)	
117-70	PUMP LIFTER LINK	
117-141	PUMP LINK (USE WITH 1 685S)	
121-38	Body flange gasket (Sup by 121 160)	
121-69	BODY GASKET	
121-160	BODY FLANGE GASKET	(2)
123-31S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
136-55	Throttle shaft spring washer	
145-13	MAIN VENT TUBE	
149 56S	STEP UP JET ASSEMBLY	
150A-13	PIN SPRING	
156 29	Gas line fitting	
159-63S	Main metering jet assembly—2 sizes lean (Sup by 224 15S)	
159-87S	Main metering jet assembly—1 size lean (Sup by 224-14S)	
159-89S	Main metering jet assembly (Sup by 224 13S)	
160-46S	STEP UP PISTON PLATE AND ROD ASSEMBLY	
183-17	Insulator (Sup by 183 64)	
183-64	Insulator	
224-13S	MAIN METERING JET ASSEMBLY—STANDARD	
224-14S	Main metering jet assembly—1 size lean	
224-15S	Main metering jet assembly—2 sizes lean	

†Install 101 150S in bowl cover attaching screw to the rear of the air horn

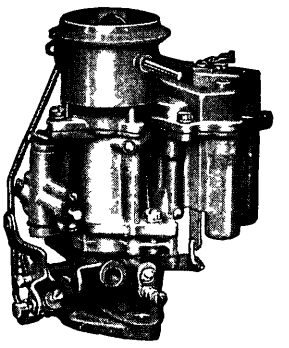
NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

CAR SERIAL NUMBERS

C39N—7031716 and higher
C39K—6765869 and higher
C39T and C—740920 and higher
C40—7810004 and higher

MOTOR SERIAL NUMBERS

C39—8752 and higher
C40—1004 and higher



CHRYSLER "8" MODELS "C39"-"C40"

FLUID DRIVE &
VACAMATIC TRANSMISSION

1946-47-48

B-B DOWN-DRAFT CARBURETER—**MODEL E7A1**

CARBURETER SPECIFICATIONS

For Chrysler Eight Cylinder Engine: 3¼ Inch Bore, 4⅞ Inch Stroke

Dimensions: Flange size 1½ inch (38 1 mm)
Throttle bore, 1-11/16 inch (42 86 mm)
Main venturi, 1-11/32 inch (34 13 mm) I D

Float Setting: Top of float 1/16 inch (1 59 mm) below top surface of carbureter body casting (Plus or minus 1/64 inch (397 mm)

Vent: Outside none Inside balance vent 218 inch diameter (5 54 mm)

Gasoline Intake Needle: Triangular horizontal No 38 (2 58 mm) drill in needle seat

Idle Orifice Tube: Jet size 0276 inch (70 mm) drill Idle passage air bleed in body, size 063 inch (1 60 mm) diameter Restriction in body size 053 inch (1 35 mm) diameter

Idle Ports: Upper port Keyhole type length 128 inch (3 25 mm), width 027 inch (69 mm) 063 inch (1 60 mm) diameter hole at top Top of port located 088 to 092 inch (2 24 to 2 34 mm) above top edge of valve (early production), 093 to 097 inch (2 36 to 2 46 mm) above top edge of valve (late production)
Lower port size 053 to 057 inch (1 35 to 1 45 mm) drill (For idle adjustment screw)

Set Idle Adjustment Screw: ¾ to 1¼ turns open For richer mixture turn screw out Do not idle engine below 300 r p m or 6 miles per hour

Main Metering Screw: Calibrated to flow 312 to 316 cc per minute (Do not gauge for size If in doubt replace with new part)

Main Vent: Through diffuser (air bleed inside bowl) Size 0315 inch (80 mm) drill

Main Vent Tube: Side Holes 4—0354 inch diameter

Step-Up Jet: Power orifice 0413 inch (1 05 mm) drill

Accelerating Pump: Type—delayed action
Stroke—Summer setting (inner hole short stroke)
Intermediate setting (center hole)
Winter setting (outer hole, long stroke)
Pump intake passage size 115 to 120 inch (2 93 to 3 05 mm) diameter in body
Pump discharge passage Restriction (under ball check) size 062 to 065 inch (1 57 to 1 65 mm) diameter in body
Pump (discharge) jet size 0374 inch (95 mm) drill

Pump Adjustment: 26/64 inch plunger travel—full throttle position medium stroke Use gauge T109-117S

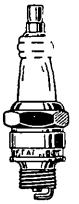
Choke: Offset butterfly type with poppet valve inter connected to open throttle valve to fast idle position when choke is used

Slow Closing Throttle: Dash pot with discharge (By pass) size 0197 (5 mm) drill through valve cage

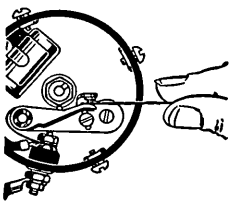
Vacuum Spark Port: Slot (round end) type, size 040 by 110 inch (1 016 by 2 794 mm) Top of port 052 to 058 inch (1 32 to 1 47 mm) above top edge of valve

Motor Tune-Up—Be Accurate!

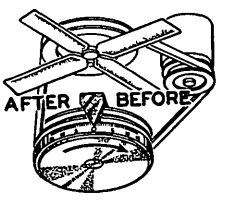
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter



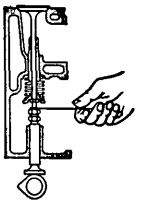
Spark Plug Gap .030"



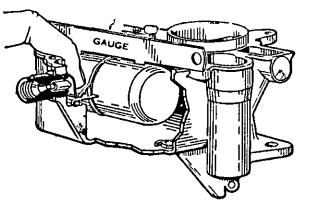
Breaker Point Setting .018"



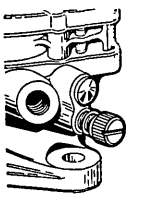
Ignition Timing Breaker Points to Open: 2° A. T. D. C



Valve Setting (Hot) Intake .008" Exhaust .010"



Float Setting (Use Gauge) 1/16 Inch



Idle Adjustment Screw Setting ¾ to 1¼ Turns Open

CARBURETER ADJUSTMENTS

If carbureter loads up after considerable service, check float level. To adjust float level, bend vertical lip of float assembly toward needle to lower, or away from needle to raise

If motor stalls while idling, set throttle lever adjusting screw so motor runs approximately 300 r p m Then set idle adjustment screw to specifications If these adjustments do not correct the trouble, remove idle orifice tube and plug assembly Clean tube and passages with compressed air

If acceleration is not satisfactory, remove pump jet and clean with compressed air However, it is usually advisable to replace the pump jet as its cost is nominal. All jets must be seated gasoline tight

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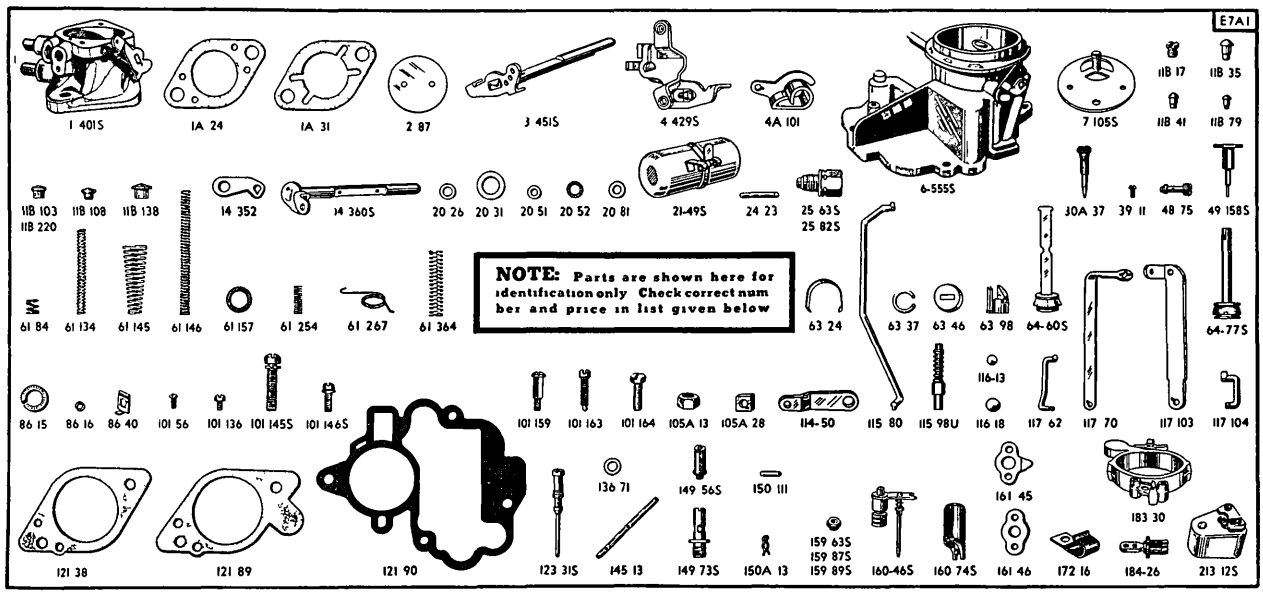
Poor acceleration may be due to damaged or worn plunger leather in accelerating pump or pump check balls not seating properly If plunger is removed from cylinder, use care when installing to avoid damage to plunger leather

Correct air fuel ratio is provided by a 'balance tube" in the air horn The 'balance tube' and vent passage must not be restricted The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type, size or condition of air cleaner Should the cleaner becomes clogged, the capacity will be reduced but the air-fuel mixture ratio will not be changed

Excessive richness above 50 miles per hour may be caused by a clogged main vent tube After removal of rivet plug beneath float bowl with tool No T109-43 main vent tube can be removed and a new tube inserted with tool No T109-195 Care must be exercised in inserting new tube which must seat tightly Use new rivet to complete the installation

Pump Adjustment Remove air horn assembly, back out throttle lever adjustment screw and locate pump link in center hole of throttle shaft arm Place universal pump travel gauge T109-117S on edge of bowl so that lip of gauge extends over top of plunger shaft Turn knurled nut of gauge until lip contacts top of plunger shaft at closed throttle position Take reading indicated on gauge Repeat with throttle wide open Difference in readings obtained should be "26 (26/64" plunger travel) Adjustment may be made by bending horizontal portion of pump lifter link

Seasonal Pump Adjustment Three holes are provided in pump arm to meet seasonal or climatic conditions For high altitudes or extreme heat, use short stroke (inner hole), winter setting long stroke (outer hole) or intermediate stroke (center hole)



Chrysler 8—"C39"—"C40"—1946-47-48—No. E7A1

WHEN SERVICING, USE GASKET ASSORTMENT No 164A; REPAIR PACKAGE No. 1384

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME
1-401S	Body flange assembly
1A-24	Flange gasket—for use with governor
1A-31	FLANGE GASKET—FOR USE WITHOUT GOVERNOR
2-87	Throttle valve
3-451S	Throttle shaft and arm assembly
4-429S	Throttle lever assembly (Sup by 4-546S)
4-546S	Throttle lever assembly
4A-101	Fast idle cam
6-555S	Air horn assembly
7-105S	Choke valve assembly
11B-17	Pump discharge passage plug
11B-35	Rivet passage plug
11B-41	Rivet passage plug
11B-79	Rivet passage plug (3)
11B-103	Main vent tube passage plug (Sup by 11B-220)
11B-108	IDLE PORT RIVET PLUG
11B-138	PUMP JET RIVET PLUG
11B-220	MAIN VENT TUBE PASSAGE PLUG
14-352	Choke lever (loose)
14-360S	Choke shaft and lever assembly
20-26	Main metering jet gasket
20-31	Needle seat gasket
20-51	Step-up jet gasket
20-52	STEP-UP PISTON AND SWITCH GASKET
20-81	SWITCH PLUNGER GASKET
21-49S	Float and lever assembly
24-23	Float lever pin
25-63S	NEEDLE AND SEAT ASSEMBLY (Sup by 25-235S)
25-82S	Needle and seat assembly (Sup by 25-63S)
25-235S	Needle and seat assembly
30A-37	Idle adjustment screw
39-11	Valve attaching screw (4)
48-75	PUMP JET
49-158S	Valve plunger rod and plate assembly
61-84	Idle adjustment screw spring
61-134	Step-up piston spring (Sup by 61-146)
61-145	PUMP SPRING
61-146	STEP-UP PISTON SPRING
61-157	Plunger spring
61-254	Dash pot valve operating spring
61-267	Dash pot arm spring (Sup by 61-372)
61-364	Switch piston spring
61-372	Dash pot arm spring
61-403	Push rod sleeve spring
63-24	FLOAT LEVER PIN RETAINER
63 37	PUMP CYLINDER BALL RETAINER
63-46	Pump spring retainer
63-98	Switch piston locator (Use with 160-74S)
64 60S	PUMP PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49-120)
64-77S	Dash-pot plunger rod assembly (Identify by shaft No 49-132)
86-15	Flange stud lock washer (2)
86-16	Lock washer (switch) (4)
86-40	Terminal lock washer (Use with 101-136)
101-56	Switch plate attaching screw (4)
101-136	Terminal connector screw (Use with 184-26)
101-145S	Body flange attaching screw and washer assembly (2)
101-146S	Air horn attaching screw and washer assembly (Sup by 101-150S)
101-150S	Air horn attaching screw and washer assembly (4)
101-159	Electro magnet assembly attaching screw
101-163	Throttle lever adjusting screw (Sup by 101-279)
101-164	Throttle lever clamp screw
101-279	Throttle lever adjusting screw
101-290	Terminal attaching screw
105A-13	Flange nut (2)
105A-28	Throttle lever clamp nut
114 50	Dash pot pick up arm
115-80	Fast idle rod
115-98U	Push rod assembly and spring unit (Consists of 61-403 and 115-79S)
116-13	PUMP CYLINDER BALL
116-18	PUMP DISCHARGE BALL
117-62	PUMP LINK
117-70	PUMP LIFTER LINK
117-103	Dash-pot lifter link
117-104	Dash-pot connector link
121-38	FLANGE TO INSULATOR GASKET
121-89	BODY TO INSULATOR GASKET
121-90	BOWL COVER GASKET
123-31S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY
136-71	Switch plunger washer
136-116	Terminal attaching screw washer
145-13	MAIN VENT TUBE
149-56S	STEP-UP JET ASSEMBLY
149-73S	Dash-pot valve cage assembly (Sup. by 149-102S)
149-102S	Dash-pot valve cage assembly
150-111	Dash-pot pin
150A-13	PIN SPRING (2)
159-63S	Main metering jet assembly—2 sizes lean
159-87S	Main metering jet assembly—1 size lean
159-89S	MAIN METERING JET ASSEMBLY
160-46S	STEP-UP PISTON, PLATE AND ROD ASSEMBLY
160-74S	Kickdown switch piston assembly (Sup by 160-88S)
160-88S	Kickdown switch piston assembly
161-45	Switch terminal end plate
161-46	Switch push rod end plate
172-16	Cable clip
183-30	Insulator
184-26	Terminal block (Sup by 184-53S, 101-290 and 136-116)
184 52	Terminal block (Sup by 184-53S)
184-53S	Terminal block and clip assembly
213-12S	Electro magnet assembly

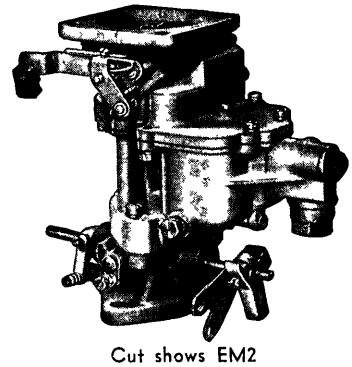
Form 4677H

CARTER CARBURETOR CHRYSLER INDUSTRIAL EM1-EM2 EM3 EM4
DIVISION OF acf INDUSTRIES INCORPORATED
ST LOUIS MO U S A

September, 1946
Revised December 1952

MODEL NUMBERS

8 Cyl		8 Cyl		6 Cyl		6 Cyl	
Ind	12-1	Ind	12-185	Ind	7-61	Ind	7-265
"	12-22		12-186	"	7-107	"	7-266
	12-55	'	12-196		7-111	'	8-20
	12-59		12-270	"	7-184		8-114
'	12-69	"	12-271	'	7-193	'	8-140
	12-70	'	12-272	'	7 260		
'	12-71	'	12-273	"	7-261		
	12-132		12-274	"	7-262		
	12 151	"	12-275	"	7-263		
	12-179	"	12-276	'	7-264		



Cut shows EM2

CHRYSLER 6 and 8 INDUSTRIAL 1946-47-48

(E7D2 can also be used)

B-B DOWN-DRAFT CARBURETERS—**Nos. EM1-EM2-EM3-EM4**

CARBURETER SPECIFICATIONS

For Chrysler 6 Cyl Engine 3-7/16 Inch Bore, 4¼ Inch Stroke
For Chrysler 8 Cyl Engine 3¼ Inch Bore 4⅞ Inch Stroke

Dimensions Flange size 1½ inch S A E
Throttle bore 1 11/16 inch (42 86 mm)
Main venturi 1 11/32 inch (3 413 mm)

Float Setting Top of float 5/64 inch (1 98 mm) plus or minus 1/64 inch (397 mm) below top surface of carbureter body casting

Vents Outside none Inside balance vent tube 218 inch (5 56 mm) inside diameter

Gasoline Intake Needle Triangular horizontal needle seat hole No 44 (2 18 mm) drill

Idle Orifice Tube Jet size 0276 inch (70 mm)
Idle passage air bleed (in air horn) size 0688 inch (1 75 mm)
Idle restriction in body size 059 inch (1 50 mm)

Idle Ports Upper port slot type Length 128 inch (3 251 mm)
Width 027 inch (686 mm)
Top of port 088 to 098 inch (2 235 mm to 2 489 mm) above top edge of valve
Lower port size 053 to 057 inch (1 35 to 1 45 mm) diameter (For idle adjustment screw)

Set Idle Adjustment Screw: ½ to 1½ turns open For richer mixture turn screw out Do not idle engine below 550 to 600 r p m motor speed

Vacuum Spark Port Slot (round end) type size 040 by 110 inch (1 016 by 2 794 mm) Top of port 052 to 058 inch (1 32 to 1 47 mm) above top edge of valve

Main Metering Jet Calibrated to flow 344 to 348 cc per minute Do not gauge for size If in doubt replace with new part

Main Vent Fuel chamber to vent tube well (in air horn) size 063 inch (1 60 mm) diameter In vent tube plug size 0433 (1 10 mm) diameter

Main Tube Side Holes 1—0354 (90 mm) diameter 3/32 inch (2 381 mm) from end
1—0354 (90 mm) diameter ⅛ inch (3 175 mm) from end
1—0236 (60 mm) diameter ½ inch (12 70 mm) from end
1—0236 (60 mm) diameter 17/32 inch (13 49 mm) from end
1—0157 (40 mm) diameter 1 15/32 inch (37 31 mm) from end

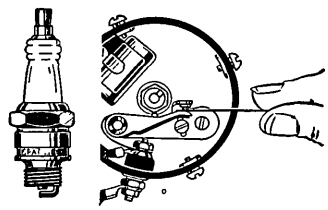
Step Up Jet Size 0492 (1 25 mm) diameter

Accelerating Pump Type vacuum operated Stroke non adjustable Pump intake passage ball check seat size 115 to 120 inch (2 93 to 3 05 mm) diameter
Pump discharge passage ball check seat size 062 to 065 inch (1 58 to 1 65 mm) diameter
Pump discharge jet size 0315 inch (80 mm) diameter

Choke Offset butterfly type with poppet valve

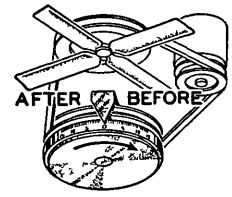
Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter

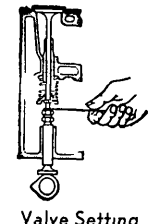


Spark Plug Gap 025"

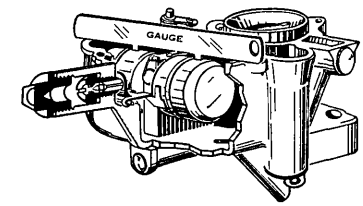
Breaker Point Setting 018"-020"



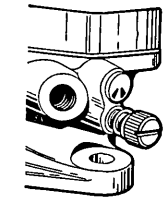
Ignition Timing Breaker Points to Open 2° or 003" A T D C



Valve Setting (Hot) Intake 010" Exhaust 012" Set Sodium Valves to 020"



Float Setting (Use Gauge) 5/64 Inch



Idle Adjustment Screw Setting ½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

If carbureter loads up after considerable service, check float level Wear on lip of float lever will raise float level Before adjusting float, be sure float lever pin is firmly seated Reset float level by bending lip of float lever away from needle to raise level, or bend lip toward needle to lower float level Bend only vertical lip of float

If motor stalls while idling set throttle lever adjusting screw so motor idle speed is that recommended in motor manufacturers handbook Then set idle adjustment screw to specifications If these adjustments do not correct the trouble remove idle orifice tube and plug assembly Clean tube and passages with compressed air

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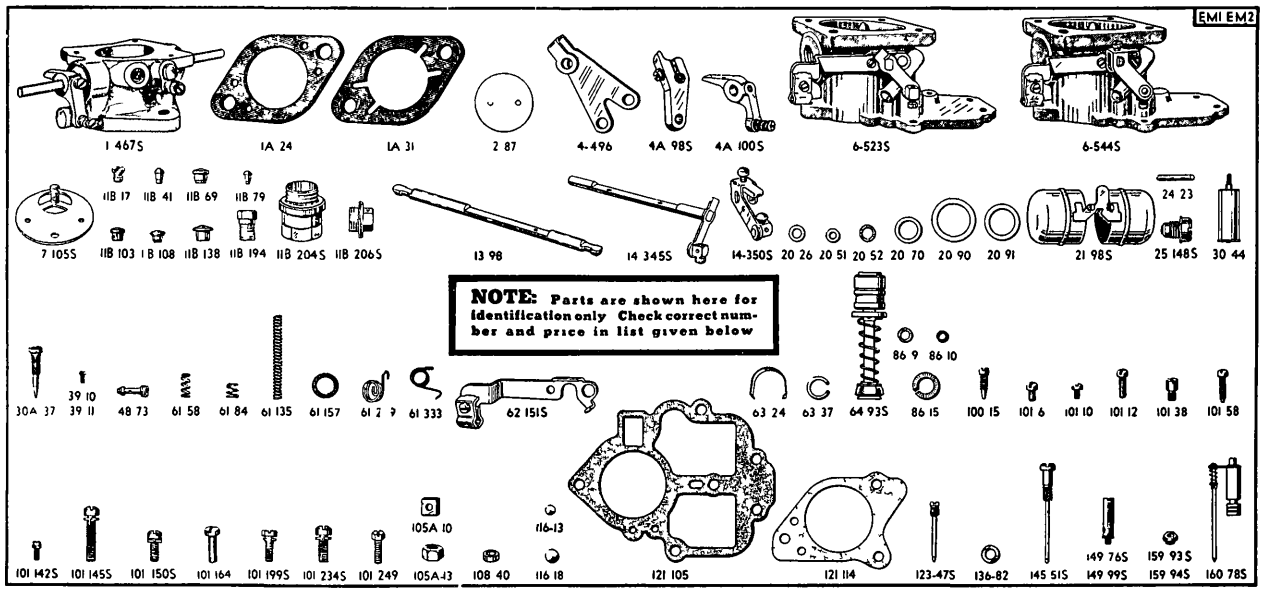
CARBURETER
TRADE MARK REG U S PAT OFF
MARCA REGISTRADA

PRINTED IN U S A

If engine misses when load is suddenly increased, remove pump jet and clean with compressed air However, it is usually advisable to replace the pump jet, as its cost is nominal All jets must be seated gasoline tight This condition may be due to damaged or worn plunger leather in accelerating pump, sediment in pump cylinder or clogged intake ball check at bottom of pump cylinder and discharge ball check in discharge passage If plunger is removed from cylinder use care in installing to avoid damage to plunger leather

Correct air fuel ratio is provided by a balance tube" in the air horn The balance tube should be checked each time the carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type, size or condition of air cleaner Should the cleaner become clogged, the capacity will be reduced but the air-fuel mixture ratio will not be changed

EM1 and early production EM2 carbureters were provided with a spacer No 108-40 inserted in the step-up cylinder under the step-up piston This spacer provided these carbureters with an extremely rich part throttle calibration, as the carbureter was originally designed for stationary industrial use However, due to the varying uses of these carbureters, this spacer has now been omitted and normal step-up piston operation will result If a rich part throttle operation is required this spacer may be used



Chrysler 6 & 8—Industrial—1946-47-48—Carbureters Nos. EM1-EM2-EM3-EM4

WHEN SERVICING, USE GASKET ASSORTMENT No 191, REPAIR PACKAGE No †1370A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME
1-467S	Body flange assembly (Sup by 1-591S)
1-591S	Body flange assembly
1A-24	Flange gasket—for use with governor
1A-31	FLANGE GASKET—FOR USE WITHOUT GOVERNOR
2-87	Throttle valve
4 496	Throttle lever (Outer)
4A-98S	Throttle lever dog assembly (Sup by 4A-114S)
4A-100S	Fast idle cam assembly
4A-105S	Throttle lever dog assembly (Sup by 4A-114S)
4A 114S	Throttle lever dog assembly
6 523S	Air horn assembly (Sup by 6 544S)
6 544S	Air horn assembly
7 105S	Choke valve assembly
11B-17	PUMP PASSAGE PLUG
11B-41	Rivet passage plug (4)
11B 69	Rivet plug
11B 79	Rivet plug
11B-103	Rivet plug (Sup by 11B-220)
11B-108	Idle port rivet plug
11B-138	PUMP JET RIVET PLUG
11B-194	Bowl drain plug
11B-204S	Filter bowl assembly (Sup by 11B-214S)
11B-206S	Needle seat plug assembly
11B-214S	Filter bowl assembly
11B-220	RIVET PLUG
13-98	Choke shaft (Use with 6-544S)
14 345S	Choke shaft and lever assy (Use with 6 523S) (EM1)
14-350S	Choke lever assembly (Use with 13-98)
20-26	Main metering jet gasket
20-51	Step-up jet gasket
20 52	STEP-UP PISTON GASKET
20-70	Needle seat gasket
20-90	FILTER BOWL GASKET
20-91	NEEDLE SEAT PLUG GASKET
21-98S	Float and lever assembly
24 23	FLOAT LEVER PIN
25-148S	NEEDLE AND SEAT ASSEMBLY
30 44	Filter element (Optional)
30-55S	Filter element
30A-37	Idle adjustment screw
39-10	Choke valve attaching screw (2)
39 11	Throttle valve attaching screw (2)
48 73	PUMP JET
61-58	Throttle lever adjusting screw spring
61 84	Idle adjustment screw spring
61-135	STEP-UP PISTON SPRING
61 144	Pump spring (Cadmium plated)
61-145	Pump spring (Copper plated) (Sup by 61-144)

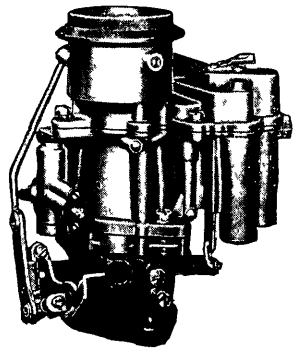
Part No.	PART NAME
61-157	Pump plunger spring
61-299	Choke spring (Use with 6-523S) (EM1)
61-333	Choke spring (Use with 6-544)
61-373	Pump spring (For altitude operation only) (Copper oxide plated)
62-151S	Choke tube bracket assembly
63-24	Float lever pin retainer
63-37	Retainer ring
64-93S	copper plated spring) (Sup by 64-117S) Plunger, rod and piston assy (Identify by
64-117S	PLUNGER, ROD AND PISTON ASSEMBLY (Identify by cadmium plated spring)
64 118S	Plunger, rod and piston assembly (Identify by copper oxide plated spring) (For altitude operation only)
86 9	Lock washer
86-10	Choke tube bracket lock washer (Use with 6 544S)
86-15	Flange stud lock washer
100-15	Throttle shaft dog set screw
101 6	Choke lever clamp screw (Use with 14-350)
101-10	Choke wire clamp screw
101-12	Choke bracket clamp screw
101-38	Choke tube bracket attaching screw (Use with 6-544S)
101-58	Throttle lever adjusting screw
101-142S	Choke tube bracket attaching screw and washer assembly
101-145S	Body flange attach screw & washer assy (2)
101-150S	Air horn attaching screw & washer assy (3)
101-164	Throttle lever dog screw (EM1)
101-199S	Air horn attaching screw and washer assy (2)
101-234S	Body flange attaching screw and washer assembly
101-248	Throttle lever dog set screw
101-249	Throttle lever clamp screw
105A-10	Choke tube clamp nut
105A-13	Flange nut (2)
108-40	Spacer (Under step up piston) (Early production only)
116 13	PUMP INTAKE CHECK BALL
116-18	PUMP DISCHARGE CHECK BALL
121-105	BOWL COVER GASKET
121-114	BODY FLANGE GASKET
123-47S	IDLE ORIFICE TUBE AND PLUG ASSY
136-82	MAIN VENT TUBE GASKET
145-51S	MAIN VENT TUBE AND PLUG ASSY
149-76S	Step-up jet assembly (Sup by 149-99S)
149-99S	STEP-UP JET ASSEMBLY (All)
159-87S	Main metering jet assy (3 sizes lean)
159-89S	Main metering jet assy (2 sizes lean)
159-93S	Main metering jet assy (1 size lean)
159-94S	MAIN METERING JET ASSY (Standard)
160-78S	STEP-UP PLATE AND ROD ASSY

†Do not use the following parts when servicing these carbureters 121-141 121-125 and 136-55

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown only one is used

CAR SERIAL NUMBERS
70011001 and higher
70515001 and higher

MOTOR SERIAL NUMBERS
1001 and higher



Cut shows EV2

CHRYSLER MODEL "C38"

FLUID DRIVE &
VACAMATIC TRANSMISSION

1946-1948

(E7L4 can also be used)

B-B DOWN-DRAFT CARBURETERS—**MODELS EV1-EV2**

CARBURETER SPECIFICATIONS

For Chrysler Six Cylinder Engine: 3-7/16 Inch Bore, 4½ Inch Stroke

Dimensions: Flange size, 1½ inch (38.1 mm).
Throttle bore, 1-11/16 inch (42.86 mm).
Main venturi, 1-11/32 inch (34.13 mm) I. D.

Float Setting: Top of float 1/16 inch below top surface of carbureter body casting. Plus or minus 1/64 inch.

Vent: Outside none. Inside balance vent .218 inch diameter (5.54 mm).

Gasoline Intake Needle: Triangular, horizontal No. 44 (2.18 mm) drill in needle seat.

Idle Orifice Tube: Jet size .0276 inch (.70 mm) drill. Idle passage air bleed, in body, size .063 inch (1.60 mm) diameter Restriction in body, size .053 inch (1.35 mm) diameter.

Idle Ports: Upper port. Keyhole type: length .128 inch (3.25 mm); width .027 inch (.69 mm). .063 inch (1.60 mm) diameter hole at top. Top of port located .088 to .092 inch (2.24 to 2.34 mm) above top edge of valve (early production); .093 to .097 inch (2.36 to 2.46 mm) above top edge of valve (late production).
Lower port size .053 to .057 inch (1.35 to 1.45 mm) drill. (For idle adjustment screw).

Set Idle Adjustment Screw: ¾ to 1¼ turns open. For richer mixture turn screw out. Do not idle engine below 300 r.p.m. or 6 miles per hour.

Main Metering Screw: Calibrated to flow 312 to 316 cc per minute. (Do not gauge for size. If in doubt replace with new part).

Main Vent: Through diffuser (air bleed inside bowl). Size .0315 inch (.80 mm) drill.

Main Vent Tube: Side Holes, 4—.0354 inch diameter.

Step-up Jet: Power orifice .0413 inch (1.05 mm) drill.

Accelerating Pump: Type—delayed action.
Stroke—Summer setting (inner hole, short stroke).
Intermediate setting (center hole).
Winter setting (outer hole, long stroke).
Pump intake passage, size .115 to .120 inch (2.93 to 3.05 mm) diameter in body.
Pump discharge passage: Restriction (under ball check) size .062 to .065 inch (1.57 to 1.65 mm) diameter in body.
Pump (discharge) jet size, .0374 inch (.95 mm) drill.

Pump Adjustment: 26/64 inch plunger travel (EV1), 20/64 inch plunger travel (EV2) full throttle position, medium stroke. (Use gauge T109-117S.)

Choke: Offset butterfly type (with poppet valve) interconnected to open throttle valve to fast idle position when choke is used.

Slow Closing Throttle: Dash pot with discharge (By-pass), size .0197 (.5 mm) drill, through valve cage.

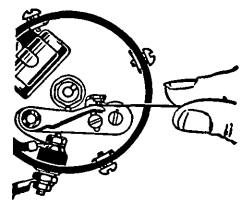
Vacuum Spark Port: Slot (round end) type; size .040 by .110 inch (1.016 by 2.794 mm). Top of port .052 to .058 inch (1.32 to 1.47 mm) above top edge of valve.

Motor Tune-Up—Be Accurate!

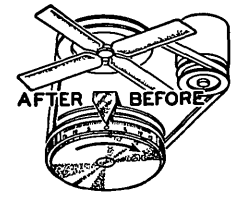
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



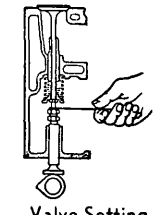
Spark Plug
Gap
.030"



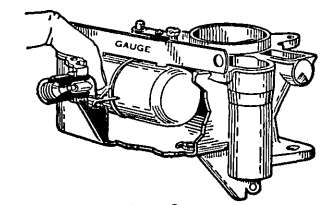
Breaker Points
Setting
.017" to .019"



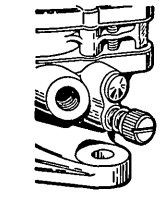
Ignition Timing
Breaker Points to Open
2° B. T. D. C.



Valve Setting
(Hot)
Intake .008"
Exhaust .010"



Float Setting
(Use Gauge)
1/16 Inch



Idle Adjustment
Screw Setting
¾ to 1¼
Turns Open

CARBURETER ADJUSTMENTS

If carbureter loads up after considerable service, check float level. Wear on lip of float lever will raise float level. Before adjusting float, be sure float lever pin is firmly seated. Reset float level by bending lip of float lever away from needle to raise level, or bend lip toward needle to lower float level. Bend vertical lip of float only.

If motor stalls while idling, set throttle lever adjusting screw so motor runs approximately 300 r. p. m. Then set idle adjustment screw to specifications. If these adjustments do not correct the trouble, remove idle orifice tube and plug assembly. Clean tube passages with compressed air.

If acceleration is not satisfactory remove pump jet and clean with compressed air. However, it is usually advisable to replace the pump jet, as its cost is nominal. All jets must be seated gasoline tight. Poor acceleration may be due to damaged or worn plunger leather in accelerating pump, sediment in pump cylinder or clogged intake ball check at bottom of pump cylinder and discharge ball check in discharge passage. If plunger is removed from cylinder, use care in installing to avoid damage to plunger leather.

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CARBURETER
TRADE MARK REG. U. S. PAT. OFF.
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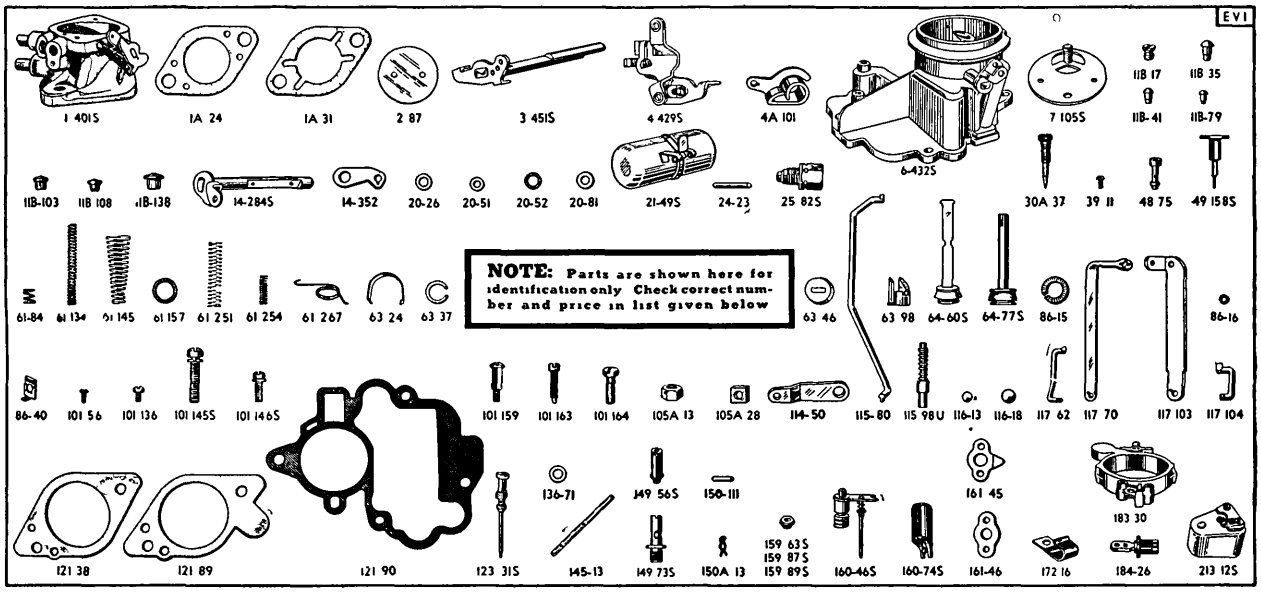
PRINTED IN U.S.A.

Correct air fuel ratio is provided by a "balance tube' in the air horn The balance tube should be checked each time the carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type, size or condition of air cleaner Should the cleaner become clogged, the capacity will be reduced but the air-fuel mixture ratio will not be changed

Excessive richness above 50 miles per hour may be caused by a clogged main vent tube After removal of rivet plug beneath float bowl with tool No T109-43 main vent tube can be removed and a new tube inserted with tool No. T109-195 Care must be exercised in inserting new tube which must seat tightly Use new rivet to complete the installation

Pump Adjustment: Remove air horn assembly, back out throttle adjustment screw, and place pump operating link in center hole of throttle shaft arm Place gauge T109-117S on edge of bowl cover so that lip of gauge extends over top of plunger shaft Turn knurled nut of gauge until lip contacts plunger shaft at closed and wide open throttle positions. Difference in readings obtained at closed and wide open throttle positions should be "26' (26/64" EV1, using 117-62 link), "20" (20/64" EV2, using 117-60 link) Adjustments can be made by bending horizontal portion of pump lifter link

Pump stroke adjustable for high or low temperature. Set to long stroke for cold weather, short stroke for hot weather driving



Chrysler "C-38"—1946-1948—Nos. EV1-EV2

WHEN SERVICING, USE GASKET ASSORTMENT No. 164A, REPAIR PACKAGE No. 1367C

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-401S	Body flange assembly	
1A-24	Flange gasket—for use with governor	
1A-31	FLANGE GASKET—FOR USE WITHOUT GOVERNOR	
2-87	Throttle valve	
3-451S	Throttle shaft and arm assembly	
4-429S	Throttle lever assembly (Sup by 4-546S)	
4-546S	Throttle lever assembly	
4A-101	Fast idle cam	
6-432S	Air horn assembly	
7-105S	Choke valve assembly	
11B-17	Pump discharge passage plug	
11B-35	Rivet passage plug	
11B-41	Rivet passage plug	
11B-79	Rivet passage plug	(3)
11B-103	High speed passage rivet plug (Sup by 11B-220)	
11B-108	IDLE PORT RIVET PLUG	
11B-138	PUMP JET RIVET PLUG	
11B-220	HIGH SPEED PASSAGE RIVET PLUG	
14-284S	Choke lever and shaft assembly	
14-352	Choke lever (loose)	
20-26	Main metering jet gasket	
20-31	Needle seat gasket	
20-51	Step-up jet gasket	
20-52	STEP-UP PISTON AND SWITCH GASKET	
20-81	SWITCH PLUNGER GASKET	
21-49S	Float and lever assembly	
24-23	Float lever pin	
25-82S	NEEDLE AND SEAT ASSEMBLY	
30A-37	Idle adjustment screw	
39-11	Valve attaching screw	(4)
48 75	Pump jet (Sup by 48-145)	
48-145	PUMP JET	
49-158S	Valve plunger rod and plate assembly	
61-84	Idle adjustment screw spring	
61-134	Step-up piston spring (Sup by 61-135)	
61-135	STEP-UP PISTON SPRING	
61-145	PUMP SPRING	
61-157	Plunger spring	(2)
61-251	Switch piston spring	
61-254	Dash-pot valve operating spring	
61-267	Dash-pot arm spring (Sup by 61-372)	
61-372	Dash-pot arm spring	
61 403	Push rod sleeve spring	
63-24	FLOAT PIN RETAINER	
63-37	PUMP CYLINDER BALL RETAINER	
63-46	Pump spring retainer	
63-98	Switch piston locator (Use with 160 74S)	
64 60S	PUMP PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49-120)	
64-77S	Dash-pot plunger and rod assembly (Identify by shaft No 49-132)	
86-15	Flange stud lock washer	
86-16	Lock washer (switch)	(4)
86-40	Terminal lock washer (Use with 101-136)	
101-56	Plate attaching screw (switch)	(4)
101-136	Terminal connector screw (Use with 184-26)	

Part No.	PART NAME	
101-145S	Body flange attaching screw and washer assembly	(2)
101-146S	Air horn attaching screw and washer assembly (Sup by 101-150S)	
101-150S	Air horn attaching screw and washer assembly	(4)
101-159	Electro magnet assembly attaching screw	
101-163	Throttle lever adjusting screw (Sup by 101-279)	
101-164	Throttle lever clamp screw	
101-279	Throttle adjusting screw	
101-290	Terminal attaching screw	
105A-13	Flange nut	
105A-28	Throttle lever clamp nut	
114-50	Dash pot pick-up arm	
115-80	Fast idle rod	
115-98U	Push rod assembly and spring unit (consists of 61-403 and 115-79S, the entire step-down switch plunger assembly and spring)	
116-13	PUMP INTAKE CHECK BALL	
116-18	PUMP DISCHARGE BALL	
117-60	PUMP LINK	
117-62	Pump link (Sup by 117-60)	
117-70	PUMP LIFTER LINK	
117-103	Dash-pot lifter link	
117-104	Dash-pot connector link	
121-38	FLANGE TO INSULATOR GASKET	
121-89	CARBURETER BODY TO INSULATOR GASKET	
121-90	BODY GASKET	
123-31S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
136-71	Switch plunger washer	
136-116	Terminal attaching screw washer	
145-13	MAIN VENT TUBE	
149-56S	STEP-UP JET ASSEMBLY	
149-73S	Dash pot valve cage assembly (Sup by 149-102S)	
149-102S	Dash pot valve cage assembly	
150-111	Dash pot pin	
150A-13	PIN SPRING	(2)
159-63S	Main metering jet assembly—2 sizes lean	
159-87S	Main metering jet assembly—1 size lean	
159-89S	MAIN METERING JET ASSEMBLY—STD	
160-46S	STEP-UP PISTON, PLATE AND ROD ASSEMBLY	
160-74S	Kick-down switch piston assembly (Sup by 160-88S)	
160-88S	Kick-down switch piston assembly	
161-45	Switch terminal end plate	
161-46	Switch push rod end plate	
172-16	Cable clip	
183-30	Insulator	
184-26	Terminal block (Sup by 184-53S, 101-290 and 136-116)	
184-52	Terminal block (Sup by 184-53S)	
184 53S	Terminal block and clip assembly	
195-42U	Unitized package (Sup by 195-47U)	
195-47U	Unitized package (for kick-down switch)	
213-12S	Electro magnet and housing assembly	

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used

CHRYSLER INDUSTRIAL 1947

MODEL "IND. 8-138"

Serial No. 4456 and up — Motor No. 4386 and up

BB DOWN-DRAFT **CARBURETER EYA1,** WITH GOVERNOR

CARBURETER SPECIFICATIONS

For Six Cylinder Engine 3 7/16 Inch Bore 4½ Inch Stroke

Dimensions Flange size 1½ inch S A E
Throttle bore 1 11/16 inch (42 86 mm)
Main venturi 1 11/32 inch (3 413 mm)

Float Setting Top of float 5/64 inch (1 98 mm) plus or minus 1/64 inch (397 mm) below top surface of carbureter body casting

Vents Outside none Inside balance vent tube 218 inch (5 56 mm) inside diameter

Gasoline Intake Needle Triangular horizontal needle seat hole No 44 (2 18 mm) drill

Idle Orifice Tube Jet size 0276 inch (70 mm)
Idle passage air bleed (in air horn) size 0688 inch (1 75 mm)
Idle restriction in body size 0629 inch (1 60 mm)

Idle Ports Upper port slot type Length 128 inch (3 251 mm) Width 027 inch (686 mm)
Top of port 088 to 098 inch (2 235 mm to 2 489 mm) above top edge of valve (in slot)
Lower port size 053 to 057 inch (1 35 to 1 45 mm) diameter (For idle adjustment screw)

Set Idle Adjustment ¾ to 1¼ turns open For richer mixture turn screw out Do not idle engine below 450 to 500 r p m motor speed

Vacuum Spark Port Slot (round end) type size 040 by 110 inch (1 016 by 2 794 mm) Top of port 052 to 058 inch (1 32 to 1 47 mm)

Main Metering Jet Calibrated to flow 344 to 348 cc per minute Do not gauge for size If in doubt replace with new part

Main Vent Fuel chamber to vent tube wel (in air horn) size 063 inch (1 60 mm) diameter In vent tube plug size 0433 (1 10 mm) diameter

Main Vent Tube Side Holes 1—0354 (90 mm) diameter 3/32 inch (2 381 mm) from end
1—0354 (90 mm) diameter ⅛ inch (3 175 mm) from end
1—0236 (60 mm) diameter ½ inch (12 70 mm) from end
1—0236 (60 mm) diameter 17/32 inch (13 49 mm) from end
1—0157 (40 mm) diameter 1 15/32 inch (37 31 mm) from end

Step Up Jet Size 0492 inch (1 25 mm) diameter

Accelerating Pump Type vacuum operated Stroke non adjustable Pump intake passage ball check seat size 115 to 120 inch (2 93 to 3 05 mm) diameter
Pump discharge passage ball check seat size 062 to 065 inch (1 58 to 1 65 mm) diameter
Pump discharge jet size 0315 inch (80 mm) diameter

Choke Offset butterfly type with poppet valve

FOR GOVERNOR INSTRUCTIONS, SEE FORM 4719D

MOTOR TUNE-UP

Spark Plug Gap	Set Breaker Points	Ignition Timing Breaker Points to Open	Valve Setting	Float Setting	Idle Setting
025"	020"	T D C	Int — { 010" (Std) / 010" (Sodium) } Exh — { 014" (Std) / 018" (Sodium) }	5/64"	¾ to 1¼ Turns Open

CARBURETER ADJUSTMENTS

Correct float adjustment is important and should be made in the following way

Place float gauge (No T109-50) across the carbureter body Press float lever down to hold float pin against the bottom of the slot in the body casting Floats should just clear the projections on the gauge If adjustment is necessary bend lip on float lever toward intake needle to lower level or away from the needle to raise the float level

If motor stalls while idling set throttle lever adjusting screw so motor runs between 450 and 500 R P M Then set idle adjustment screw ¾ to 1¼ turns open from closed position If a vacuum gauge is available adjust to highest steady gauge reading

Accelerating pump is actuated by the intake manifold vacuum and no adjustment is necessary However, be sure the bowl cover gasket and flange gasket seal to prevent any air leaks to the pump vacuum passages

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If engine misses when load is suddenly increased, remove pump jet and clean with compressed air However, it is usually advisable to replace the pump jet, as its cost is nominal (All jets must be seated gasoline tight) This condition may also be due to damaged or worn plunger leather in accelerating pump cylinder or discharge check in discharge passage If plunger is removed from cylinder, use care when installing to avoid damage to plunger leather

Correct air fuel ratio is provided by a "balance tube" in the air horn The balance tube should be checked each time the carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type, size or condition of air cleaner Should the cleaner become clogged, the capacity will be reduced but the air-fuel mixture ratio will not be changed

A fuel filter is incorporated in the carbureter bowl casting It should be cleaned periodically by removing the filter bowl and element (small discs) Soak element in acetone or a mixture of half and half Ethyl Alcohol and Benzol until all foreign material dissolves Then allow to dry CAUTION—do not blow off with compressed air which may damage discs

PARTS LIST

Part No	PART NAME	
1-567S	Body flange assembly (Sup by 1 590S)	
1-590S	Body flange (complete with 220 17 governor)	
1A 31	Flange gasket	
3-583S	Throttle lever snaft and arm assembly	
4-491S	Throttle lever assembly	
4A 96	Throttle shaft pick up dog	
6 544S	Air horn assembly	
7-105S	Choke valve assembly	
11B-17	Pump discharge passage plug	
11B-41	Rivet passage plug	(4)
11B 69	Rivet passage plug	
11B-79	Rivet passage plug	
11B-108	Idle port rivet plug	
11B-138	Pump jet rivet plug	
11B 186S	Governor primary adj passage plug assembly	
11B-194	Bowl drain plug	
11B 201S	Governor secondary adj passage plug assembly	
11B-206S	Needle seat plug assembly	
11B-214S	Filter bowl assembly	
11B 220	High speed passage plug	
13 98	Choke shaft	
14-350S	Choke lever assembly	
20 26	Main metering jet gasket	
20 35	Governor primary adj passage plug gasket	
20-36	Governor secondary adj passage plug gasket	
20-51	Step up jet gasket	
20 52	Step up piston gasket	
20-70	Needle seat gasket	
20-90	Filter plug gasket	
20 91	Needle seat plug gasket	
21-98S	Float and lever assembly	
24 23	Float lever pin	
25-148S	Needle and seat assembly	
30-44	Filter element (optional)	
30-55S	Filter element and retainer assembly	
30A 37	Idle adjustment screw	
38A 57S	‡Adjusting nut assembly (stamped No 27)	
39-10	Choke valve attaching screw	(2)
48 73	Pump jet	
61-84	Idle adjustment screw spring	
61-135	Step up piston spring	
61-144	Pump spring (Cadmium plated)	
61-145	Pump spring (Copper plated) (Sup by 61 144)	
61-157	Plunger spring	
61-302	‡Friction spring	
61-316S	‡Secondary spring assembly	
61-333	Choke spring	
61-367	‡Primary spring (Copper plated 043" wire diameter)	
61-373	Pump spring (for altitude only) (Copper oxide plated)	
62-151S	Choke tube bracket assembly	
63-24	Float lever pin retainer	
63-37	Pump cylinder ball retainer	
63-85	‡Secondary adjusting screw retainer	
63-104	Throttle shaft retaining ring	

Part No	PART NAME	
64-93S	Plunger rod and piston assembly (Sup by 64 117S)	
64-117S	Pump plunger shaft spring and piston assembly	
64-118S	Plunger rod spring and piston assembly (for altitude only)	
86-10	Choke bracket attaching screw lock washer (Use with 101 38)	
86-15	Flange stud lock washer	(2)
86-17	Throttle stop screw lock washer	
86-51	Throttle shaft dog lock washer	
86-54	Throttle valve screw lock washer	(2)
101-6	Choke lever clamp screw	
101-10	Wire clamp screw	
101-12	Choke bracket clamp screw	
101-38	Choke bracket attaching screw (special)	
101-121	Throttle adjusting screw	
101-142S	Choke tube bracket attaching screw and washer assembly	
101-145S	Body flange attaching screw and washer assembly	(2)
101-149S	Shaft housing attaching screw and washer assembly	(3)
101-150S	Air horn attaching screw and washer assembly	(3)
101-160S	Cover to governor housing attaching screw and washer assembly	(6)
101-164	Throttle lever clamp screw	
101-199S	Air horn attaching screw and washer assembly (hexhead)	(2)
101-215	‡Secondary adjusting screw	
101-220	‡Primary adjusting screw (stamped No 27)	
101-231	Throttle shaft dog attaching screw	
101-232	Throttle valve screw	(2)
101-234S	Body flange attaching screw and washer assembly	
101-257	Throttle stop screw	
103-11	Lead shot	(2)
105A-10	Choke tube clamp nut	
105A-13	Flange nut	(2)
105A-28	Throttle lever clamp nut	
116-13	Pump intake check ball	
116 18	Pump discharge check ball	
118-59S	Governor housing cover assembly	
121-105	Bowl cover gasket	
121-114	Body flange gasket	
121-123	Governor housing cover gasket	
121-141	Throttle shaft housing gasket	
123-47S	Idle orifice tube and plug assembly	
136 82	Gasket (main vent plug)	
136-105	Throttle lever shaft washer	
136-124	Spring washer (between throttle lever and flange) (Sup by 63 104)	
145-51S	Main vent tube and plug assembly	
149-99S	Step up jet assembly	
159-94S	Main metering jet assembly	
160-78S	Step up piston plate and rod assembly	
163-37	Carter seal	
170-143S	Shaft housing assembly	

‡Governor parts are of the latest design and must be set to 220 17 specifications (Form 4719D) After rebuilding and calibration are complete stamp 220 17 on cover plate assembly

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

CHRYSLER INDUSTRIAL 6 & 8—1946-1947

BB DOWN-DRAFT CARBURETERS WITH GOVERNOR—**EP1-EP2-EP3-EP5-EP6**

ENGINE MODELS: 7-44, 7-87, 8-104, 8-138, 12-71V, 12-132, 12-151, 12-197, 6-3

Optional Equipment on: 5-250 to 5-255, incl., 7-260 to 7-266, incl., 12-270 to 12-275
(E7E3 can also be used)

Note: Engine Serial Nos. 7-44 (13088), 12-71V (13555), 12-132 (13802), 12-151 (13328), 6-3 (9203)
All Others, 1001 and higher

CARBURETER SPECIFICATIONS

Six Cylinder Engine: 3-7/16 Inch Bore, 4½ Inch Stroke
Eight Cylinder Engine: 3¼ Inch Bore, 4⅞ Inch Stroke

Dimensions: Flange size, 1½ inch S. A. E.
Throttle bore, 1-11/16 inch (42.86 mm).
Main venturi, 1-11/32 inch (3.413 mm).

Float Setting: Top of float 5/64 inch (1.98 mm) plus or minus 1/64 inch (.397 mm) below top surface of carbureter body casting.

Vents: Outside: none. Inside: balance vent tube .218 inch (5 56 mm) inside diameter.

Gasoline Intake Needle: Triangular, horizontal, needle seat hole No 44 (2.18 mm) drill.

Idle Orifice Tube: Jet size, .0276 inch (.70 mm).
Idle passage air bleed (in air horn), size .0688 inch (1.75 mm).
(EP1-EP2-EP3) Idle restriction in body, size .059 inch (1.50 mm).
(EP5-6) Size .0629 inch (1.60 mm).

Idle Ports: Upper port: slot type. Length, .128 inch (3.251 mm). Width, .027 inch (.686 mm).
Top of port .088 to .098 (2.235 mm to 2.489 mm) above top edge of valve (in slot).
Lower port size. .053 to .057 inch (1.35 to 1.45 mm) diameter (For idle adjustment screw).

Set Idle Adjustment: (EP1-2-3) ⅝ to 1⅛ turns open, (EP5-6) ¾ to 1¼ turns open. For richer mixture turn screw out. Do not idle engine below 450 to 500 r.p.m. motor speed.

Vacuum Spark Port: Slot (round end) type: size .040 by .110 inch (1.016 by 2.794 mm). Top of port .052 to .058 inch (1.32 to 1.47 mm) above top edge of valve

Main Metering Jet: (EP1) Calibrated to flow 328 to 332 cc per minute.
(EP2-EP3-EP5-EP6) Calibrated to flow 344 to 348 cc per minute. Do not gauge for size. If in doubt, replace with new part.

Main Vent: Fuel chamber to vent tube well (in air horn), size 063 inch (1 60 mm) diameter. In vent tube plug, size .0433 (1.10 mm) diameter.

Main Vent Tube: Side holes: 1—0354 (.90 mm) diameter, 3/32 inch (2.381 mm) from end.
1—0354 (.90 mm) diameter, ⅛ inch (3.175 mm) from end
1—0236 (.60 mm) diameter, ½ inch (12.70 mm) from end.
1—0236 (.60 mm) diameter, 17/32 inch (13.49 mm) from end.
1—0157 (.40 mm) diameter, 1-15/32 inch (37.31 mm) from end.

Step-Up Jet: (EP1) Size, .0433 (1.10 mm) diameter
(EP2-EP3-EP5-EP6) Size, .0492 (1.25 mm) diameter.

Accelerating Pump: Type, vacuum operated. Stroke, non-adjustable. Pump intake passage ball check seat, size .115 to .120 inch (2.93 to 3.05 mm) diameter.
Pump discharge passage, ball check seat size, .062 to 065 inch (1.58 to 1.65 mm) diameter.
Pump discharge jet, size .0315 inch (.80 mm) diameter.

Choke: Offset butterfly type with poppet valve.

FOR GOVERNOR INSTRUCTIONS, SEE FORM 4719D

Spark Plug Gap .025"	Set Breaker Points	Use Motor Gauge Breaker Points to Open	Set Valves (Hot)	Float Setting	Idle Adjustment Screw Setting
	6 cyl.—.020"	6 cyl.—T.D.C.	Intake .010"	5/64 Inch	(EP1-2-3) ⅝ to 1⅛ Turns Open
	8 cyl.—.018"	8 cyl.—2° A.T.D.C.	Exhaust { .012" (Std.) .020" (Sodium) }		(EP5-6) ¾ to 1¼ Turns Open

CARBURETER ADJUSTMENTS

Correct float adjustment is important and should be made in the following way.

Place float gauge (No. T109-50) across the carbureter body. Press float lever down to hold float pin against the bottom of the slot in the body casting. Floats should just clear the projections on the gauge. If adjustment is necessary, bend lip on float lever toward intake needle to lower level or away from the needle to raise the float level.

If motor stalls while idling, set throttle lever adjusting screw so motor runs between 450 and 500 R P.M. Then set idle adjustment screw (EP1-2-3) ⅝ to 1⅛, (EP5-6) ¾ to 1¼ turns open from closed position If a vacuum gauge is available, adjust to highest steady gauge reading.

Accelerating pump is actuated by the intake manifold vacuum and no adjustment is necessary However, be sure the bowl cover gasket and flange gasket seal to prevent any air leaks to the pump vacuum passages

If engine misses when load is suddenly increased, remove pump jet and clean with compressed air. However, it is usually advisable to replace the pump jet, as its cost is nominal. (All jets must be seated gasoline tight.) This condition may also be due to damaged or worn plunger leather in accelerating pump cylinder or discharge check in discharge passage If plunger is removed from cylinder, use care when installing to avoid damage to plunger leather.

Correct air fuel ratio is provided by a "balance tube" in the air horn. The balance tube should be checked each time the carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type, size or condition of air cleaner. Should the cleaner become clogged, the capacity will be reduced but the air-fuel mixture ratio will not be changed.

A fuel filter is incorporated in the carbureter bowl casting It should be cleaned periodically by removing the filter bowl and element (small discs). Soak element in acetone or a mixture of half and half Ethyl Alcohol and Benzol until all foreign material dissolves. Then allow to dry. CAUTION—do not blow off with compressed air which may damage discs

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PARTS LIST

WHEN SERVICING, USE GASKET ASSORTMENT No 191, REPAIR PACKAGE No 1370A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part N .	PART NAME	
1-470S	Body flange assembly (complete with 220 5 governor) (Sup by 1 584S)	
1-495S	Body flange assembly (complete with 220 7 governor) (Sup by 1 584S)	
1-509S	Body flange assembly (complete with 220 13 governor) (Sup by 1 584S)	
1-524S	Body flange assembly (complete with 220 13 governor) (Sup by 1 584S)	
1-584S	★Body flange assembly (complete with 220 13 governor)	
1A-31	FLANGE GASKET	
3-539S	Throttle lever shaft and arm assembly (EP1 2 3)	
3-583S	Throttle lever shaft and arm assembly (EP5 6)	
4-491S	Throttle lever assembly	
4A-96	Throttle shaft pickup dog	
6-523S	Air horn assembly (EP1)	
6-544S	Air horn assembly (EP2 3 5 6)	
7-105S	Choke valve assembly	
11B-17	PUMP DISCHARGE PASSAGE PLUG	
11B-41	Rivet plug	(4)
11B-69	Rivet plug	
11B-79	Rivet plug	
11B-108	Idle port rivet plug	
11B-138	PUMP JET RIVET PLUG	
11B-186S	Governor primary adjusting screw passage plug assembly (EP1 only)	
11B-194	Bowl drain plug	
11B 201S	Governor secondary adjusting screw passage plug assembly	
11B 204S	Filter bowl assembly	
11B-206S	Needle seat plug assembly	
11B 214S	†Filter bowl assembly	
11B-219S	Governor primary adjusting screw passage plug assembly (EP2 3 5 6)	
11B-220	HIGH SPEED PASSAGE PLUG	
13-98	Choke shaft (EP2-3-5 6)	
14-345S	Choke lever and shaft assembly (EP1 only)	
14-350S	Choke lever assembly (EP2 3 5 6)	
20-26	Main metering jet gasket	
20-35	Governor primary adj screw plug gasket	
20-36	Governor secondary adj screw plug gasket	
20-51	Step up jet gasket	
20-52	STEP UP PISTON GASKET	
20-70	Needle seat gasket	
20 90	FILTER BOWL GASKET	
20-91	NEEDLE SEAT PLUG GASKET	
21-98S	Float and lever assembly	
24-23	FLOAT LEVER PIN	
25-124S	Needle and seat assembly (Sup by 25 148S)	
25-148S	NEEDLE AND SEAT ASSEMBLY	
30-44	Filter element	
30-55S	†Filter element	
30A-37	Idle adjustment screw	
38A-60S	★Adjusting nut assembly (Stamped No 33)	
39-10	Choke valve attaching screw	(2)
48 73	PUMP JET	
61-84	Idle adjustment screw spring	
61-135	STEP UP PISTON SPRING	
61-144	Pump spring (Cadmium plated)	
61-145	Pump spring (Copper plated) (Sup by 61-144)	
61-157	Plunger spring	
61-299	Choke spring (EP1 only) (Sup by 61 333)	
61-302	★Friction spring	
61-308	★Primary spring (Cadmium plated 043" wire diameter) (Sup by 61 367)	
61-316S	★Secondary spring assembly	
61-333	Choke spring	
61-367	Primary spring (Copper plated 043" wire diameter)	
61-373	Pump spring (for altitude operation only) (Copper oxide plated)	
62-151S	Choke tube bracket assembly	
63-24	Float lever pin	
63-37	Pump cylinder ball retainer	

Part No	PART NAME	
63-85	★Secondary adjusting screw retainer	
63-104	Throttle shaft retaining ring (Sup by 136 55)	
64-93S	Pump plunger rod spring and piston assembly (Identify by copper plated spring) (Sup by 64 117S)	
64-117S	PUMP PLUNGER, SPRING AND ROD ASSEMBLY (Identify by cadmium plated spring)	
64 118S	Plunger rod spring and piston assembly (for altitude operation only) (Identify by copper oxide plated spring)	
86 9	Throttle stop screw lock washer (EP1 2)	
86 10	Choke bracket attaching screw lock washer (EP2 3 5 6)	
86-15	Flange stud lock washer	(2)
86 16	Throttle valve screw lock washer (EP1 2 3) (Sup by 86 54)	(2)
86 17	Throttle stop screw lock washer (EP5 6)	
86-51	Throttle shaft dog lock washer	
86-54	Throttle valve screw lock washer	(2)
101-6	Choke lever clamp screw (EP2 3 5 6)	
101-10	Wire clamp screw	
101-12	Clamp screw (choke bracket)	
101 38	Choke bracket attaching screw (long) (EP2 3 5 6)	
101-121	Throttle adjusting screw	
101-142S	Choke tube bracket attaching screw and washer assembly	
101-145S	Body flange attaching screw and washer assembly	(2)
101-149S	Throttle shaft housing attaching screw and washer assembly (EP5-6)	(3)
101-150S	Air horn attaching screw and washer assembly	(3)
101-160S	Cover to governor housing attaching screw and washer assembly	(6)
101-164	Throttle lever clamp screw	
101-199S	Air horn attaching screw and washer assembly	(2)
101-215	★Secondary adjusting screw	
101-216S	Throttle shaft housing attaching screw and washer assembly (EP1 2 3)	
101-217	Throttle stop screw (EP1-2 3)	
101 231	Throttle shaft dog attaching screw	
101-232	Throttle valve attaching screw	(2)
101-234S	Body flange attaching screw and washer assembly (lower)	
101-247	★Primary adjusting screw (Stamped No 33 1 29/32" long)	
101-257	Throttle stop screw (EP5 6)	
103-11	Lead shot	(2)
105A-10	Choke tube clamp nut	(2)
105A-13	Flange nut	
105A-28	Throttle lever clamp nut	
116-13	PUMP INTAKE CHECK BALL	
116-18	PUMP DISCHARGE CHECK BALL	
118-59S	Governor cover housing assembly	
121-105	BOWL COVER GASKET	
121-114	BODY FLANGE GASKET	
121-123	Governor housing cover gasket	
121-125	THROTTLE SHAFT HOUSING GASKET (EP1 2 3)	
121-141	THROTTLE SHAFT HOUSING GASKET (EP5 6)	
123-47S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
136-55	SPRING WASHER (Between throttle lever and flange)	
136 82	Main vent plug gasket	
136-105	Washer (Throttle lever shaft)	
145-51S	MAIN VENT TUBE AND PLUG ASSEMBLY	
149-76S	Step up jet assembly (EP1 only) (Sup by 149 99S)	
149-99S	STEP UP JET ASSEMBLY	
159-93S	Main metering jet assembly (EP1 only) (Sup by 159 94S)	
159-94S	MAIN METERING JET ASSEMBLY	
160-78S	Step up piston plate and rod assembly	
163 37	Carter Seal	
163 49	★Adjusting nut seal	
170-107S	Throttle shaft housing assembly (EP1 2 3)	
170-143S	Throttle shaft housing assembly (EP5 6)	

★Governor parts are of the latest design and must be set to 220 13 specifications (Form 4719D) when used to rebuild 220 5 and 220 7 After rebuilding and calibration is complete stamp 220 13 on cover plate assembly

†30 55S may be used if 11B 214S is used

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

Form 4719D

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

July, 1947
Revised May, 1952

THE CARTER VELOCITY GOVERNOR

Used in conjunction with EP1, EP2, EP3, EP5, EP6 carbureters. Optional on Chrysler Industrial engines, models Ind. 5, 6, 7, 8, 12, 13, 14

Governor Speed range on 6 cylinder engines Ind. 5, 6, 7, 8: 1200-2800 R.P.M.
Governor Speed range on 8 cylinder engines Ind. 12: 1200-2000 R.P.M.
Governor Speed range on 6 cylinder engines Ind. 13: 1200-2400 R.P.M.
Governor Speed range on 6 cylinder engines Ind. 14: 1200-1800 R.P.M.

Used in conjunction with EYA1-E7E1-E7E2-E7E3 carbureters. Optional on Chrysler Industrial engine model Ind. 8; speed range 2500-3200 R.P.M.

GOVERNOR ASSEMBLY

1. Cover Plate Lead Seal Plugs
2. Secondary Adjusting Screw Plug
3. Speed Adjusting Screw Plug
4. Lead Car Seals
5. Idle Mixture Adjusting Screw
6. Governor Unit Number
7. Throttle Shaft Housing Assembly
8. Throttle Stop Screw
9. Idle Speed Adjusting Screw

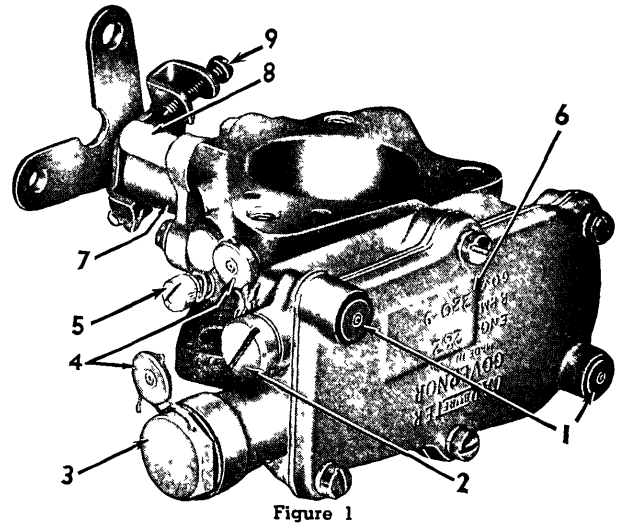


Figure 1

The action of the throttle valve is the same as that in conventional carbureters up to the governed sp d of the engine. The governor therefore, does not affect idle or economy nor does it affect power or acceleration under the speed at which engine is governed.

GOVERNOR ADJUSTMENTS

The governor is properly calibrated when it leaves the factory and should not require any attention, aside from a speed adjustment to satisfy operation requirement.

Before any governor adjustment is attempted engine must be tuned to manufacturer's specifications.

Run engine until normal operating temperature is reached. The manifold vacuum at sea level must be at least 16 inches with engine operating at no load, transmission in neutral (wide open throttle with governor controlling engine speed) and at least 17 inches at idling speed (450-500 R. P. M.) with an allowable reduction for approximately 3½ inches at 5,000 feet above sea level.

To adjust governed engine speed, remove large screw cap and gasket and with a screw driver, turn the primary adjusting screw (Figure 2) clockwise to decrease engine speed, and counter-clockwise to increase engine speed.

CAUTION: Do not turn adjusting screw out beyond the end of the governor housing to the extent that it will interfere with the complete tightening of the screw cap. Primary spring can become disengaged from the adjusting screw if screw is turned too far out (do not force).

It is desirable to check and set the governed engine speed with the aid of a reliable electric or mechanical tachometer.

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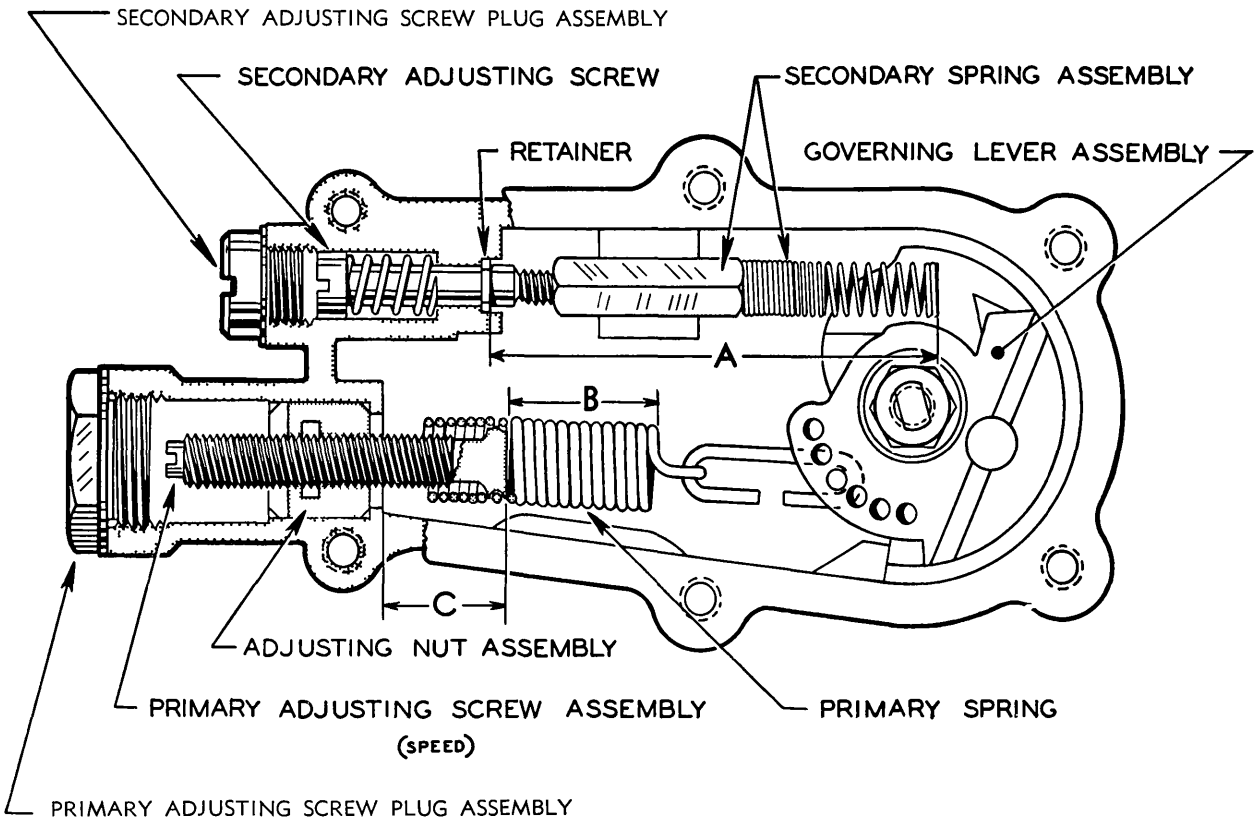


Figure 2

GOVERNOR CALIBRATIONS

Carbur t r Model	Governor Unit No.	"A"	"B"	"C"
EP1	220-5	2-7/32"	16-3/4	1/2"
EP2	220-7	2-7/32"	14-3/4	1/2"
EP3	220-13	2-3/16"	14-3/4	1/2"
EP5	220-13	2-3/16"	14-3/4	1/2"
EP6	220-13	2-3/16"	14-3/4	1/2"
EYA1	220-17	2-7/32"	12	21/32"
E7E1	220-23	2-3/16"	14-3/4	1/2"
E7E2	220-29	2-15/64"	15-1/4	3/8"
E7E3	220-29	2-15/64"	15-1/4	3/8"

'A' Dimension—Measurement from front of retainer to end of secondary spring.

"B" Specifications—Number of active spring coils from end of adjusting screw thread to end of spring

'C" Dimension—Measurement from housing boss to end of adjusting screw

GOVERNOR SERVICE INSTRUCTIONS

If governor has been tampered with, or should the adjusting screw be turned out of the primary spring due to faulty adjustment recalibration will be necessary to insure proper operation This will require removal of the carbureter from the engine If recalibration is necessary, proceed as follows

1 Determine the governor unit number (stamped on the cover plate and also on housing on later production) and refer to the chart in conjunction with Figure 2 for calibration specifications

2 Remove lead seal plugs from the two depressed screw openings in the governor cover plate by prying out with a small screw driver Remove all retaining screws and cover Never attempt to remove governing lever assembly from end of throttle valve shaft

3 Remove shaft housing and lever assembly located at end of throttle shaft opposite governor assembly Before removal be sure to note and mark position of long throttle stop screw for correct reassembly Never immerse this part in cleaning solvent as this may cause swelling of throttle lever shaft assembly seal

4 Carbon or gum deposits in the throttle shaft bearing races may eventually cause friction and result in sluggish and inaccurate governor performance Therefore, it is advisable before proceeding with recalibration of governor, to squirt some non corrosive solvent in the narrow space between the throttle shaft and shaft openings in the throttle bore and clean with compressed air Do not use any solvent which might leave a gummy film Never apply lubricating oil to throttle shaft bearings

5 Check fit of throttle valve in throttle bore as follows

Hold governor valve open and with long nose pliers disconnect loop of primary spring from the governing lever link This will allow the throttle valve to close with very little pressure from the secondary spring and makes checking of the throttle valve fit much easier The throttle valve must not touch the bore of the carbureter flange when in any position except when completely closed Check the centering of the valve by holding the flange up to a light, closing the valve tightly and looking through the bore The valve should touch the bore at the idle port and also the point opposite to it The sides of the valve near the throttle shaft should not touch the bore and approximately the same clearance should be visible on both sides If throttle valve is not propery aligned, loosen the two attaching screws, then with the valve in closed position rotate and shift valve with the fingers to obtain proper alignment Tighten the two screws Connect primary spring to governing lever link Do not tap throttle valve or throttle shaft when refitting valve

6 Remove secondary adjusting screw plug and gasket assembly and check A' dimension of secondary adjusting screw and spring assembly Open throttle to make sure that the secondary spring is not in contact with governing lever Turn secondary screw clockwise to decrease dimension, and counter-clockwise to increase dimension Secondary spring assembly may be removed for replacement by removing retainer while pressing lightly on head of secondary adjusting screw, then backing out screw

Upon reassembling, be sure that retainer is installed in proper slot and not against thread (see Figure 2) and that secondary spring compresses without buckling as throttle valve is closed If spring buckles remove secondary spring assembly and revolve entire spring assembly 1/6 turn and reinstall If necessary, repeat until buckling condition no longer exists Never remove secondary spring from its holder since this will damage spring

7. Check "C' dimension (throttle valve closed) This controls the primary spring tension (First make sure that the adjusting nut is pressed all the way into casting by tapping with tool T109 185)

Correct "C" dimension if necessary by turning the primary adjusting screw, clockwise to increase dimension, counter clockwise to decrease dimension

8 Check "B" specification. This is the number of active coils. In order that the number of active coils may easily be counted, hold the throttle valve closed to separate the coils In counting the number of active coils start at the first complete coil from the loop end as shown in Figure 3 The active coils end at the entering edge of the primary adjustment screw thread as shown in Figure 4

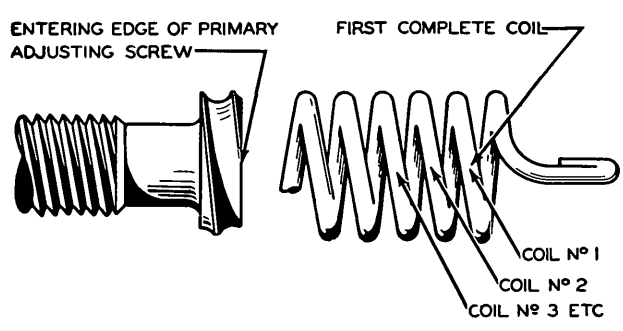


FIGURE 4 FIGURE 3

If the number of active coils is within one coil of "B specification it may be considered satisfactory

If the number of active coils is not within one coil of "B' specification, indications are that the spring has been tampered with and recalibration with the adjusting nut is necessary To do this proceed as follows

Set the amount of active coils (B ' specification) with the adjusting screw

Where a fractional number of coils is required, first adjust to the nearest whole number of coils as described above Then add or subtract the fractional coil by turning the primary adjusting screw the same fraction of a turn As an example— if 14 3/4 coils are called for in ' B ' specification, adjust to obtain exactly 15 active coils Then turn primary adjusting screw 1/4 turn or 90° clockwise, thereby reducing the number of active coils to 14 3/4

Should the end coil of the primary spring contact the governor housing or if the primary adjusting screw is turned in so far that the slotted end becomes flush with the adjusting nut assembly before the correct amount of coils is obtained, it will be necessary to adjust the nut Hold the primary adjusting screw with screw driver so that it cannot turn, while turning the adjusting nut with tool T109 185

9 Once the correct number of active coils has been established with the adjusting screw, set "C" dimension

To do this hold the primary adjusting screw with screw driver so that it cannot turn while turning the adjusting nut with tool T109 185 Turn clockwise to decrease C ' dimension, counter clockwise to increase the dimension When dimension is correct, tap end of wrench with a light hammer to seat adjusting nut as adjusting nut must be firmly seated, then recheck dimension

10 To replace damaged primary adjusting screw or nut Hold throttle valve open, unhook the primary spring from the link and using a narrow screw driver, turn the primary adjusting screw clockwise until it is out of adjusting nut Place fiber drift inside governor housing, against adjusting nut and drive out nut To reassemble primary adjusting screw and adjusting nut assembly proceed as follows

Install primary adjusting nut, driving nut against seat in housing with tool T109 185 (always use new part to make certain of tight fit) Start primary adjusting screw in adjusting nut from inside of housing then turn screw counter clockwise with narrow screw driver until all but a few threads have engaged the nut Screw will be a tight fit as it will be cutting new threads in adjusting nut fiber insert

Insert tail of primary spring in slot in governor housing, bring against entering edge of adjusting screw and turn screw clockwise until a few coils have been engaged Hook spring to governing lever link

11 Inspect throttle shaft pick up dog for wear If replacing dog, install in proper relation to throttle valve as shown in Figure 5 If dog is tight, do not hammer or tap in place Draw into place with screw and lock washer

CAUTION Excessive tightening may shear screw

Before installing same or new shaft housing and lever assembly be sure that throttle lever assembly is snug against the shoulder of the flat on the shaft (stub)

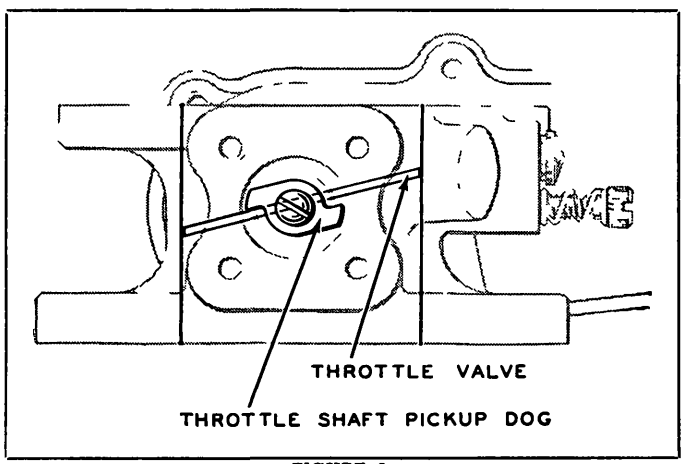


FIGURE 5

Holding throttle valve closed, and throttle lever assembly in open position, install shaft housing and lever assembly and gasket with throttle stop screw in previously marked position

12 Install governor housing cover and gasket

While supporting governor housing over edge of bench place lead shot (part 103 11) in the two depressed screw openings Tamp into place and stamp with identifying tool Install adjusting screw plug assemblies

13 Install carbureter and governor assembly on engine Warm up engine Hook up tachometer and check governed no load speed Set with primary adjusting screw to required R P M

If the engine surges under heavy load with the governor controlling engine speed, turn the speed adjusting screw clockwise, 1/2 turn at a time, and correct maximum governed speed by turning the adjusting nut clockwise Repeat if necessary until the surge is eliminated

Should engine surge (continued rapid rise and fall of engine speed) at governed engine speed (no load) transmission in neutral turn secondary adjusting screw counter-clockwise 1/2 turn at a time until surge is just eliminated If this adjustment increases the maximum governed engine speed, reduce same by turning the primary adjusting screw clockwise until maximum governed engine speed is re-established

14 When final adjustments are completed, install adjusting screw plug assemblies Seal by threading wire through plug and hole in boss in governor housing and crimp lead seal with identifying tool Both adjustments must be sealed with wire and lead seal

RECONDITIONING BEYOND THAT COVERED BY THESE INSTRUCTIONS IS NOT RECOMMENDED AND MAY REQUIRE REPLACEMENT OF THE COMPLETE GOVERNOR AND FLANGE ASSEMBLY.

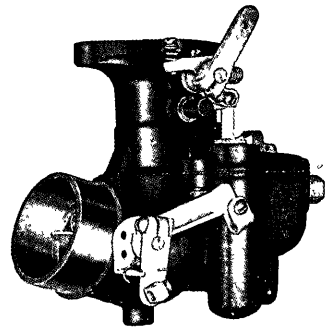
CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

CHRYSLER-MARINE 6J2-6J3-6K2-6K3
August, 1943
Revised November, 1952

MODELS

6J2-6J3 — M7-M8

6K2-6K3 — M7



Cut shows 6K3

CHRYSLER MARINE 1943-46-47

BB UP-DRAFT CARBURETERS **Nos. 6J2-6J3-6K2-6K3**

CARBURETER SPECIFICATIONS

For Six-Cylinder Engine, Model M7—3-7/16 Inch Bore, 4½ Inch Stroke
For Eight-Cylinder Engine, Model M8—3¼ Inch Bore, 4⅞ Inch Stroke

Dimensions: Flange size, 1½ inch (38.10 mm).
Throttle bore, 1½ inch (38.10 mm).
Main venturi, 1-1/16 inch I. D. (26.99 mm).
Air bleed through venturi, to idle passage .076 inch diameter (1.93 mm) drill.

Float Setting: Top of float 1/32 to 1/16 inch (.79 to 1.59 mm) below top of surface of lower body.

Balance Vent Tube: Inside diameter, 7/32 inch (5.56 mm).

Gasoline Intake Needle: Triangular, horizontal. No. 44 (2.18 mm) drill in needle seat.

Idle Jet Tube: Jet size, .0236 inch (.60 mm) drill.

Idle Ports: Lower port size: .062 to .064 inch (1.58 to 1.63 mm) diameter. Top of port located .005 to .009 inch (.13 to .23 mm) below lower edge of valve. Upper port size: .053 to .057 inch (1.35 to 1.45 mm) diameter (for idle adjustment screw).

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture, turn screw out. Do not idle engine below 300 r.p.m. or 6 m.p.h.

Main Metering Screw: (6J2-6K2) Adjustable.

Main Metering Jet: (6J3-6K3) Calibrated to flow 350 cc per minute. (Do not gauge for size. If in doubt, repair with new part.)

Nozzle: (6J2-6K2) No. 33 (2.87 mm) drill, I. D. (30°).
(6J3-6K3) No. 31 (3.04 mm) drill, I. D. (30°).

Accelerating Jets: 2—.038 inch (.97 mm) drill 1/16 inch (1.59 mm) from shoulder.
2—.038 inch (.97 mm) drill ⅜ inch (9.525 mm) from shoulder.
2—.038 inch (.97 mm) drill 23/32 inch (18.256 mm) from shoulder.
2—.063 inch (1.60 mm) drill 1-1/16 inch (26.99 mm) from shoulder.

Air Bleed to Nozzle: (Vent tube) Size, .048 inch (1.22 mm) drill.

Step-Up Jet: (Power Orifice) Size, .055 inch (1.4 mm) drill (early production). Size, .0472 inch (1.2 mm) drill (late production).

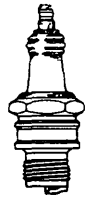
Accelerating Pump: Type, low pressure, delayed action. Stroke: Summer setting, inner hole, short stroke 9/16 inch (14.29 mm). Winter setting (outer hole, long stroke) 1 inch (25.40 mm). Pump intake ball check: Size ⅛ inch (3.175 mm). Pump discharge retainer (in pump valve cage assembly) .0635 inch diameter (1.615 mm) drill size.

Choke: Butterfly type, with poppet valve.

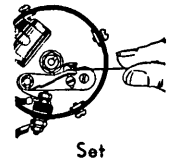
Vacuum Spark Port: .029 inch (.73 mm) diameter.

Motor Tune-Up—Be Accurate!

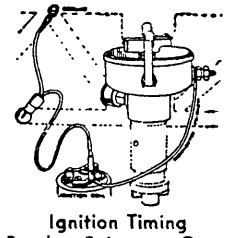
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



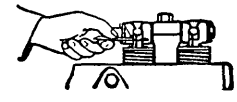
Spark Plug Gap .025"



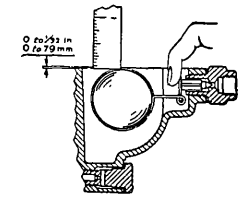
Set Breaker Points (6J2-6J3—M8) .018" (All—M7) .020"



Ignition Timing Breaker Points to Open (6J2-6J3—M7-M8) 2° ATDC (6K2-6K3—M7) 4° ATDC (Cast Iron Pistons)



Set Valves Hot (6J2-6J3—M7-M8) Intake .008" Exhaust .010" (6K2-6K3—M7) Intake .010" Exhaust .010"



Correct Float Level 1/32" to 1/16" Below Edge of Casting (Remove Gasket)

CARBURETER ADJUSTMENTS

To Secure a Good Idle: Set throttle lever adjusting screw so motor runs approximately 300 rpm. Then set idle adjustment screw so motor fires evenly. Correct setting will be found between ½ and 1½ turns open. A richer mixture is obtained by backing out adjustment screw—a leaner mixture by turning screw in. If motor stalls while idling, remove idle passage tube and idle jet tube and clean with compressed air.

Pump Stroke is adjustable. Pump link connected by inner hole produces short stroke, outer hole results in long stroke. Use setting consistent with good performance.

If Motor Loads—Check Float Level: Wear on lip of float lever will raise float level from factory setting, causing carbureter to load up. To lower float level, bend lip of float lever toward needle. To raise float level, bend lip away from needle. A very slight bend is sufficient. Be sure to bend lip of float, not bracket.

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CARBURETER
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Economy

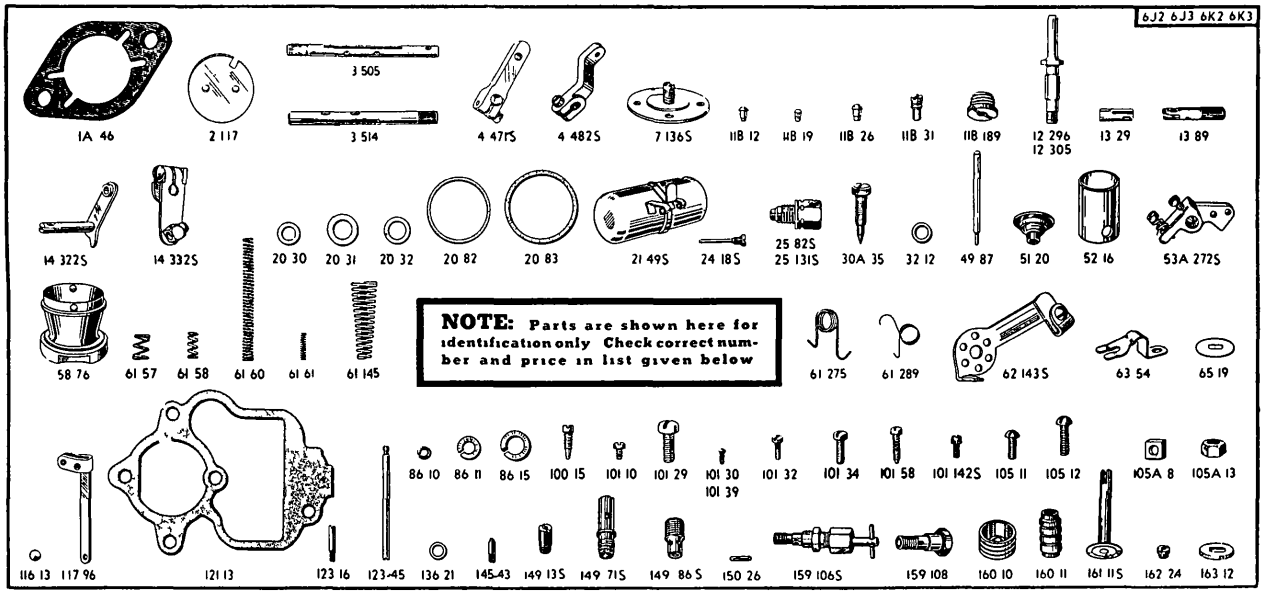
(a) Maximum economy is secured only when breaker points, spark plugs, valves and ignition timing are set to manufacturer's specifications

(b) Float level must set as instructed

(c) Ball must be free in checks and seats should be clean When reassembling all checks must be screwed in tight against seat

(d) Step-up push rod must move freely in upper and lower guides and be installed with small end down

(e) Step-up piston in upper casting should not bind and must be free from dirt and carbon accumulation



Chrysler-Marine—1943-1946-1947—Carbureters 6J2-6J3-6K2-6K3

WHEN SERVICING, USE GASKET ASSORTMENT No 179, REPAIR PACKAGE No 1342B

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1A-46	FLANGE GASKET	
2-117	Throttle valve	
3-505	Throttle shaft (6J2 6J3)	
3-514	Throttle shaft (6K2 6K3)	
4-471S	Throttle lever assembly (6K2 6K3)	
4-482S	Throttle lever assembly (6J2 6J3)	
7-136S	Choke valve assembly	
11B-12	RIVET PASSAGE PLUG	
11B-19	Plug	
11B-26	Rivet passage plug	(2)
11B-31	IDLE PORT PLUG	
11B-189	Step up piston plug	
12-296	Nozzle (6J2 6K2) (Sup by 12 305)	
12-305	Nozzle	
13-29	Choke shaft stub	
13-89	Choke shaft (6K2 6K3)	
14-322S	Choke lever and shaft assembly (6J2 6J3)	
14-332S	Choke lever assembly (6K2 6K3)	
20 30	NOZZLE GASKET	
20-31	Needle seat gasket	
20-32	METERING SCREW GASKET	
20 82	VENTURI GASKET—UPPER	
20-83	VENTURI GASKET—LOWER	
21-49S	Float and lever assembly	
24-18S	FLOAT LEVER PIN AND PLUG ASSEMBLY	
25 82S	NEEDLE AND SEAT ASSEMBLY	
25 131S	Needle and seat assembly (6J2 6K2) (Sup by 25 82S)	
30A-35	Idle adjustment screw	
32-12	Pump rod gasket	
49-87	STEP UP PUSH ROD	
51-20	Pump collar	
52-16	Pump sleeve	
53A-71S	Pump arm assembly	
53A-272S	Pump arm assembly (Sup by 53A 71S)	
58-76	Venturi	
61-57	Idle adjustment screw spring	
61-58	Throttle lever adjusting screw spring	
61-60	STEP UP PISTON SPRING	
61-61	Step up valve spring	
61-145	PUMP SPRING	
61-275	Choke lever spring (6K2 6K3)	
61-289	Choke lever spring (6J2 6J3)	

Part No	PART NAME	
62-143S	Choke tube clamp assembly (6K2 6K3)	
63-54	Plunger shaft seal retainer	
65-19	Pump link cover plate	(2)
86-10	Lock washer	
86-11	Lock washer (Used with 101 29)	(3)
86-15	Flange stud lock washer	
100-15	Headless screw	
101-10	Wire clamp screw (6K2-6K3)	
101-29	Body attaching screw (6J2) (Sup by 101-151S on 6J3 6K2 6K3)	(3)
101-30	CHOKE VALVE SCREW	(2)
101-32	PUMP LINK SCREW	
101-34	Throttle lever clamp screw	
101-39	THROTTLE VALVE SCREW	(2)
101-58	Throttle lever adjusting screw	
101-142S	ATTACHING SCREW AND WASHER ASSEMBLY (6J2 6J3—1) (6K2 6K3—3)	
101-151S	Screw and lock washer assembly (6J3 6K2 6K3)	(3)
105-11	Tube clamp screw (6K2 6K3)	
105-12	Choke lever clamp screw (6K2-6K3)	
105A-8	Tube clamp nut (6K2 6K3)	(2)
105A-13	Flange nut	
116-13	Ball	(2)
117-96	Pump link	
121-13	BODY GASKET	
123-16	IDLE ORIFICE TUBE	
123-45	Idle passage tube	
136-21	FLOAT LEVER PIN WASHER	
145-43	VENT TUBE	
149-13S	CHECK VALVE ASSEMBLY	
149-66S	Step up valve assembly (6J3)	
149-71S	STEP UP VALVE ASSEMBLY (6J2 6K2 6K3) (Sup by 149 66S on 6J3)	
149-86S	PUMP VALVE ASSEMBLY	
150-26	PUMP COLLAR PIN	
159 106S	Adjustable main metering screw assembly (6J2 6K2)	
159-108	Main metering jet (6J3 6K3)	
160-10	Pump piston	
160-11	STEP UP PISTON	
161-11S	Pump rod plate and rod assembly	
162-24	Power orifice	
163-12	PLUNGER SHAFT FELT PACKING	

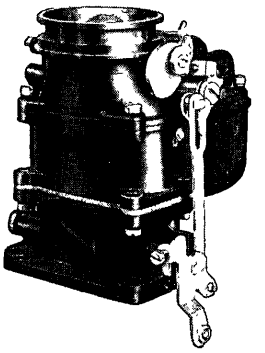
NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

CHRYSLER INDUSTRIAL 373S
November, 1943
Revised January, 1953

Model Numbers

C36 — 520 C36 — 5428
C36 — 5427 C36 — 6413
C36 — 6419
C36 — 6421 (After Engine Serial No. 803)



Casting No. 170 on Face of Flange

CHRYSLER "8" INDUSTRIAL 1943

WDO DUAL DOWN-DRAFT **CARBURETER 373S**

CARBURETER SPECIFICATIONS

For Chrysler 8 Cylinder Engine: 3¼ Inch Bore, 4⅛ Inch Stroke

Dimensions: Flange size, 1¼ inch dual, 4 bolt type.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 21/32 inch I. D.
Main venturi, 1-3/16 inch I. D.

Float Level: Distance from float to bowl cover to be 9/64 inch when needle is seated. (Use gauge No. T109-34.)

Outside Vent: No. 20 drill. Inside, none.

Gasoline Intake: Square vertical needle. Size No. 38 drill hole in needle seat.

Low Speed Jet Tube: Jet size, No. 71 drill.
By-pass in body, size No. 53 drill.
Restriction in body, size No. 50 drill.
Idle bleed, size No. 52 drill.

Idle Port: Length, .175 inch; width, .030 inch.

Idle Port Opening: .009 to .015 inch with valve closed tight.

Idle Screw Seat: No. 52 drill.

Set Idle Adjustment Screw: ½ to 1 turn open. For richer mixture, turn screw out. Do not attempt to idle engine below 350 r. p. m.

Main Nozzle: In primary venturi, angle 45°. Discharge jet size No. 30 drill.

Nozzle Retainer Plug: Jet size, .067 inch diameter.

Metering Rod: Economy step, .073 inch diameter, middle step tapers from .070 to .065 inch diameter; power step, .039 inch diameter. Length of rod 2-59/64 inches.

Metering Rod Jet: No. 41 drill, .096 inch diameter.

Metering Rod Setting: Use gauge, part No. T109-27 (2.359 inches).

Accelerating Pump: Low pressure type, with adjustable stroke.
Discharge jet (external bleed type), size, No. 70 drill.
Intake ball check, size No. 62 drill.
Discharge ball check, size No. 45 drill.
Relief passage to outside, .0935 inch diameter.

Pump Adjustment: 16/64 inch plunger travel (full throttle position). Use gauge T109-117S.

Choke: Butterfly type, with poppet valve.

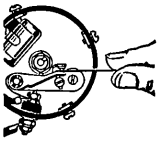
Vacuum Spark Port: .039 to .041 inch diameter.
Top of port .029 to .033 inch above valve.

Motor Tune-Up—Be Accurate!

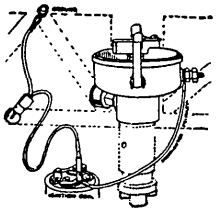
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



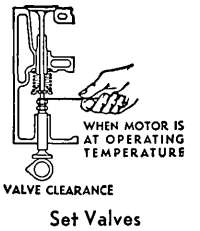
Spark Plug Gap .025"



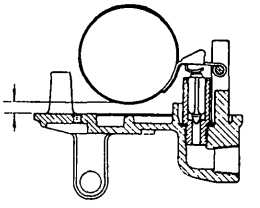
Set Breaker Points .020"



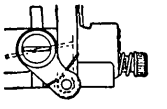
Use Timing Light Breaker Points to Open T. D. C.



Set Valves Intake .008" Exhaust .010"



Correct Float Level (Remove Cork Gasket) 9/64-Inch



Idle Adjustment Screw Setting ½ to 1 Turn Open

CARBURETER ADJUSTMENTS

PUMP ADJUSTMENTS: With pump connector link in outer hole (long stroke), throttle lever set screw backed out, pump plunger should travel 16/64" from closed to wide open throttle position. Use gauge No. T109-117S. Adjustment can be made by bending throttle connector rod at lower angle.

METERING ROD ADJUSTMENT should be made when reassembling carbureter or when leaner than standard rods are installed. (Do not disturb pump adjustment.) Correct setting of metering rods is important. Procedure is as follows:

A. Remove air horn, back out throttle lever adjusting screw and loosen anti-percolator arm screw one full turn.

B. Remove metering rod pin, rods, metering rod disk retainer and disks.

C. Insert two T109-27 metering rod gauges in place of metering rods, seating tapered ends in metering rod jets. Install metering rod pin. With metering rod pin resting on shoulders of both gauges (allowing .005" variation at either gauge) tighten anti-percolator arm screw.

D. Remove gauges and replace metering rod disks, retainer and screw. Install metering rods, spring and pin and connect metering rod spring. Lubricate pump arm shaft (with graphite grease) through holes in top of boss in bowl cover.

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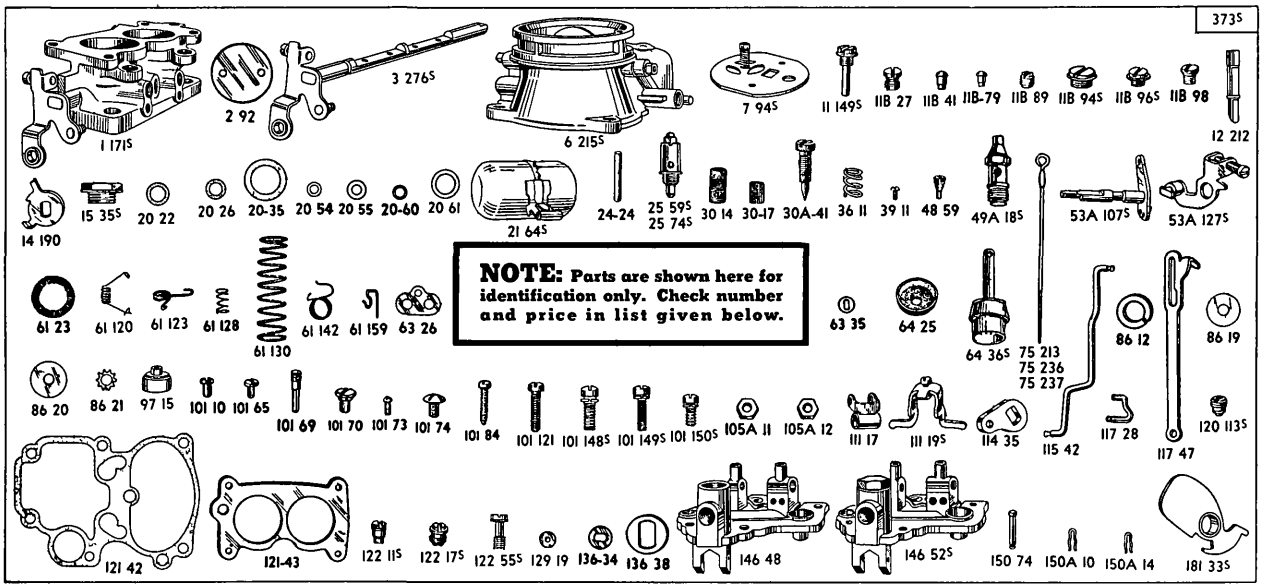
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ANTI PERCOLATOR ADJUSTMENT· Back out throttle lever adjusting screw With throttle valves seated, bend lips on anti-percolator arm until indicator lines on both valve stems are flush with top of both anti-percolator plugs **An even adjustment must be made on both stems.**

UNLOADER ADJUSTMENT With throttle wide open, distance between upper edge of choke valve and wall of air horn should be 1/4 inch (Tool T109-31) Adjust by bending lip on fast idle connector link With throttle wide open move choke valve wide open and choke valve will be locked in wide open position if unloader is adjusted properly Closing the throttle will release choke valve Choke trip lever is notched out for this setting

FAST IDLE ADJUSTMENT· Hold choke valve tightly closed and adjust fast idle arm screw to give 018 inch opening between edge of throttle valve and bore of carbureter (side opposite port)



Chrysler "8"—Industrial—1943—No. 373S

WHEN SERVICING, USE GASKET ASSORTMENT No 180, REPAIR PACKAGE No. 1343A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-171S	Body flange assembly	
2-92	Throttle valve	(2)
3-276S	Throttle shaft and lever assembly	
6-215S	Air horn assembly	
7-94S	Choke valve assembly	
11-149S	LOW SPEED JET ASSEMBLY	(2)
11B-27	Idle passage screw plug (early production)	(2)
11B-41	Rivet plug	(2)
11B-79	Rivet plug	(4)
11B-89	NOZZLE RETAINER PLUG	(2)
11B-94S	Ball check plug assembly (Sup by 11B-125S)	
11B-96S	Nozzle plug assembly (Sup by 11B-127S)	(2)
11B-98	Pump jet plug	(2)
11B-108	Idle passage rivet plug (late production)	(2)
11B-125S	Ball check passage plug assembly	
11B-127S	Nozzle passage plug assembly	(2)
12-212	NOZZLE	(2)
14-190	Choke trip lever (Sup by 14-220)	
14-220	Choke trip lever	
15-35S	Strainer nut assembly (Part of 146-52S)	
20-22	Needle seat gasket	(3)
20-26	Low speed jet gasket	(3)
20 35	STRAINER NUT GASKET (Part of 146-52S)	
20-54	Metering rod jet gasket	(2)
20-55	IDLE PASSAGE GASKET	(2)
20-60	NOZZLE GASKET	(2)
20-61	Ball check passage plug gasket	
21-64S	Float and lever assembly	
24-24	FLOAT LEVER PIN	
25-59S	Needle and seat assembly (Sup by 25-74S)	
25-74S	NEEDLE AND SEAT ASSEMBLY	
30-14	STRAINER GAUZE (Part of 146-52S)	
30-17	Ball check strainer (Sup by 30-20)	
30-20	BALL CHECK STRAINER	
30A-41	Idle adjustment screw	(2)
36-11	Adjustment screw lock spring	(2)
39-11	VALVE ATTACHING SCREW	(3)
48-59	PUMP JET, 028"	(2)
49A-18S	Anti-percolator valve assembly	(2)
53A-107S	Pump arm and countershaft assembly	
53A-127S	Fast idle arm pin and screw assembly	
61-23	Plunger spring (Sup by 61-200)	
61-120	Metering rod spring	
61-123	Connector link spring	
61-128	Connector rod spring	(2)
61-130	Pump spring	
61-142	Fast idle arm spring	
61-159	Intake needle pull clip	
61-200	Plunger spring	
63-26	Metering rod disk retainer	
63-35	Spring retainer (Sup by 63-93)	(2)
63-93	Spring retainer	(2)
64 25	PLUNGER LEATHER	
64-36S	Plunger and rod assembly (Identify by Shaft No 49-100)	

Part No	PART NAME	
75-213	METERING ROD—STANDARD— 073"- 070 to 065"- 039	(2)
75-236	Metering rod—1 size lean— 0745' - 0715' to 069"- 054"	(2)
75-237	Metering rod—2 sizes lean— 076 - 073 to 072"- 059"	(2)
86-12	Flange stud lock washer	(4)
86-19	Plunger washer (inner)	
86-20	Plunger washer (outer)	
86-21	Plunger shaft lock washer	
97-15	Plunger cup	
100-16	Throttle lever adj screw (Sup by 101-121)	
101-10	Metering rod arm clamp screw	
101-61	Bowl cover attaching screw (Sup by 101-148S)	
101-65	Choke trip lever attaching screw	
101-68	Flange attaching screw (Sup by 101-149S)	
101-69	Throttle centering screw	
101-70	Fast idle arm attaching screw	
101-72	Air horn attaching screw (Sup by 101-150S)	
101-73	THROTTLE VALVE SCREW	(4)
101-74	Throttle shaft arm attaching screw	
101-84	Fast idle adjustment screw	
101-121	Throttle lever adjusting screw	
101-148S	Bowl cover attaching screw and lock washer assembly	(4)
101-149S	Flange attaching screw and lock washer assembly	(4)
101-150S	Air horn attaching screw and lock washer assembly	(2)
105A-11	Flange stud nut	(4)
105A-12	Plunger shaft hex nut	
111-17	Metering rod arm	
111-19S	Anti-percolator arm and screw assembly	
114-35	Throttle shaft arm	
115-42	Throttle connector rod	
117-28	Connector link	
117-47	Fast idle connector link	
120-113S	METERING ROD JET ASSEMBLY, 096'	(2)
121-42	BODY GASKET	
121-43	BODY FLANGE GASKET	
122-11S	DISCHARGE BALL CHECK ASSEMBLY	
122-17S	INTAKE BALL CHECK ASSEMBLY	
122-55S	Blank relief check plug assembly	
129-19	Metering rod disk	(2)
136-34	Choke shaft washer	
136-38	Throttle shaft washer	
146-36	Bowl cover (Sup by 146-52S)	
146-48	Bowl cover (Not sold separately) (Part of 146-52S)	
146-52S	Bowl cover and strainer assembly	
150-74	Metering rod arm pin	
150A-10	PIN SPRING	(3)
150A-14	PIN SPRING	
181-33S	Fast idle cam and collar assembly	

NOTE· Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.

CARTER

AIR CONDITIONING FAST IDLE DEVICE ASSEMBLY

No. 202-75S (12 VOLT)

No. 202-76S (6 VOLT)

FOR CHRYSLER and DE SOTO

CARS EQUIPPED WITH AIR CONDITIONING

Part No.	Part Name
11B-134	Rivet plug
49-191S	Electro magnet plunger assembly
61-84	Adjusting nut spring
61-438	Diaphragm return spring
61-502	Electro magnet plunger spring
86-58	Lock washer
101-142S	Electro magnet housing attaching screw and washer assembly (2)
101-213S	Diaphragm cover attaching screw and washer assembly (6)
105A-12	Lock nut
105A-53	Adjusting nut
105A-55	Diaphragm shaft guide nut
116-13	Check ball
121-190	Electro magnet housing gasket
150-168	Diaphragm air bleed pin
170-190	Inner diaphragm housing
170-298S	Outer diaphragm housing and plug assembly
202-73S	—Diaphragm and shaft assembly
202-75S	—Air conditioning fast idle device assembly (complete) (12 volt)
202-76S	—Air conditioning fast idle device assembly (complete) (6 volt)
213-14S	Electro magnet and housing assembly (6 volt)
213-16S	Electro magnet and housing assembly (12 volt)

—Parts so marked are new and listed for the first time.

NOTE: Figures in parentheses indicate number of pieces used in the idle device assembly. Where no figure is shown, only one is used.

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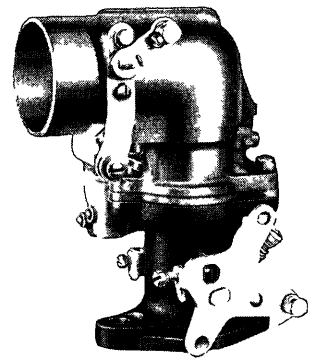
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Form 4660H

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST LOUIS MO U S A

WO 58
May 1944
Revised November, 1952

Starting Serial No.
CAMCO-44-0001



CLEVELAND 3 TON FORK LIFT TRUCK 1944

W-O DOWN-DRAFT **CARBURETER 584S**

CARBURETER SPECIFICATIONS

For Continental F6209 Engine 3 3/16 Inch Bore 4 3/8 Inch Stroke

Dimensions Flange size 1 1/4 S A E
Primary venturi 11/32 inch I D
Main venturi 1 000 inch I D

Float Setting Distance from float (at free end) to float chamber cover to be 3/8 inch with free weight of float on needle and spring

Vents Outside No 10 drill size

Gasoline Intake Square vertical needle No 53 drill size in needle seat

Low Speed Jet Tube Jet size No 71 drill Idle well jet No 61 drill
By pass in body 059 to 060 inch diameter
Economizer in body 0515 to 0525 inch diameter
Idle bleed size No 52 drill

Idle Port Length 140 inch Width 030 inch

Idle Port Opening 010 to 014 inch below lower edge of valve with valve closed tight

Idle Screw Seat No 46 drill

Set Idle Adjustment Screw 3/8 to 7/8 turns open For richer mixture turn screw out

Main Nozzle (Flush type) in primary venturi angle 30° Discharge jet size 096 inch diameter

Nozzle Retainer Plug Jet size 1015 inch diameter

Metering Rod Economy step 0615 inch diameter second step tapers to 051 inch diameter Power step 051 inch diameter Length 3 25/64 inches

Metering Rod Jet Size 070 inch diameter

Metering Rod Setting Use gauge part No T109 26 (2 718 inches)

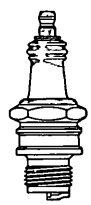
Accelerating Pump High pressure type spring operated lever
Discharge jet size No 72 drill
Relief passage to outside size No 42 drill
Intake ball check size No 40 drill
Discharge disk check size No 40 drill

Pump Adjustment 20/64 inch plunger travel at full throttle position Use gauge T109 117S

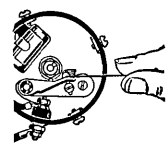
Choke Manual—butterfly type with pressure relief poppet valve

Motor Tune-Up—Be Accurate!

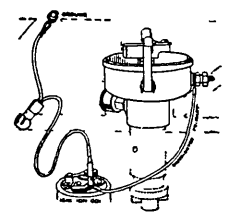
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



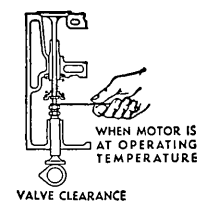
Spark Plug Gap 025"



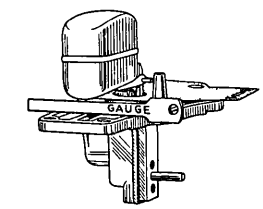
Set Breaker Points 018"



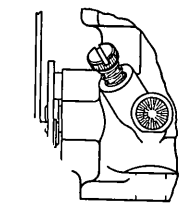
Use Timing Light Breaker Points to Open at T D C



Set Valves (Cold) Intake 014" Exhaust 014"



Correct Float Level (Measure from machined surface of casting) 3/8"



Idle Adjustment Screw Setting 3/8 to 7/8 Turns Open

CARBURETER ADJUSTMENTS

Float Adjustment If carburetor loads up check float level Reset to specifications by bending needle contact lip on float

Idle Adjustment If motor stalls while idling reset throttle lever set screw and idle adjustment screw to specifications If trouble is not corrected remove low speed jet first, then idle well jet and clean jets and passages with compressed air Replace with new jets of identical specifications when necessary to seat gasoline-tight

Pump Adjustment With throttle valve seated and throttle lever set screw backed out pump plunger should travel 20/64" from closed to wide open throttle position Adjustment is made by bending throttle connector rod at lower angle using tool T109-41 Pump travel can be measured by using gauge T109-117S Difference between numbers on gauge at wide open and closed throttle position should be 20

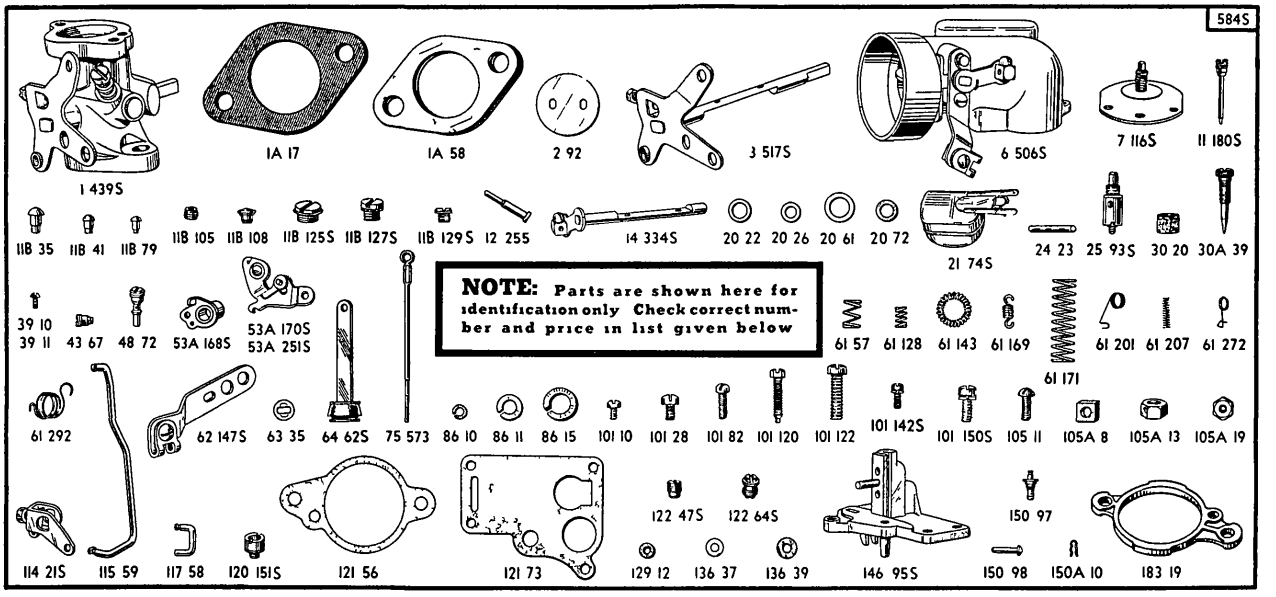
Metering Rod Adjustment Metering rod setting must be made after pump adjustment Install metering rod pin and spring assembly washer and nut loosely on pump operating lever Insert gauge (Tool T109-26) in place of metering rod seating tapered end in metering rod jet With gauge held vertical and throttle valve seated push metering rod pin down to rest on shoulder of gauge notch and tighten nut Remove gauge and install metering rod disc and pin spring Connect metering rod spring through hole in metering rod Bend lower end of spring when necessary to exert slight downward pressure of metering rod on metering rod pin when off of jet

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Cleveland 3 Ton Fork Lift Truck, Carbureter 584S

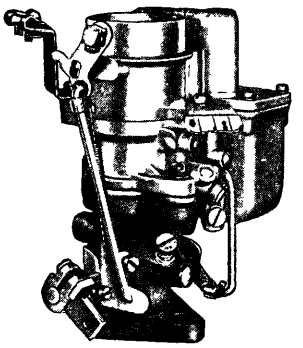
WHEN SERVICING, USE GASKET ASSORTMENT No 181, REPAIR PACKAGE No 1345B

PART NAMES IN CAPITAL LETTERS LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1 439S	Body flange assembly	
1A-17	FLANGE GASKET (Between carbureter and governor)	
1A 58	FLANGE GASKET (Between governor and manifold)	
2-92	Throttle valve	
3-517S	Throttle shaft and lever assembly	
6-506S	Air horn and choke valve assembly	
7-116S	Choke valve assembly	
11-180S	LOW SPEED JET ASSEMBLY	
11B 35	RIVET PLUG	
11B-41	Idle passage rivet plug	
11B-79	RIVET PLUG	(5)
11B-105	NOZZLE RETAINER PLUG	
11B 108	IDLE PORT RIVET PLUG	
11B-125S	STRAINER PLUG ASSEMBLY	
11B-127S	NOZZLE AND PUMP PLUG ASSEMBLY	(2)
11B-129S	LOW SPEED JET AND IDLE PLUG ASSEMBLY	(2)
12-255	NOZZLE	
14-334S	Choke lever and shaft assembly	
20 22	Needle seat and plug gasket	(3)
20-26	Metering rod jet and plug gasket	(3)
20-61	Strainer plug gasket	
20-72	NOZZLE GASKET	
21-74S	Float and lever assembly	
24 23	Float lever pin	
25 93S	NEEDLE SPRING AND SEAT ASSEMBLY	
30 20	PUMP CHECK STRAINER	
30A 39	Idle adjustment screw	
39 10	CHOKE VALVE ATTACHING SCREW	(2)
39-11	THROTTLE VALVE ATTACHING SCREW	(2)
43-67	IDLE WELL JET	
48-72	PUMP JET	
53A-168S	Pump arm and collar assembly	
53A-170S	Pump operating lever assembly (Sup by 53A 251S)	
53A-251S	Pump operating lever assembly	
61-57	Idle adjustment screw spring	
61-128	Connector rod spring (Use with 115 59)	
61-143	Plunger spring	
61-169	PUMP ARM SPRING	
61-171	PUMP SPRING	
61-201	Metering rod spring (Sup by 61 272)	
61-207	Intake needle spring	
61-272	METERING ROD SPRING	
61-292	CHOKE SPRING	

Part No	PART NAME	
62 147S	Choke tube bracket assembly	
63-35	Spring retainer (Use with 115 59)	
64 62S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49 121)	
75 573	METERING ROD—STANDARD	
86 10	BOWL COVER ATTACHING SCREW LOCK WASHER (Use with 101 82)	(4)
86 11	BODY FLANGE ATTACHING SCREW LOCK WASHER (Use with 101 122)	(2)
86 15	Flange stud lock washer	(2)
101-10	Wire clamp screw	
101 28	Throttle shaft arm clamp screw	
101 82	BOWL COVER ATTACHING SCREW (Sup by 101 184S)	(4)
101 120	Throttle lever adjustment screw	
101 122	BODY FLANGE ATTACHING SCREW (Sup by 101 183S)	(2)
101 142S	Choke tube bracket attach screw and washer assembly	
101-150S	AIR HORN ATTACH SCREW AND WASHER ASSEMBLY	(2)
101-183S	Body flange attaching screw and washer assembly	(2)
101-184S	Bowl cover attaching screw and lock washer assembly	(4)
105 11	Tube clamp screw	
105A 8	Tube clamp nut	
105A-13	Flange stud nut	(2)
105A-19	METERING ROD PIN HEX NUT	
114-21S	THROTTLE SHAFT ARM AND SCREW ASSEMBLY	
115 59	Throttle connector rod (Sup by 115 142)	
115-142	THROTTLE CONNECTOR ROD	
117-58	PUMP CONNECTOR LINK	
120-151S	METERING ROD JET ASSEMBLY	
121-56	BODY FLANGE GASKET	(2)
121-73	BOWL COVER GASKET	
122-47S	DISCHARGE DISK CHECK PLUG ASSEMBLY	
122 64S	INTAKE BALL CHECK PLUG ASSEMBLY	
129-12	METERING ROD DISK	
136-37	Connector rod washer	
136-39	METERING ROD PIN WASHER	
146-95S	Bowl cover and pin assembly	
150 97	METERING ROD PIN	
150 98	Intake needle pin	
150A-10	PIN SPRING	(3)
172 21	THROTTLE CONNECTOR ROD RETAINER (Use with 115 142)	
183 19	Insulator	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used



CROSLEY
MOTOR GENERATOR

WO DOWN-DRAFT CARBURETER **No. 934S**

CARBURETER SPECIFICATIONS

For Crosley 4 Cylinder Engine: 2½ Inch Bore, 2¼ Inch Stroke

Dimensions: Flange size, 1 inch S. A. E.
Primary venturi, 11/32 inch I D
Main venturi, ¾ inch I. D.

Float Setting: See adjustments.

Vents: Inside: No. 10 (.1935 inch) drill, in air horn.
Outside: None. Idle well to bore, No. 65 (.035 inch) drill.

Gasoline Intake: Spring loaded needle. No. 53 (.0595 inch) drill size in needle seat.

Low Speed Jet Tube: Jet size, No. 70 (.028 inch) drill.
Idle well jet, size No. 65 (.035 inch) drill.
By-pass in body, size .070 inch diameter.
Economizer in body, size 070 inch diameter
Idle bleed, size No. 47 (.0785 inch) drill.
Idle well to bowl fuel chamber, No. 30 (.01285 inch) drill.

Idle Port: Upper port—slot type Length, .086 inch Width .030 inch

Idle Port Opening: 050 to 054 inch above top edge of valve with valve tightly closed

Idle Screw Seat: No. 46 (.081 inch) drill.

Set Idle Adjustment Screw: 1 to 2 turns open. For richer mixture turn screw out. Do not idle engine below 600 RPM.

Main Nozzle: Inside diameter No. 40 (.098 inch) drill.

Nozzle Retainer Plug: Jet size· No. 58 (.042 inch) drill

Metering Rod: Economy step, 048 inch diameter. Power step, 040 inch diameter.

Metering Rod Jet: Size 067 inch diameter

Metering Rod Setting: See adjustments.

Accelerating Pump: Pressure type, spring operated lever
Discharge (pump) jet size, No. 75 (.021 inch) drill.
Intake, ball check, seat size No. 40 (.098 inch) drill.
Discharge, disk check, seat size No. 40 (.098 inch) drill

Pump Adjustment: See adjustments.

Choke: Manual—Offset, butterfly type, with pressure relief poppet valve Interconnected to open throttle valve to fast idle position when choke is used

Motor Tune-Up!—Be Accurate! Always Use Feeler Gauges!

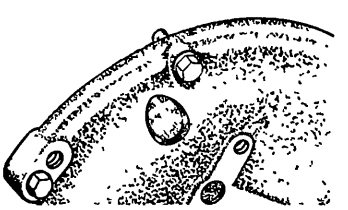
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



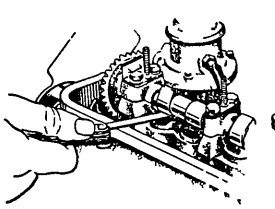
Spark Plug Gap .025"



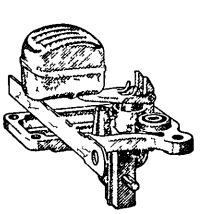
Breaker Point Setting Magneto Ign. .018"



Ignition Timing Breaker Points to Open: 18° B.T.D.C.



Valve Setting (Cold) Intake .004"-.006" Exhaust .007"-.009"



Float Setting ½ Inch (Gauge T109-83)



Idle Adjustment Screw Setting 1 to 2 Turns Open

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: With gasket removed, bowl cover inverted, and free weight of float resting on needle pin, the distance from free end of float to machined surface of bowl cover should be ½" (gauge T109-83).

PUMP ADJUSTMENT: Back out throttle lever set screw. With throttle valve seated, pump link in lower hole (short stroke), pump should travel 10/64" from closed to wide open position. Adjustment can be made by bending throttle connector rod at lower angle with tool T109-213. Pump travel can be measured with universal pump travel gauge T109-117S by placing base of gauge on raised portion of bowl cover so that projecting lip of pump gauge rests on top surface of

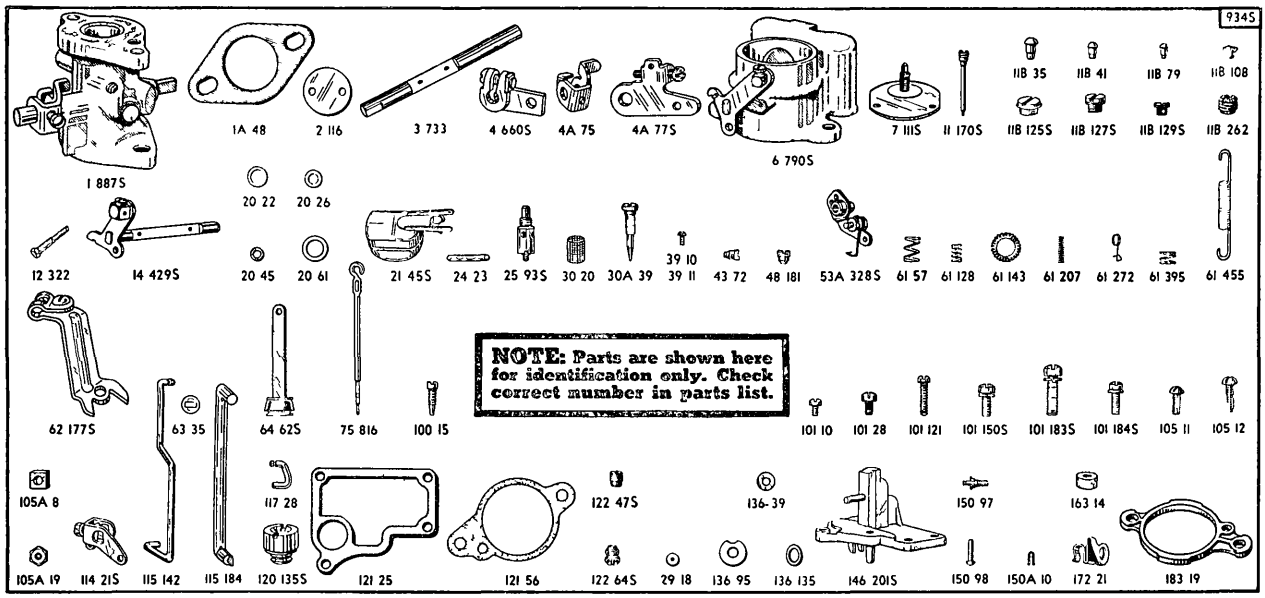
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pump shaft. Hold gauge vertical The difference between the number shown by index mark on gauge, at wide open and closed positions, should be "10".

METERING ROD ADJUSTMENT: Correct setting of metering rod is important and must be made after pump adjustment Install metering rod pin and spring assembly, washer and nut loosely on pump operating lever Insert gauge (tool T109-26) in place of metering rod, seating tapered end in metering rod jet Hold gauge vertical to insure seating With throttle valve seated, push metering rod pin even with shoulder of notch in gauge and tighten nut (tool T109-76) Remove gauge and install metering rod, disk and pin spring Connect metering rod spring



CROSLEY CARBURETER No. 934S

WHEN SERVICING, USE GASKET ASSORTMENT No 217, REPAIR PACKAGE No 1702

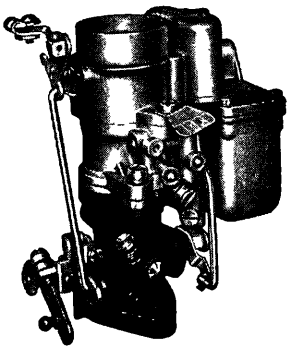
PART NAMES IN CAPITAL LETTERS, LISTED BELOW INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-887S	Body flange assembly	
1A-48	FLANGE GASKET	
2-116	Throttle valve	
3-733	Throttle shaft	
4-606S	Throttle lever assembly (Sup by 4 660S)	
4-660S	—Throttle lever assembly	
4A-75	Throttle shaft dog	
4A-77S	Fast idle dog assembly	
6-790S	—Air horn assembly	
7-111S	Choke valve assembly	
11-170S	LOW SPEED JET ASSEMBLY	
11B-35	Rivet plug	
11B-41	Rivet plug	
11B-79	Rivet plug	(6)
11B-108	IDLE PORT RIVET PLUG	
11B-125S	Strainer plug assembly	
11B-127S	Pump jet plug assembly	(2)
11B-129S	Low speed passage plug assembly	(2)
11B-262	Nozzle retainer plug	
12-322	Nozzle	
14-429S	Choke lever and shaft assembly	
20-22	Needle seat gasket	(3)
20-26	GASKET	(3)
20-45	NOZZLE GASKET	
20-61	STRAINER PLUG GASKET	
21-45S	Float and lever assembly	
24-23	FLOAT LEVER PIN	
25-93S	NEEDLE AND SEAT ASSEMBLY	
30-20	STRAINER	
30A-39	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	THROTTLE VALVE ATTACHING SCREW	(2)
43-72	IDLE WELL JET	
48-181	PUMP JET	
53A-328S	Pump arm and collar assembly	
61-57	Idle adjustment screw spring	
61-128	CONNECTOR ROD SPRING	
61-143	Plunger spring	
61-171	Pump spring (Discontinued)	
61-207	Intake needle spring	
61-272	Metering rod spring	

Part No	PART NAME	
61-395	Shaft seal spring	(2)
61-455	—Choke spring	
62-177S	Choke tube clamp assembly	
63-35	SPRING RETAINER	
64-62S	Plunger and rod assembly (Sup by 64-155S)	
64-155S	—Plunger and rod assembly	
75-816	—METERING ROD	
100-15	Throttle shaft dog attaching screw	
101-10	Wire clamp screw	
101-28	Throttle shaft arm clamp screw	
101-121	Throttle lever adjustment screw	
101-150S	Air horn attaching screw and washer assembly	(2)
101-183S	Body flange attaching screw and washer assembly	(2)
101-184S	Bowl cover attaching screw and washer assembly	(4)
105-11	Choke tube clamp screw	
105-12	Throttle lever clamp screw	
105A-8	Choke tube and throttle lever clamp nut	(2)
105A-19	Metering rod pin hex nut	
114-21S	THROTTLE SHAFT ARM AND SCREW ASSEMBLY	
115-142	THROTTLE CONNECTOR ROD	
115-184	—Choke connector rod	
117-28	PUMP CONNECTOR LINK	
117-58	Pump connector link (Sup by 117 28)	
120-135S	METERING ROD JET ASSEMBLY	
121-25	BOWL COVER GASKET	
121-56	BODY FLANGE GASKET	(2)
122-47S	DISCHARGE DISK CHECK ASSEMBLY	
122-64S	INTAKE BALL CHECK ASSEMBLY	
129-18	Metering rod disk	
136-39	Metering rod pin washer	
136-95	Dust seal retainer washer	
136-135	Dust seal retainer washer	
146-201S	Bowl cover and pin assembly	
150-97	Metering rod pin	
150-98	Intake needle pin	
150A-10	PIN SPRING	(3)
163-14	Felt packing washer	(3)
172-21	THROTTLE CONNECTOR ROD RETAINER	(2)
183-19	Insulator	

—Parts so marked are new and listed for first time

NOTE· Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used



CROSLEY
1946-1952

WO DOWN-DRAFT CARBURETER **No. 870S**

CARBURETER SPECIFICATIONS

For Crosley 4 Cylinder Engine: 2½ Inch Bore, 2¼ Inch Stroke

Dimensions: Flange size, 1 inch S. A. E.
Primary venturi, 11/32 inch (8.73 mm) I. D
Main venturi, ¾ inch (19.05 mm) I. D.

Float Setting: See adjustments.

Vents: Inside: No. 10 (4.92 mm) drill, in air horn.
Outside: None.

Gasoline Intake: Spring loaded needle. No. 53 (1.51 mm) drill size in needle seat.

Low Speed Jet Tube: Jet size, No. 70 (.71 mm) drill.
Idle well jet, size No. 65 (.89 mm) drill.
By-pass in body, size .070 inch (1.78 mm) diameter.
Economizer in body, size .070 inch (1.78 mm) diameter.
Idle bleed, size No. 47 (1.99 mm) drill.
Idle well to bowl fuel chamber, No. 30 (3.26 mm) drill.

Idle Port: Upper port—slot type. Length, .086 inch (2.18 mm). Width, .030 inch (.76 mm).

Idle Port Opening: .050 to .054 inch (1.27 to 1.37 mm) above top edge of valve with valve tightly closed.

Idle Screw Seat: No. 46 (2.06 mm) drill.

Set Idle Adjustment Screw: ¾ to 1¾ turns open. For richer mixture turn screw out. Do not idle engine below 600 RPM

Main Nozzle: Inside diameter No. 40 (2.49 mm) drill.

Nozzle Retainer Plug: Jet size: No. 58 (1.07 mm) drill.

Metering Rod: Economy step, .0595 (1.51 mm) diameter. Middle step tapers to .0495 inch (1.26 mm) diameter. Power step, .040 inch (1.02 mm) diameter.

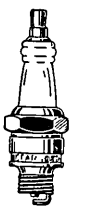
Metering Rod Jet: Size .067 inch (1.70 mm) diameter

Metering Rod Setting: See adjustments.

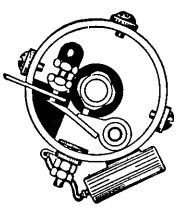
Accelerating Pump: Pressure type, solid lever.
Discharge (pump) jet size, No. 75 (.53 mm) drill.
Intake, ball check, seat size No. 40 (2.49 mm) drill.
Discharge, disk check, seat size, No. 40 (2.49 mm) drill.

Pump Adjustment: See adjustments.

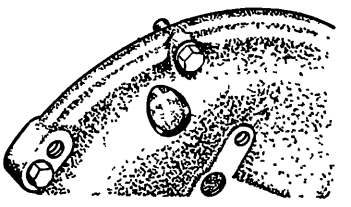
Choke: Manual—Offset, butterfly type, with pressure relief poppet valve. Interconnected to open throttle valve to fast idle position when choke is used.



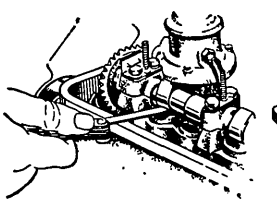
Spark Plug Gap .025"



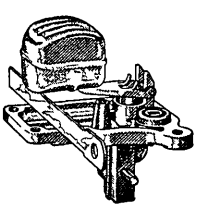
Breaker Point Setting .020"



Ignition Timing Breaker Points to Open: 12° B.T.D.C.



Valve Setting (Cold) Intake .004"-.006" Exhaust .007"-.009"



Float Setting ½" ± 1/64" (Gauge T109-83)



Idle Adjustment Screw Setting ¾ to 1¾ Turns Open

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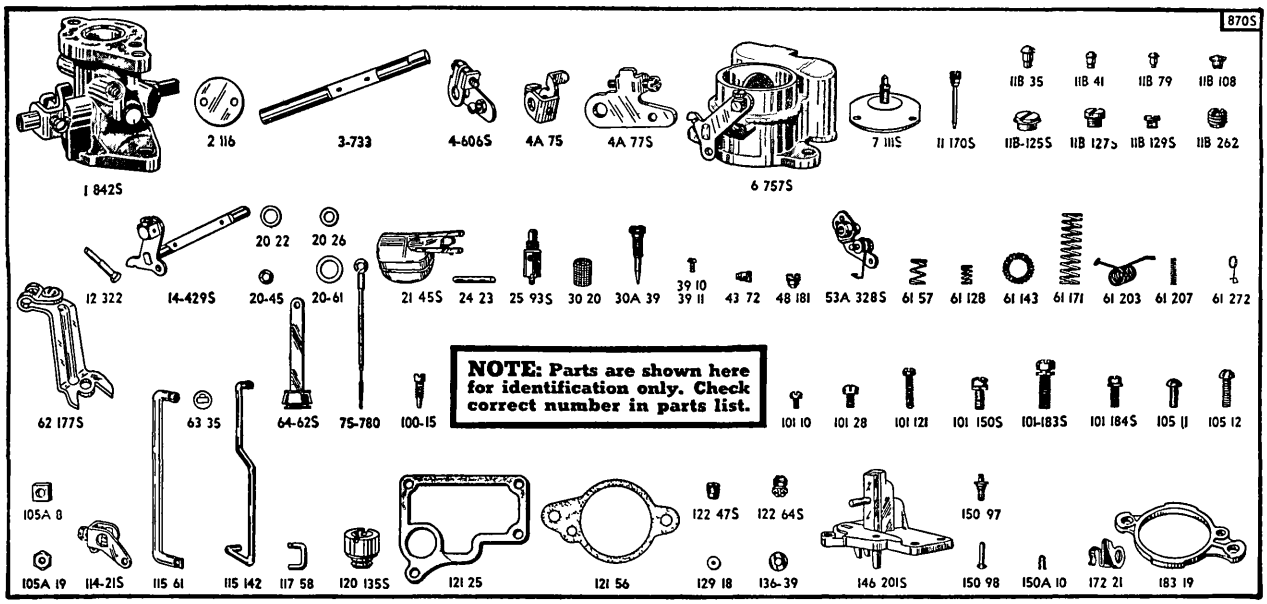
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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT With gasket removed, bowl cover inverted, and free weight of float resting on needle pin, the distance from free end of float to machined surface of bowl cover should be ½" (gauge T109-83)

PUMP ADJUSTMENT Back out throttle lever set screw With throttle valve seated and pump connector link in lower hole, pump should travel 10/64" from closed to wide open position Adjustment can be made by bending throttle connector rod at lower angle with tool T109-41 Pump travel can be measured with universal pump travel gauge T109-117S by placing base of gauge on raised portion of bowl cover so that projecting lip of pump gauge rests on top surface of pump shaft Hold gauge vertical The difference between the number shown by index mark on gauge, at wide open and closed positions should be "10 '

METERING ROD ADJUSTMENT Correct setting of metering rod is important and must be made after pump adjustment Install metering rod pin and spring assembly, washer and nut loosely on pump operating lever Insert gauge (tool T109-26) in place of metering rod seating tapered end in metering rod jet Hold gauge vertical to insure seating With throttle valve seated, push metering rod pin even with shoulder of notch in gauge and tighten nut (tool T109-76) Remove gauge and install metering rod disc and pin spring Connect metering rod spring



CROSLEY CARBURETER No. 870S

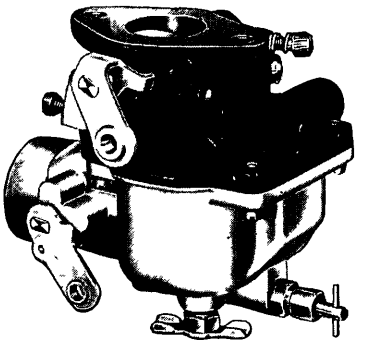
WHEN SERVICING, USE GASKET ASSORTMENT No. 217; REPAIR PACKAGE No. 1712

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-842S	Body flange assembly	
1A-48	FLANGE GASKET	
2-116	Throttle valve	
3-733	Throttle shaft	
4-606S	Throttle lever assembly	
4A-75	Throttle shaft dog	
4A-77S	Fast idle dog assembly	
6-757S	Air horn assembly	
7-111S	Choke valve assembly	
11-170S	LOW SPEED JET ASSEMBLY	
11B-35	Rivet plug	
11B-41	Rivet plug	
11B-79	Rivet plug	(6)
11B-108	IDLE PORT RIVET PLUG	
11B-125S	Strainer plug assembly	
11B-127S	Pump jet passage plug assembly	(2)
11B-129S	Low speed passage plug assembly	(2)
11B-262	NOZZLE RETAINER PLUG	
12-322	Nozzle	
14-429S	Choke lever and shaft assembly	
20-22	Needle seat gasket	(3)
20-26	PLUG GASKET	(3)
20-45	NOZZLE GASKET	
20 61	STRAINER PLUG GASKET	
21-45S	Float and lever assembly	
24-23	Float lever pin	
25-93S	NEEDLE SPRING AND SEAT ASSEMBLY	
30 20	STRAINER	
30A-39	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	THROTTLE VALVE ATTACHING SCREW	(2)
43-72	IDLE WELL JET	
48-181	PUMP JET	
53A-328S	Pump arm and collar assembly	
61-57	Idle adjustment screw spring	
61-128	CONNECTOR ROD SPRING	
61-143	Plunger spring	
61-171	PUMP SPRING	
61-203	Choke spring	

Part No.	PART NAME	
61-207	Intake needle spring	
61-272	Metering rod spring	
62-177S	Choke tube clamp assembly	
63-35	Spring retainer	
64-62S	PLUNGER AND ROD ASSEMBLY	
75-780	METERING ROD—STANDARD	
75-821	Metering rod—1 size lean	
75-822	Metering rod—2 sizes lean	
100-15	Throttle shaft dog attaching screw	
101-10	Wire clamp screw	
101-28	Throttle shaft arm clamp screw	
101-121	Throttle lever adjustment screw	
101-150S	Air horn attaching screw and washer assembly	(2)
101-183S	Body flange attaching screw and washer assembly	(2)
101-184S	Bowl cover attaching screw and washer assembly	(4)
105-11	Choke tube clamp screw	
105-12	Throttle lever clamp screw	
105A-8	Choke tube and throttle lever clamp nut	(2)
105A-19	Metering rod pin hex nut	
114 21S	THROTTLE SHAFT ARM AND SCREW ASSEMBLY	
115-61	Choke connector rod	
115-142	THROTTLE CONNECTOR ROD	
117-28	PUMP CONNECTOR LINK	
117-58	Connector link (Sup by 117 28)	
120-135S	METERING ROD JET ASSEMBLY	
121-25	BOWL COVER GASKET	
121-56	BODY FLANGE GASKET	(2)
122-47S	DISCHARGE DISK CHECK ASSEMBLY	
122-64S	INTAKE BALL CHECK ASSEMBLY	
129-18	Metering rod disk	
136 39	Metering rod pin washer	
146-201S	Bowl cover and pin assembly	
150-97	Metering rod pin	
150-98	Intake needle pin	
150A-10	PIN SPRING	(4)
172 21	THROTTLE CONNECTOR ROD RETAINER	
183-19	Insulator	

NOTE **Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used**



CROSLEY MARINE ENGINE 1950-1951

UT UP-DRAFT **CARBURETER No. 852S**

CARBURETER SPECIFICATIONS

For Crosley Marine 4 Cylinder Engine: 2½ Inch Bore, 2¼ Inch Stroke

Dimensions: Flange size, 1 inch S. A. E.
Throttle bore, 1-1/16 inch.
Main venturi, 21/32 inch.

Float Setting: With body gasket removed and free weight of float resting on needle, there should be 11/64 inch (plus or minus 1/64 inch) clearance between seam of float (both sides) and machined surface of casting.

Vents: Outside, none. Inside, balance vent No. 12 drill.

Gasoline Intake Needle: Square vertical needle. (Early production) size No. 38 drill in needle seat. (Late production) size No. 55 drill in needle seat.

Idle Jet Plug: Jet size, No. 70 (.028 inch) drill.
Upper bleed: No. 65 drill.
Lower bleed: No. 60 drill.
Economizer: No. 61 drill.

Idle Ports: Lower port, slot type, round end, .049 to .051 inch by .029 to .031 inch wide. Bottom of port .044 to .048 inch below lower edge of valve. Upper port .038 to .042 inch diameter (for idle adjustment screw).

Set Idle Adjustment Screw: ½ to 1 turn open. For richer mixture, turn screw out. Do not idle engine below 400 r.p.m.

Main Metering Jet: Adjustable, 1¾ to 2¾ turns open.

Nozzle: In primary venturi, angle 24° from vertical Inside diameter No. 44 drill.
Accelerating jets: 2 No. 64 (.036 inch) drill 21/64 inch from shoulder. 2 No. 64 (.036 inch) drill 27/32 inch from shoulder.

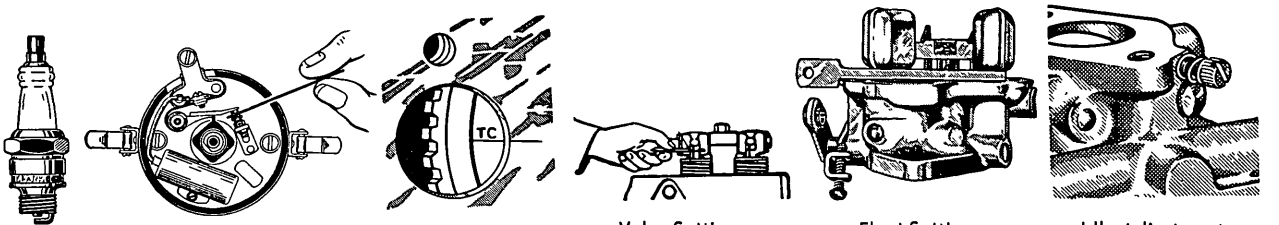
Air Bleed to Nozzle: (Thru plug) No. 65 drill.

Choke: Manual—Butterfly type, with pressure relief (poppet) valve.

Vacuum Spark: None.

Motor Tune-Up—Be Accurate! Always Use Feeler Gauges!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



Spark Plug Gap .025"

Breaker Point Setting .020"

Ignition Timing Breaker Points to Open: 12° B. T. C.

Valve Setting (Cold) Intake .004"-.006" Exhaust .007"-.009"

Float Setting (Use Gauge T109-205) 11/64" ± 1/64"

Idle Adjustment Screw Setting ½ to 1 Turn Open

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CARBURETER ADJUSTMENTS

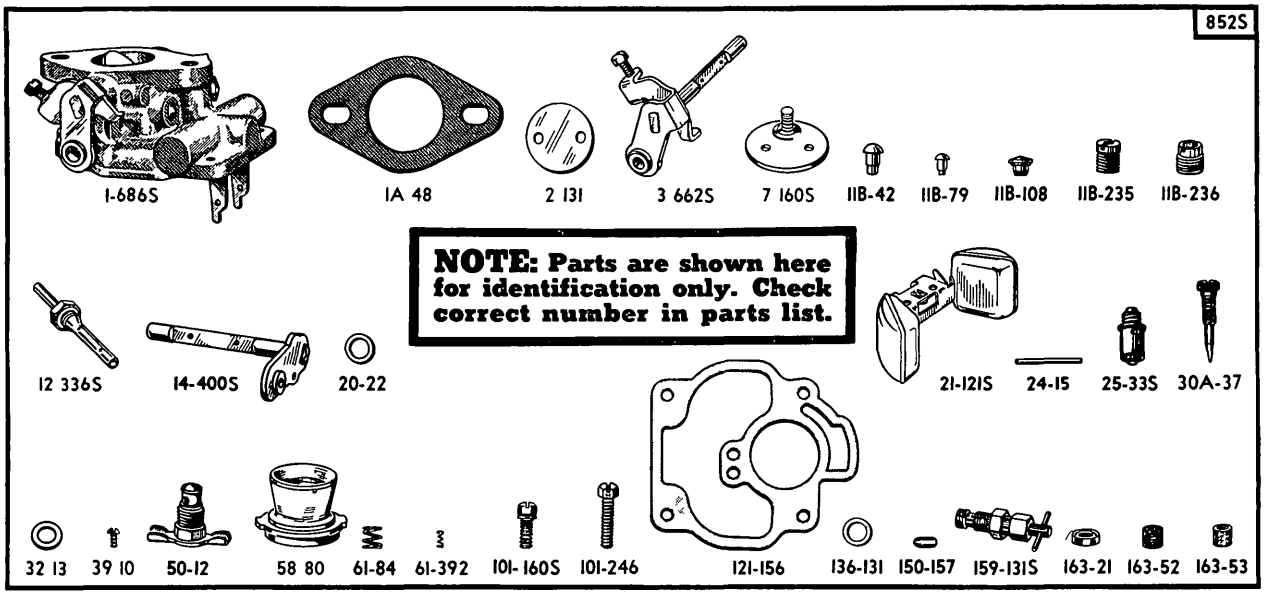
To secure a good idle Set throttle lever adjusting screw until motor runs approximately 400 r p m Then set idle adjustment screw for highest steady vacuum gauge reading or smoothest engine operation Correct setting will be found between ½ to 1 turn open

High speed adjustment With engine operating at 1650 r p m, adjust high speed adjusting needle until smoothest engine operation is obtained This setting will be found between 1¾ to 2¾ turns open

If motor loads—check float level Wear on lip of float lever will raise float level, causing carbureter to load up To lower float level bend float lever toward needle To raise float level bend lip away from needle A very slight bend is sufficient Bend lip of float only, not bracket **Be sure float is installed with lip of float against needle**

Maximum performance can be secured only when breaker points, spark plugs, valves and motor timing are set to manufacturer s specifications

If carbureter does not respond to the above adjustments, disassemble clean all parts in carbureter cleaner, rinse and blow out all passages with compressed air Replace all worn or damaged parts Always use new gaskets See form No 3525 for complete overhaul procedure



Crosley Carbureter No. 852S

WHEN SERVICING, USE GASKET ASSORTMENT No 207, REPAIR PACKAGE No 1593

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-686S	Throttle body assembly	
IA-48	FLANGE GASKET	
2-131	Throttle valve	
3-662S	THROTTLE SHAFT AND LEVER ASSEMBLY (Sup by 3 821S)	
3-821S	Throttle shaft and lever assembly	
7-160S	Choke valve assembly	
IIB-42	Rivet plug	(2)
IIB-79	Rivet plug	
IIB-108	IDLE PORT RIVET PLUG	
IIB 235	NOZZLE BLEED SCREW PLUG	
IIB-236	IDLE JET SCREW PLUG	
12 336S	Nozzle assembly	
14 400S	Choke lever and shaft assembly	
20-22	NEEDLE SEAT AND NOZZLE GASKET	(2)
21-121S	Float and lever assembly	
24 15	FLOAT LEVER PIN	
25-33S	NEEDLE AND SEAT ASSEMBLY (Sup by 25 179S)	
25-179S	Needle and seat assembly	

Part No	PART NAME	
30A-37	Idle adjustment screw	
32-13	MAIN METERING SCREW GASKET	
39-10	THROTTLE AND CHOKE VALVE ATTACHING SCREW	(4)
50-12	Drain cock	
58 80	Venturi	
61-84	Idle adjustment screw spring	
61-392	CHOKE LOCK PIN STOP SPRING	
101-160S	Body attaching screw and washer assembly	(4)
101-246	Throttle adjusting screw	
121-156	BODY GASKET	
136-131	CHOKE AND THROTTLE SHAFT DUST SEAL RETAINER	(2)
150-157	CHOKE LOCK PIN	
159-131S	Adjustable main metering screw and needle assembly	
163-21	CHOKE AND THROTTLE SHAFT DUST SEAL	(2)
163-52	AIR HORN DRAIN FELT	
163-53	MAIN METERING SCREW PACKING	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

Form 5358

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

CRUSADER MARINE
2955S
May, 1959

CRUSADER MARINE

(283) MARK VII, VIII (348) MARK IX, X

AFB Four-Bore Down-Draft Climatic® Control Carbureter No. 2955S

CARBURETER SPECIFICATIONS

For Crusader Marine 8 Cylinder 283 Cu. In. Engine: Vacuum at Idle 18 Inches

For Crusader Marine 8 Cylinder 348 Cu. In. Engine: Vacuum at Idle 18 Inches

Dimensions: Flange, four bore--4 bolt type.
Throttle bore, primary, 1-9/16 inch; secondary 1-11/16 inch I. D.
Primary venturi size, primary side, 7/16 inch; secondary side, 11/32 I. D.
Main venturi size, primary side 1¼ inch, secondary side 1-9/16 inch I. D.

Vents: Inside (4) in air horn; Outside (1) in air horn (4) in body.

Low Speed Circuit: (Primary side only) Jet, size No. 56 (.0465 inch) drill.
By pass, size No. 54 (.055 inch) drill.
Economizer, size No. 60 (.040 inch) drill.
Idle bleed, size (.053 inch) diameter.
Idle port slot type, length .200 inch; width .030 inch.

Idle Port Opening: .156 to .162 inch above top edge of valve with valve tightly closed.

Set Idle Adjustment Screw: ¼ to 1¾ turns open. For Richer mixture turn screw out. Do not idle engine below 550 r.p. m.

Main Nozzle: Installed permanently. DO NOT REMOVE. Antipercolator bleed, primary, (tube in venturi assembly) size No. 80 (.0135 inch) drill. Secondary, (drilled hole in venturi assembly) size No. 60 (.040 inch) drill.

Secondary Inital Discharge: (In venturi assembly, secondary side only).
Pick up tube size No. 60 (.040 inch) drill.
Air bleed, size (.0275 inch) diameter.
Discharge port size (.051 inch) diameter.

Accelerating Pump: Discharge jet (twin) primary side only, size No. 71 (.026 inch) drill. Intake ball check seat (screw plug) size .115 to .120 inch diameter. Discharge needle seat size No. 50 (.070 inch) drill.

Choke: Carter Climatic® Control set on index. Butterfly type--offset choke valve, primary side only. Choke heat suction hole, restriction in body size (.098 inch) diameter.

Vacuum Spark Port: None.

Motor Tune-Up – Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbur t r.

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open: 10° B.T.D.C. At Vibration Damper	Valve Setting (Hot)	Float Setting 7/32 Inch (Use Gauge T109-106)	Idle Adjustment Screw Setting ¼ to 1¾ 550 R.P.M.
.032"	.018"		283 Intake .008" Exhaust .018"		
			348 Intake .018" Exhaust .018"		

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CARBURETER
TRADE MARK REG. U. S. PAT. OFF
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CARBURETER ADJUSTMENTS

FLOAT ALIGNMENT: Side of floats parallel to edge of casting. Minimum clearance between lev r and air horn lugs without binding. To adjust, bend float lever.

FLOAT LEVEL: 7/32 inch (Gauge T109-106) between top of floats (at outer end) and air horn gasket. To adjust, bend float lever.

FLOAT DROP: 23/32 inch between top of floats (at outer end) and air horn gasket. To adjust, bend stop tabs on float brackets.

PUMP: 33/64 inch from the top of the bowl cover to the top of the plunger shaft. To adjust, bend throttle connector rod.

CHOKE PISTON LEVER ADJUSTMENT: .010 inch (Gauge T109-200) between choke lever and stop in piston housing with choke valve closed. To adjust, bend choke connector rod.

FAST IDLE LINKAGE ADJUSTMENT: With slight clearence between lug on fast idle cam and stop on flange casting, and inner choke shaft lever contacting lug on outer choke shaft lever align index mark on cam with adjusting screw. To adjust, bend fast idle connector rod.

FAST IDLE THROTTLE VALVE CLEARANCE: .012 inch (Gauge T109-200) between lower edge of valve and bore with adjusting screw on index mark of cam.

UNLOADER: 3/16 inch (Gauge T109-28) between upper edge of choke valve and inner wall of air horn. To adjust, bend unloader lip on throttle lever.

SECONDARY THROTTLE LEVER ADJUSTMENT: 1. Primary and secondary throttle valves must reach wide open position at the same time. To adjust, bend secondary operating rod. NOTE: Secondary throttle valves will be a few degrees from wide open when primary valves are wide open. Upper edge of secondary valve should just contact auxiliary valve when auxiliary valve is wide open. IMPORTANT: The wide open stop lug on secondary throttle lever should contact boss on flange to prevent secondary valves from going past wide open. If necessary bend stop lug. 2. With primary and secondary throttle valves tightly closed, there should be .010 to .030 inch gauge T109-29 between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on secondary lever.

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: Crack throttle valves and manually open and close the choke valve. Tang on secondary throttle lever should freely engage in notch of lock-out dog. To adjust, bend tang on secondary throttle lever.

TOOLS REQUIRED FOR SERVICING CARBURETOR

T109-28	3/16" Unloader gauge
T109-41	Bending tool
T109-106	7/32" Float gauge
T109-200	010" Wire gauge
T109-213	Bending tool

Crusad r Marine – Carbur t r No. 2955S
WHEN SERVICING, USE GASKET ASSORTMENT No. 323;
ZIP KIT No. 900-62

Part No.	PART NAME
1A-119	Flange gasket .....
2-196	Secondary throttle valve ..... (2)
2-211	Primary throttle valve ..... (2)
3-1101S	Auxiliary throttle shaft, valve and weight assy.
3-1140S	Secondary throttle shaft and lever assembly...
3-1229S	Primary throttle shaft and lever assembly .....
4A-164	Primary throttle shaft dog .....
4A-180S	Primary throttle shaft dog and screw assembly
6-1415S	Air horn assembly .....
7-218	Choke valve .....
11B-79	Rivet plug .....(2)
11B-363	Pump intake screw plug .....
11B-366	Lead plug ..... (4)
11B-378	Power brake vacuum passage plug .....
11B-385	Fuel passage plug ..... (2)
11B-389	Idle port rivet plug ..... (2)
14-605S	Choke lever and shaft assembly .....
14-609S	Choke piston lever and link assembly .....
14-612S	Choke shaft and lever assembly (piston housing)
15-52S	Fuel inlet fitting assembly .....
16-92	Step-up rod (.060" x .054") ..... (2)
17-51	Pump discharge check needle .....
20-43	Piston housing gasket .....
20-126	Needle seat gasket .....(2)
20-127	Fuel inlet fitting gasket .....
21-179S	Float and lever assembly ..... (2)
24-29	Float lever pin ..... (2)
25-357S	Needle and seat assembly (.111") ..... (2)
30A-80	Idle adjustment screw .....(2)
38A-107	Pump intake check ball seat .....
39-11	Choke valve attaching screw .....(2)
47-30	Piston housing welsh plug .....
47-33	Primary venturi welsh plug ..... (2)
47-36	– Secondary venturi welsh plug ..... (2)
48-277S	– Pump jet and housing assembly .....
53A-412	Lockout dog .....
53A-430	Secondary throttle operating lever .....
58-151S	Secondary venturi assembly (choke side) .....
58-152S	Secondary venturi assembly (pump side) .....
58-413S	– Primary venturi assembly (choke side) .....
58-414S	– Primary venturi assembly (pump side) .....
61-84	Idle adjustment screw spring ..... (2)
61-171	Pump spring (lower) .....
61-291	Throttle lever adjusting screw spring .....
61-483	Secondary throttl return spring .....
61-485	Vacuum piston spring ..... (2)
61-553	Primary throttl shaft dog spring .....
61-585	Step-up rod retaining spring ..... (2)

Part No.	PART NAME
61-623	Throttle flex spring .....
63-144	Delayer plate retainer ring .....
63-225	Coil housing retainer .....
63-229	Heat tube retainer .....
64-209S	Pump plunger, rod and spring ass mbly .....
65-43	Step-up piston cover plate .....(2)
101-65	Choke shaft lever attaching screw .....(2)
101-74	Throttle shaft lever attaching screw .....(2)
101-152S	Air horn attaching screw and washer assembly
101-184S	Pump jet housing attaching screw and washer assembly .....(2)
101-323	Fast idle cam attaching screw .....
101-426	Coil housing attaching screw .....(3)
101-362S	Air horn attaching screw and wash r assy. (8)
101-379S	Secondary and primary venturi attaching screw and washer assembly .....(8)
101-407	Fast idle adjustment screw .....
101-419	Secondary throttle valve attaching screw ...(4)
101-420	Primary throttle valve attaching scr w ....(4)
101-421	Pump arm attaching screw .....
101-431S	Air horn attaching screw and washer assembly
101-435S	Step-up piston cover plate attaching scr w and washer assembly ..... (2)
101-436	Piston housing attaching screw ..... (3)
101-441	Throttle lever adjusting screw .....
103-14	Lead shot (.180") .....
103-16	Lead shot (.200") ..... (2)
111-75	Pump arm .....
114-139	Primary throttle shaft arm (inner) .....
114-143	Primary throttle shaft arm (outer) .....
115-275	Fast idle connector rod .....
115-285	Choke connector rod .....
115-309	Throttle operating rod .....
115-322	Throttle connector rod .....
116-13	Pump intake check ball .....
117-182	Pump connector link .....
120-165	Secondary metering jet (.086") .....(2)
120-166	Primary metering jet (.0935") ..... (2)
121-78	Coil housing gasket .....
121-287	Pump jet housing gasket .....
121-288	Primary venturi cluster gasket ..... (2)
121-291	Heat tube cap gasket .....
121-292	Air horn gasket .....
121-293	Secondary venturi cluster gasket ..... (2)
136-34	Choke piston lever retaining washer .....
136-159	Primary throttle shaft washer .....
136-160	S condary throttle shaft washer .....
136-174	Throttle lever adjusting screw washer .....

Part N .	PART NAME	Part No.	PART NAME
150-190	Chok piston pin	172-22	Throttle connector rod retainer .....
150A-10	Pin Spring ..... (6)	181-255S	Fast idle cam assembly .....
160-153	St p-up piston ..... (2)	184-85	Choke heat tube cap .....
160-200	Choke piston	186-61	Flange baffle plate .....
170-577S	Piston housing and plug assembly	186-70	Fuel bowl baffle ..... (2)
170AR-538S	Thermostatic coil and housing assembly	186-79	Choke baffle plate .....

–Parts so marked are new and listed for the first time.

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

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CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST LOUIS, MO., U S. A.
February, 1957

DEARBORN MARINE "V-8"

"INTERCEPTORS"

1957

2617S—"185"
2617S—(With 75-1351) "125", "145"
2617S—(With 75-1352) "165"
2617S—(With 75-1338) "215"
2618S—"215"

(Use 2617S with 75-1338 to replace 2618S)

YH Horizontal Climatic® Control **Carbureters Nos. 2617S-2618S**

CARBURETER SPECIFICATIONS

For Dearborn Marine 8 Cylinder Engines:

239 Cu. In. (125) 256 Cu. In. (145) 272 Cu. In. (165)
292 Cu. In. (185) 312 Cu. In. (215)

Dimensions Flange size 1¼ inch 3 bolt
Primary venturi 11/32 inch I D
Secondary venturi 11/16 inch I D
Main venturi 1 5/16 inch I D

Vents. Outside none Inside balance vent tube to air horn ahead of choke valve

Gasoline Intake: Spring loaded needle Size No 48 (076 inch) drill hole in needle seat

Low Speed Jet Tube: Jet size No 69 (0292 inch) drill
By pass in body, size No 56 (0465 inch) drill
Economizer, size (051 inch) diameter

Idle Port: Upper port slot type length 162 inch Width 030 inch

Idle Port Opening: Top of port 124 to 128 inch, above top edge of valve with valve tightly closed Lower port size 0615 to 0655 inch diameter (for idle adjusting screw)

Set Idle Adjustment Screw: ¼ to 1¾ turns open For richer mixture turn screw out Do not idle engine below 700 r p m (in neutral)

Main Nozzle: In primary venturi DO NOT REMOVE Anti percolating jet (in tube) to nozzle size No 70 (028 inch) drill

Metering Rod (Diaphragm Type): See parts list for size

Metering Rod Jet. 0785 inch diameter

Accelerating Pump: Diaphragm type vacuum and mechanically operated Discharge (pump) jet size No 70 (028 inch) drill Intake ball check (in diaphragm housing) seat size 115 120 inch diameter Discharge needle check (in body) seat size 092 inch diameter Vacuum passage restriction (in body) size No 46 (081 inch) drill Vacuum bleed (to throttle bore) size No 65 (035 inch) drill

Choke: Carter Climatic® Control, set on index Butterfly type offset choke valve Choke heat suction hole in piston housing size No 42 (0935 inch) drill

Vacuum Spark Port: Slot type Size 125 by 041 inch Bottom of horizontal port 026 to 036 inch above top edge of valve in closed position

Motor Tune-Up—Be Accurate!

CAUTION· Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .032"	Breaker Point Setting .018"	Ignition Timing Breaker Points to Open: 4° B. T. D. C. At Vibration Damper	Valve Setting (Cold) Intake .019" Exhaust .019"	Float Setting ~~5/16 inch~~ (~~Use gauge~~ T109-107) 7/16 - 109-8	Idle Adjustment Screw Setting ¼ to 1¾ Turns Open Idle Engine at 700 R.P.M. in neutral

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: With gasket removed, bowl cover assembly inverted and float resting on pin in seated needle, the distance from the bowl cover to the top of float should be 5/16 inch (gauge T109-107) Do not depress float lip against spring loaded pin in needle, but let float rest on its own weight Adjust by bending float lever Float setting must be checked with bowl cover held at eye height in a level position

FLOAT DROP: With bowl cover assembly held in upright position, the distance between bottom of float (at free end) and bowl cover should be 2⅜" Adjust by bending stop tab on float arm

METERING ROD ADJUSTMENT: This adjustment is important and should be checked each time the carbureter is reassembled Insert gauge (T109-104) in place of metering rod, seating tapered end of gauge in metering rod jet Hold gauge vertical to insure seating in jet With throttle valve tightly closed, press down on diaphragm shaft until metering rod arm contacts lifter link at diaphragm stem With diaphragm shaft held in this position, metering rod pin must rest lightly on metering rod gauge To adjust, bend metering rod arm Use bending tool T109-22

ACCELERATING PUMP: If acceleration is not satisfactory, remove pump housing, intake rivet plug and ball check

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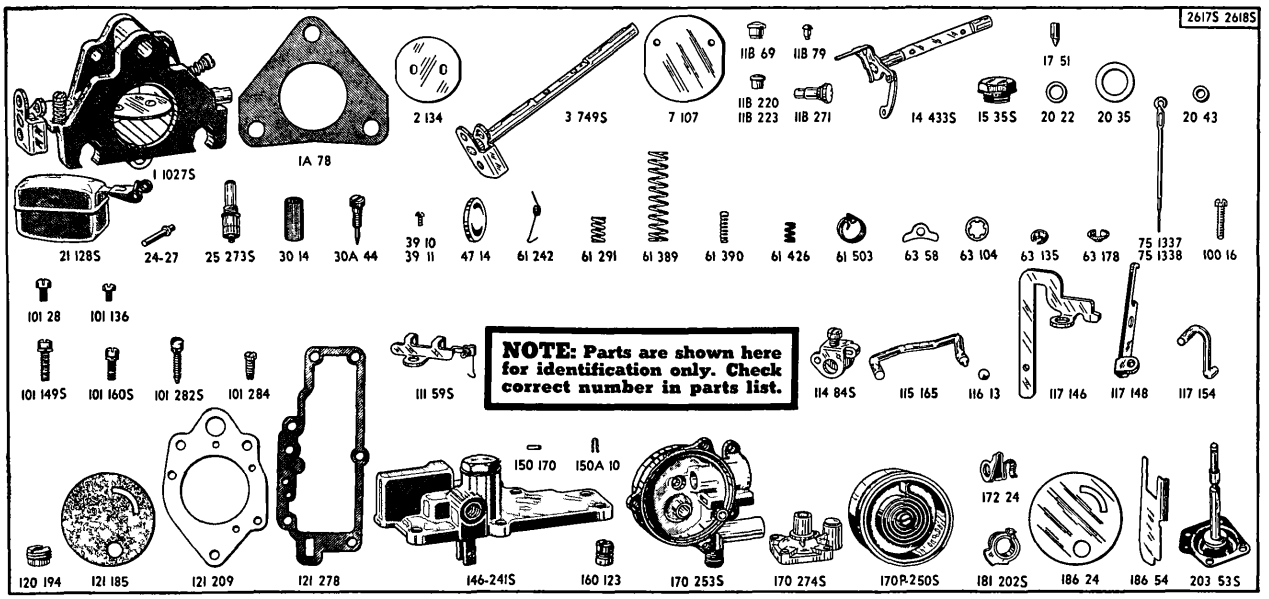
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Examine diaphragm for wear or damage Be sure intake check ball and discharge check needle seats are not clogged with lint or foreign matter Intake ball check and discharge needle must seat, as a leak at these points will result in poor acceleration Inspect and replace all worn parts, clean and blow out all passages with compressed air Pump jet is permanently installed do not remove

FAST IDLE ADJUSTMENT (Early Production only) With thermostatic coil housing, gasket and baffle plate removed, partial open throttle, close choke valve and then close throttle valve This will allow the fast idle cam to revolve to fast idle position With choke valve held tightly closed and slight tension on throttle lever, there should be 015" (Gauge T109-44) clearance between throttle valve and bore of carbureter (side opposite idle port) Adjust by bending connector link at lower angle

UNLOADER ADJUSTMENT: This adjustment must be made after fast idle adjustment Hold throttle valve in wide open position and close choke valve as far as possible without forcing There should be 5/8 inch clearance between lower edge of choke valve (vent tube side) and inner wall of air horn (gauge T109-85) Adjust by bending choke shaft unloader arm (Use bending tool T109 105)



Dearborn Marine V-8—1957—Carbureters Nos. 2617S-2618S

WHEN SERVICING, USE GASKET ASSORTMENT No 284A

Part No.	PART NAME	
1-1027S	Body flange assembly	
1A-78	Flange gasket	
2-134	Throttle valve	
3-749S	Throttle shaft and lever assembly	
7-107	Choke valve	
11B-69	Rivet plug	
11B-79	Rivet plug	(3)
11B-220	Rivet plug	
11B-223	Rivet plug	
11B-271	Idle port rivet plug	
14-433S	Choke piston lever link and shaft assembly	
15-35S	Strainer nut assembly	
17-51	Pump check needle	
20-22	Needle seat gasket	
20-35	Bowl strainer gasket	
20-43	Piston housing gasket	
21-128S	Float and lever assembly	
24-27	Float lever pin	
25-273S	Needle pin spring and seat assembly	
30-14	Bowl strainer gauze	
30A-44	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	Throttle valve attaching screw	(2)
47-14	Welsh plug	
61-242	Metering rod spring	
61-291	Throttle lever adjusting screw spring	
61-389	Pump diaphragm spring	
61-390	Upper pump spring	
61-426	Idle adjustment screw spring	
61-503	Fast idle cam spring (early production)	
63-58	Coil housing retainer	(3)
63-104	Throttle shaft retaining ring	
63-135	Upper pump spring retainer	
63-178	Diaphragm spring retainer	
75-1337	—Metering rod—standard 051" x 040" (2617S)	
75-1338	—Metering rod—standard 050" x 039" (2618S)	

Part No.	PART NAME	
100-16	Throttle lever adjusting screw	
101-28	Throttle shaft arm attaching screw	
101-136	Coil housing attaching screw	(3)
101-149S	Body flange attaching screw and washer assembly	(3)
101-160S	Bowl cover attaching screw and washer assembly	(6)
101-282S	Diaphragm housing attaching screw and washer assembly	(4)
101-284	Piston housing attaching screw	(3)
111-59S	Metering rod arm assembly	
114-84S	Throttle shaft arm assembly	
115-165	Choke connector rod	
116-13	Pump intake check ball	
117-146	Pump lifter link	
117-148	Fast idle link	
117-154	Throttle shaft arm connector link	
120-194	Metering rod jet	
121-185	Coil housing gasket	
121-209	Body flange gasket	
121-278	Body gasket	
146-241S	Bowl cover and strainer assembly	
150-170	Choke piston pin	
150A-10	Pin spring	
160-123	Choke piston	
170-253S	Piston housing and plug assembly	
170-274S	Pump diaphragm housing assembly	
170P-250S	Thermostatic coil and housing assembly (Sup by 170AX 250S)	
170AX-250S	—Thermostatic coil and housing assembly	
172-24	Choke connector rod retainer	
181-202S	Fast idle cam assembly (early production)	
186-24	Coil housing baffle plate	
186-54	Fuel bowl baffle plate	
203-53S	Pump diaphragm assembly	

—Parts so marked are new and listed for the first time

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used

CARTER CARBURETOR
DIVISION OF ACF INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

DEARBORN MARINE 2285S-2341S-2528S
March, 1955
Revised March, 1957

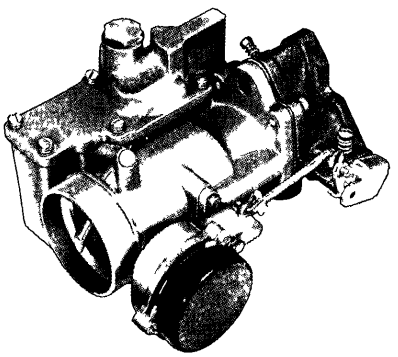
1955 MODELS

2285S — "125", "145"
2341S (With 75-1184) "160"
2341S (With 75-1185) "175"

1956 MODELS

2341S (With 75-1176) "125", "145"
2341S (With 75-1184) "165"
2341S (With 75-1185) "185"
2528S — "215"

(Two carbureters per engine)



DEARBORN "V-8" MARINE "INTERCEPTORS" 1955-1956

(Use 2617S with 75-1351 to replace 2285S)

(Use 2617S with 75-1338 to replace 2528S)

YH Horizontal Climatic® Control **Carbureters Nos. 2285S-2341S-2528S**

CARBURETER SPECIFICATIONS

For Dearborn Marine 8 Cylinder Engines:

3.50 Inch Bore, 3.10 Inch Stroke (125)
3.62 Inch Bore, 3.10 Inch Stroke (145)
3.62 Inch Bore, 3.30 Inch Stroke (160, 165)
3.75 Inch Bore, 3.30 Inch Stroke (175, 185)
3.80 Inch Bore, 3.44 Inch Stroke (215)

Dimensions: Flange size, Special 1¼ inch 3 bolt
Primary venturi, 11/32 inch I D
Secondary venturi, 11/16 inch I D
Main venturi, 1 5/16 inch I D

Vents Outside none Inside balance vent tube to air horn ahead of choke valve

Gasoline Intake: Spring loaded, needle Size No 46 (.081 inch) drill in needle seat

Low Speed Jet Tube: Jet size No 68 (.031 inch) drill By-pass in body size 0492 inch drill Idle bleed size No 58 (.042 inch) drill Economizer size No 54 (.055 inch) drill

Idle Port: Upper port, slot type, length 162 inch Width 030 inch

Idle Port Opening: Top of port 124 to 128 inch above top edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw) Size 0615 to 0655 inch diameter

Set Idle Adjustment Screw: ¼ to 1¾ turns open For richer mixture, turn screw out Do not idle engine below 350 r p m in neutral

Main Nozzle: Nozzle is installed permanently DO NOT RE MOVE

Metering Rod: (75 1176) 064" x 051", (75-1184) 062" x 045" (75-1185) 060" x 041", (75-1266) 058" x 038"

Metering Rod Jet: 089 inch diameter

Accelerating Pump: Diaphragm type vacuum and mechanically operated Intake ball check (in diaphragm housing) seat size 115 120 inch diameter Discharge ball check (in body) seat size 115-120 inch diameter Vacuum passage restriction (in body) size No 46 (.081 inch) drill Vacuum bleed (to throttle bore) size No 65 (.035 inch) drill

Pump Adjustment None

Choke Carter Climatic® Control set (front) 4 points lean, (rear) 6 points lean Butterfly type offset choke valve Choke heat suction hole, size No 42 (.0935 inch) drill

Vacuum Spark Port: Slot type Size 125 by 041 inch Lower edge of port 026 to 036 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .030"	Breaker Point Setting .018"	Ignition Timing Breaker Points to Open: 3° B.T.D.C.	Valve Setting (Cold) Intake .019" Exhaust .019"	Float Setting 7/16 Inch (Use gauge T109-81)	Idle Adjustment Screw Setting ¼ to 1¾ Turns Open Idle engine at 350 R.P.M. in neutral

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT· With gasket removed, bowl cover assembly inverted and float resting on pin in seated needle, the distance from the bowl cover to the top of float should be 7/16 inch (gauge T109-81) Do not depress float lip against spring loaded pin in needle, but let float rest of its own weight Adjust by bending float lever Float setting must be checked with bowl cover held at eye height in a level position

FLOAT DROP· With bowl cover assembly held in upright position, the distance between float seam (at free end) and bowl cover should be 2 inches Adjust by bending stop tab on float arm

METERING ROD ADJUSTMENT· This adjustment is important and should be checked each time the carbureter is reassembled Insert (gauge T109-104) in place of metering rod, seating tapered end of gauge in metering rod jet Hold gauge vertical to insure seating in jet With throttle valve tightly closed, press down on diaphragm shaft until metering rod arm contacts lifter link at diaphragm stem With diaphragm shaft held in this position, metering rod pin must rest lightly on metering rod gauge To adjust, bend metering rod arm Use bending tool T109-22

ACCELERATING PUMP. If acceleration is not satisfactory, remove pump housing, intake rivet plug and ball check Then remove discharge ball check and spring Examine diaphragm for wear or damage Be sure intake check and discharge check are not clogged with lint or foreign matter Intake and

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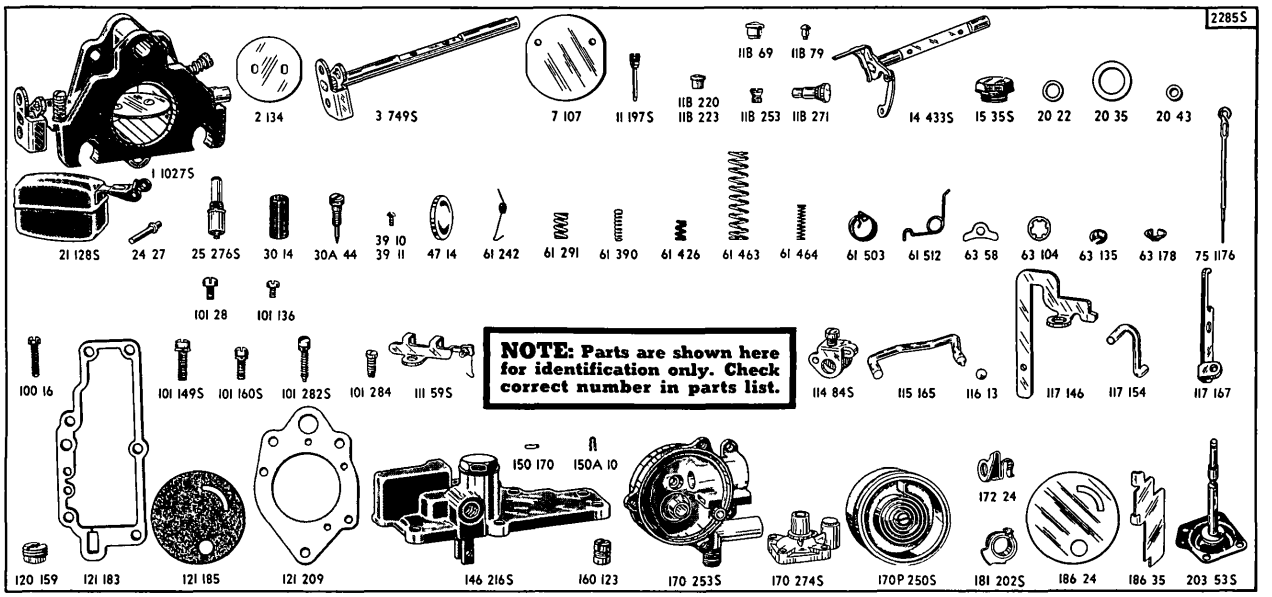
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discharge ball checks must seat as a leak at these points will result in poor acceleration Inspect and replace all worn parts clean and blow out all passages with compressed air **Pump jet is permanently installed, do not remove**

FAST IDLE ADJUSTMENT With thermostatic coil housing gasket and baffle plate removed crack throttle valve and hold choke valve fully closed then close throttle valve This will allow the fast idle cam to revolve to fast idle position With choke valve held tightly closed and slight tension on throttle lever there should be 015 inch (gauge T109 44) clearance between throttle valve and bore of carbureter (side opposite idle port) Adjust by bending connector link at lower angle (Use tool T109-213)

UNLOADER ADJUSTMENT This adjustment must be made after fast idle adjustment Hold throttle valve in wide open position and close choke valve as far as possible without forcing There should be 5/8 inch (gauge T109 85) clearance between lower edge of choke valve (vent tube side) and inner wall of air horn Adjust by bending choke shaft unloader arm (Use Bending Tool T109 105)



Dearborn Marine V-8—1955-1956—Carbureters Nos. 2285S-2341S-2528S

WHEN SERVICING USE GASKET ASSORTMENT No 227

Part No	PART NAME	
1-1027S	Body flange assembly	
2-134	Throttle valve	
3-749S	Throttle shaft and lever assembly	
7-107	Choke valve	
11-197S	Low speed jet assembly	
11B-69	Rivet plug	
11B-79	Rivet plug	(3)
11B 220	Rivet plug	
11B 223	Nozzle passage rivet plug	
11B-253	Pump discharge plug	
11B-271	Idle port rivet plug	
14-433S	Choke piston lever link and shaft assembly	
15-35S	Strainer nut assembly	
20 22	Needle seat gasket	
20-35	Bowl strainer gasket	
20-43	Piston housing gasket	
21-128S	Float and lever assembly	
24-27	Float lever pin	
25-276S	Needle pin spring and seat assembly	
30-14	Bowl strainer gauze	
30A-44	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	Throttle valve attaching screw	(2)
47-14	Welsh plug	
61-242	Metering rod spring	
61-291	Throttle lever adjusting screw spring	
61-390	Pump spring (upper)	
61-426	Idle adjustment screw spring	
61-463	Pump diaphragm spring	
61-464	Pump discharge spring	
61 503	Fast idle cam spring	
61-512	Fast idle link spring	
63-58	Coil housing retainer	(3)
63-104	Throttle shaft retaining ring	
63-135	Upper pump spring retainer	
63 178	Diaphragm spring retainer	
75-1176	Metering rod—standard (2285S) (2341S when used on models 125 145)	

Part No	PART NAME	
75-1184	Metering rod—standard (2341S) (When used on models 160 165)	
75-1185	Metering rod—standard (2341S) (When used on models 175 185)	
75-1266	Metering rod—standard (2528S) (2341S when used on model 215)	
100-16	Throttle lever adjusting screw	
101-28	Throttle shaft arm attaching screw	
101-136	Coil housing attaching screw	(3)
101-149S	Body flange attaching screw and washer assembly	(3)
101-160S	Bowl cover attaching screw and washer assembly	(6)
101-282S	Diaphragm housing attaching screw and washer assembly	(4)
101-284	Piston housing attaching screw	(3)
111-59S	Metering rod arm assembly	
114-84S	Throttle shaft arm assembly	
115-165	Choke connector rod	
116-13	Pump discharge and pump intake check ball	(2)
117-146	Pump lifter link	
117-154	Throttle shaft arm connector link	
117-167	Fast idle link	
120-159	Metering rod jet	
121-183	Body gasket	
121-185	Coil housing gasket	
121-209	Body flange gasket	
146-216S	Bowl cover and strainer assembly	
150-170	Choke piston pin	
150A-10	Pin spring	
160-123	Choke piston	
170-253S	Piston housing and plug assembly	
170-274S	Pump diaphragm housing assembly	
170P250S	Thermostatic coil and housing assembly	
172-24	Choke connector rod retainer	
181-202S	Fast idle cam assembly	
186-24	Coil housing baffle plate	
186-35	Fuel bowl baffle plate	
203-53S	Pump diaphragm assembly	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

CARBURETER
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2870S
"MS1"
—
2871S
"MS2"

DE SOTO--1959
MODELS
MS1 & MS2

(2871S also used on Canadian
De Soto MS2 and Chrysler MC2)

Use 2871S to
replace 2793S
and 2870S

BBD Dual Down-Draft Climatic® Control Carbureters Nos. 2793S-2870S-2871S

CARBURETER SPECIFICATIONS

For De Soto 8 Cylinder 360 (MS1); 383 (MS2, MC2) Cu. In. Engine: Vacuum at Idle 19.5 Inches

Dimensions: Flange dual, 4 bolt type. Throttle bore, 1-9/16 inch I. D. Primary venturi, 15/32 inch I. D. Main venturi 1-5/16 inch I. D.

Vent: Inside, in air horn. Outside, none.

Low Speed Circuit: Jet, in venturi assembly, size (.0295 inch) diameter. Idle bleed, in venturi cluster screw, size (.059 inch) diameter. Idle restriction, in venturi cluster screw, size (.051 inch) diameter. Venturi idle bleed, in body, size (.040 inch) diameter. Idle port, slot type, length .198 inch; width .030 inch.

Idle Port Opening: .140 to .144 inch above upper edge of valve with valve tightly closed.

Lower Port (For Idle Adjustment Screw): Size .055 inch diameter.
Set Idle Adjustment Screw: 1/4 to 1 1/4 turns open. For richer mixture, turn screw out. With gear shift in neutral position, idle engine at 500 R. P. M.

Main Nozzle: Nozzle is installed permanently. DO NOT REMOVE.

Main Vent Tube: Side holes 2—size .0292 inch, 1—size .038 inch diameter.

Accelerating Pump: Pump discharge jets (2—in venturi cluster), size .0275 inch diameter. Intake ball check seat, size .130 to .140 inch diameter. Discharge ball check seat, size .110 to .120 inch diameter.

Choke: Carter Climatic® cross over type, set at index. Butterfly type, offset valve. Choke heat suction hole, in air horn, size (.0905 inch) diameter.

Vacuum Spark Port: Horizontal, round end type, .030 by .090 inch. Top of port to be .015 to .025 inch, above upper edge of valve with valve closed tight.

Motor Tune-Up — Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .017" Canadian MS2-MC2 .020"	Ignition Timing Breaker Points to Open: 10° B. T. C. At Vibration Damper	Float Setting 5/16 Inch (Use Gauge T109-280)	Idle Adjustment Screw Setting 1/4 to 1 1/4 Turns Open Idle Engine at 500 R. P. M. In Neutral

NOTE: These cars are equipped with Hydraulic Valve Lifters — NO ADJUSTMENT.

CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3732

Float Level: 5/16 inch (gauge T109-280) between top of each float ridge (at free end of float) and top surface of body casting. To adjust, bend lip on float arm.

Pump: 1 inch from top of the bowl cover to the top of the plunger shaft. Install throttle connector rod in center hole (medium stroke) of throttle lever. To adjust, bend throttle connector rod. When throttle connector rod is installed in a different hole for seasonal operation the bowl vapor vent must be readjusted.

Fast Idle Linkage Adjustment: With choke valve tightly closed and lug on fast idle cam contacting lip on choke shaft lever align center of fast idle screw with index mark on cam. To adjust, bend lip on choke shaft lever.

Fast Idle Throttle Valve Clearance: .018 inch (gauge T109-44) between lower edge of valve and bore with adjusting screw on index mark of cam.

Fast Idle on Car: 1400 R. P. M. hot engine, with fast idle screw on index mark of cam.

Unloader: 15/64 inch (gauge T109-32) between top edge of choke valve and inner wall of air horn with throttle valve wide open. To adjust, bend unloader finger on fast idle arm.

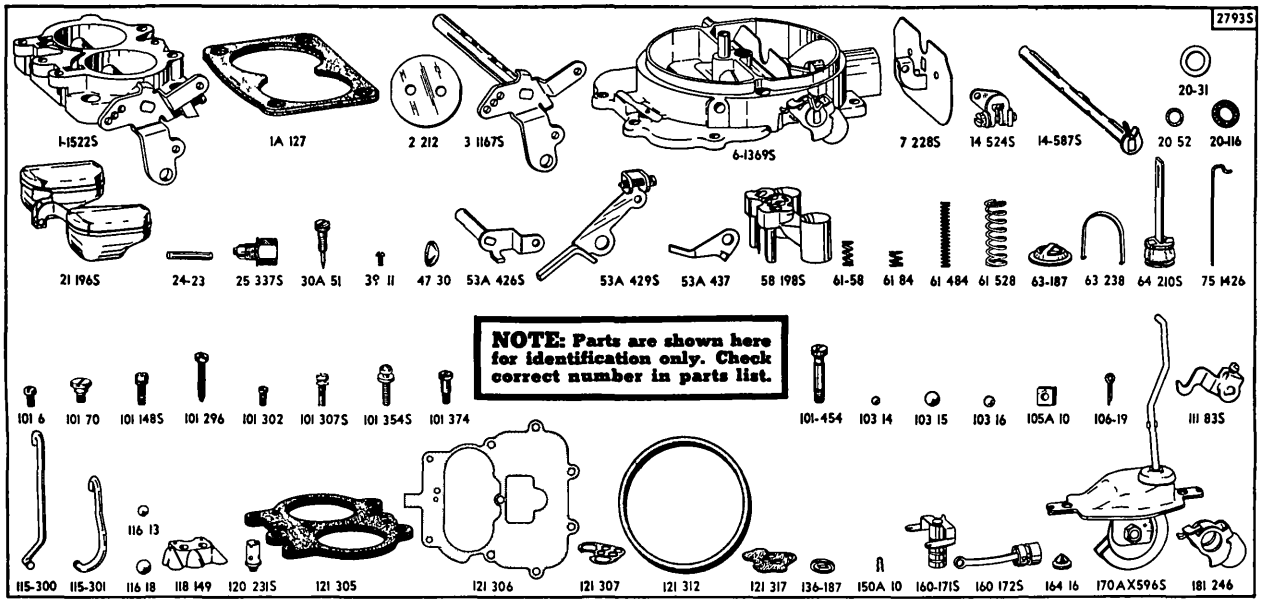
Bowl Vapor Vent Adjustment: .062" to .093" (gauge T109-234) between the heel of the rubber grommet and its seat on the bowl cover with throttle valve seated. To adjust, bend lip on vapor vent arm. If the pump has been changed to the long or short stroke readjust the bowl vapor vent.

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Choke Adjustment (Cross Over Type) See Form 3691: 1 Loosen mounting post lock nut and turn mounting post with screw driver until index mark on disk is positioned as listed on carbureter specification page Hold in this position with screw driver and tighten lock nut NOTE Screw driver may be held in vise so that one hand may be used to support housing while tightening nut 2 After adjustment is completed and coil housing and rod assembly and carbureter is installed on engine lift cover disk and open and close choke valve manually to see if connector rod clears sides of hole in housing cover If rod does not clear hole in housing cover without binding replace with a new unit since connector rod cannot be bent without affecting calibration



De Soto — 1959 — Carbureters Nos. 2793S-2870S-2871S

WHEN SERVICING, USE GASKET ASSORTMENT No. 325; RE-CARBURETION KIT No. 1949N (2793S-2871S), No 1976N (2870S)
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF RE-CARBURETION KIT

Part No.	PART NAME
1-1522S	Body flange assembly (2793S)
1-1590S	—Body flange assembly (2870S 2871S)
1A-127	FLANGE GASKET
2-212	Throttle valve (2)
3-1167S	Throttle shaft and lever assembly (2793S)
3-1231S	—Throttle shaft and lever assembly (2870S-2871S)
6-1369S	Air horn assembly
7-223S	Choke valve and bracket assembly
14-524S	Choke lever assembly
14-587S	Choke lever and shaft assembly
20-31	Needle seat gasket
20-52	STEP UP PISTON GASKET
20-116	Main metering jet gasket (2)
21-196S	Float and lever assembly
24-23	Float lever pin
25-337S	NEEDLE AND SEAT ASSEMBLY (.111")
30A-51	Idle adjustment screw (2)
39-11	Choke valve attaching screw (2)
47-30	Welsh plug
53A-426S	Pump arm and countershaft assembly
53A-429S	Fast idle arm and screw assembly
53A-437	Loose lever
58-198S	Venturi cluster tube and nozzle assembly
61-58	Throttle adjusting screw spring
61-84	Idle adjustment screw spring (2)
61-484	STEP-UP PISTON SPRING
61-528	Pump spring
63-187	Intake check ball retainer
63-238	Float lever pin retainer
64-210S	PUMP PLUNGER AND ROD ASSEMBLY
75-1426	Step up rod (.031") (2)
101-6	Pump arm screw
101-70	Fast idle arm attaching screw
101-148S	Air horn attaching screw and washer assembly (8)
101-296	Throttle and fast idle adjusting screw (2)
101-302	Throttle valve attaching screw (4)
101-307S	Body flange attaching screw and washer assembly (4)

Part No.	PART NAME
101-354S	Choke lever clamp screw and washer assembly
101-374	Step up piston plate screw
101-454	Venturi cluster screw (2)
103-14	Lead shot
103-15	Lead shot (2)
103-16	Lead shot (2)
105A-10	Choke lever clamp screw nut
106-19	Cotter pin
111-83S	Pump arm and screw assembly
115-300	Throttle connector rod
115-301	Fast idle connector rod
116-13	Pump discharge check ball
116-18	Pump intake check ball
118-149	Venturi cover
120-199S	Main metering jet assembly (448 to 458cc)— 1 size lean (2870S) (2)
120-205S	Main metering jet assembly (426 to 434cc)— 2 sizes lean (2870S) (2)
120-207S	Main metering jet assembly (454 to 464cc)— 2 sizes lean (2871S) (2)
120-231S	MAIN METERING JET ASSEMBLY (485 to 495cc) — STANDARD (2871S) (2)
120-232S	MAIN METERING JET ASSEMBLY (470 to 480cc) — STANDARD on (2870S), 1 SIZE LEAN on (2871S) (2)
121-305	BODY FLANGE GASKET
121-306	BODY GASKET
121-307	VENTURI HOUSING GASKET
121-312	AIR CLEANER GASKET
121-317	VENTURI COVER GASKET
136-187	Pump spring retainer washer
150A-10	Pin spring (2)
160-171S	Step up piston and plate assembly
160-172S	Choke piston and link assembly
164-16	Grommet seal
170AX-596S	Thermostatic coil, housing and rod assembly
181-246	Fast idle cam

—Parts so marked are new and listed for the first time.

NOTE: Figures in parentheses indicate number f pieces used in n carbureter. Where no figure is shown, only one is used.

DE SOTO

MODEL MS3-H

1959

Also used on Dodge, Models MD2, MD3 and Canadian De Soto, Model MS2— Canadian Chrysler, Model MC2

AFB Four-Bore Down-Draft Climatic® Control Carbureter No. 2794S

CARBURETER SPECIFICATIONS

For De Soto 8 Cylinder 383 Cu. In. Engine: Vacuum at Idle 19.5 Inches

Dimensions: Flange, four bore—4 bolt type.
Throttle bore, primary, 1-7/16 inch; secondary 1-9/16 inch.
Primary venturi size, primary side, 7/16 inch, secondary side, 11/32 inch I. D.
Main venturi, primary, 1-3/16 inch; secondary, 1-5/16 inch.

Vents: Inside (4) in air horn: Oustide (5) in air horn.

Low Speed Circuit: (Primary side only)
Jet, size No. 66 (.033 inch) drill.
By-pass, size (.0492 inch) diameter.
Economizer, size (.0452 inch) diameter.
Idle bleed, size (.0492 inch) diameter.
Idle port, slot type, length .198 inch, width .030 inch.

Idle Port Opening: .167 to .173 inch above top edge of valve with valve tightly closed.

Set Idle Adjustment Screw: 1/2 to 2 turns open. For richer mixture turn screw out. Do not idle engine below 500 R. P. M. Transmission in neutral.

Main Nozzle: Install permanently. DO NOT REMOVE. Antipercolator bleed, primary (tube in venturi assembly), size No. 68 (.031 inch) drill. Secondary (drilled hole in venturi assembly) size No. 60 (.040 inch) drill.

Main Vent Tube: (In venturi assembly) Side holes primary side 11—size No. 70 (.028 inch) 1—size No. 65 (.035 inch) drill; secondary side 2—size No. 57 (.043 inch) 1—size No. 70 (.028 inch) drill.

Accelerating Pump: Discharge jet (twin) primary side only, size No. 68 (.031inch) drill. Intake ball check seat (screw plug) size .115 to .120 inch diameter. Discharge needle seat size No. 50 (.070 inch) drill.

Choke: Carter Climatic® Control Cross Over type, set on index. Butterfly type offset valve, primary side only. Choke heat suction hole, in air horn, size No. 44 (.086 inch) drill.

Vacuum Spark Port: Slot type (round end) .045 x .110 inch. Top of port .026 to .034 inch above top edge of valve with valve tightly closed.

Motor Tune-Up — Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .017" Canadian MS2, MC2 .020"	Ignition Timing Breaker Points to Open: 10° B. T. C. At Vibration Damper	Float Setting (See Adjustments)	Idle Adjustment Screw Setting 1/2 to 2 Turns Open 500 R. P. M. In Neutral

NOTE: These cars are equipped with Hydraulic Valve Lifters — NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3733

FLOAT ALIGNMENT: Side of floats parallel to edge of casting. Minimum clearance between lever and air horn lugs without binding. To adjust, bend float lever.

FLOAT LEVEL: 7/32 inch (gauge T109-106) plus or minus 1/64 inch, between top of floats (at outer end) and air horn gasket. To adjust, bend float lever.

FLOAT DROP: 23/32 inch plus or minus 1/16 inch between top of floats (at outer end) and air horn gasket. To adjust, bend stop tabs on float brackets.

PUMP: 7/16 inch from the top of the bowl cover to the top of the plunger shaft with throttle connector rod in center hole (medium stroke) of pump arm. To adjust, bend throttle connector rod.

FAST IDLE LINKAGE ADJUSTMENT: With choke valve tightly closed and lug on outer choke shaft lever contacting stop on inner choke shaft lever align center of fast idle screw with index mark on cam. To adjust, bend fast idle connector rod.

FAST IDLE THROTTLE VALVE CLEARANCE: .015 inch (gauge T109-44) between lower edge of valve and bore with adjusting screw on index mark of cam.

FAST IDLE ON CAR: 1400 R. P. M. hot engine with fast idle screw on index mark of cam.

UNLOADER: 1/4 inch (gauge T109-31) between upper edge of choke valve and inner wall of air horn. To adjust, bend unloader lip on throttle lever.

SECONDARY THROTTLE LEVER ADJUSTMENT: 1. Block choke valve wide open. 2. With 3/8 inch between lower edge of primary valve and bore (opposite idle port) secondary valves should just start to open. To adjust, bend throttle operating rod. NOTE: At wide open throttle primary and secondary valves will reach full vertical position. 3. With primary and secondary throttle valves in tightly closed position there should be .010" to .030" (gauge T109-29) between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on secondary lever.

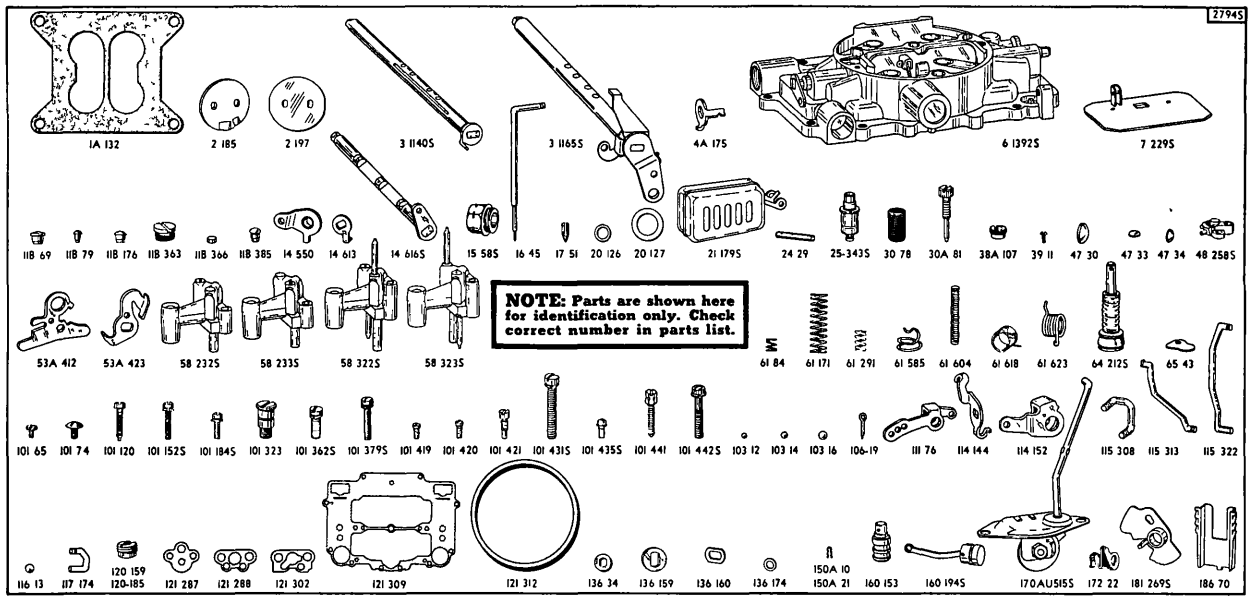
SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: Crack throttle valves and manually open and close the choke valve. Tang on secondary throttle lever should freely engage in notch of lock-out dog. To adjust, bend tang on secondary throttle lever.

CHOKE ADJUSTMENT (CROSS OVER TYPE) SEE FORM 3691: 1. Loosen mounting post lock nut and turn mounting post with screw driver until index mark on disk is positioned as listed on carbureter specification page. Hold in this position with screw driver and tighten lock nut. NOTE: Screw driver may be held in vise so that one hand may be used to support housing while tightening nut. 2. After adjustment is completed and coil housing and rod assembly and carbureter is installed on engine lift cover disk and open and close choke valve manually to see if connector rod clears sides of hole in housing cover. If rod does not clear hole in housing cover without binding replace with a new unit since connector rod cannot be bent without affecting calibration.

TOOLS REQUIRED FOR SERVICING CARBURETERS:

T109-29	.020" Wire gauge	T109-44	.015" Wire gauge
T109-31	1/4" Unloader gauge	T109-106	7/32" Float gauge
T109-41	Bending tool	T109-213	Bending tool

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De Soto — 1959 — Carbureter No. 2794S

WHEN SERVICING, USE GASKET ASSORTMENT No. 326; RE-CARBURETION KIT No. 1955N

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF RE-CARBURETION KIT

Part No.	PART NAME	
1A-132	—FLANGE GASKET	
2-197	Secondary throttle valve	(2)
2-185	Primary throttle valve	(2)
3-1140S	Secondary throttle shaft and dog assembly	
3-1165S	Primary throttle shaft and lever assembly	
4A-175	Primary throttle shaft dog	
6-1392S	Air horn assembly	
7-229S	Choke valve and bracket assembly	
11B-69	Rivet plug	(2)
11B-79	Rivet plug	(4)
11B-176	Idle port rivet plug	(2)
11B-363	Pump intake screw plug	
11B-366	Nozzle well lead plug	(4)
11B-385	Fuel passage rivet plug	
14-550	Inside choke shaft lever	
14-613	—Outside choke shaft lever	
14-616S	Choke lever and shaft assembly	
15-58S	Fuel inlet assembly	
16-35	Step-up rod .064" x .058"—1 size lean	(2)
16-39	Step-up rod .066" x .061"—2 sizes lean	(2)
16-45	STEP-UP ROD .0635" x .055"—Standard	(2)
17-51	Pump discharge check needle	
20-126	Needle seat gasket	(2)
20-127	Fuel inlet gasket	
21-179S	Float and lever assembly	(2)
24-29	Float lever pin	(2)
25-343S	NEEDLE AND SEAT ASSEMBLY (.0935")	(2)
30-78	Fuel inlet strainer	
30A-81	Idle adjustment screw	(2)
38A-107	Pump intake check ball seat	

Part No.	PART NAME	
39-11	Choke valve attaching screw	(2)
47-30	Choke piston welsh plug	
47-33	Venturi welsh plug	(4)
47-34	Spark port welsh plug	
48-253S	Pump jet and housing assembly	
53A-412	Lockout dog	
53A-423	Secondary throttle operating lever	
58-232S	Secondary venturi assembly (opposite pump)	
58-233S	Secondary venturi assembly (pump side)	
58-322S	—Primary venturi assembly (opposite pump)	
58-323S	—Primary venturi assembly (pump side)	
61-84	Idle adjusting screw spring	(2)
61-171	Pump spring (lower)	
61-291	Throttle lever adjusting screw spring	
61-585	Step-up rod retaining spring	(2)
61-604	VACUUM PISTON SPRING	(2)
61-618	Secondary throttle return spring	
61-623	Throttle flex spring	
64-212S	PUMP PLUNGER, ROD AND SPRING ASSEMBLY	
65-43	Step-up piston cover plate	(2)
101-65	Choke shaft lever attaching screw	
101-74	Throttle shaft lever attaching screw	(2)
101-120	Fast idle adjustment screw	
101-152S	Air horn attaching screw and washer assembly	
101-184S	Pump jet housing attaching screw and washer assembly	(2)
101-323	Fast idle cam attaching screw	
101-362S	Air horn attaching screw and washer assembly	(8)
101-379S	Secondary venturi attaching screw and washer assembly	(4)

Part No.	PART NAME	
101-419	Secondary throttle valve attaching screw	(4)
101-420	Primary throttle valve attaching screw	(4)
101-421	Pump arm attaching screw	
101-431S	Air horn attaching screw and washer assembly	
101-435S	Step-up piston cover plate attaching screw and washer assembly	(2)
101-441	Throttle lever adjusting screw	
101-442S	Primary venturi attaching screw and washer assembly	(4)
103-12	Lead shot (.130" dia.)	(2)
103-14	Lead shot (.180" dia.)	
103-16	Lead shot (.200" dia.)	
106-19	Cotter pin	
111-76	Pump arm	
114-144	Primary throttle shaft arm (outer)	
114-152	Primary throttle shaft arm (inner)	
115-308	Throttle operating rod	
115-313	—Choke connector rod	
115-322	—Throttle connector rod	
116-13	Pump intake check ball	
117-174	Pump connector link	

Part No.	PART NAME	
120-159	PRIMARY METERING JET (.089")	(2)
120-185	Secondary metering jet (.067")	(2)
121-287	PUMP JET HOUSING GASKET	
121-288	SECONDARY VENTURI CLUSTER GASKET	(2)
121-302	PRIMARY VENTURI CLUSTER GASKET	(2)
121-309	AIR HORN GASKET	
121-312	AIR CLEANER GASKET	
136-34	Choke shaft washer	
136-159	Primary throttle shaft washer	
136-160	Secondary throttle shaft washer	
136-174	Throttle lever adjusting screw washer	
150A-10	Pin spring	(4)
150A-21	Pin spring	
160-153	Step-up piston	(2)
160-194S	Choke piston and link assembly (Use 160-204S)	
160-204S	—Choke piston and link assembly	
170AU-515S	Thermostatic coil, housing and rod assembly	
172-22	Throttle connector rod retainer	
181-269S	—Fast idle cam and collar assembly	
186-70	Fuel bowl baffle	(2)

—Parts so marked are new and listed for the first time.

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

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DE SOTO "V-8"

MODEL LS-1 "POWER PAK"

Standard Transmission

1958

(Also used on Dodge, Models LD3, LD3-D500)

AFB Four-Bore Down-Draft Climatic® Control **Carbureter No. 2773S**

CARBURETER SPECIFICATIONS

For DeSoto 8 Cylinder 350 (LS-1 and LD3), 360 (D500) Cu. In. Engine: Vacuum at Idle 19.5 Inches

Dimensions: Flange, four bore—4 bolt type
Throttle bore 1 7/16 inch
Primary venturi size primary side 7/16 inch secondary side 7/16 inch I D
Main venturi size, 1-3/16 inch.

Vents: Inside (4) in air horn, Outside (4) in body, (5) in air horn

Low Speed Circuit: (Primary side only)
Jet, size No 065 (.035 inch) drill
By-pass size (.0492 inch) diameter
Economizer, size (.0452 inch) diameter
Idle bleed, size (.0492 inch) diameter
Idle port, slot type, length .198 inch, width .030 inch.

Idle Port Opening: .142 to .148 inch above top edge of valve with valve tightly closed

Set Idle Adjustment Screw: 3/4 to 2 1/4 turns open For richer mixture turn screw out Do not idle engine below 500 r p m Transmission in neutral

Main Nozzle Install permanently DO NOT REMOVE Anti-percolator bleed primary (tube in venturi assembly), size No 68 (.031 inch) drill Secondary (drilled hole in venturi assembly) size No 70 (.028 inch) drill Bleed to main vent tube passage size No 69 (.029 inch) drill

Main Vent Tube: (In venturi assembly) Side holes primary side 5—size No 70 (.028 inch) 1—size No 65 (.035 inch) drill secondary side 11—size No 70 (.028 inch) drill

Accelerating Pump. Discharge jet (twin) primary side only size No 68 (.031 inch) drill Intake ball check seat (screw plug) size .115 to .120 inch diameter Discharge needle seat size No 50 (.70 inch) drill

Choke: Carter Climatic® Control Cross Over Type set 2 points rich Butterfly type offset valve, primary side only Choke heat suction hole, in air horn, size No 44 (.086 inch) drill

Vacuum Spark Port: Slot type (round end) .045 x .110 inch Top of port .026 to .034 inch above top edge of valve with valve tightly closed

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Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .017"	Ignition Timing Breaker Points to Open: 6° B. T. C. 10° B. T. C. (Export DeSoto) At Vibration Damper	Float Setting 7/32 Inch (Use Gauge T109-106)	Idle Adjustment Screw Setting 3/4 to 2 1/4 Turns Open 500 R. P. M. In Neutral

NOTE· These cars are equipped with Hydraulic Valve Lifters — NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3733

FLOAT ALIGNMENT: Side of floats parallel to edge of casting. Minimum clearance between lever and air horn lugs without binding. To adjust, bend float lever.

FLOAT LEVEL: 7/32 inch (gauge T109-106) between top of floats (at outer end) and air horn gasket. To adjust, bend float lever.

FLOAT DROP: 23/32 inch between top of floats (at outer end) and air horn gasket. To adjust, bend stop tabs on float brackets.

PUMP: 7/16 inch from the top of the bowl cover to the top of the plunger shaft with throttle connector rod in center hole (medium stroke) of pump arm. To adjust, bend throttle connector rod.

FAST IDLE LINKAGE ADJUSTMENT: With choke valve tightly closed and lug on outer choke shaft lever contacting stop on inner choke shaft lever align center of fast idle screw with index mark on cam. To adjust, bend fast idle connector rod.

FAST IDLE THROTTLE VALVE CLEARANCE: .012 inch (gauge T109-200) between lower edge of valve and bore with adjusting screw on index mark of cam.

FAST IDLE ON CAR: 1400 R. P. M. hot engine with fast idle screw on index mark of cam.

UNLOADER: 1/4 inch (gauge T109-31) between upper edge of choke valve and inner wall of air horn. To adjust, bend unloader lip on throttle lever.

SECONDARY THROTTLE LEVER ADJUSTMENT: 1. Block choke valve wide open. 2. With 3/8 inch between lower edge of primary valve and bore (opposite idle port) secondary valves should just start to open. To adjust, bend throttle operating rod. NOTE: at wide open throttle primary and secondary valves will reach full vertical position. 3. With primary and secondary throttle valves in tightly closed position there should be .010" to .030" (gauge T109-29) between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on secondary lever.

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: Crack throttle valves and manually open and close the choke valve. Tang on secondary throttle lever should freely engage in notch of lock-out dog. To adjust, bend tang on secondary throttle lever.

CHOKE ADJUSTMENT (CROSS OVER TYPE) SEE FORM 3691: 1. Loosen mounting post lock nut and turn mounting post with screw driver until index mark on disk is positioned as listed on carbureter specification page. Hold in this position with screw driver and tighten lock nut. NOTE: Screw driver may be held in vise so that one hand may be used to support housing while tightening nut. 2. After adjustment is completed and coil housing and rod assembly and carbureter is installed on engine lift cover disk and open and close choke valve manually to see if connector rod clears sides of hole in housing cover. If rod does not clear hole in housing cover without binding replace with a new unit since connector rod cannot be bent without affecting calibration.

TOOLS REQUIRED FOR SERVICING CARBURETERS:

T109-29	.020" Wire gauge	T109-106	7/32" Float gauge
T109-31	1/4" Unloader gauge	T109-200	.012" Wire gauge
T109-41	Bending tool	T109-213	Bending tool

CARBURETER
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De Soto—1958—Carbureter No. 2773S

WHEN SERVICING, USE GASKET ASSORTMENT No. 317

Part No	PART NAME	
1A-129	Flange gasket	
2-178	Secondary throttle valve	(2)
2-185	Primary throttle valve	(2)
3-1140S	Secondary throttle shaft and dog assembly	
3-1165S	Primary throttle shaft and lever assembly	
4A-175	Primary throttle shaft dog	
6-1330S	Air horn assembly	
7-229S	Choke valve and bracket assembly	
11B-69	Rivet plug	(2)
11B-79	Rivet plug (early prod (2) (late prod (4)	
11B-176	Idle port rivet plug	(2)
11B-363	Pump intake screw plug	
11B-366	Nozzle well rivet plug	(4)
11B-385	Rivet plug	
14-512	Outside choke shaft lever	
14-550	Inside choke shaft lever	
14 616S	—Choke lever and shaft assembly	
15 58S	Fuel inlet assembly	
16-35	Step up rod 0645" x 058"	(2)
17-51	Pump discharge check needle	
20-126	Needle seat gasket	(2)
20-127	Fuel inlet gasket	
21-179S	Float and lever assembly	(2)
24-29	Float lever pin	(2)
25-343S	Needle and seat assembly (0935")	(2)
30-78	Fuel inlet strainer	
30A-81	Idle adjustment screw	(2)
38A-107	Pump intake check ball seat	
39-11	Choke valve attaching screw	(2)
47-30	Choke piston welsh plug	
47-33	Venturi welsh plug	(4)
47-34	Spark port welsh plug	
48 258S	Pump jet and housing assembly	
53A-412	Lockout dog	
53A-423	Secondary throttle operating lever	
58-298S	—Primary venturi assembly (opposite pump)	
58-299S	—Primary venturi assembly (pump side)	
58-302S	—Secondary venturi assembly (opposite pump)	
58 303S	—Secondary venturi assembly (pump side)	
61-84	Idle adjusting screw spring	(2)
61-128	Throttle connector rod spring	
61-171	Pump spring (lower)	
61-291	Throttle lever adjusting screw spring	
61-585	Step up rod retaining spring	(2)
61-592	Throttle flex spring (Sup by 61 623)	
61-604	Vacuum piston spring	(2)
61-618	—Secondary throttle return spring	
61-623	Throttle flex spring	
63-35	Throttle connector rod retainer	

Part No	PART NAME	
64-212S	Pump plunger rod and spring assembly	
65-43	Step up piston cover plate	(2)
101-65	Choke shaft lever attaching screw	
101-74	Throttle shaft lever attaching screw	(2)
101-120	Fast idle adjustment screw	
101-152S	Air horn attaching screw and washer assembly	
101-184S	Pump jet housing attaching screw and washer assembly	(2)
101-323	Fast idle cam attaching screw	
101-362S	Air horn attaching screw and washer assembly	(8)
101-419	Secondary throttle valve attaching screw	(4)
101-420	Primary throttle valve attaching screw	(4)
101-421	Pump arm attaching screw	
101-431S	Air horn attaching screw and washer assembly	
101-435S	Step up piston cover plate attaching screw and washer assembly	(2)
101 441	Throttle lever adjusting screw	
101-442S	Primary and secondary venturi attaching screw and washer assembly	(8)
103-12	Lead shot	(2)
103-14	Lead shot (late prod)	
103-15	Lead shot (early prod)	
103-16	Lead shot	
106-19	Cotter pin	
111-76	Pump arm	
114-144	Primary throttle shaft arm (outer)	
114-152	Primary throttle shaft arm (inner)	
115-275	Choke connector rod	
115-276	Throttle connector rod	
115-308	Throttle operating rod	
116-13	Pump intake check ball	
117-174	Pump connector link	
120-155	Primary metering jet (091")	(2)
120-186	Secondary metering jet (061")	(2)
121-287	Pump jet housing gasket	
121 288	Secondary venturi cluster gasket	(2)
121-302	Primary venturi cluster gasket	(2)
121-309	Air horn gasket	
136-34	Choke shaft washer	
136-37	Throttle operating rod washer	
136-159	Primary throttle shaft washer	
136-160	Secondary throttle shaft washer	
136-174	Throttle lever adjusting screw washer	
150A-10	Pin spring	(4)
150A-21	Pin spring	
160-153	Step up piston	(2)
160 174S	Choke piston and link assembly	
170AX 515S	Thermostatic coil housing and rod assembly	
181-251S	Fast idle cam assembly	
186-70	Fuel bowl baffle	(2)

—Parts so marked are new and listed for the first time

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

CARTER CARBURETOR

DIVISION OF acf INDUSTRIES
INCORPORATED
ST. LOUIS 7, MO., U.S.A.

GENERAL BULLETIN

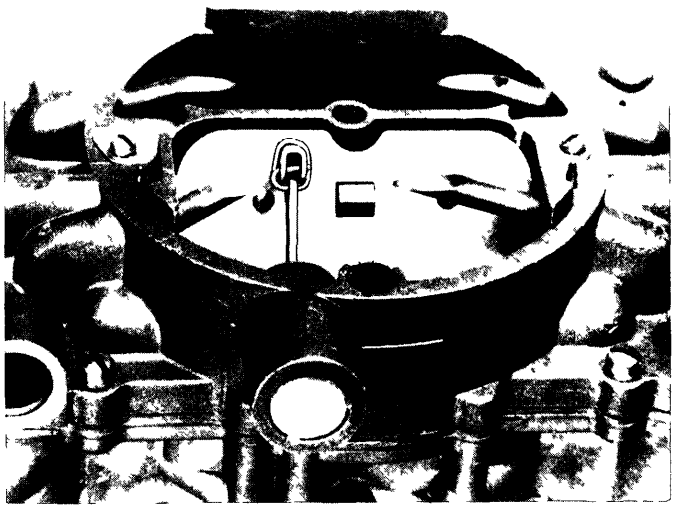
CARBURETER CONTRACT ACCOUNTS
FACTORY, P.I. & P.C.T. GRADUATES

BULLETIN NO. 16 DeSoto
DATE February 17, 1958

SUBJECT: 1958 DESOTO PERFORMANCE COMPLAINTS

STALLING ON ACCELERATION WITH A COLD ENGINE AFB-2642S FOUR BORE CARBURETER

Complaints have been received of the engine stalling after the initial start and upon the first few accelerations during the warm-up period. This difficulty has been traced to the choke valve being pulled open too far by the choke piston.



The following field modification has proven effective:

1. Remove the air cleaner. Hold the choke valve closed and take out the cotter pin attaching the choke piston link to the bracket on the choke valve.
2. Obtain a piece of straight wire 1-3/4 inches long and approximately .060 inches in diameter (1/16" welding rod), and pass one end through the two holes in the bracket on the choke valve so that it protrudes 1/8 inch on the other side. Bend the long end of the wire around the bottom of the bracket, forming a "U" with unequal length sides. Remove the wire from the bracket. Pass the long end through the hole in the piston link and the short end through the holes in the bracket. With the wire held tight against the bracket, fold the long end up behind the extension of the short end and over the top of the bracket, as shown in the illustration.

ACCELERATION COMPLAINTS (ENGINE AT OPERATING TEMPERATURE)

A few complaints have been received concerning a lag or flat spot in part throttle acceleration on 1958 DeSotos equipped with either the BBD-2637S Dual or AFB-2642S carbureters. The following carbureter changes will provide a slightly richer mixture to help overcome these complaints.

(over)

BBD-2637S DUAL CARBURETER

Install two (2) 75-998 (.027") step-up rods in place of the original 75-999 (.029") rods.

AFB-2642S FOUR BORE CARBURETER

Install two (2) 120-155 (.091") primary metering jets in place of the original 120-159 (.089") jets. The 120-155 jets are installed in the primary high speed circuit. A richer than standard step-up rod part 16-70 will be available shortly for the AFB-2642S carbureter. It may be used instead of the 120-155 jet. CAUTION - do not use the 16-70 step-up rod with the 120-155 jet as an excessively rich mixture will result.

Parts 75-998 and 120-155 have been used in other model carbureters and should be available in field stocks, however, an initial shipment of a limited number of each part is being made to Carter Central Distributors.

Carter warranty is not involved in either the choke or metering correction.

V. F. Thompson, Manager
Distribution Sales

RJM:dg

cc: Personnel and Extra Copies - Canada and U.S.A.

IMPORTANT THIS BULLETIN CONTAINS INFORMATI N OF VALUE TO YOU AND WAS PREPARED AT CONSIDERABLE EXPENSE TO BE OF SERVICE TO YOU FAILURE TO USE THIS INFORMATION MAY COST YOU MONEY WE SUGGEST THAT YOU ISSUE COPIES OF IT TO THOSE OF YOUR STAFF INTERESTED, SO THAT THEY CAN BE FILED IN REGULAR CARTER SALES AND SERVICE MANUAL.

FORM C-2914E

CARBURETER
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DE SOTO "V-8"

MODELS LS-1 & LS-2

1958

(All Transmissions)

BBD Dual Down-Draft Climatic® Control **Carbureter No. 2822S**

CARBURETER SPECIFICATIONS

For De Soto 8 Cylinder 350 (LS1), 360 (LS2) Cu. In. Engine: Vacuum at Idle 19.5 Inches

Dimensions: Flange dual, 4 bolt type. Throttle bore, 1-9/16 inch I D Primary venturi, 15/32 inch I. D Main venturi 1-5/16 inch I D

Vent: Inside, in air horn. Outside (2) in flange above throttle valve

Gasoline Intake: Size No 34 (111 inch) drill hole in needle seat.

Low Speed Circuit: Jet in venturi assembly, size (0295 inch) diameter Idle bleed, in venturi cluster screw, size (059 inch) diameter. Idle restriction, in venturi cluster screw, size (051 inch) diameter. Venturi idle bleed, in body, size (0355 inch) diameter. Idle port, slot type, length .198 inch, width 030 inch.

Idle Port Opening: 140 to .144 inch above upper edge of valve with valve tightly closed.

Lower Port (For Idle Adjustment Screw): Size 055 inch diameter.

Set Idle Adjustment Screw: 1/4 to 1 1/4 turns open For richer mixture turn screw out With gear shift in neutral position idle engine at 500 R P M

Main Nozzle: Nozzle is installed permanently DO NOT REMOVE

Main Vent Tube: Side holes 3—size 0292 inch 1—size 038 inch diameter

Accelerating Pump: Pump discharge jets (2—in venturi cluster), size 0275 inch diameter Intake ball check seat, size 130 to 140 inch diameter Discharge ball check seat size 110 to 120 inch diameter

Choke: Carter Climatic® Control cross over type, set at index Butterfly type, offset valve Choke heat suction hole, in air horn, size (0905 inch) diameter

Vacuum Spark Port: Horizontal, round end type, 030 by 090 inch Top of port to be 015 to 025 inch, above upper edge of valve with valve closed tight

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .017"	Ignition Timing Breaker Points to Open: 6° B. T. C. 10° B. T. C. (Export) At Vibration Damper	Float Setting 5/16 Inch (Use Gauge T109-280)	Idle Adjustment Screw Setting 1/4 to 1 1/4 Turns Open Idle Engine at 500 R. P. M. In Neutral

NOTE: These cars are equipped with Hydraulic Valve Lifters — NO ADJUSTMENT.

CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3732

Float Level: 5-16 inch (gauge T109-280) between top of each float ridge (at free end of float) and top surface of body casting To adjust, bend lip on float arm

Pump: 1 inch from top of the bowl cover to the top of the plunger shaft Install throttle connector rod in center hole (medium stroke) of throttle lever To adjust, bend throttle connector rod When throttle connector rod is installed in a different hole for seasonal operation the bowl vapor vent must be readjusted

Fast Idle Linkage Adjustment: With choke valve tightly closed and lug on fast idle cam contacting lip on choke shaft lever align center of fast idle screw with index mark on cam To adjust bend lip on choke shaft lever

Fast Idle Throttle Valve Clearance: 020 inch (gauge T109-29) between lower edge of valve and bore with adjusting screw on index mark of cam

Fast Idle on Car: 1400 R P M hot engine, with fast idle screw on index mark of cam

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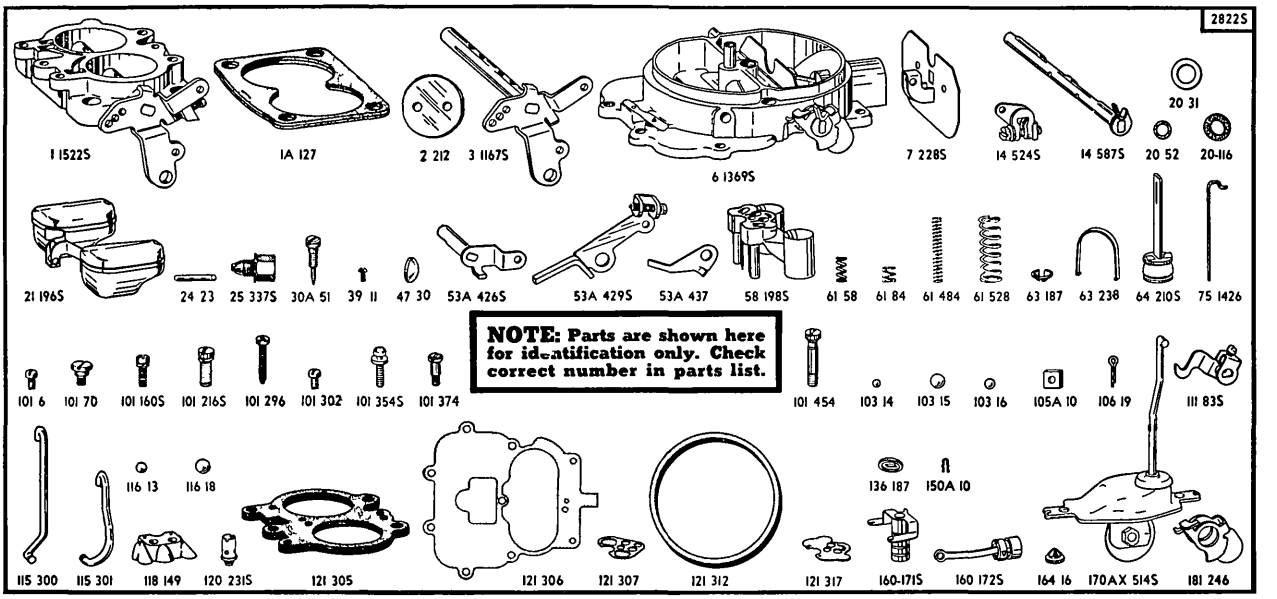
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Unloader 15/64 inch (gauge T109 32) between top edge of choke valve and inner wall of air horn with throttle valve wide open To adjust bend unloader finger on fast idle arm

Bowl Vapor Vent Adjustment 062" to 093" (gauge T109 234) between the heel of the rubber grommet and its seat on the bowl cover with throttle valve seated To adjust bend lip on vapor vent arm If the pump has been changed to the long or short stoke readjust the bowl vapor vent

Choke Adjustment (Cross Over Type) See Form 3691 1 Loosen mounting post lock nut and turn mounting post with screw driver until index mark on disk is positioned as listed on car burter specification page Hold in this position with screw driver and tighten lock nut NOTE Screw driver may be held in vise so that one hand may be used to support housing while tightening nut 2 After adjustment is completed and coil housing and rod assembly and carbureter is installed on engine lift cover disk and open and close choke valve manu ally to see if connector rod clears sides of hole in housing cover If rod does not clear hole in housing cover without binding replace with a new unit since connector rod cannot be bent without affecting calibration



De Soto — 1958 — Carbureter No. 2822S

WHEN SERVICING, USE GASKET ASSORTMENT No 325, RE-CARBURETION KIT No 1949N

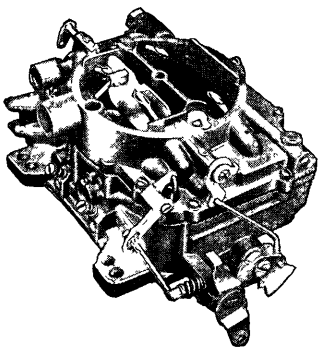
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF RE-CARBURETION KIT

Part No	PART NAME	
1-1522S	Body flange assembly	
1A-127	FLANGE GASKET	
2-212	Throttle valve	(2)
3-1167S	Throttle shaft and lever assembly	
6-1369S	Air horn assembly	
7-228S	Choke valve and bracket assembly	
14-524S	Choke lever assembly	
14-587S	Choke lever and shaft assembly	
20-31	Needle seat gasket	
20-52	STEP UP PISTON GASKET	
20-116	Main metering jet gasket	(2)
21-196S	Float and lever assembly	
24-23	Float lever pin	
25-337S	NEEDLE AND SEAT ASSEMBLY (.111")	
30A-51	Idle adjustment screw	(2)
39-11	Choke valve attaching screw	(2)
47-30	Welsh plug	
53A-426S	Pump arm and countershaft assembly	
53A-429S	Fast idle arm and screw assembly	
53A-437	Loose lever	
58-198S	Venturi cluster tube and nozzle assembly	
61-58	Throttle adjusting screw spring	
61-84	Idle adjustment screw spring	(2)
61-484	STEP UP PISTON SPRING	
61-528	Pump spring	
63-187	Intake check ball retainer	
63-238	Float lever pin retainer	
64-210S	PUMP PLUNGER AND ROD ASSEMBLY	
75-1426	—Step up rod (.031")	(2)
101-6	Pump arm screw	
101-70	Fast idle arm attaching screw	
101-160S	Air horn attaching screw and washer assembly	(8)

Part No.	PART NAME	
101-216S	Body flange attaching screw and washer assembly	(4)
101-296	Throttle and fast idle adjusting screw	(2)
101-302	Throttle valve attaching screw	(4)
101-354S	Choke lever clamp screw and washer assembly	
101-374	Step up piston plate screw	
101-454	—Venturi cluster screw	(2)
103-14	Lead shot	
103-15	Lead shot	(2)
103-16	Lead shot	(2)
105A-10	Choke lever clamp screw nut	
106-19	Cotter pin	
111-83S	Pump arm and screw assembly	
115-300	Throttle connector rod	
115-301	Fast idle connector rod	
116-13	Pump discharge check ball	
116-18	Pump intake check ball	
118-149	Venturi cover	
120-231S	—MAIN METERING JET ASSEMBLY (485 to 495 cc)—STANDARD	(2)
121-305	BODY FLANGE GASKET	
121-306	BODY GASKET	
121-307	VENTURI HOUSING GASKET	
121-312	AIR CLEANER GASKET	
121-317	—VENTURI COVER GASKET	
136-187	Pump spring retainer washer	
150A-10	Pin spring	(2)
160-171S	Step up piston and plate assembly	
160-172S	Choke piston and link assembly	
164-16	Grommet seal	
170AX-514S	Thermostatic coil housing and rod assembly	
181-246	Fast idle cam	

—Parts so marked are new and listed for the first time

NOTE **Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.**



DE SOTO "V-8"

MODELS

LS-1 "Power Pak,"

LS-3

1958

(Automatic Transmission)

AFB Four-Bore Down-Draft Climatic® Control Carbureters Nos. 2642S-2823S

CARBURETER SPECIFICATIONS

For De Soto 8 Cylinder 350 (LS-1), 360 (LS-3) Cu. In. Engine: Vacuum at Idle 19.5 Inches

Dimensions: Flange, four bore—4 bolt type.
Throttle bore, 1-7/16 inch.
Primary venturi size, primary side, 7/16 inch, secondary side, 11/32 inch I. D.
Main venturi size, 1-3/16 inch.

Vents: Inside (4) in air horn; Outside (4) in body, (5) in air horn.

Low Speed Circuit: (Primary side only)
Jet, size No. 66 (.033 inch) drill.
By-pass, size (.0492 inch) diameter.
Economizer, size (.0452 inch) diameter.
Idle bleed, size (.0492 inch) diameter.
Idle port, slot type, length .198 inch, width .030 inch.

Idle Port Opening: .142 to .148 inch above top edge of valve with valve tightly closed.

Set Idle Adjustment Screw: 3/4 to 2 1/4 turns open. For richer mixture turn screw out. Do not idle engine below 500 r. p. m. Transmission in neutral.

Main Nozzle: Install permanently. DO NOT REMOVE. Anti-percolator bleed, primary (tube in venturi assembly), size No. 68 (.031 inch) drill. Secondary (drilled hole in venturi assembly) size No. 60 (.040 inch) drill.

Main Vent Tube: (In venturi assembly) Side holes primary side 11—size No. 70 (.028 inch) 1—size No. 65 (.035 inch) drill; secondary side 2—size No. 57 (.043 inch) 1—size No. 70 (.028 inch) drill.

Accelerating Pump: Discharge jet (twin) primary side only, size No. 68 (.031 inch) drill. Intake ball check seat (screw plug) size .115 to .120 inch diameter. Discharge needle seat size No. 50 (.070 inch) drill.

Choke: Carter Climatic® Control Cross Over type, set (2642S) 2 points rich, (2823S on index). Butterfly type offset valve, primary side only. Choke heat suction hole, in air horn, size No. 44 (.086 inch) drill.

Vacuum Spark Port: Slot type (round end) .045 x .110 inch. Top of port .026 to .034 inch above top edge of valve with valve tightly closed.

Motor Tune-Up — Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .017"	Ignition Timing Breaker Points to Open: 6° B. T. C. At Vibration Damper	Float Setting (See Adjustments)	Idle Adjustment Screw Setting 3/4 to 2 1/4 Turns Open 500 R. P. M. In Neutral

NOTE: These cars are equipped with Hydraulic Valve Lifters — NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3733

FLOAT ALIGNMENT: Side of floats parallel to edge of casting. Minimum clearance between lever and air horn lugs without binding. To adjust, bend float lever.

FLOAT LEVEL: 5/16 inch (gauge T109-107) for 21-188S floats (identify by smooth sides); 7/32 inch (gauge T109-106) for 21-179S floats (identify by ribs on floats) between top of floats (at outer end) and air horn gasket. To adjust, bend float lever.

FLOAT DROP: 23/32 inch between top of floats (at outer end) and air horn gasket. To adjust, bend stop tabs on float brackets.

PUMP: 7/16 inch from the top of the bowl cover to the top of the plunger shaft with throttle connector rod in center hole (medium stroke) of pump arm. To adjust, bend throttle connector rod.

FAST IDLE LINKAGE ADJUSTMENT: With choke valve tightly closed and lug on outer choke shaft lever contacting stop on inner choke shaft lever align center of fast idle screw with index mark on cam. To adjust, bend fast idle connector rod.

FAST IDLE THROTTLE VALVE CLEARANCE: .012 inch (gauge T109-200) between lower edge of valve and bore with adjusting screw on index mark of cam.

FAST IDLE ON CAR: 1400 R. P. M. hot engine with fast idle screw on index mark of cam.

UNLOADER: 1/4 inch (gauge T109-31) between upper edge of choke valve and inner wall of air horn. To adjust, bend unloader lip on throttle lever.

SECONDARY THROTTLE LEVER ADJUSTMENT: 1. Block choke valve wide open. 2. With 3/8 inch between lower edge of primary valve and bore (opposite idle port) secondary valves should just start to open. To adjust, bend throttle operating rod. NOTE: at wide open throttle primary and secondary valves will reach full vertical position. 3. With primary and secondary throttle valves in tightly closed position there should be .010" to .030" (gauge T109-29) between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on secondary lever.

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: Crack throttle valves and manually open and close the choke valve. Tang on secondary throttle lever should freely engage in notch of lock-out dog. To adjust, bend tang on secondary throttle lever.

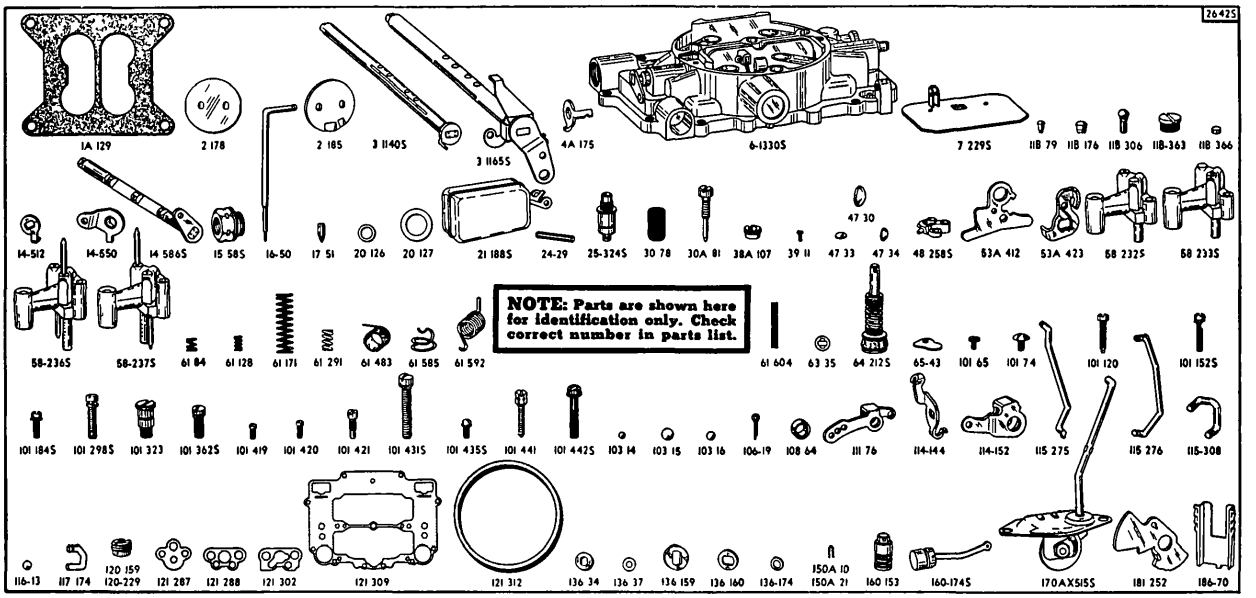
CHOKE ADJUSTMENT (CROSS OVER TYPE) SEE FORM 3691: 1. Loosen mounting post lock nut and turn mounting post with screw driver until index mark on disk is positioned as listed on carbureter specification page. Hold in this position with screw driver and tighten lock nut. NOTE: Screw driver may be held in vise so that one hand may be used to support housing while tightening nut. 2. After adjustment is completed and coil housing and rod assembly and carbureter is installed on engine lift cover disk and open and close choke valve manually to see if connector rod clears sides of hole in housing cover. If rod does not clear hole in housing cover without binding replace with a new unit since connector rod cannot be bent without affecting calibration.

TOOLS REQUIRED FOR SERVICING CARBURETERS:

T109-29	.020" Wire gauge	T109-106	7/32" Float gauge (late)
T109-31	1/4" Unloader gauge	T109-107	5/16" Float gauge (early)
T109-41	Bending tool	T109-200	.012" Wire gauge

T109-213 Bending tool

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De Soto—1958—Carbureters Nos. 2642S-2823S

WHEN SERVICING, USE GASKET ASSORTMENT No. 317; RE-CARBURETION KIT No. 1915N (2642S) No. 1948N (2823S)

PART NAMES IN CAPITAL LETTERS, LISTED BELOW INDICATE CONTENTS OF RE-CARBURETION KIT

Part No.	PART NAME	
1A-129	FLANGE GASKET	
2-178	Secondary throttle valve	(2)
2-185	Primary throttle valve	(2)
3-1140S	Secondary throttle shaft and dog assembly	
3-1165S	Primary throttle shaft and lever assembly	
4A-175	Primary throttle shaft dog	
6-1330S	Air horn assembly (2642S)	
6-1392S	Air horn assembly (2823S)	
7 229S	Choke valve and bracket assembly	
11B-69	Rivet plug (late prod)	(2)
11B-79	Rivet plug (2642S early prod (2), (2642S late prod (4) (2823S (4)	
11B-176	Idle port rivet plug	(2)
11B-306	Fuel passage rivet plug (early prod) (2642S)	
11B-363	Pump intake screw plug	
11B-366	Nozzle well lead plug	(4)
11B-385	Fuel passage plug	
14-512	Outside choke shaft lever	
14-550	Inside choke shaft lever	
14-586S	Choke lever and shaft assembly (2642S) (Sup by 14-616S)	
14-616S	Choke lever and shaft assembly	
15-58S	Fuel inlet assembly	
16-35	Step-up rod (0645" x 058") 1 size lean (2642S)	(2)
16-39	Step-up rod (066" x 061") 2 sizes lean (2642S)	(2)
16-45	STEP-UP ROD .0635" x 055" (2642S)	(2)
16-50	Step-up rod—standard 0645" x 055" (2642S) (Sup by 16 45)	(2)
16-70	STEP-UP ROD 062" x 055" (standard on 2823S) used as 1 size rich with 120 159 on 2642S to correct lean complaint	
17-51	Pump discharge check needle	
20-126	Needle seat gasket	(2)
20-127	Fuel inlet gasket	
21-179S	Float and lever assembly	(2)

Part No.	PART NAME	
21-188S	Float and lever assembly (2642S) (Sup by 21 179S)	(2)
24-29	Float lever pin	(2)
25-324S	Needle and seat assembly (1015") (2642S) (Sup by 25 343S)	(2)
25-343S	NEEDLE AND SEAT ASSEMBLY (0935")	(2)
30-78	Fuel inlet strainer	
30A-81	Idle adjustment screw	(2)
38A-107	Pump intake check ball seat	
39-11	Choke valve attaching screw	(2)
47-30	Choke piston welsh plug	
47-33	Venturi welsh plug	(4)
47-34	Spark port welsh plug	
48-258S	Pump jet and housing assembly	
53A-412	Lockout dog	
53A-423	Secondary throttle operating lever	
58-232S	Secondary venturi assembly (opposite pump)	
58-233S	Secondary venturi assembly (pump side)	
58-236S	Primary venturi assembly (choke side) (2642S) (Sup by 58 256S)	
58-237S	Primary venturi assembly (pump side) (2642S) (Sup by 58-257S)	
58-256S	Primary venturi assembly (opposite pump)	
58-257S	Primary venturi assembly (pump side)	
61-84	Idle adjusting screw spring	(2)
61-128	Throttle connector rod spring	
61-171	Pump spring (lower)	
61-291	Throttle lever adjusting screw spring	
61-483	Secondary throttle return spring (2642S) (Sup by 61-618)	
61-585	Step-up rod retaining spring	(2)
61-592	Throttle flex spring (2642S) (Sup by 61-623)	
61-604	VACUUM PISTON SPRING	(2)
61-618	Secondary throttle return spring	
61-623	Throttle flex spring	

Part No.	PART NAME	
63-35	Throttle connector rod retainer	
64-212S	PUMP PLUNGER, ROD AND SPRING ASSEMBLY	
65-43	Step up piston cover plate	(2)
101-65	Choke shaft lever attaching screw	
101-74	Throttle shaft lever attaching screw	(2)
101-120	Fast idle adjustment screw	
101-152S	Air horn attaching screw and washer assembly	
101-184S	Pump jet housing attaching screw and washer assembly	(2)
101-298S	Secondary venturi attaching screw and washer assembly (length 1 1/8") (2823S) (Sup by 101-379S on 2642S)	(4)
101-323	Fast idle cam attaching screw	
101-362S	Air horn attaching screw and washer assembly	(8)
101-379S	Secondary venturi attaching screw and washer assembly (length 1") (2642S late prod.)	(4)
101-419	Secondary throttle valve attaching screw	(4)
101-420	Primary throttle valve attaching screw	(4)
101-421	Pump arm attaching screw	
101-431S	Air horn attaching screw and washer assembly	
101-435S	Step up piston cover plate attaching screw and washer assembly	(2)
101-441	Throttle lever adjusting screw	
101-442S	Primary venturi attaching screw and washer assembly	(4)
103-12	Lead shot	(2)
103-14	Lead shot (.180" dia.)	
103-15	Lead shot (.240" dia.)	
103-16	Lead shot	
106-19	Cotter pin	
108-64	Fast idle cam spacer (2642S) (Sup by 181-251S)	
111-76	Pump arm	
114-144	Primary throttle shaft arm (outer)	
114-152	Primary throttle shaft arm (inner)	

Part No.	PART NAME	
115-275	Choke connector rod	
115-276	Throttle connector rod	
115-308	Throttle operating rod	
116-13	Pump intake check ball	
117-174	Pump connector link	
120-155	Primary metering jet (.091") 1 size rich (Use with 16-45 to correct lean complaint) (2642S)	
120-159	PRIMARY METERING JET (.089")	(2)
120-186	Secondary metering jet (.061") (2642S)	(2)
120-193	Secondary metering jet (.057") (2823S)	
120-226	Secondary metering jet (.065") (2642S) (Sup by 120-186)	(2)
121-287	PUMP JET HOUSING GASKET	
121-288	SECONDARY VENTURI CLUSTER GASKET	(2)
121-302	PRIMARY VENTURI CLUSTER GASKET	(2)
121-309	AIR HORN GASKET	
121-312	AIR CLEANER GASKET	
136-34	Choke shaft washer	
136-37	Throttle operating rod washer	
136-159	Primary throttle shaft washer	
136-160	Secondary throttle shaft washer	
136-174	Throttle lever adjusting screw washer	
150A-10	Pin spring	(4)
150A-21	Pin spring	
160-153	Step up piston	(2)
160-174S	Choke piston and link assembly (2642S)	
160-194S	Choke piston and link assembly (2823S)	
170AU-515S	Thermostatic coil, housing and rod assembly (2823S)	
170AX-515S	Thermostatic coil, housing and rod assembly (2642S)	
181-251S	Fast idle cam and collar assembly	
181-252	Fast idle cam (2642S) (Sup. by 181-251S)	
186-70	Fuel bowl baffle	(2)

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

CARBURETER
TRADE MARK REG. U. S. PAT. OFF.
MARCA REGISTRADA

CARTER MODEL AFB CARBURETER FOR DESOTO (SERVICE ADJUSTMENT PROCEDURE)

NOTE: The parts and specification pages referred to are catalog pages. These pages can be obtained from Carter Carburetor, Catalog Department, St. Louis (7), Missouri. Specify the carbureter number found on the base of the carbureter, when requesting specification pages.

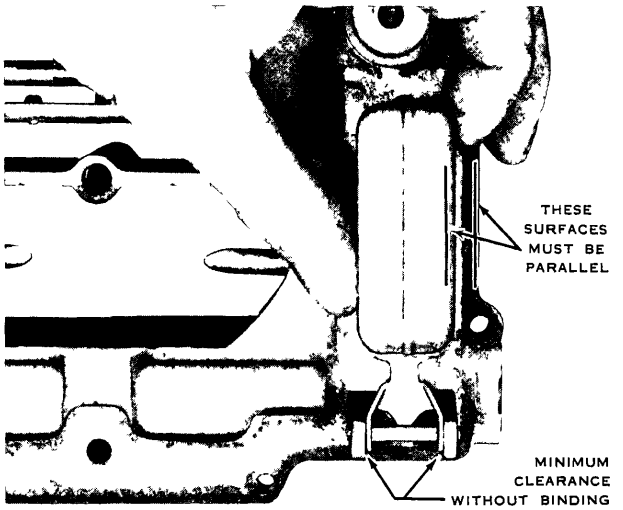


Figure 1

FLOAT ALIGNMENT ADJUSTMENT (Fig. 1):

1. Sight down the side of the float shell to determine if the side of the float is parallel to the outer edge of the air horn casting. TO ADJUST: Bend float lever by applying pressure to the end of the float shell with the fingers while supporting the float lever with the thumb.

   CAUTION: To avoid damaging the float, apply only enough pressure to bend float lever.

2. After aligning float, remove as much clearance as possible between arms of float lever and lugs on air horn by bending the float lever. Arms of float lever should be as parallel to the inner surfaces of lugs on air horn as possible.

   Floats must operate freely without excess clearance on its hinge pin.

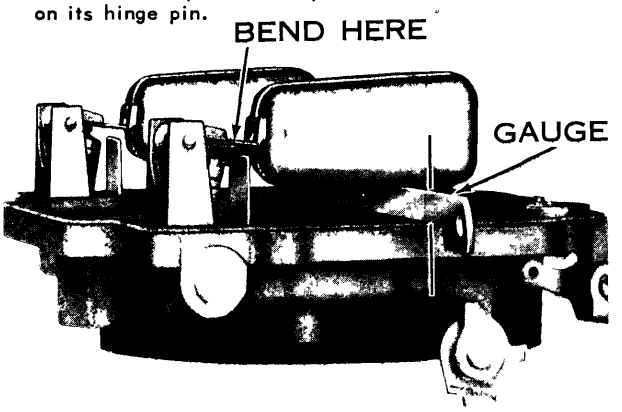


Figure 2

FLOAT LEVEL ADJUSTMENT (Fig. 2):

With air horn inverted, bowl cover gasket in place and needle seated, the clearance between top of float (at out r end) and air horn gasket should be as list d on carbur ter specification page. To adjust, bend float arm. Adjust both floats. Recheck float alignm nt.

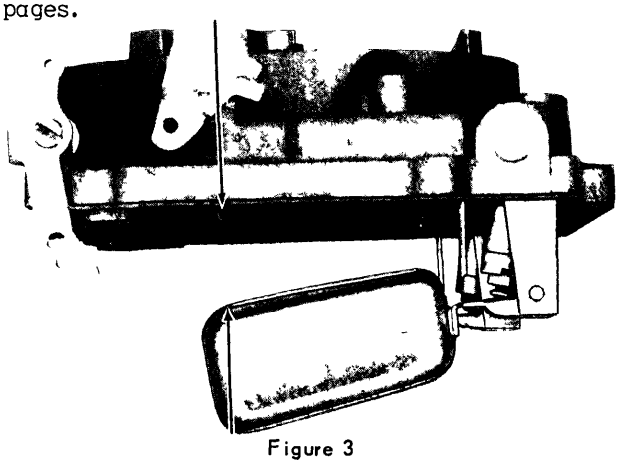


Figure 3

FLOAT DROP ADJUSTMENT (Fig. 3):

With bowl cover held in upright position and measuring from outer end of each float, the distanc b twe n top of floats and bowl cover gasket should be as listed on carbureter specification page. To adjust, bend st p tabs on float brackets.

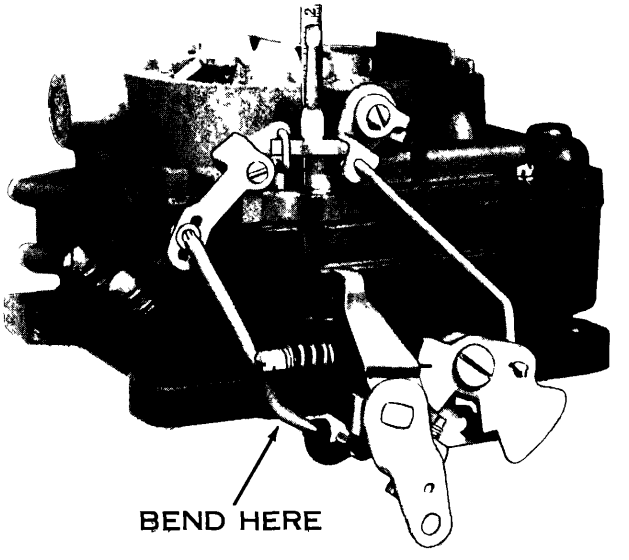


Figure 4

PUMP ADJUSTMENT (Fig. 4):

1. Back out idle speed screw until throttle valv s seat in bores of carbureter. NOTE: Be sur fast idle adjusting screw does not contact fast idle cam and hold throttle valves open.
2. With throttle connector rod in center hole (medium strok) of pump arm, the distance from the top of the bowl cover to the top of the plunger shaft should b as listed on carburet r specificati n page.
3. Adjust by bending throttle connector rod at lower angle (use tool T109-213).

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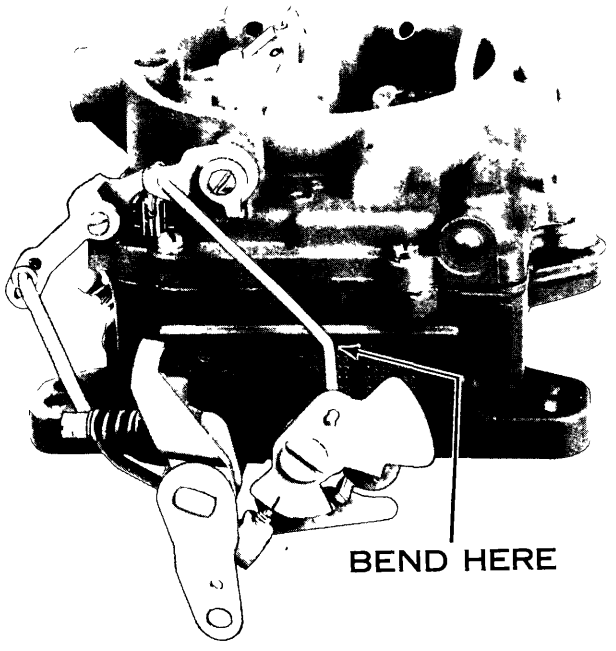


Figure 5

FAST IDLE LINKAGE ADJUSTMENT (Fig. 5):

With choke valve tightly closed and lug on outer choke shaft lever contacting stop on inner choke shaft lever align center of fast idle screw with index mark on cam. To adjust, bend fast idle connector rod. (Use tool T109-213.)

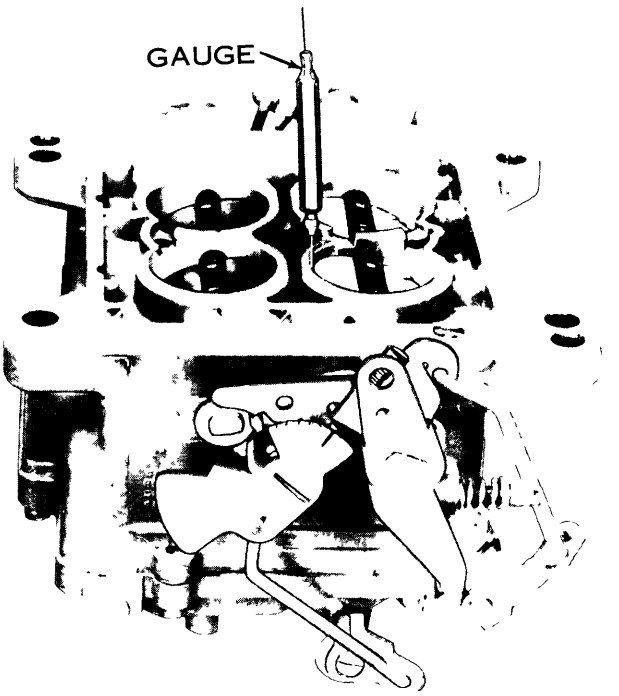


Figure 6

FAST IDLE THROTTLE VALVE CLEARANCE ADJUSTMENT (Fig. 6):

With choke valve tightly closed, tighten fast idle adjusting screw (on index mark of cam) until the clearance between throttle valve and bore of carbureter, side opposite idle port, is as listed on carbureter specification page.

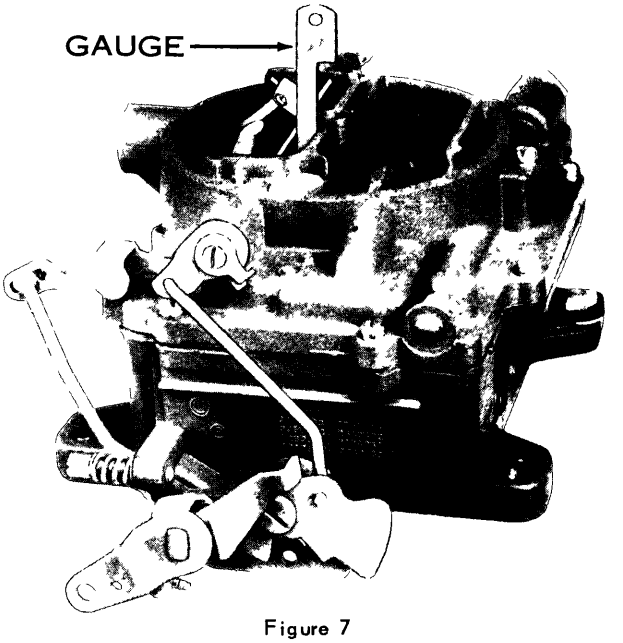


Figure 7

UNLOADER ADJUSTMENT (Fig. 7):

With throttle wid open, the clearanc between upp r edge of choke valve and inner wall of air horn should b as listed on carbureter specification pag . To adjust, bend unloader lip on throttle shaft lever. (Use tool T109-41.)

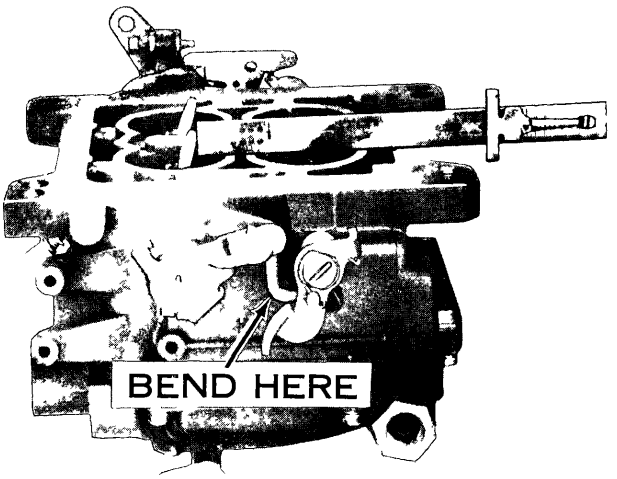


Figure 8A

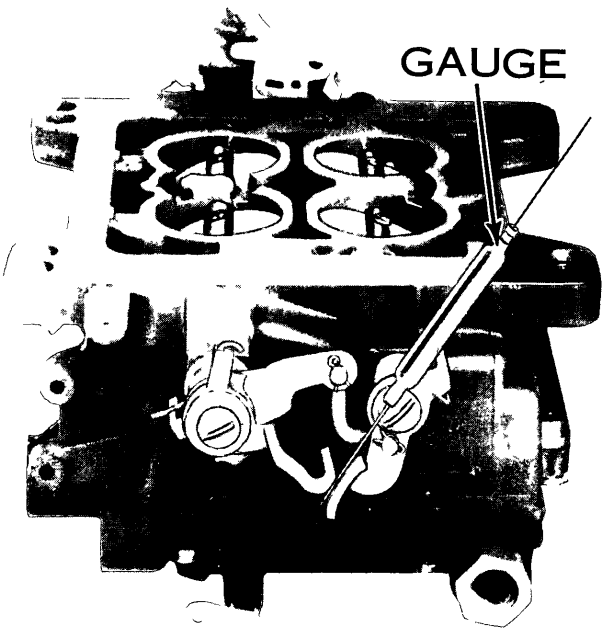


Figure 8B

SECONDARY THROTTLE LEVER ADJUSTMENT (Figs. 8A & 8B):

1. Block choke valve wide open.
2. Secondary throttle valves should just start to open when primary throttle valves are opened to the clearance as listed on specification page between lower edge of valve and bore (opposite idle port). To adjust, bend throttle operating rod. (Use bending tool T109-213). (See Fig. 8A) NOTE: Primary and secondary throttle valves should reach wide open position, full vertical, at the same time.
3. With primary and secondary throttle valves in tightly closed position, there should be the clearance as listed on specification page between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on secondary lever. (See Fig. 8B)

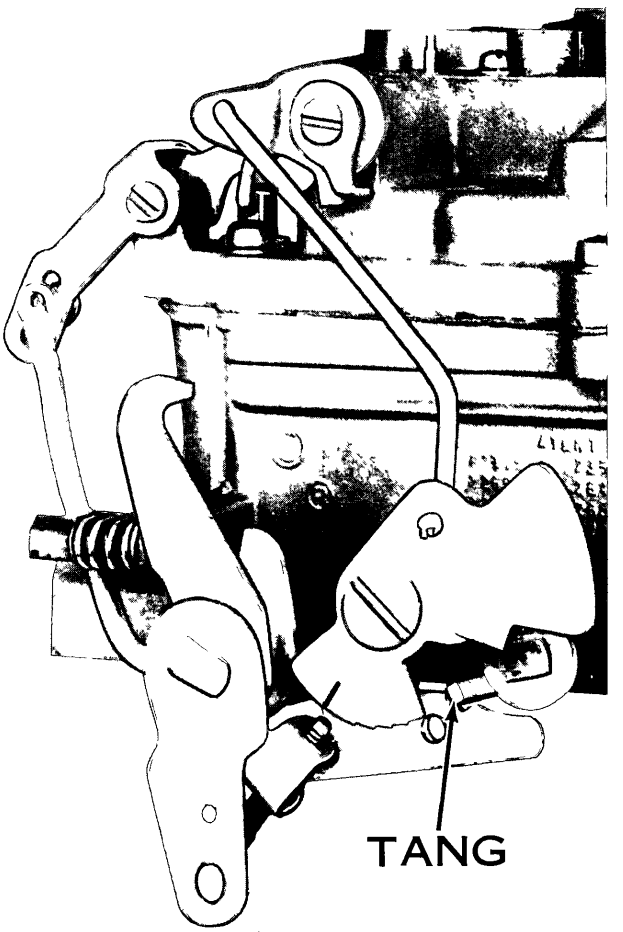


Figure 9

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT (Fig. 9):

Crack throttle valves and manually open and close the choke valve. Tang on secondary throttle lever should freely engage in notch of lock-out dog. If necessary to adjust, bend tang on secondary throttle lever.

NOTE: See last page for pertinent service information.

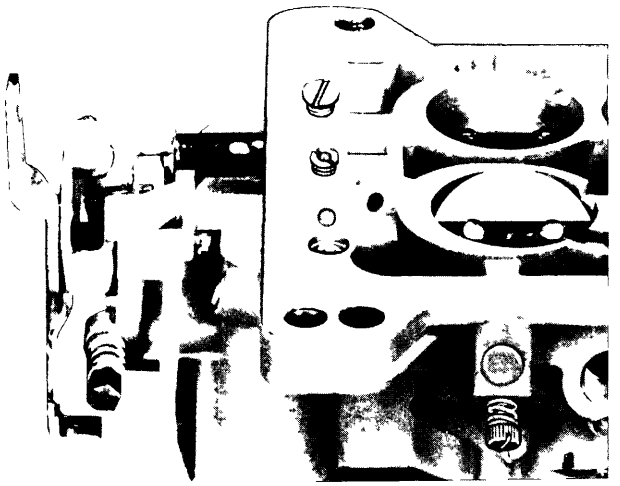


Figure 10

(Fig. 10):

Pump intake check ball, seat and screw plug are removed by inverting carbureter and removing from lower side of flange.

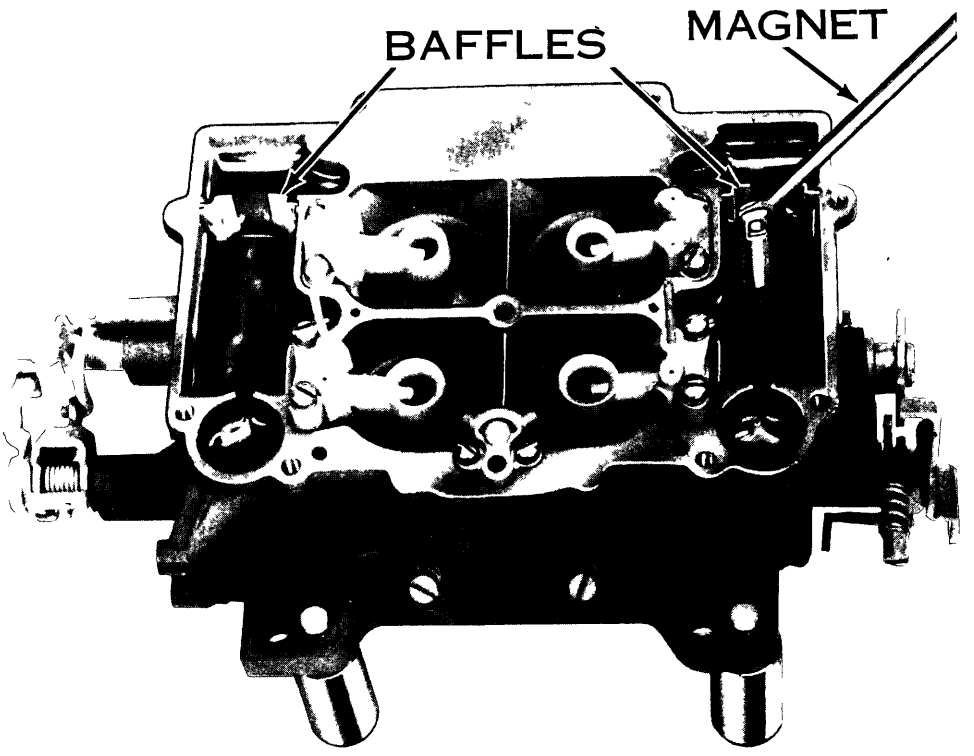


Figure 11

(Fig. 11):

Flooding, stumble on acceleration and other performance complaints are, in many instances, caused by the presence of dirt, water or other foreign matter in the carbureter. To aid in diagnosing the cause of the complaint, the carbureter should be carefully removed from the engine without draining the fuel from the bowl. The contents of the fuel bowl may then be examined for contamination as the carbureter is disassembled.

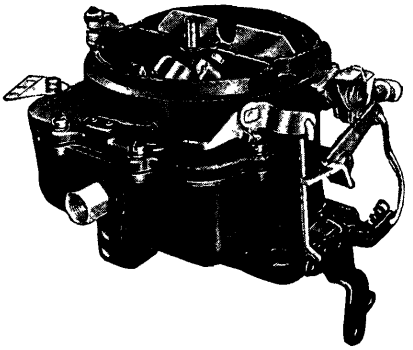
Check the fuel in the bowl for contamination by dirt, water, gum or other foreign matter. A magnet moved through the fuel in the bowl will pick up and identify any iron oxide dust that may have caused intake needle and seat leakage.

Inspect gasketed surfaces between body and air horn. Small nicks or burrs should be smoothed down to eliminate air or fuel leakage. Be especially particular when inspecting the top surface of the inner wall of the bowl around the vacuum piston passage. A poor seal at this location may contribute to a "cutting-out" on turns complaint.

Install fuel baffles as shown (Fig. 11) to prevent damage to floats. Use caution when installing air horn assembly. Baffles on air horn assembly must fit inside of fuel bowl baffles toward primary side of carbureter.

Fill the carbureter bowl with clean fuel before installing on the manifold. This will help prevent dirt trapped in the fuel system from being dislodged by the free flow of fuel as the carbureter is primed. The operation of the floats and intake needle and seats may be checked under pressure if a fuel pump is used at the bench to fill the carbureter bowl. Operate the throttle several times and visually check the discharge from the pump jets.

Before installing the carbureter, hold choke valve open and turn the idle speed screw until it just contacts the throttle lever, then 1/2 a turn more to open the throttle valves enough to keep the engine running until the idle mixture and final R.P.M. adjustment can be made.



DE SOTO--1958
MODELS LS1 & LS2
1958
2637S — Automatic Transmission
2772S — Standard Transmission

BBD Dual Down-Draft Climatic® Control Carbureters Nos. 2637S-2772S

CARBURETER SPECIFICATIONS

For De Soto 8 Cylinder 350 (LS1), 360 (LS2) Cu In Engine Vacuum at Idle 19 5 Inches

Dimensions Flange dual 4 bolt type Throttle bore 1 9/16 inch I D Primary venturi 15/32 inch I D Main venturi 1 5/16 inch I D

Vent Inside in air horn Outside (2) in flange above throttle valve

Gasoline Intake Size No 34 (111 inch) drill hole in needle seat

Low Speed Circuit Jet in venturi assembly size (2637S) (0295 inch) (2772S) (0315 inch) diameter Idle bleed in venturi cluster screw size (2637S) (055 inch) (2772S) (059 inch) diameter Idle restriction in venturi cluster screw size (051 inch) diameter Venturi idle bleed in body size (2637S early prod) (0625 inch) (2637S late prod) (0355 inch) (2772S) No 60 (040 inch) drill Idle port slot type length 198 inch width 030 inch

Idle Port Opening 140 to 144 inch above upper edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw) Size 055 inch diameter

Set Idle Adjustment Screw 1/2 to 1 1/2 turns open For richer mixture turn screw out With gear shift in neutral position idle engine at 500 R P M

Main Nozzle Nozzle is installed permanently DO NOT REMOVE

Main Vent Tube Side holes (2637S early prod) 2—size No 69 (0292 inch) 1—size No 62 (038 inch) (2637S late prod) 3—size No 69 (0292 inch) 1—size No 62 (038 inch) (2772S) 3—size No 69 (0292 inch) drill

Accelerating Pump Pump discharge jets (2—in venturi cluster) size 0275 inch diameter Intake ball check seat size 130 to 140 inch diameter Discharge ball check seat size 110 to 120 inch diameter

Choke Carter Climatic® cross over type set at index Butterfly type offset valve Choke heat suction hole in air horn size (0905 inch) diameter

Vacuum Spark Port Horizontal round end type 030 by 090 inch Top of port to be 015 to 025 inch above upper edge of valve with valve closed tight

Motor Tune-Up — Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open	Float Setting	Idle Adjustment Screw Setting
035"	017"	6° B T C 10° B T C (Export Std Trans) At Vibration Damper	5/16 Inch (Use Gauge T109-280)	1/2 to 1 1/2 Turns Open Idle Engine at 500 R. P. M In Neutral

NOTE These cars are equipped with Hydraulic Valve Lifters — NO ADJUSTMENT.

CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3732

Float Level 5/16 inch (gauge T109-280) between top of each float ridge (at free end of float) and top surface of body casting To adjust bend lip on float arm

Pump 1 inch from top of the bowl cover to the top of the plunger shaft Install throttle connector rod in center hole (medium stroke) of throttle lever To adjust bend throttle connector rod When throttle connector rod is installed in a different hole for seasonal operation the bowl vapor vent must be readjusted

Fast Idle Linkage Adjustment With choke valve tightly closed and lug on fast idle cam contacting lip on choke shaft lever align center of fast idle screw with index mark on cam To adjust bend lip on choke shaft lever

Fast Idle Throttle Valve Clearance. 020 inch (gauge T109 29) between lower edge of valve and bore with adjusting screw on index mark of cam

Fast Idle on Car 1400 R P M hot engine with fast idle screw on index mark of cam

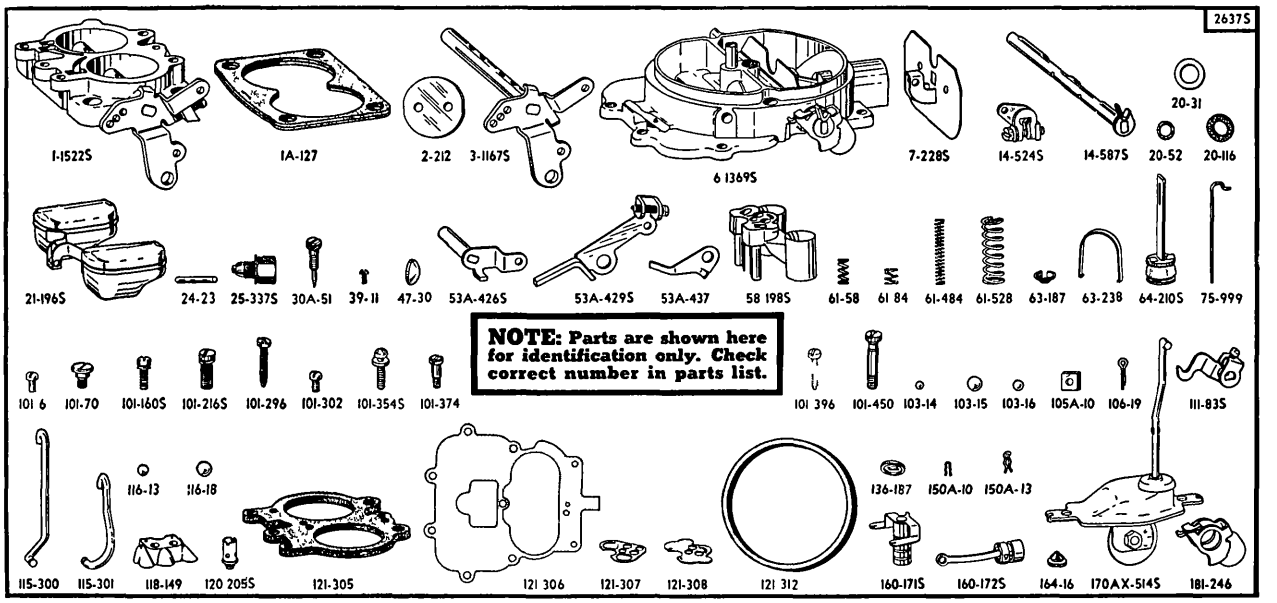
Unloader 15/64 inch (gauge T109 32) between top edge of choke valve and inner wall of air horn with throttle valve wide open To adjust bend unloader finger on fast idle arm

Bowl Vapor Vent Adjustment 062" to 093" (gauge T109 234) between the heel of the rubber grommet and its seat on the bowl cover with throttle valve seated To adjust bend lip on

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vapor vent arm. If the pump has been changed to the long or short stroke readjust the bowl vapor vent.

Choke Adjustment (Cross Over Type) See Form 3691: 1. Loosen mounting post lock nut and turn mounting post with screw driver until index mark on disk is positioned as listed on carbureter specification page. Hold in this position with screw driver and tighten lock nut. NOTE: Screw driver may be held in vise so that one hand may be used to support housing while tightening nut. 2. After adjustment is completed and coil housing and rod assembly and carbureter is installed on engine lift cover disk and open and close choke valve manually to see if connector rod clears sides of hole in housing cover. If rod does not clear hole in housing cover without binding replace with a new unit since connector rod cannot be bent without affecting calibration.



De Soto — 1958 — Carbureters Nos. 2637S-2772S

WHEN SERVICING, USE GASKET ASSORTMENT No. 325; RE-CARBURETION KIT No. 1925N
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF RE-CARBURETION KIT

Part No.	PART NAME	
1-1522S	—Body flange assembly	
1A-127	—FLANGE GASKET	
2-212	—Throttle valve	(2)
3-1167S	—Throttle shaft and lever assembly	
6-1369S	—Air horn assembly	
7-228S	Choke valve and bracket assembly	
14-524S	Choke lever assembly	
14-587S	—Choke lever and shaft assembly	
20-31	Needle seat gasket	
20-52	STEP-UP PISTON GASKET	
20-116	Main metering jet gasket	(2)
21-196S	—Float and lever assembly.	
24-23	Float lever pin	
25-337S	—NEEDLE AND SEAT ASSEMBLY	
30A-51	Idle adjustment screw	(2)
39-11	Choke valve attaching screw	(2)
47-30	Welsh plug	
53A-426S	—Pump arm and countershaft assembly	
53A-429S	—Fast idle arm and screw assembly	
53A-437	—Loose lever	
58-198S	—Venturi cluster tube and nozzle assembly (2637S)	
58-292S	—Venturi cluster tube and nozzle assembly (2772S)	
61-58	Throttle adjusting screw spring	
61-84	Idle adjustment screw spring	(2)
61-484	STEP-UP PISTON SPRING	
61-528	Pump spring	
63-187	Intake check ball retainer	
63-238	—Float lever pin retainer	
64-210S	—PUMP PLUNGER AND ROD ASSEMBLY	
75-998	Step-up rod (.027") (2772S) (used as 1 size rich on 2637S to correct lean complaint)	
75-999	Step-up rod (.029") (2637S)	(2)
101-6	Pump arm screw	
101-70	Fast idle arm attaching screw	
101-160S	Air horn attaching screw and washer assembly	(8)
101-216S	Body flange attaching screw and washer assembly	(4)
101-296	Throttle and fast idle adjusting screw	(2)
101-302	Throttle valve attaching screw	(4)
101-354S	Choke lever clamp screw and washer assembly	
101-374	Step-up piston plate screw	
101-396	Fast idle adjusting screw (2637S) (Sup. by 101-296)	
101-450	—Venturi cluster screw (2637S)	(2)
101-454	Venturi cluster screw (2772S)	
103-14	Lead shot	
103-15	Lead shot	(2)
103-16	Lead shot	(2)
105A-10	Choke lever clamp screw nut	
106-19	Cotter pin	
111-83S	—Pump arm and screw assembly	
115-300	—Throttle connector rod	
115-301	—Fast idle connector rod	
116-13	Pump discharge check ball	
116-18	Pump intake check ball	
118-149	—Venturi cover	
120-205S	MAIN METERING JET ASSEMBLY (426 to 434 cc)—STANDARD	(2)
120-206S	Main metering jet assembly (402 to 410 cc)—1 size lean	(2)
120-215S	Main metering jet assembly (378 to 386 cc)—2 sizes lean	(2)
121-305	—BODY FLANGE GASKET	
121-306	—BODY GASKET	
121-307	—VENTURI HOUSING GASKET	
121-308	—Venturi cover gasket (Sup. by 121-317)	
121-312	—Air cleaner gasket	
121-317	—VENTURI COVER GASKET	
136-187	Pump spring retainer washer	
150A-10	Pin spring	(2)
150A-13	Pin spring (Sup. by 150A-10)	(2)
160-171S	—Step-up piston and plate assembly	
160-172S	—Choke piston and link assembly	
164-16	—Grommet seal	
170AX-514S	—Thermostatic coil, housing and rod assembly	
181-246	—Fast idle cam	

—Parts so marked are new and listed for the first time.

NOTE: Figures in parentheses indicate number of pieces used in ne carbureter. Where no figure is shown, nly one is used.

Form 3732
October, 1957

CARTER CARBURETOR

DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

File Under DeSoto

CARTER MODEL BBD CARBURETER FOR DESOTO
(SERVICE ADJUSTMENT PROCEDURE)

NOTE: The parts and specification pages referred to are catalog pages. These pages can be obtained from Carter Carburetor, Catalog Department, St. Louis (7), Missouri. Specify the carbureter number found on the brass identification tag, when requesting specification pages.



Figure 1

FLOAT ADJUSTMENT (Fig. 1):

This adjustment must be made with the bowl cover gasket removed. Hold the lip on float arm against the seated intake needle, making sure the fl at pin is at the bottom of its guide slots. The distance (A) from the top surface of the body casting to the top of each float (at free end) should be as listed on carbureter specification page. If one float is lower than the other, equalize by bending the float arm. If b th floats require the same correction, adjust by bending lip on float arm. The floats must not rub anywh re against the inner walls of the bowl. If necessary, bend float arms slightly to provide clearanc n all sides of floats.

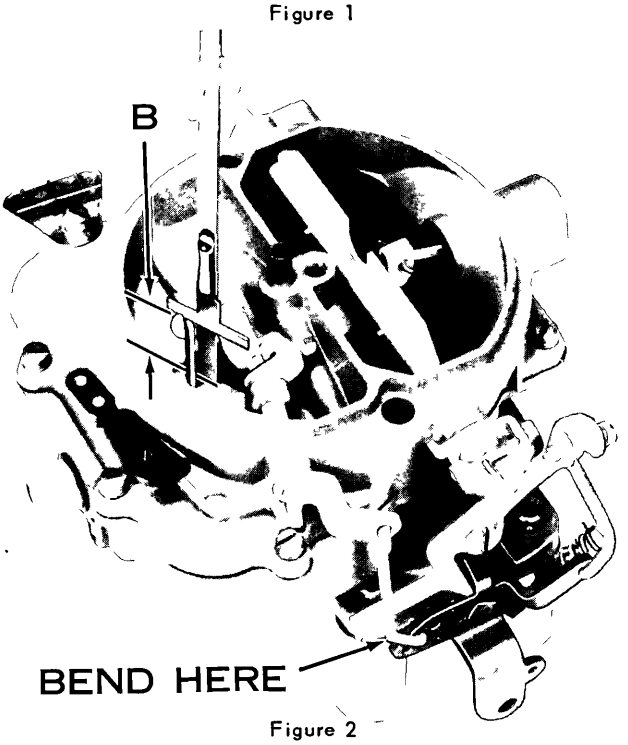


Figure 2

PUMP ADJUSTMENT (Fig. 2):

1. Back out throttle adjustment screw and open choke valve so that throttle valves seat in bores of carbureter.
2. Install throttle connector rod in the hole in the throttle lever specified on carbureter specification page.
3. The distance (B) from the top of the bowl cover to th top of the plunger shaft should be as specified on carbur t r sp cification pag .
4. Adjust by b nding pump c nnector rod. (Us bending tool T109-213)

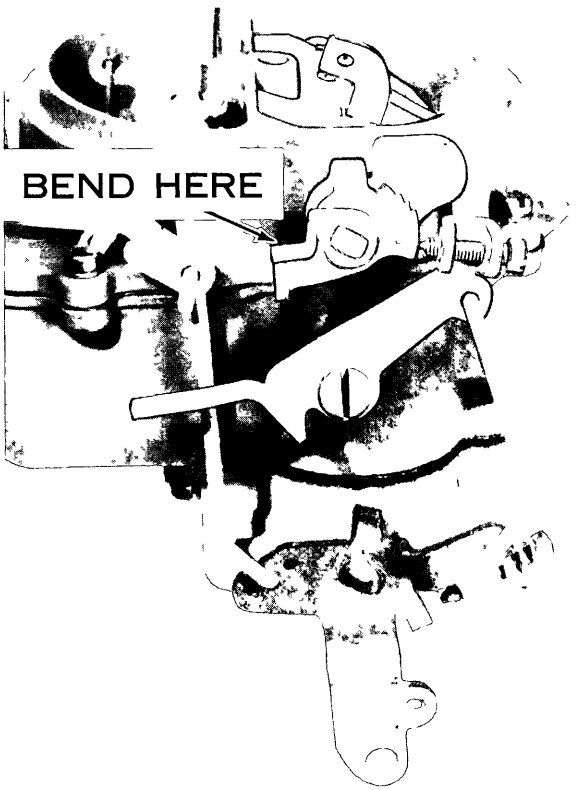


Figure 3

FAST IDLE LINKAGE ADJUSTMENT (Fig. 3):

With choke valve tightly closed and lug n fast idl cam contacting lip n choke shaft l ver align center of fast idle scr w with index mark on cam. To adjust bend lip on choke shaft l ver (use to l T109-22).

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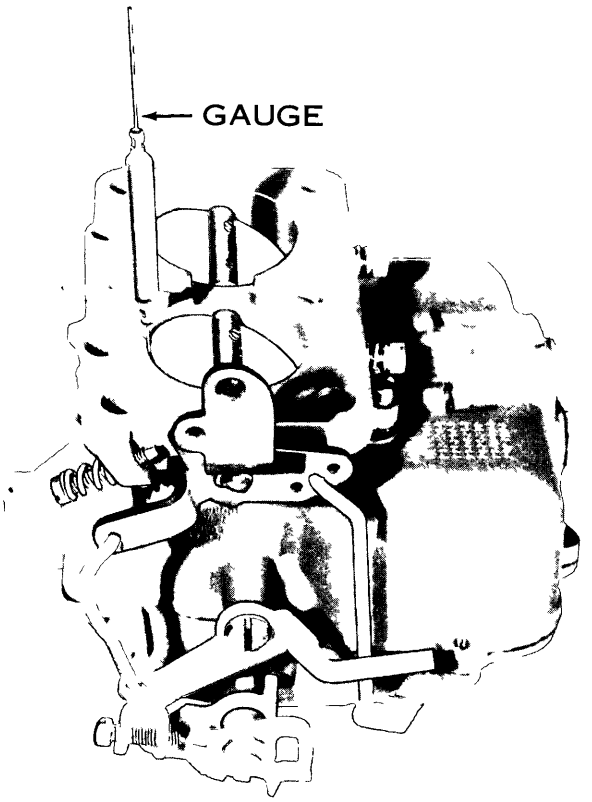


Figure 4

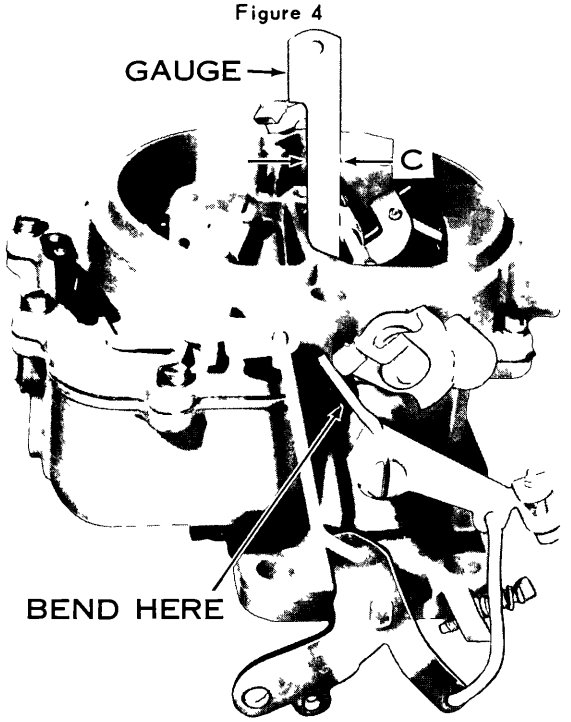


Figure 5

UNLOADER ADJUSTMENT (Fig. 5):

1. Hold throttl valves wide open.
2. Close choke valve as far as possible without forcing.
3. Clearance (C) between top edge of choke valve and inner wall of air horn should be as listed on carbur t r sp cificatıon page.
4. Adjust by bending unloader finger n fast idle arm. (Use tool T109-22).

FAST IDLE THROTTLE VALVE CLEARANCE ADJUSTMENT (Fig. 4):

1. Be sure choke valve is closed.
2. Adjust fast idle adjusting screw against index mark of cam (revolve cam if necessary) until the clearance between throttle valve (side opposite port) and bore is as listed on carbureter specification page.



Figure 6

BOWL VAPOR VENT ADJUSTMENT (Fig. 6):

With throttle valve tightly closed the clearance between the heel of the rubber grommet and its seat on the bowl cover should be as listed on carbureter specification page. To adjust, bend lip on vapor vent arm (Use tool T109-22)

CAUTION:

When servicing carbureter use elevating legs (T109-289U) to prevent damaging throttle valves.

Form 5245A

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

DE SOTO 2532S
October, 1956
Revised December, 1956

DESOTO "V-8"

MODEL

S-27 POWER PACKAGE

1957

(All Transmissions)

WCFB Four-Bore Down-Draft Climatic® Control **Carbureter No. 2532S**

CARBURETER SPECIFICATIONS

For DeSoto 8 Cylinder Engine: 3.6875 Inch Bore, 3.8 Inch Stroke

Dimensions: Flange size 1¼ inch Four Bore—4 bolt type
Primary venturi size, 11/32 inch I. D
Main venturi size 1-3/16 inch I D

Vents: Inside, (5).

Gasoline Intake: Size No 42 (0935 inch) drill in needle seat

Low Speed Jet Tube Jet size (035 inch) diameter By-pass, tube in body size (057 inch) diameter Economizer plug in body size (0492 inch) diameter Idle bleed, in body, size No 46 (081 inch) drill

Idle Port. Upper slot type, primary length 140 inch, width 030 inch Secondary, length 103 inch; width 030 inch

Idle Port Opening: Primary 092 to 098 inch, secondary 065 to 071 inch above top edge of valve with valve tightly closed

Lower Port: Primary (for idle adjustment screw), size No 53 (0595 inch) drill Secondary (no idle adjustment screw), size No 57 (043 inch) drill.

Set Idle Adjustment Screw: ½ to 1½ turns open For richer mixture turn screw out Do not idle engine below 500 R P M in neutral.

Main Nozzle: Installed permanently DO NOT REMOVE Anti percolating jet (4) size No 70 (028 inch) drill

Metering Rod: (Vacumeter type) see parts list for size

Metering Rod Jet: Primary Size 0945 inch diameter Sec ondary Size 067 inch diameter

Accelerating Pump: Discharge jet (twin) primary side only size No 74 (0225 inch) drill Intake ball check seat, size 115 to 120 inch diameter Discharge needle seat size No 50 (070 inch) drill Relief passage (vent) to fuel chamber size No 42 (0935 inch) drill

Choke: Carter Climatic® Control Cross Over Type set on index Butterfly type offset choke valve primary side only Choke heat suction hole restriction in piston housing, size No 40 (098 inch) drill

Vacuum Spark Port: Horizontal slot (round end) 045 x 110 inch Top of port 022 to 032 inch above top edge of valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .017"	Ignition Timing Breaker Points to Open 6° B. T. D. C. At Vibration Damper	Float Setting See Adjustments	Idle Adjustment Screw Setting ½ to 1½ Turns Open Idle engine at 500 R.P.M. in neutral

NOTE These cars are equipped with Hydraulic Valve Lifters—No Adjustment.

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: Two separate float adjustments must be made—lateral and vertical. **LATERAL ADJUSTMENT:** With bowl cover assembly inverted, bowl cover gasket removed and float resting on seated needle, place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting. Side of floats should just clear the vertical uprights of float gauge. Adjustment should be made by bending arms of floats. **VERTICAL ADJUSTMENT:** With float gauge in same position, floats should just clear the horizontal portion of gauge. Vertical distance between top of float and machined surface of casting must be 7/32" (gauge T109-283) for primary floats; and 9/32" (gauge T109-284) for secondary floats. Adjust by bending float arms.

FLOAT DROP ADJUSTMENT: With bowl cover held in upright position and measuring from center of floats, the distance between top of floats and bowl cover should be 23/32" for primary floats and 25/32" for secondary floats. Adjust by bending stop tabs on float bracket.

PUMP ADJUSTMENT: Install pump connector link in outer hole (long stroke) of pump arm, with ends extending toward countershaft arm. Back out throttle lever set screw until throttle valves seat in bores of carbureter. Hold straight edge across top of dust cover boss at pump arm. The flat on top of pump arm should be parallel to straight edge. Adjust by bending throttle connector rod at lower angle. (Use tool T109-213.)

METERING ROD ADJUSTMENT: Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows: 1. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw. 2. With metering rods in place, press down on vacumeter link until metering rods bottom in carbureter body casting. 3. Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link. Hold in place and carefully tighten clamp screw.

BOWL VAPOR VENT ADJUSTMENT: This adjustment should be made after completing pump and metering rod adjustments. Install dust cover and dust cover gasket. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter. There should be 1/16 inch (gauge T109-197) between lower edge of bowl vapor vent valve and dust cover. To adjust, remove dust cover and bend vapor vent arm.

FAST IDLE ADJUSTMENT: (a) Loosen choke lever clamp screw on choke shaft. Insert .020" feeler gauge (T109-29) between lip of fast idle cam and boss of flange casting. Hold choke valve tightly closed and take slack out of linkage by pressing lever towards closed position — hold in place and tighten clamp screw. (b) With choke valve tightly closed, tighten fast idle adjusting screw until there is .010" (gauge T109-200) opening between throttle valve and bore of carbureter (side opposite idle port). Be sure fast idle adjusting screw is on high step of cam while making this adjustment.

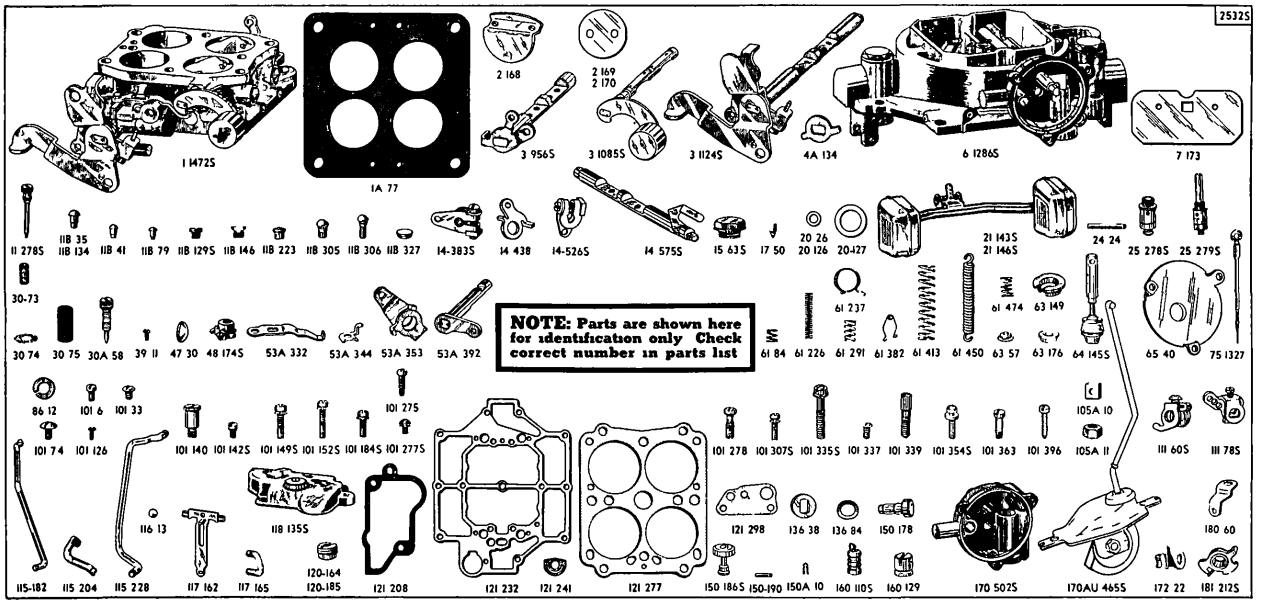
FAST IDLE ON CAR: 1350 to 1400 R.P.M.

UNLOADER ADJUSTMENT: With throttle wide open there should be 11/64" clearance between upper edge of choke valve and inner wall of air horn (gauge T109-166). Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41).

SECONDARY THROTTLE LEVER ADJUSTMENT: The stop lug on both primary and secondary throttle levers should contact boss on flange at the same time. To adjust bend secondary throttle operating rod at angle (use bending tool T109-213).

AUXILIARY THROTTLE LOCK-OUT ADJUSTMENT: This adjustment should be made after completing fast idle adjustment. 1. With choke valve closed, edge of hook on lockout arm should contact auxiliary throttle lever, making maximum contact of locking step on lever. 2. Open choke valve. Auxiliary throttle valve should become unlocked a few degrees before the choke reaches wide open position. Adjust by bending lockout arm.

CHOKE ADJUSTMENT (CROSS OVER TYPE) See Form 3691: 1. Loosen mounting post lock nut and turn mounting post with screw driver until index mark on disk is positioned as listed on carbureter specification page. Hold in this position with screw driver and tighten lock nut. NOTE: Screw driver may be held in vise so that one hand may be used to support housing while tightening nut. 2. After adjustment is completed and coil housing and rod assembly and carbureter is installed on engine lift cover disk and open and close choke valve manually to see if connector rod clears sides of hole in housing cover. If rod does not clear hole in housing cover without binding replace with a new unit since connector rod cannot be bent without affecting calibration.



DeSoto "V-8"—1957—Carbureter No. 2532S

WHEN SERVICING, USE GASKET ASSORTMENT No 299, REPAIR PACKAGE No 1859

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1472S	—Body flange assembly	
1A-77	FLANGE GASKET	
2-168	Auxiliary throttle valve	(2)
2-169	Secondary throttle valve	(2)
2-170	Primary throttle valve	(2)
3-956S	Secondary throttle shaft and operating lever assembly	
3-1085S	Auxiliary throttle shaft lever and weight assembly	
3-1124S	—Primary throttle shaft and lever assembly	
4A-134	Primary throttle shaft dog	
6-1286S	—Air horn assembly	
7-173	Choke valve	
11-278S	LOW SPEED JET ASSEMBLY	(4)
11B-35	Rivet plug	(6)
11B-41	Rivet plug	
11B-79	Rivet plug	(4)
11B-129S	Pump discharge passage plug assembly	
11B-134	Rivet plug	
11B-146	Level sight plug	(2)
11B-223	Nozzle passage and idle port rivet plug	(8)
11B-305	Rivet plug	(2)
11B-306	Rivet plug	
11B-327	Secondary throttle shaft rivet plug	
14-383S	Choke lever and screw assembly	
14-438	Cam trip lever	
14-526S	Choke lever assembly	
14-575S	—Choke piston lever link and shaft assembly	
15-63S	—Strainer nut assembly	(2)
17-50	PUMP CHECK NEEDLE	
20-26	RELIEF VALVE GASKET	
20-126	—Needle seat gasket	(2)
20-127	—BOWL STRAINER GASKET	(2)
21-143S	Primary float and lever assembly	
21-146S	Secondary float and lever assembly	
24-24	Float lever pin	(2)
25-278S	PRIMARY NEEDLE AND SEAT ASSEMBLY	
25-279S	SECONDARY NEEDLE AND SEAT ASSEMBLY	
30-73	PRIMARY NEEDLE SEAT STRAINER	
30-74	SECONDARY FUEL INLET STRAINER	
30-75	BOWL STRAINER	
30A-58	Idle adjustment screw	(2)
39-11	Choke and primary throttle valve attaching screw	(6)
47-30	Welsh plug	
48-174S	Pump jet and housing assembly	
53A-332	Lockout arm	
53A-344	VENT ARM	
53A-353	Primary operating lever	
53A-392S	Pump operating lever and countershaft assembly	
61-84	Idle adjustment screw spring	(2)
61-226	VACUUM PISTON SPRING	
61-237	Fast idle cam spring	
61-291	Throttle lever adjusting screw spring	
61-382	METERING ROD SPRING	
61-413	Upper pump spring	
61-450	SECONDARY THROTTLE RETURN SPRING	
61-474	Bowl vent spring	
63-57	INTAKE CHECK BALL RETAINER	

Part No.	PART NAME	
63-149	Bowl vent spring retainer	
63-176	Pump spring retainer	
64-145S	PUMP PLUNGER AND ROD ASSEMBLY	
[illegible]-40	Piston housing cover plate	
75-1327	—METERING ROD—STANDARD 075" x 072" x 054"	(2)
[illegible]-12	Flange stud lock washer	(4)
101-6	Pump arm clamp screw	
[illegible]1-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	
101-126	Auxiliary throttle valve attaching screw	(4)
101-140	Fast idle cam screw	
101-142S	Piston housing cover plate attaching screw and washer assembly	(3)
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-275	Piston housing attaching screw	
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet housing attaching screw	
101-307S	Air horn and bracket attaching screw and washer assembly	(8)
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-339	Throttle lever adjusting screw	
101-354S	Choke lever clamp screw assembly	(2)
101-363	Piston housing attaching screw	(2)
101-396	Fast idle adjustment screw	
105A-10	Choke lever clamp screw nut	(2)
105A-11	Flange stud nut	(4)

Part No.	PART NAME	
111-60S	Metering rod arm and screw assembly	
111-78S	—Pump arm and screw assembly	
115-182	Choke connector rod	
115-204	Throttle operating rod	
115-228	THROTTLE CONNECTOR ROD	
116-13	PUMP INTAKE CHECK BALL	
117-162	Vacumeter piston link	
117-165	Pump connector link	
118-102S	Dust cover assembly	
118-135S	—Dust cover assembly (Sup by 118 102S)	
120-164	PRIMARY METERING ROD JET	(2)
120-185	SECONDARY METERING ROD JET	(2)
121-208	DUST COVER GASKET	
121-241	PUMP JET HOUSING GASKET	
121-265	AIR HORN GASKET	
121-277	BODY FLANGE GASKET	
121-298	—PISTON HOUSING GASKET	
136-38	Throttle shaft washer	
136-84	Spring washer	
150-178	Auxiliary valve lockout arm pin	
150-186S	Pin and valve cap assembly	
150-190	Choke piston pin	
150A-10	PIN SPRING	(5)
160-110S	Vacuum piston and pin assembly	
160-129	Choke piston	
170-502S	—Piston housing and plug assembly	
170AU-465S	—Thermostatic coil housing and rod assembly	
172-22	Throttle connector rod retainer	
180-60	Lever return spring bracket	
181-212S	Fast idle cam assembly	

—Parts so marked are new and listed for the first time

NOTE **Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used**

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CARTER CLIMATIC® CONTROL CROSS OVER CHOKE TYPE
(SERVICE INFORMATION AND ADJUSTMENT PROCEDURE)

NOTE: Coil housing and rod assembly may be cleaned in carbureter parts cleaner without disassembling. After cleaning rinse in solvent and blow out inside of housing with compressed air. After rinsing make sure housing revolves freely on mounting post. If disassembly is necessary for thorough cleaning, follow steps under "reassembly" to be sure coil is installed properly.

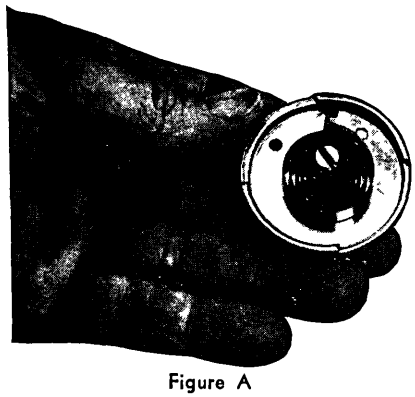


Figure A

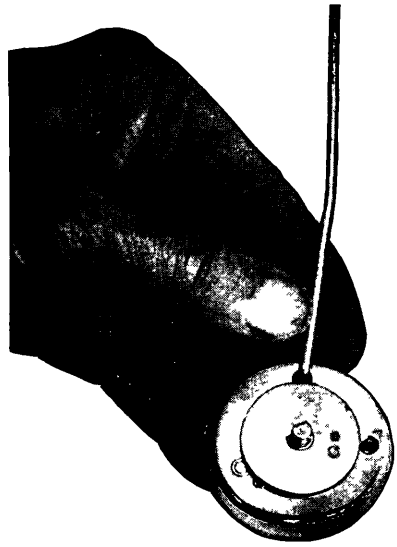


Figure B

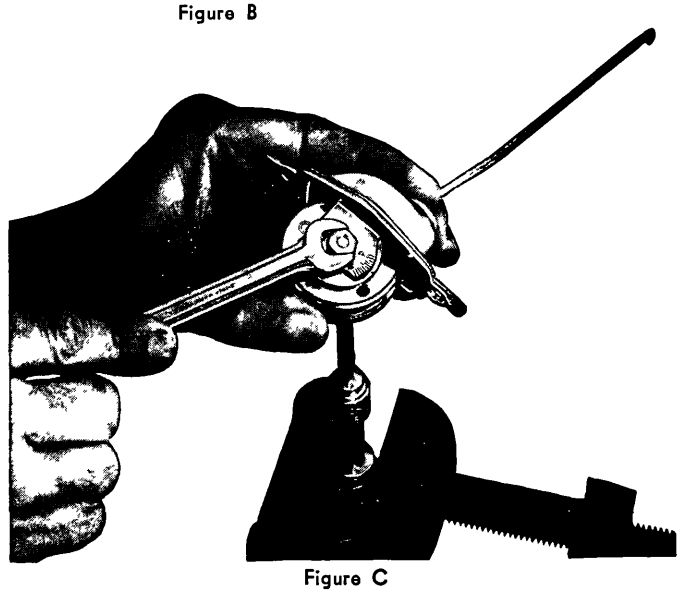


Figure C

TWO PIECE CLOSED HOUSING

REASSEMBLY:

1. Place coil mounting post in either half of coil housing.
2. Insert thermostatic coil on mounting post with hook facing clockwise. (See Fig. A.)
3. Assemble second half of housing and secure on mounting post with washer and hair pin. Be sure holes in both housings are in alignment.
4. Install connector rod with hair pin end extending through either hole toward split end of mounting post. Secure with washer and hair pin. (Eye of hair pin extending outward.)
5. Place index disk on mounting post with flat on disk aligning with flat on post and turn disk and post counter-clockwise until hook on coil engages connector rod. Index mark on disk should be just to the right (approximately 2 o'clock position) of connector rod when holding housing with rod pointing to 12 o'clock position. (See Fig. B.) If incorrectly installed turn index disk over.
6. Assemble housing cover to mounting post and install lock washer and nut.
7. Install cover disk on connector rod.

ADJUSTMENT:

1. Loosen mounting post lock nut and turn mounting post with screw driver until index mark on disk is positioned as listed on carbureter specification page. Hold in this position with screw driver and tighten lock nut. (See Fig. C.)

   NOTE: Screw driver may be held in vise so that one hand may be used to support housing while tightening nut.
2. After adjustment is completed and coil housing and rod assembly and carbureter is installed on engine lift cover disk and open and close choke valve manually to see if connector rod clears sides of hole in housing cover. If rod does not clear hole in housing cover without binding replace with a new unit since connector rod cannot be bent without effecting calibration.

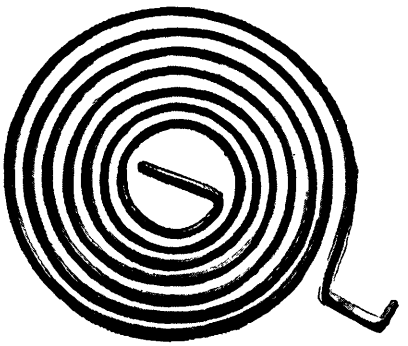
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ONE PIECE OPEN HOUSING

REASSEMBLY:

1. Place housing with circular edge downward and center web at 3 o'clock position. (See Fig. D.)
2. Insert thermostatic coil into housing with hook on coil in 4 o'clock position and pointing toward web of housing.
3. Insert mounting post through housing and coil with index mark toward hook on coil. (See Fig. E.)
4. Secure mounting post to housing with washer and pin spring.
5. Install cover disk on connector rod.
6. Install connector rod through housing cover into housing toward split end of mounting post. Secure with washer and pin spring. (Eye of pin spring extending outward)
7. Assemble housing cover to mounting post with lock washer and nut. Rotate mounting post counterclockwise until hook on coil picks up connector rod and tighten nut.
8. Check positive spring action by pushing connector rod downward through housing cover.



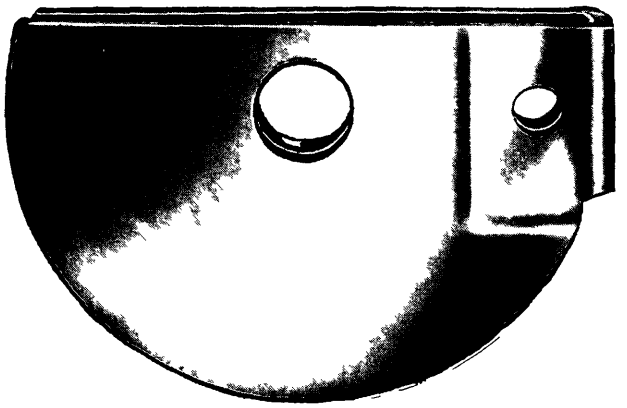


Figure D

ADJUSTMENT:

Same as two piece housing. (See Fig. C.)

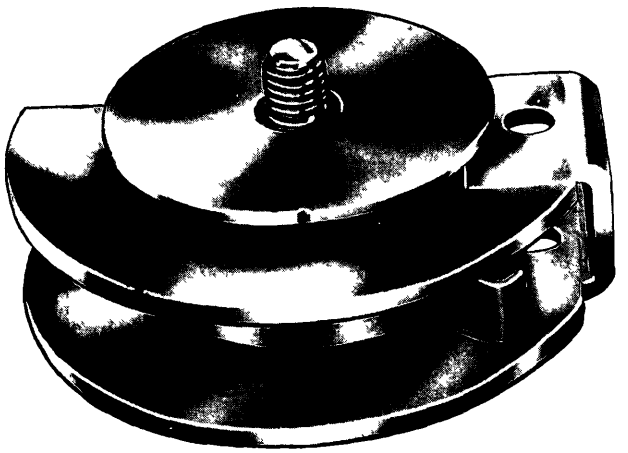


Figure E

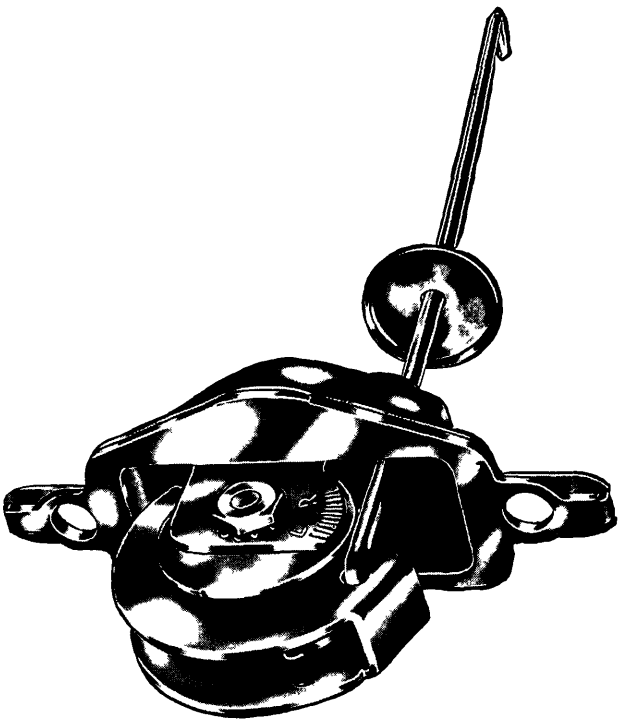


Figure F

DE SOTO "V-8"

MODEL S-26

1957

(Power Flite Transmission)

WCFB Four-Bore Down-Draft Climatic® Control **Carbureter No. 2588S**

CARBURETER SPECIFICATIONS

For DeSoto 8 Cylinder Engine 3 78 Inch Bore, 3 80 Inch Stroke

Dimensions Flange size 1¼ inch Four Bore—4 bolt type
Primary venturi size 11/32 inch I D
Main venturi size 1 3/16 inch I D

Vents Inside (5)

Gasoline Intake Primary size No 38 (1015 inch) secondary size No 42 (0935 inch) drill hole in needle seat

Low Speed Jet Tube Jet (4) size 032 inch diameter
By pass in body (4) size No 52 (0635 inch) drill
Economizer (4) size No 56 (0465 inch) drill
Idle bleed (4) in body size No 52 (0635 inch) drill

Idle Port Upper slot type Primary length 175 inch width 030 inch Secondary length 101 inch width 030 inch

Idle Port Opening Primary 130 to 134 inch above top edge of valve with valve tightly closed Secondary 071 to 077 inch

Lower Port Primary (for idle adjustment screw) size No 53 (0595 inch) drill Secondary constant feed size 040 inch diameter

Set Idle Adjustment Screw ½ to 1½ turns open For richer mixture turn screw out Do not idle engine below 500 R P M in neutral

Main Nozzle Installed permanently DO NOT REMOVE Anti percolating bleed (to nozzle well) primary side (to idle well) secondary side size No 70 (028 inch) drill

Metering Rod (Vacumeter type) see parts list for size

Metering Rod Jet Primary size 0935 inch diameter (for meter ing rod)
Secondary size 061 inch diameter (no metering rod)

Accelerating Pump Discharge jet (twin) primary side only size No 72 (025 inch) drill
Intake ball check seat size 115 to 120 inch diameter
Discharge needle seat size 070 inch diameter
Relief passage (vent) to fuel chamber No 42 (0935 inch) drill
Discharge relief plug size No 55 (052 inch) drill

Choke Carter Climatic® Control set one point rich Butterfly type offset choke valve primary side only Choke heat suc tion hole bush ng between piston housing and air horn size No 50 (070 inch) drill

Vacuum Spark Port Horizontal slot (round end) 045 by 110 inch Top of port 032 to 042 inch above valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap 035"	Breaker Point Setting 017"	Ignition Timing Breaker Points to Open 6° B T C At Vibration Damper	Float Setting Primary 5/32 Inch (Use Gauge T109 236) Secondary 9/32 Inch (Use Gauge T109-284)	Idle Adjustment Screw Setting ½ to 1½ Turns Open Idle Engine at 500 R P M In Neutral

NOTE These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: Two separate float adjustments must be made—lateral and vertical. **Lateral Adjustment:** Side of floats should just clear the vertical uprights of float gauge Adjustment should be made by bending arms of floats. **Vertical Adjustment:** With bowl gasket removed, vertical distance between top of float and machined surface of casting must be 5/32 inch (gauge T109-236) for primary floats; and 9/32 inch (gauge T109-284) for secondary floats. Adjust by bending float arms.

FLOAT DROP ADJUSTMENT: With bowl cover held in upright position and measuring from center of floats, the distance between top of floats and bowl cover should be 21/32 inch for primary floats and 25/32 inch for secondary floats. Adjust by bending stop tabs on float bracket.

PUMP ADJUSTMENT: Install pump connector link in center hole (medium stroke) of pump arm, with ends extending outward toward countershaft arm. Back out throttle lever set screw until throttle valves seat in bores of carbureter. Hold straight edge across top of dust cover boss at pump arm. The flat on top of pump arm should be parallel to straight edge. Adjust by bending throttle connector rod at lower angle. (Use tool T109-213.)

METERING ROD ADJUSTMENT: Metering rod adjustment must be made after pump adjustment. 1. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw. 2. With metering rods in place, press down on vacumeter link until metering rods bottom in carbureter body casting. 3. Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link. Hold in place and carefully tighten clamp screw.

BOWL VAPOR VENT ADJUSTMENT: This adjustment should be made after completing pump and metering rod adjustments. Install dust cover and dust cover gasket. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter. There should be 1/16 inch (gauge T109-197) between lower edge of bowl vapor vent valve and dust cover. To adjust, remove dust cover and bend vapor vent arm.

FAST IDLE ADJUSTMENT: (a) Loosen choke lever clamp screw on choke shaft. Insert .020 inch wire gauge (T109-29) between lip of fast idle cam and boss of flange casting. Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw. (b) With choke valve tightly closed, tighten fast idle adjusting screw until there is .012 inch (gauge T109-200) opening between throttle valve and bore of carbureter, side opposite idle port. Be sure fast idle adjusting screw is on high step of cam while making this adjustment.

FAST IDLE ON CAR: 1300 to 1350 R.P.M.

UNLOADER ADJUSTMENT: With throttle wide open there should be 3/16 inch (gauge T109-28) clearance between upper edge of choke valve and inner wall of air horn. Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41).

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: This adjustment should be made after completing fast idle adjustment. Crack throttle valves and manually open and close the choke valve Tang on secondary throttle lever should freely engage in notch of lock-out dog. If necessary to adjust, bend tang on secondary throttle lever.

PRIMARY THROTTLE SHAFT DOG ADJUSTMENT:

Block choke valve wide open.

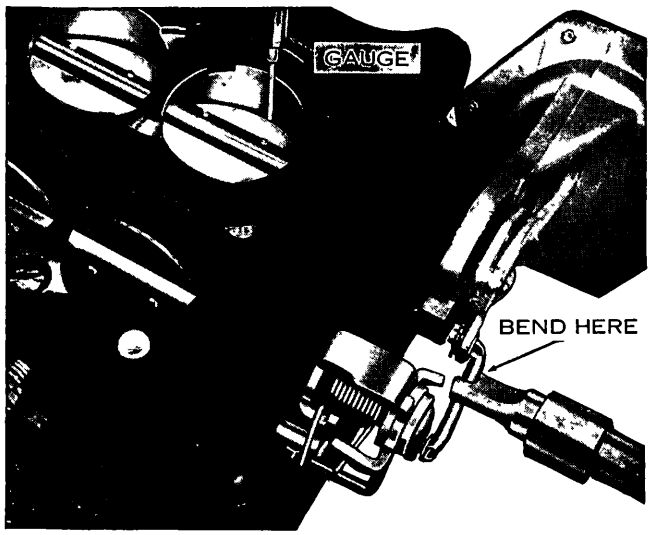


Figure 1

With primary throttle valves in wide open position, adjust (use tool T109-213) secondary operating rod so there is .054" to 064" clearance (gauge T109-193) between upper edge of secondary throttle valves (next to idle port) and bore of carbureter (Fig. 1).

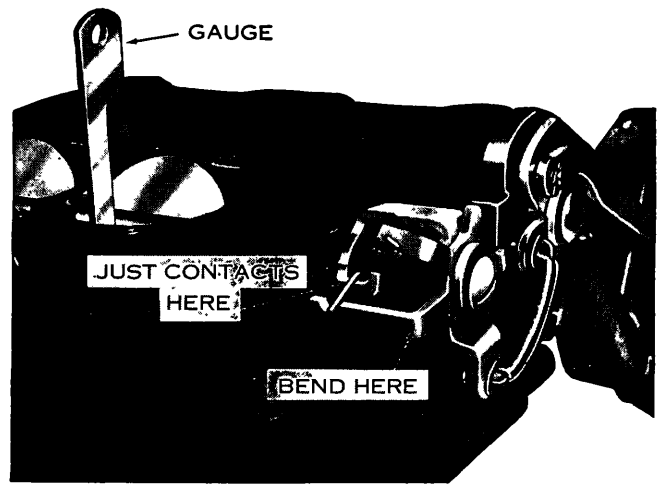


Figure 2

Place 1/4" gauge (tool T109-31) between upper edge of primary throttle valve and bore (next to idle port) and adjust (use tool T109-214) long tang on primary throttle shaft dog so that inner arm of spring just contacts inner lug of secondary operating lever and secondary throttle valves just start to open (Fig. 2).

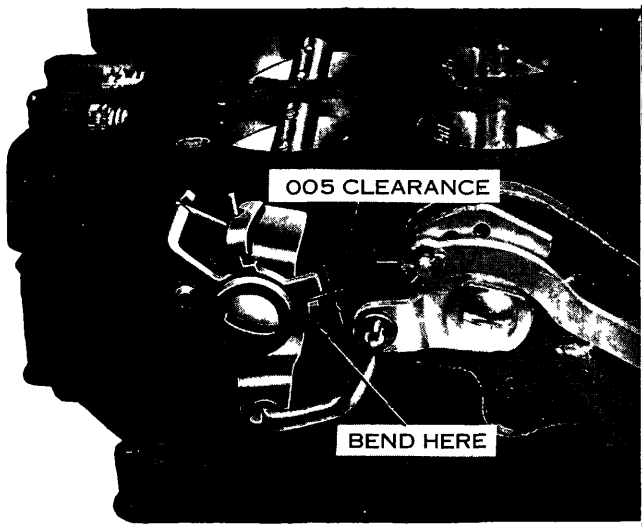


Figure 3

With primary and secondary throttle valves tightly seated there should be 005" clearance (gauge T109 237) between outer lip on secondary operating lever and stop lug on primary throttle shaft dog

TO ADJUST Bend outer lip on secondary operating lever (use tool T109 214)

CAUTION After bending be sure secondary operating lever operates freely and does not bind in any position (Fig 3)

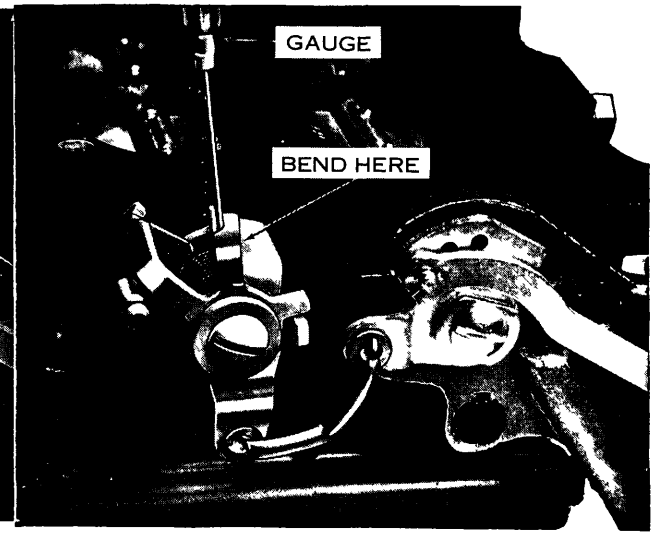
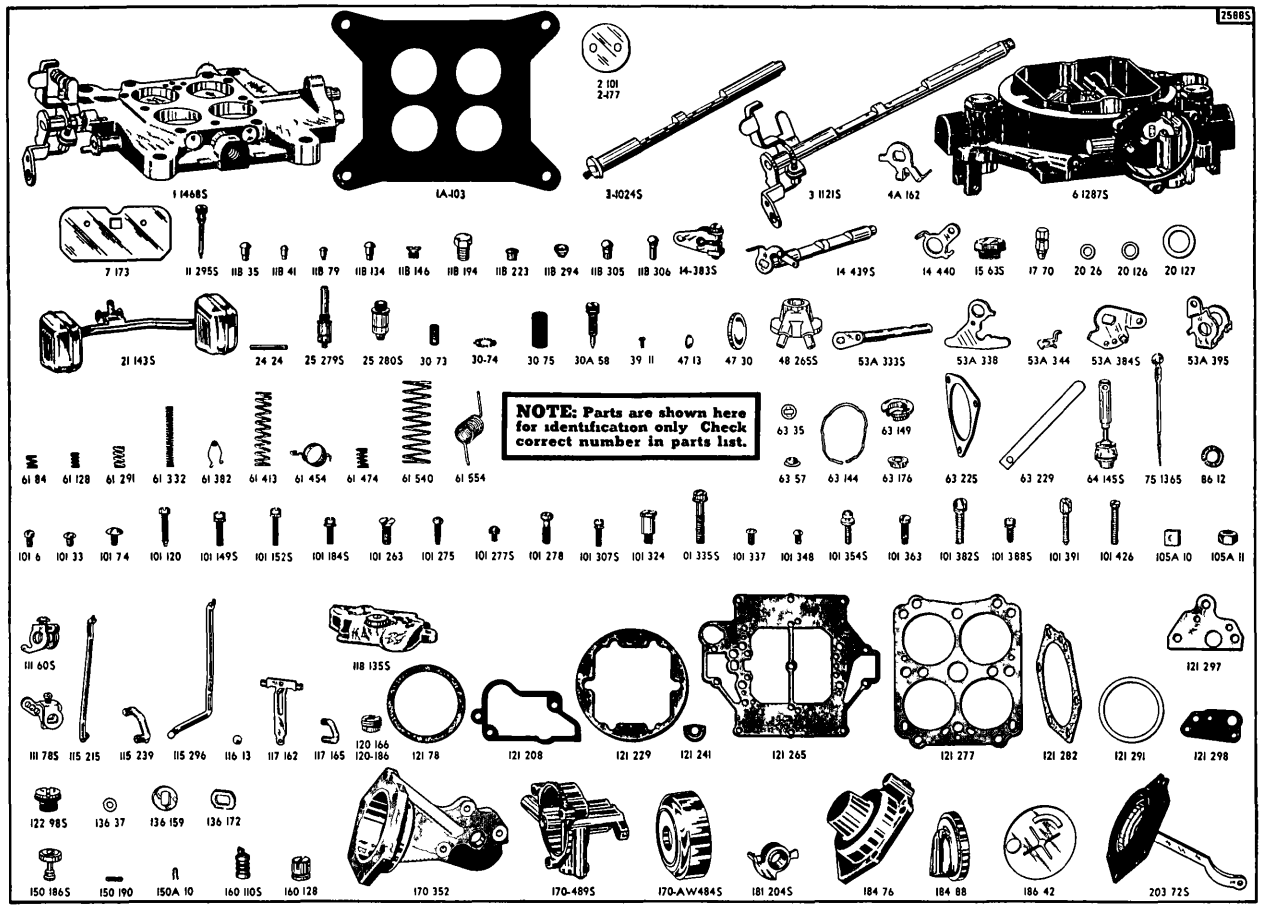


Figure 4

With primary and secondary throttle valves tightly closed there should be 040" clearance (gauge T109 193) between short tang on primary throttle shaft dog and outer arm of spring

TO ADJUST Bend short tang on primary throttle shaft dog (use tool T109 214) (Fig 4)



De Soto "V-8"—1957—Carbureter No. 2588S

(See Page 4 for above parts group identification)

De Soto "V-8"—1957—Carbureter No. 2588S

WHEN SERVICING, USE GASKET ASSORTMENT No. 297; REPAIR PACKAGE No. 1862

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1468S	—Body flange assembly	
1A-103	FLANGE GASKET	
2-101	Primary throttle valve	(2)
2-177	Secondary throttle valve	(2)
3-1024S	Secondary throttle shaft and dog assembly	
3-1121S	—Primary throttle shaft and lever assembly	
4A-162	Primary throttle shaft dog	
6-1287S	—Air horn assembly	
7-173	Choke valve	
11-295S	LOW SPEED JET ASSEMBLY	(4)
11B-35	Rivet plug	(4)
11B-41	Rivet plug	
11B-79	Rivet plug	(5)
11B-134	Rivet plug	
11B-146	Level sight plug	(2)
11B-194	Pipe plug	
11B-223	Nozzle passage rivet plug	(4)
11B-294	Idle port rivet plug	(4)
11B-305	Rivet plug	(2)
11B-306	Rivet plug	
14-383S	Choke lever and screw assembly	
14-439S	Choke piston lever link and shaft assembly	
14-440	Cam trip lever	
15-63S	Strainer nut assembly	(2)
17-70	PUMP CHECK NEEDLE	
20-26	Pump relief plug gasket	
20-126	Needle seat gasket	(2)
20-127	BOWL STRAINER GASKET	(2)
21-143S	Float and lever assembly	(2)
24-24	Float lever pin	(2)
25-279S	SECONDARY NEEDLE AND SEAT ASSEMBLY	
25-280S	PRIMARY NEEDLE AND SEAT ASSEMBLY	
30-73	PRIMARY NEEDLE SEAT STRAINER	
30-74	SECONDARY FUEL INLET STRAINER	
30-75	BOWL STRAINER	
30A-58	Idle adjustment screw	(2)
39-11	Choke valve attaching screw	(2)
47-13	Welsh plug (spark port passage)	
47-30	Welsh plug (choke housing)	
48-265S	—Pump jet and housing assembly	
53A-333S	Pump operating lever and countershaft assembly	
53A-338	Lockout arm	
53A-344	VENT ARM	
53A-384S	Secondary throttle operating lever assembly	
53A-395	Primary throttle operating lever	
61-84	Idle adjustment screw spring	(2)
61-128	Connector rod spring	
61-291	Throttle adjusting screw spring	
61-332	VACUUM PISTON SPRING	
61-382	METERING ROD SPRING	
61-413	UPPER PUMP SPRING	
61-454	Fast idle cam spring	
61-474	Bowl vent spring	
61-540	Diaphragm return spring	
61-554	Throttle flex spring	
63-35	Connector rod spring retainer	
63-57	INTAKE CHECK BALL RETAINER	
63-144	Delayer plate retainer ring	
[illegible]	—Pump vent spring retainer	

Part No.	PART NAME	
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	(2)
101-120	Fast idle adjustment screw	
101-149S	Body flange attaching screw and washer assembly	
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-263	Diaphragm housing attaching screw	(3)
101-275	Piston housing attaching screw	
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet housing attaching screw	
101-307S	Air horn attaching screw and washer assembly	(8)
101-324	Fast idle cam attaching screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-348	Primary throttle valve attaching screw	(4)
101-354S	Choke lever clamp screw assembly	
101-363	Piston housing attaching screw	(2)
101-382S	Body flange attaching screw and washer assembly	(3)
101-388S	Diaphragm housing cover attaching screw and washer assembly	(6)
101-391	Throttle lever adjusting screw	
101-426	—Coil housing attaching screw	(3)
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
111-60S	Metering rod arm and screw assembly	
111-78S	—Pump arm and screw assembly	
115-215	Choke connector rod	
115-239	Throttle operating rod	
115-296	—THROTTLE CONNECTOR ROD	
116-13	PUMP INTAKE CHECK BALL	
117-162	Vacumeter piston link	
117-165	Pump connector link	
118-102S	Dust cover assembly	
118-135S	—Dust cover assembly (Sup by 118 102S)	
120-166	PRIMARY METERING ROD JET	(2)
120-186	SECONDARY METERING JET	(2)
121-78	COIL HOUSING GASKET	
121-208	DUST COVER GASKET	
121-229	AIR CLEANER GASKET	
121-241	PUMP JET HOUSING GASKET	
121-265	AIR HORN GASKET	
121-277	BODY FLANGE GASKET	
121-282	GASKET (DIAPHRAGM TO LOWER HOUSING)	
121-291	—HEAT TUBE CAP GASKET	
121-297	—DIAPHRAGM HOUSING GASKET	
121-298	—PISTON HOUSING GASKET	
122-98S	PUMP RELIEF PLUG ASSEMBLY	
136-37	Throttle connector rod and operating rod washer	(5)
136-159	Primary throttle shaft washer	
136-172	Secondary throttle shaft washer	
150-186S	Pin and valve cap assembly	
150-190	Choke piston pin	
150A-10	PIN SPRING	(5)
160-110S	Vacuum piston and pin assembly	
160-128	Choke piston	
170-352	Diaphragm housing	
170-489S	—Piston housing and plug assembly	
170AW-484S	—Thermostatic coil and housing assembly	
181-204S	Fast idle cam assembly	
184-76	Diaphragm housing cap	
184-88	—Choke heat tube cap	
186-42	Choke baffle plate	
203-72S	Secondary throttle shaft diaphragm assembly	

DE SOTO

Form 5248A
Carb. 2588S
Add

75 1336	Metering rod 1 size lean 072" x 065" x 058" (2)	
75 1387	Metering rod 2 sizes lean 073" x 067" x 062" (2)	
	OD ASSEMBLY	
	071" x 064" x 060"	
		(2)
	OARD— 071" x 064"	
		(2)
		(4)

—Parts so marked are new and listed for the first time

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used

DE SOTO "V-8"

MODEL S-25

1957

(All Transmissions)

BBD Dual Down-Draft Climatic® Control Carbureters Nos. 2522S-2522SA-2522SB

CARBURETER SPECIFICATIONS

For DeSoto 8 Cylinder Engine· 3.78 Inch Bore, 3.80 Inch Stroke

Dimensions Flange size, 1¼ inch dual, 4 bolt type Throttle bore, 1 7/16 inch I D Primary venturi ⅜ inch I D Main venturi, 1-3/16 inch I D.

Vent: Inside, balance vent tube to bowl, in air horn above choke valve Outside (late prod) (2) No 36 (1065 inch) in flange above throttle valve

Gasoline Intake. Size No 38 (1015 inch) drill hole in needle seat

Idle Tube· Jet in venturi assembly size 0275 inch diameter Idle bleed (in venturi cluster screw), size 055 inch diameter Idle restriction (in venturi cluster screw), size 055 inch diameter Venturi idle bleed in body size 0472 inch diameter Models S and SA have idle passage through top of venturi cluster, models SB have diagonal passage to screw hole

Idle Port Upper slot type length, 189 inch, width 030 inch

Idle Port Opening 148 to 152 inch above upper edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw): Size 053 to 057 inch diameter

Set Idle Adjustment Screw ½ to 1½ turns open For richer mixture turn screw out With gear shift lever in neutral position idle engine at 500 R P M

Main Nozzle: Nozzle is installed permanently DO NOT REMOVE

Main Vent Tube: Side holes 10—size 0433 inch 1—size 0393 inch diameter Main vent in bottom of tube size 0393 inch diameter

Step-Up Rod: (Vacuum operated) 023 inch diameter.

Metering Jet: Calibrated to flow 327 to 333 cc per minute (Do not gauge for size, if in doubt, replace with new part)

Accelerating Pump: Pump discharge jets (2—in venturi cluster) size 0275 inch diameter Intake ball check seat, size 130 to 140 inch diameter Discharge ball check seat, size 110 to 120 inch diameter

Choke: Carter Climatic® Control, set 1 point rich Butterfly type, offset valve Choke heat suction hole in body, size 063 inch diameter NOTE Thermostatic coil should not be removed from delayer mounting post If defective, replace with complete thermostatic coil and housing assembly

Vacuum Spark Port Horizontal round end type, (early prod) 030 by 110, (late prod) 045 by 110 inch Top of port to be (early prod) 035 to 045 inch (late prod) 025 to 035 inch above upper edge of valve with valve closed tight

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .017"	Ignition Timing Breaker Points to Open 6° B. T. C. At Vibration Damper	Float Setting 9/32 Inch (Use Gauge T109-239)	Idle Adjustment Screw Setting ½ to 1½ Turns Open Idle Engine at 500 R.P.M.

NOTE. These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT.

CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3658

Float Level. 9/32" (gauge T109-239) between top of each float ridge (at center of float) and top surface of body casting To adjust bend lip on float arm

Pump: 1 1/32" from the top of the bowl cover to the top of the plunger shaft Install throttle connector rod in center hole (medium stroke) of throttle lever and inner hole of pump arm To adjust bend throttle connector rod

Fast Idle Cam Clearance· With choke valve closed and lip on inner choke shaft lever contacting lug on outer lever align index mark on cam with adjusting screw To adjust bend lip on inner choke shaft lever

Fast Idle on Car· 1300 to 1350 hot engine with fast idle screw on high step of cam

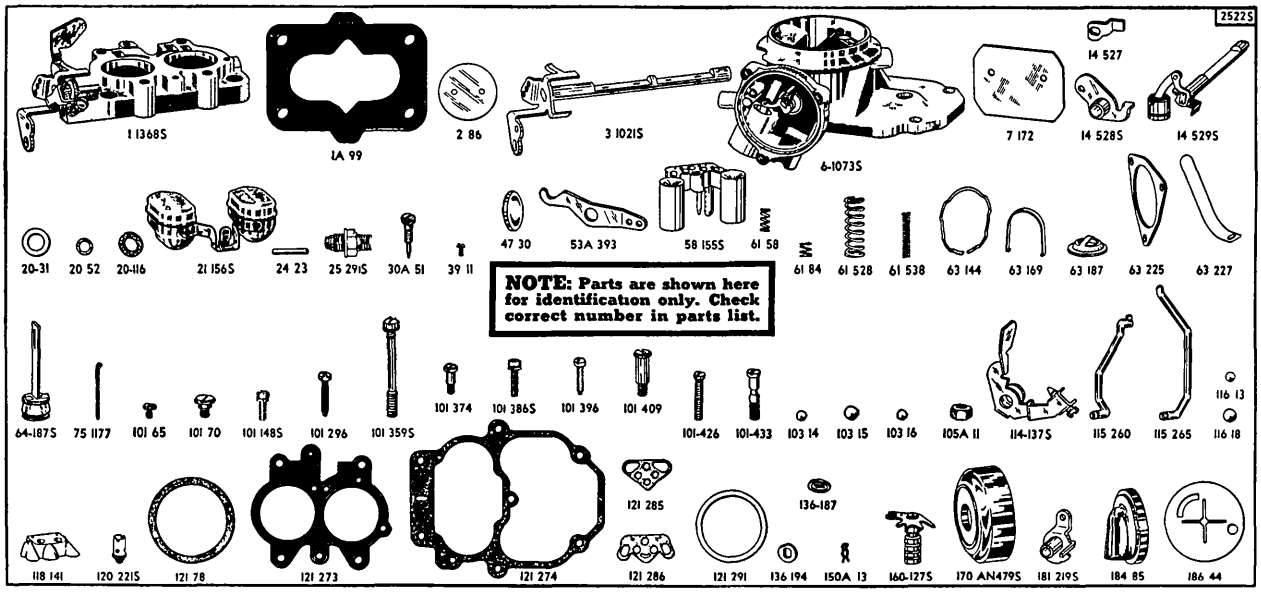
Fast Idle Throttle Valve Clearance: 020" (gauge T109 29) between lower edge of valve and bore with adjusting screw on index mark of cam

Unloader. ¼" (gauge T109-31) between top edge of choke valve and inner wall of air horn with throttle valves wide open To adjust bend unloader arm on throttle lever

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De Soto "V-8"—1957—Carbureters Nos. 2522S-2522SA-2522SB

WHEN SERVICING, USE GASKET ASSORTMENT No. 298, REPAIR PACKAGE No. 1863

PART NAMES IN CAPITAL LETTERS, LISTED BELOW INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-1368S	Body flange assembly	
1A-99	FLANGE GASKET	
2-86	Throttle valve	(2)
3-1021S	Throttle shaft and lever assembly	
6 1073S	Air horn assembly	
7 172	Choke valve	
14 527	Choke shaft lever	
14-528S	Choke lever assembly	
14-529S	Choke piston lever link and shaft assembly	
20-31	Needle seat gasket	
20-52	STEP UP PISTON GASKET	
20-116	Main metering jet gasket	(2)
21-156S	Float and lever assembly	
24-23	Float lever pin	
25-291S	NEEDLE AND SEAT ASSEMBLY	
30A 51	Idle adjustment screw	(2)
39 11	Choke and throttle valve attaching screw	(6)
47-30	Welsh plug	
53A 393	Pump arm	
58 155S	Venturi cluster and nozzle assembly	
61-58	Throttle adjusting screw spring	
61-84	Idle adjustment screw spring	(2)
61-528	PUMP SPRING	
61 538	STEP UP PISTON SPRING	
63 144	Delayer plate retainer ring	
63-169	FLOAT LEVER PIN RETAINER	
63-187	INTAKE CHECK BALL RETAINER	
63-225	Coil housing retainer	
63-227	Heat tube retainer	
64-187S	PUMP PLUNGER AND ROD ASSEMBLY	
75 1145	Step up rod	(2)
75-1177	Step up rod (2522S) (Sup by 75 1145)	(2)
101-65	Choke lever attaching screw	
101-70	Pump arm screw	
101-148S	Air horn attaching screw and washer assembly	(4)
101-296	Throttle adjusting screw	
101-359S	Body attaching screw and washer assembly	(2)

Part No.	PART NAME	
101-374	Step up piston plate guide screw	
101-386S	Body flange attaching screw and washer assembly	(2)
101-396	Fast idle adjusting screw	
101-409	Fast idle cam attaching screw	
101-426	Coil housing attaching screw	(3)
101-433	Venturi cluster screw (2522S) (Sup by 101 434)	(2)
101-434	Venturi cluster screw	(2)
103-14	Lead shot	
103-15	Lead shot	(2)
103-16	Lead shot	(2)
105A-11	Flange stud nut	(4)
114-137S	Dash pot lever assembly	
115-260	Choke connector rod	
115-265	Throttle connector rod	
116-13	DISCHARGE CHECK BALL	
116-18	INTAKE CHECK BALL	
118-141	Venturi cover	
120-209S	Main metering jet assembly—2 sizes lean	(2)
120-212S	Main metering jet assembly—1 size lean	(2)
120-221S	MAIN METERING JET ASSEMBLY—STANDARD	(2)
121-78	COIL HOUSING GASKET	
121-273	BODY FLANGE GASKET	
121-274	BODY GASKET	
121-285	VENTURI HOUSING GASKET	
121-286	VENTURI COVER GASKET	
121-291	HEAT TUBE CAP GASKET	
121-313	Air cleaner gasket	
136-187	Pump spring retainer washer	
136-194	Choke shaft washer	
150A-10	Pin spring (late prod)	
150A-13	PIN SPRING (early prod (3) (late prod (2)	
160-127S	STEP UP PISTON AND PLATE ASSEMBLY	
170AN479S	Thermostatic coil and housing assembly	
181-219S	Fast idle cam assembly	
184 85	Choke heat tube cap	
186-44	Choke baffle plate	

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

DE SOTO "V-8"

MODEL S-24
"ADVENTURER"
1956

(2445S)
Rear Carbureter

(2476S)
Front Carbureter

WCFB Four-Bore Down-Draft Climatic® Control **Carbureters Nos. 2445S-2476S**

CARBURETER SPECIFICATIONS

For DeSoto 8 Cylinder Engine: 3.78 Inch Bore, 3.80 Inch Stroke

Dimensions: Flange size, 1 1/8 inch Four Bore—4 bolt type.
Primary venturi size, 11/32 inch I. D.
Main venturi size, 1-1/16 inch I. D.

Vents: Inside (5), outside (none).

Gasoline Intake: Size No. 42 (.0935 inch) drill; in needle seat.

Low Speed Jet Tube: Jet, primary and secondary, size No. 69 (.0293 inch) drill. By-pass, in body size primary No. 52 (.0635 inch) drill, secondary (.057 inch) diameter. Economizer, in body size (.0452 inch) diameter. Idle bleed, in body size primary (.059 inch) diameter, secondary No. 44 (.086 inch) drill.

Idle Port: Upper, slot type, primary, length .175 inch; width .030 inch. Secondary, length .103 inch; width .030 inch.

Idle Port Opening: Primary .116 to .122 inch, secondary .059 to .065 inch above top edge of valve with valve tightly closed.

Lower Port: Primary (for idle adjustment screw), size No. 55 (.052 inch) drill. Secondary (no idle adjustment screw), size No. 57 (.043 inch) drill.

Set Idle Adjustment Screw: 1/4 to 1 1/4 turns open. For richer mixture turn screw out. Do not idle engine below 650 to 750 R.P.M. in neutral.

Main Nozzle: Installed permanently. DO NOT REMOVE. Anti-percolating jet (4) size No. 70 (.028 inch) drill.

Metering Rod: (Vacumeter type) see parts list for size.

Metering Rod Jet: Primary: size (2445S) .0935 inch, (2476S) .089 inch diameter. Secondary: Size .055 inch diameter.

Accelerating Pump: Discharge jet (twin) primary side only, size No. 74 (.0225 inch) drill. Intake ball check seat, size .115 to .120 inch diameter. Discharge needle seat, size No 50 (.070 inch) drill. Relief passage (vent) to fuel chamber, size No. 42 (.0935 inch) drill.

Choke: Carter Climatic® Control, set on index. Butterfly type offset choke valve, primary side only. Choke heat suction hole, restriction in piston housing, size No. 43 (.089 inch) drill.

Vacuum Spark Port: Horizontal slot (round end) .045 x .110 inch. Top of port .035 to .045 inch above top edge of valv with valve tightly closed.

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .017"	Ignition Timing Breaker Points to Open: 6° B. T. C. At Vibration Damper	Float Setting Primary 7/32 Inch (Use Gauge T109-283) Secondary 11/32 Inch (Use Gauge T109-285)	Idle Adjustment Screw Setting 1/4 t 1 1/4 Idle Engine at 650 to 750 R.P.M. In Neutral

NOTE: These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: Two separate float adjustments must be made—lateral and vertical. **LATERAL ADJUSTMENT:** With bowl cover assembly inverted, bowl cover gasket removed and float resting on seated needle, place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting. Side of floats should just clear the vertical uprights of float gauge. Adjustment should be made by bending arms of floats. **VERTICAL ADJUSTMENT:** With float gauge in same position, floats should just clear the horizontal portion of gauge. Vertical distance between top of float and machined surface of casting must be 7/32 inch (gauge T109-283) for primary floats; and 11/32 inch (gauge T109-285) for secondary floats. Adjust by bending float arms.

FLOAT DROP ADJUSTMENT: With bowl cover held in upright position and measuring from center of floats, the distance between top of floats and bowl cover should be 23/32 inch for primary floats and 27/32 inch for secondary floats. Adjust by bending stop tabs on float bracket.

PUMP ADJUSTMENT: Install pump connector link in outer hole (long stroke) of pump arm, with ends extending toward countershaft arm. Back out throttle lever set screw until throttle valves seat in bores of carbureter. Hold straight edge across top of dust cover boss at pump arm. The flat on top of pump arm should be parallel to straight edge. Adjust by bending throttle connector rod at upper angle. (Use tool T109-213.)

METERING ROD ADJUSTMENT: Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows: 1. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw. 2. With metering rods in place, press down on vacumeter link until metering rods bottom in carbureter body casting. 3. Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link. Hold in place and carefully tighten clamp screw.

BOWL VAPOR VENT ADJUSTMENT: This adjustment should be made after completing pump and metering rod adjustments. Install dust cover and dust cover gasket. Back out throttle lever stop screw to allow throttle valves to seat in bores of carbureter. There should be 1/16 inch (gauge T109-197) between lower edge of bowl vapor vent valve and dust cover. To adjust, remove dust cover and bend vapor vent arm.

FAST IDLE ADJUSTMENT: (a) Loosen choke lever clamp screw on choke shaft. Insert .015 inch feeler gauge (T109-44) between lip of fast idle cam and boss of flange casting. Hold choke valve tightly closed and take slack out of linkage by pressing lever towards closed position — hold in place and tighten clamp screw. (b) With choke valve tightly closed, tighten fast idle adjustment screw until there is .006-.010 inch (gauge T109-200) opening between throttle valve and bore of carbureter (side opposite idle port). Be sure fast idle adjusting screw is on high step of cam while making this adjustment.

FAST IDLE ON CAR: 1350 to 1400 R.P.M.

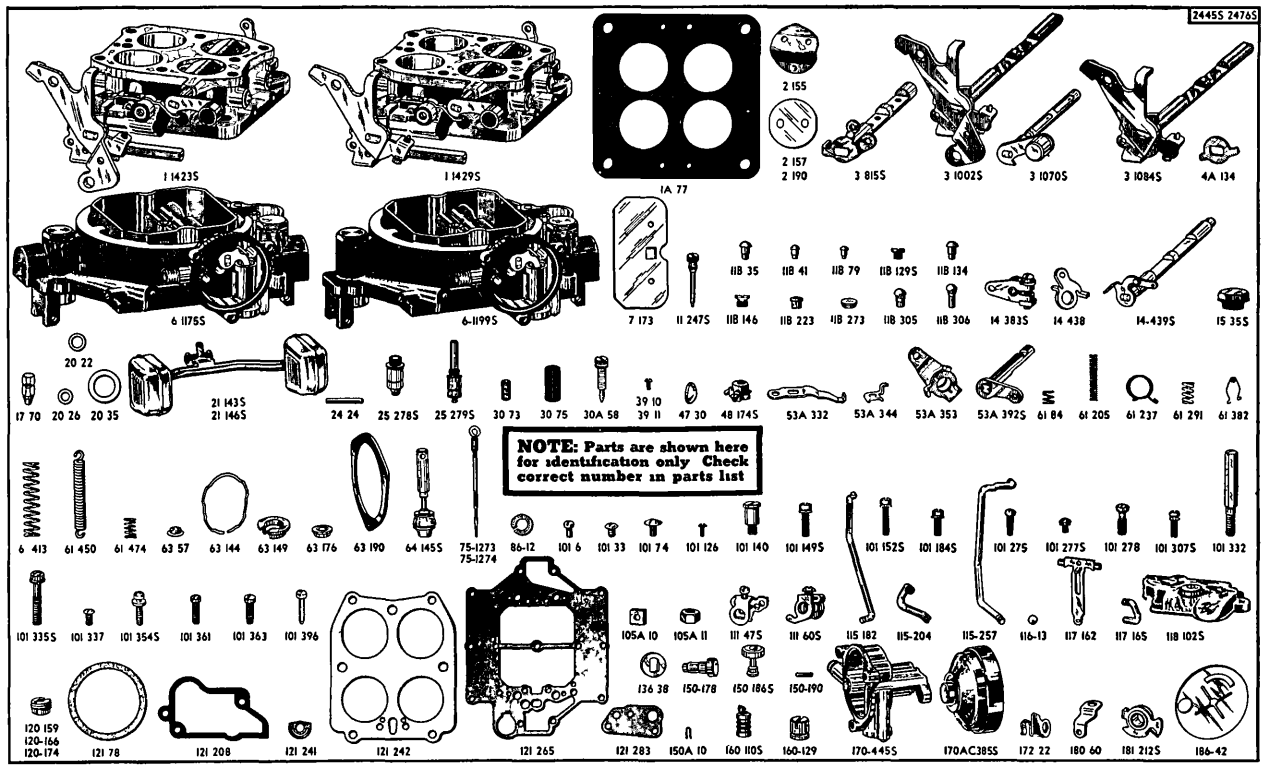
UNLOADER ADJUSTMENT: With throttle wide open there should be 11/64 inch clearance between upper edge of choke valve and inner wall of air horn (gauge T109-166). Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41).

AUXILIARY THROTTLE VALVE ADJUSTMENT: (a) Disconnect secondary throttle operating rod. (b) Adjust stop lug on secondary throttle lever (use bending tool T109-214) until there is 27/64 inch clearance (gauge T109-242) between lower edge of auxiliary throttle valve and bore, when lug is against stop on flange.

SECONDARY THROTTLE LEVER ADJUSTMENT: The stop lug on both primary and secondary throttle levers should contact boss on flange at the same time. To adjust bend secondary throttle operating rod at angle (use bending tool T109-213).

AUXILIARY THROTTLE LOCK-OUT ADJUSTMENT: This adjustment should be made after completing fast idle adjustment. 1. With choke valve closed, edge of hook on lock-out arm should contact auxiliary throttle lever, making maximum contact of locking step on lever. 2. Open choke valve. Auxiliary throttle valve should become unlocked a few degrees before the choke reaches wide open position. Adjust by bending lock-out arm.

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DeSoto "V-8"—1956—Carbureters Nos. 2445S-2476S

WHEN SERVICING, USE GASKET ASSORTMENT No. 269A

Part No.	PART NAME	
1-1423S	—Body flange assembly (2445S)	
1-1429S	—Body flange assembly (2476S)	
1A-77	Flange gasket	
2-92	Primary throttle valve (Sup by 2 190)	(2)
2-155	Auxiliary throttle valve	(2)
2-157	Secondary throttle valve	(2)
2-190	—Primary throttle valve	(2)
3-815S	Secondary throttle shaft and operating lever assembly	
3-1002S	Primary throttle shaft and lever assembly (2445S)	
3-1070S	—Auxiliary throttle shaft lever and weight assembly	
3-1084S	—Primary throttle shaft and lever assembly (2476S)	
4A-134	Primary throttle shaft dog	
6-1175S	—Air horn assembly (2445S)	
6-1199S	—Air horn assembly (2476S)	
7-173	Choke valve	
11-247S	Low speed jet assembly	(4)
11B-35	Rivet plug	(6)
11B-41	Rivet plug	
11B-79	Rivet plug	(4)
11B-129S	Pump discharge passage plug assembly	
11B-134	Rivet plug	
11B-146	Level sight plug	(2)
11B-223	Nozzle passage and idle port rivet plug	(8)

Part No.	PART NAME	
11B-273	Secondary throttle shaft rivet plug	
11B-305	Rivet plug	(2)
11B-306	Rivet plug	
14-383S	Choke lever and screw assembly	
14-438	Cam trip lever	
14-439S	Choke piston lever link and shaft assembly	
15-35S	Strainer nut assembly	(2)
17-70	Pump check needle	
20-22	Needle seat gasket	(2)
20-26	Relief valve gasket	
20-35	Bowl strainer gasket	(2)
21-143S	Primary float and lever assembly	
21-146S	Secondary float and lever assembly	
24-24	Float lever pin	(2)
25-278S	Primary needle and seat assembly	
25-279S	Secondary needle and seat assembly	
30-73	Primary needle seat strainer	
30-75	Bowl strainer	
30A-58	Idle adjustment screw	(2)
39-10	Primary throttle valve attaching screw	(4)
39-11	Choke valve attaching screw	(2)
47-30	Welsh plug	
48-174S	Pump jet and housing assembly	
53A-332	Lockout arm	

Part No.	PART NAME	
53A-344	Vent arm	
53A-353	Primary operating lever	
53A-392S	Pump operating lever and countershaft assembly	
61-84	Idle adjustment screw spring	(2)
61-205	Vacuum piston spring	
61-237	Fast idle cam spring	
61-291	Throttle lever adjusting screw spring	
61-382	Metering rod spring	
61-413	Upper pump spring	
61-450	Secondary throttle return spring	
61-474	Bowl vent spring	
63-57	Intake check ball retainer	
63-144	Delayer plate retainer ring	
63-149	Bowl vent spring retainer	
63-176	Pump spring retainer	
63-190	Coil housing retainer	
64-145S	Pump plunger and rod assembly	
75-1273	—Metering rod—standard (073 x 062 x 053 (2476S)	(2)
75-1274	—Metering rod—standard (078 x 070 x 045 (2445S)	(2)
86-12	Flange stud lock washer	(4)
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	
101-126	Auxiliary throttle valve attaching screw	(4)
101-140	Fast idle cam screw	
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-275	Piston housing attaching screw	
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet housing attaching screw	
101-284	Piston housing attaching screw (Sup by 101 363)	(2)
101-307S	Bracket and air horn attaching screw and washer assembly	(8)
101-332	Throttle lever adjusting screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-354S	Choke lever clamp screw and washer assembly	
101-361	Coil housing attaching screw	(3)
101-363	Piston housing attaching screw	(2)
101-396	Fast idle adjustment screw	
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
115-182	Choke connector rod	
115-204	Throttle operating rod	
115-257	Throttle connector rod	
116-13	Pump intake check ball	
117-162	Vacumeter piston link	
117-165	Pump connector link	
118-102S	Dust cover assembly	
120-159	Primary metering rod jet (2476S)	(2)
120-166	Primary metering rod jet (2445S)	(2)
120-174	Secondary metering jet	(2)
121-78	Coil housing gasket	
121-208	Dust cover gasket	
121-241	Pump jet housing gasket	
121-242	Body flange gasket	
121-265	Air horn gasket	
121-283	Piston housing gasket	
136-38	Throttle shaft washer	
150-178	Auxiliary valve lockout arm pin	
150-186S	Pin and valve cap assembly	
150-190	Choke piston pin	
150A-10	Pin spring	(5)
160-110S	Vacuum piston and pin assembly	
160-129	Choke piston	
170-445S	—Piston housing and plug assembly	
170AC385S	Thermostatic coil and housing assembly	
172-22	Throttle connector rod retainer	
180-60	Lever return spring bracket	
181-212S	Fast dle cam assembly	
186-42	Choke baffle plate	

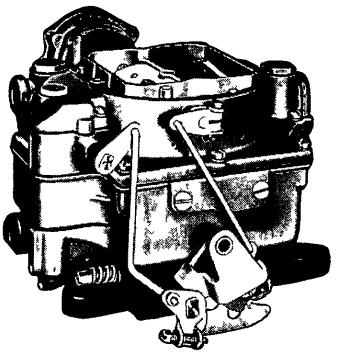
—Parts so marked are new and listed for the first time

NOTE **Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used**

CARTER CARBURETOR
DIVISION OF ACF INDUSTRIES INCORPORATED
ST LOUIS, MO., U. S. A.

De Soto 2311S-2311SA
January, 1956
Revised April, 1957

All Transmissions



DE SOTO "V-8"
MODEL S-24
1956

WCFB Four-Bore Down-Draft Climatic® Control **Carbureters Nos. 2311S-2311SA**

CARBURETER SPECIFICATIONS

For De Soto 8 Cylinder Engine: 3.72 Inch Bore, 3.80 Inch Stroke

Dimensions. Flange size 1¼ inch Four Bore—4 bolt type
Primary venturi size 11/32 inch I D
Main venturi size, 1-3/16 inch I D

Vents: Outside (4) Inside, (5)

Gasoline Intake. Size No 42 (.0935 inch) drill hole in needle seat

Low Speed Jet Tube: Jet, (4) size 035 inch diameter
By pass in body, (4) size No. 52 (.0635 inch) drill
Economizer (4) size 0452 inch diameter
Idle bleed, (4) in body size No 52 (.0635 inch) drill

Idle Port: Upper slot type Primary length 175 inch, width 030 inch Secondary length 101 inch, width 030 inch

Idle Port Opening: Primary, 130 to 134 inch above top edge of valve with valve tightly closed Secondary 071 to 077 inch

Lower Port Primary (for idle adjustment screw) size No 53 (.0595 inch) drill Secondary, constant feed, size 040 inch diameter

Set Idle Adjustment Screw: 1 to 2 turns open For richer mixture turn screw out Do not idle engine below 500 R P.M in neutral.

Main Nozzle: Installed permanently DO NOT REMOVE Anti percolating jet (to nozzle well), primary side, (to idle well) secondary side size No 70 (.028 inch) drill

Metering Rod. Primary economy step 075 inch diameter Middle step tapers to 065 inch diameter Power step 042 inch diameter Secondary, none

Metering Rod Jet: Primary size 096 inch diameter (for metering rod)
Secondary size 0595 inch diameter (no metering rod)

Accelerating Pump: Discharge jet (twin) primary side only size No 74 (.0225 inch) drill
Intake ball check seat size 115 to 120 inch diameter
Discharge needle seat, size 070 inch diameter
Relief passage (vent) to fuel chamber No 42 (.0935 inch) drill
Discharge relief plug size No 55 (.052 inch) drill

Choke: Carter Climatic® Control set one point rich Butterfly type, offset choke valve primary side only Choke heat suction hole restriction in piston housing, size No 47 (.0785 inch) drill

Vacuum Spark Port: Horizontal slot (round end) 045 by 110 inch Top of port 032 to 042 inch above valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

CAUTION. Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .017"	Ignition Timing Breaker Points to Open 4° B. T. C. At Vibration Damper	Float Setting Primary 5/32 Inch (Use Gauge T109-236) Secondary 7/32 Inch (Use Gauge T109-283)	Idle Adjustment Screw Setting 1 to 2 Turns Open Idle Engine at 500 R.P.M. In Neutral

NOTE These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT.

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CARBURETER
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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: Two separate float adjustments must be made—lateral and vertical. **Lateral Adjustment:** Side of floats should just clear the vertical uprights of float gauge Adjustment should be made by bending arms of floats **Vertical Adjustment:** With bowl gasket removed, vertical distance between top of float and machined surface of casting must be 5/32 inch (gauge T109-236) for primary floats, and 7/32 inch (gauge T109-283) for secondary floats Adjust by bending float arms.

FLOAT DROP ADJUSTMENT: With bowl cover held in upright position and measuring from center of floats, the distance between top of floats and bowl cover should be 21/32 inch for primary floats and 23/32 inch for secondary floats Adjust by bending stop tabs on float bracket.

PUMP ADJUSTMENT: Install pump connector link in outer hole (long stroke) of pump arm, with ends extending outward toward countershaft arm. Back out throttle lever set screw until throttle valves seat in bores of carbureter. Hold straight edge across top of dust cover boss at pump arm. The flat on top of pump arm should be parallel to straight edge. Adjust by bending throttle connector rod at lower angle (Use tool T109-213.)

METERING ROD ADJUSTMENT: Metering rod adjustment must be made after pump adjustment. 1. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw. 2. With metering rods in place, press down on vacumeter link until metering rods bottom in carbureter body casting. 3. Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link. Hold in place and carefully tighten clamp screw.

BOWL VAPOR VENT ADJUSTMENT: This adjustment should be made after completing pump and metering rod adjustments Install dust cover and dust cover gasket Back out throttle lever seat screw to allow throttle valves to seat in bores of carbureter. There should be 1/16 inch (gauge T109-197) between lower edge of bowl vapor vent valve and dust cover To adjust, remove dust cover and bend vapor vent arm

FAST IDLE ADJUSTMENT: (a) Loosen choke lever clamp screw on choke shaft. Insert 020 inch wire gauge (T109-29) between lip of fast idle cam and boss of flange casting Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw (b) With choke valve tightly closed, tighten fast idle adjusting screw until there is 012 inch (gauge T109-200) opening between throttle valve and bore of carbureter side opposite idle port Be sure fast idle adjusting screw is on high step of cam while making this adjustment.

UNLOADER ADJUSTMENT: With throttle wide open there should be 3/16 inch (gauge T109-28) clearance between upper edge of choke valve and inner wall of air horn Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41).

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: This adjustment should be made after completing fast idle adjustment Crack throttle valves and hold choke valve tightly closed Then close throttle. Tang on secondary throttle lever should freely engage in notch of lock-out dog If necessary to adjust, bend tang on secondary throttle lever

PRIMARY THROTTLE SHAFT DOG ADJUSTMENT:

Block choke valv wide open.

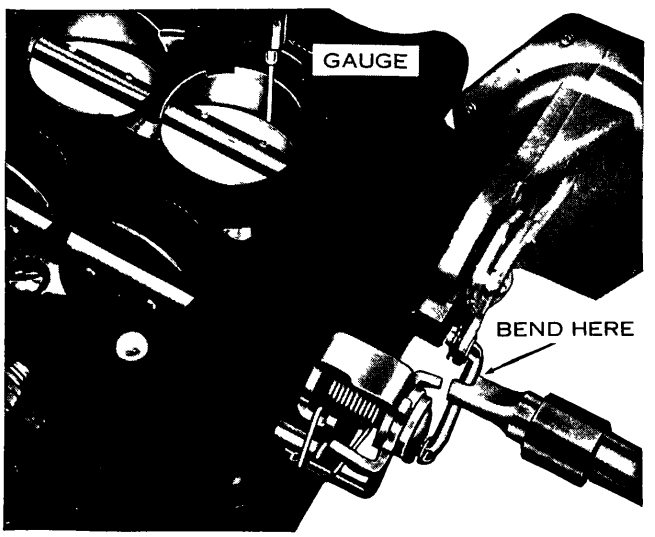


Figure 1

With primary throttle valves in wide open position, adjust (use tool T109-213) secondary operating rod so there is .054" to .064" clearance (gauge T109-193) between upper edge of secondary throttle valve (next to idle port) and bore of carbureter (Fig. 1).

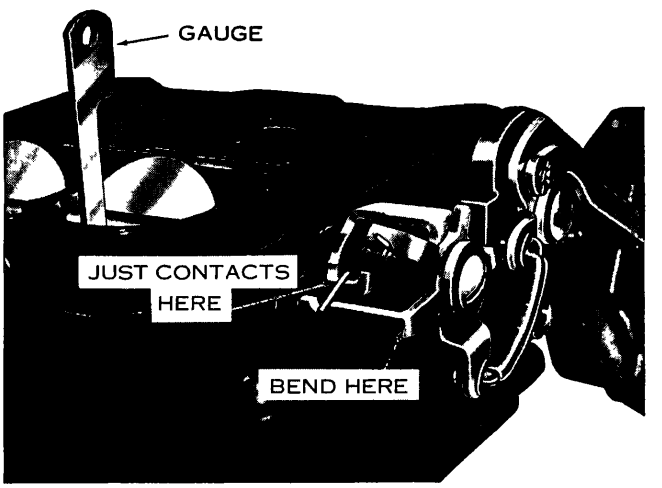


Figure 2

Place 1/4" gauge (tool T109-31) between upper edge of primary throttle valve and bore (next to idle port) and adjust (use tool T109-214) long tang on primary throttle shaft dog so that inner arm of spring just contacts inner lug of secondary operating lever and secondary throttle valves just start to open (Fig. 2).

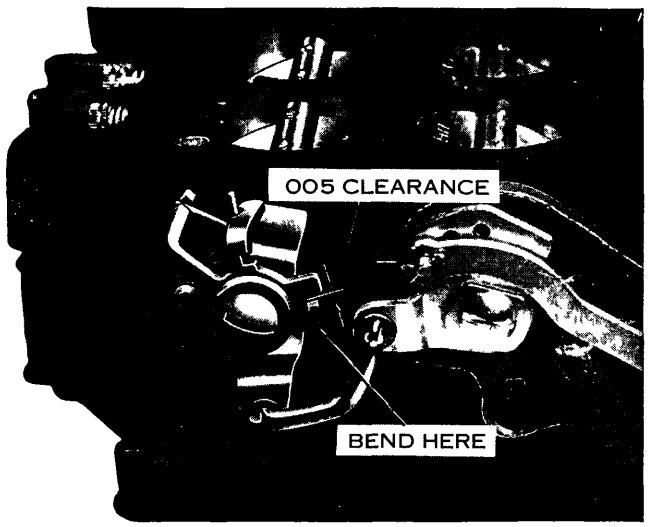


Figure 3

With primary and secondary throttle valves tightly seated there should be 005" clearance (gauge T109 237) between outer lip on secondary operating lever and stop lug on primary throttle shaft dog

TO ADJUST Bend outer lip on secondary operating lever (use tool T109 214)

CAUTION After bending be sure secondary operating lever operates freely and does not bind in any position (Fig 3)

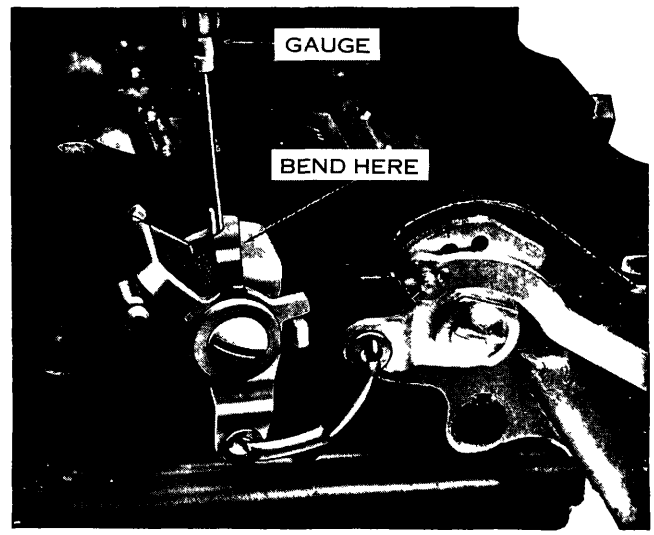
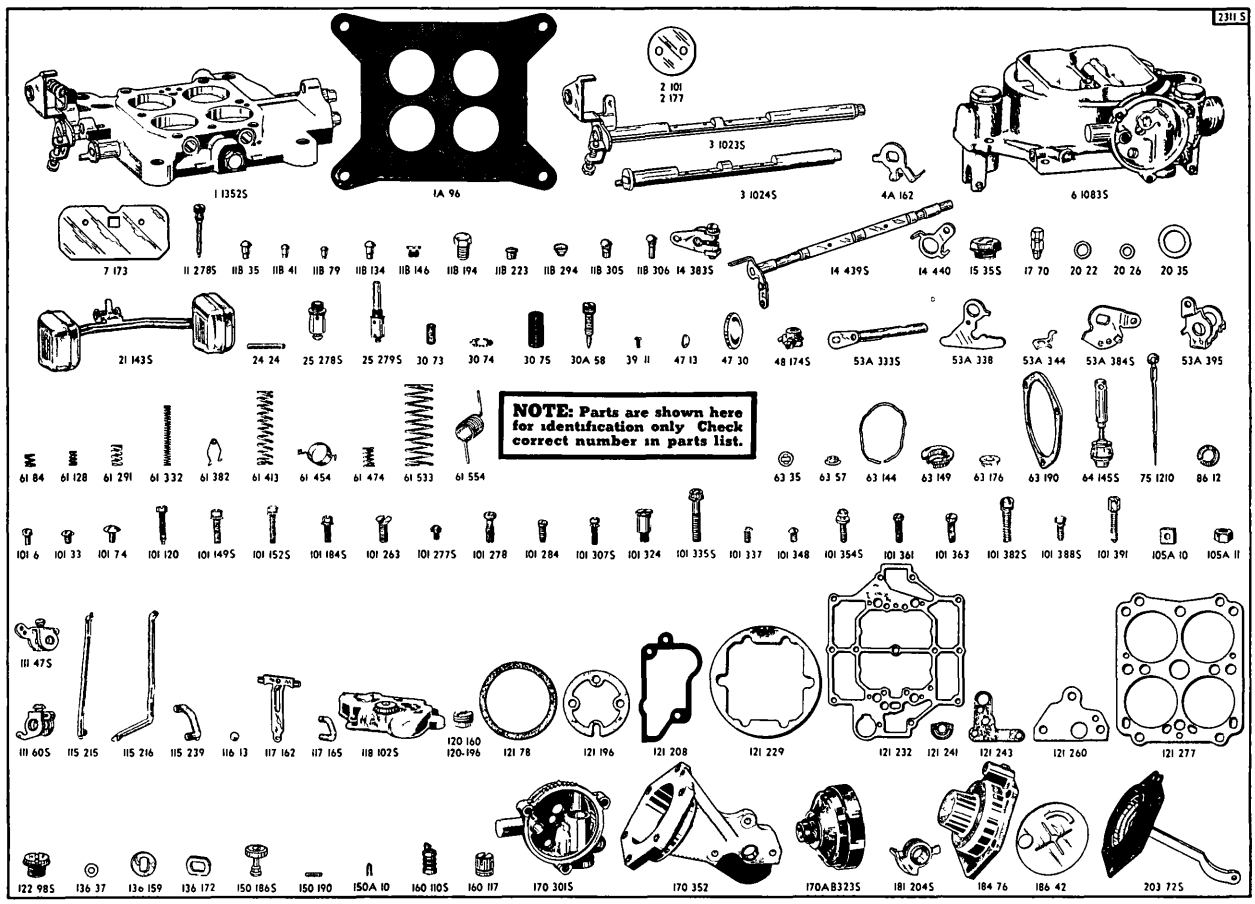


Figure 4

With primary and secondary throttle valves tightly closed there should be 040" clearance (gauge T109 193) between short tang on primary throttle shaft dog and outer arm of spring

TO ADJUST Bend short tang on primary throttle shaft dog (use tool T109 214) (Fig 4)



De Soto "V-8"—1956—Carbureters Nos. 2311S-2311SA

(See Page 4 for above parts group identification.)

De Soto "V-8"—1956—Carbureters Nos. 2311S-2311SA

WHEN SERVICING, USE GASKET ASSORTMENT No 282A, REPAIR PACKAGE No 1834A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1352S	Body flange assembly	
1A-96	Flange gasket (Sup by 1A 103)	
1A-103	FLANGE GASKET	
2-101	Primary throttle valve	(2)
2-177	Secondary throttle valve	(2)
3-1023S	Primary throttle shaft and lever assembly	
3-1024S	Secondary throttle shaft and dog assembly	
4A-162	Primary throttle shaft dog	
6-1083S	Air horn assembly (Casting No 6 1020)	
6-1174S	Air horn assembly (Casting No 6 1147)	
7-173	Choke valve	
11-278S	LOW SPEED JET ASSEMBLY	(4)
11B-35	Rivet plug	(4)
11B-41	Rivet plug (6 1083S (2) (6 1174S (1)	
11B-79	Rivet plug (early prod) (5) (late prod)	(3)
11B-134	Rivet plug	
11B-146	Level sight plug	(2)
11B-194	Pipe plug	
11B-223	Nozzle passage rivet plug	(4)
11B-294	Idle port rivet plug	(4)
11B-305	Rivet plug (6 1083S (1) (6 1174S (2)	
11B-306	Rivet plug (6 1083S (2) (6 1174S (1)	
14-383S	Choke lever and screw assembly	
14-439S	Choke piston lever link and shaft assembly	
14-440	Cam trip lever	
15-35S	Strainer nut assembly	(2)
17-70	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	(2)
20-26	Pump relief plug gasket	
20-35	BOWL STRAINER GASKET	(2)
21-143S	Float and lever assembly	(2)
24-24	Float lever pin	(2)
25-278S	PRIMARY NEEDLE AND SEAT ASSEMBLY	
25-279S	SECONDARY NEEDLE AND SEAT ASSEMBLY	
30-73	PRIMARY NEEDLE SEAT STRAINER	
30-74	SECONDARY FUEL INLET STRAINER	
30-75	BOWL STRAINER	
30A-58	Idle adjustment screw	(2)
39-11	Choke valve attaching screw	(2)
47-13	Welsh plug (spark port passage)	
47-30	Welsh plug (choke housing)	
48-174S	Pump jet and housing assembly	
53A-333S	Pump operating lever and countershaft assembly	
53A-338	Lockout arm	
53A-344	VENT ARM	
53A-384S	Secondary throttle operating lever assembly	
53A-395	Primary throttle operating lever	
61-84	Idle adjustment screw spring	(2)
61-128	Connector rod spring	
61-291	Throttle adjusting screw spring	
61-332	VACUUM PISTON SPRING	
61-382	METERING ROD SPRING	
61-413	UPPER PUMP SPRING	
61-454	Fast idle cam spring	
61-474	Bowl vent spring	
61-533	Diaphragm return spring	
61-554	Throttle flex spring	
63-35	Connector rod spring retainer	
63-57	INTAKE CHECK BALL RETAINER	
63-144	Delayer plate retainer ring	
63-149	Bowl vent spring retainer	
63-176	Pump spring retainer	
63-190	Coil housing retainer	
64-145S	PUMP PLUNGER AND ROD ASSEMBLY	
75-1143	Metering rod—standard (2311S) (Sup by 75 1210)	(2)
75-1180	Metering rod—1 size lean	(2)
75-1181	Metering rod—2 sizes lean	(2)
75-1210	Metering rod—standard (Sup by 75 1263)	(2)
75-1263	METERING ROD—STANDARD	(2)
86-12	Flange stud lock washer	(4)
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	(2)
101-120	Fast idle adjustment screw	

Part No	PART NAME	
101-149S	Body flange attaching screw and washer assembly	
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-263	Diaphragm housing attaching screw	(3)
101-275	Piston housing attaching screw (Use with 6 1174S)	
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet housing attaching screw	
101-284	Piston housing attaching screw (6 1083S)	(2)
101-307S	Air horn attaching screw and washer assembly	(8)
101-324	Fast idle cam attaching screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-348	Primary throttle valve attaching screw	(4)
101-354S	Choke lever clamp screw assembly	
101-361	Coil housing attaching screw	(3)
101-363	Piston housing attaching screw (6 1083S (1) (6 1174S (2)	
101-382S	Body flange attaching screw and washer assembly	(3)
101-388S	Diaphragm housing cover attaching screw and washer assembly	(6)
101-391	Throttle lever adjusting screw	
103-14	Lead shot (late prod)	(2)
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
115-215	Choke connector rod	
115-216	THROTTLE CONNECTOR ROD	
115 239	Throttle operating rod	
116-13	PUMP INTAKE CHECK BALL	
117-162	Vacumeter piston link	
117-165	Pump connector link	
118-102S	Dust cover assembly	
120 160	PRIMARY METERING ROD JET	(2)
120-196	SECONDARY METERING JET	(2)
121-78	COIL HOUSING GASKET	
121-196	Delayer plate gasket (2311S)	
121-208	DUST COVER GASKET	
121-229	AIR CLEANER GASKET	
121 232	AIR HORN GASKET	
121-241	PUMP JET HOUSING GASKET	
121-243	PISTON HOUSING GASKET (Use with 6 1083S)	
121-256	Body flange gasket (Sup by 121 277)	
121-260	Diaphragm housing gasket (Sup by 121 297)	
121-277	BODY FLANGE GASKET	
121-282	Gasket (diaphragm to lower housing)	
121-283	PISTON HOUSING GASKET (Use with 6 1174S)	
121 297	DIAPHRAGM HOUSING GASKET	
122-98S	PUMP RELIEF PLUG ASSEMBLY	
136-37	Throttle connector rod and operating rod washer	(5)
136-159	Primary throttle shaft washer	
136-172	Secondary throttle shaft washer	
150-186S	Pin and valve cap assembly	
150-190	Choke piston pin	
150A-10	PIN SPRING	(5)
160-110S	Vacuum piston and pin assembly	
160-117	Choke piston	
170-301S	Piston housing and plug assembly (2311S) (Sup by 170 424S)	
170 352	Diaphragm housing	
170-424S	Piston housing and plug assembly (Use with 6 1083S)	
170-443S	Piston housing and plug assembly (Use with 6 1174S)	
170AB323S	Thermostatic coil and housing assembly (2311S) (Sup by 170AB 426S)	
170AB-426S	Thermostatic coil and housing assembly	
181-204S	Fast idle cam assembly	
184-76	Diaphragm housing cap	
186 42	Choke baffle plate	
203-72S	Secondary throttle shaft diaphragm assembly	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only ne is used

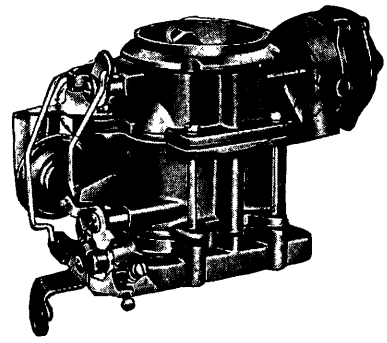
CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

DE SOTO 2308S-2309S-2310S
October, 1955
Revised January, 1957

2308S
Standard Transmission

2309S
Overdrive Transmission

2310S
Power Flite Transmission



DE SOTO "V-8" MODEL S-23 1956

(Use 2310S to replace 2308S—(remove dash pot)
Use 2310S with 192-36U and adjust, to replace 2309S—(remov dashpot)

BBD Dual Down-Draft Climatic® Control **Carbureters Nos. 2308S-2309S-2310S**

CARBURETER SPECIFICATIONS

For DeSoto 8 Cylinder Engine: 3.72 Inch Bore, 3.80 Inch Stroke

Dimensions: Flange size, 1¼ inch dual, 4 bolt type. Throttle bore, 1-7/16 inch I. D. Primary venturi, ⅜ inch I. D. Main venturi, 1-3/16 inch I. D.

Float Level: See adjustments.

Vent: Inside, balance vent tube to bowl, in air horn above choke valve.

Gasoline Intake: Size No. 38 (.1015 inch) drill hole in needle seat.

Idle Tube: Jet, size .035 inch diameter. Idle bleed (in venturi cluster screw), size .063 inch diameter. Idle restriction (in venturi cluster screw), size .0472 inch diameter.

Idle Port: Upper, slot type, length .189 inch; width, .030 inch.

Idle Port Opening: .148 to .152 inch above upper edge of valve with valve tightly closed.

Lower Port (For Idle Adjustment Screw): Size .053 to .057 inch diameter.

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture, turn screw out. With gear shift lever in neutral position, idle engine between 450 and 500 RPM.

Main Nozzle: Nozzle is installed permanently. DO NOT REMOVE.

Main Vent Tube: Side holes 8—size .0354 inch diameter. Main vent in top of tube, size .0196 inch diameter.

Step-Up Rod: (Vacuum operated) .023 inch diameter.

Metering Jet: Calibrated to flow 327 to 333 cc per minute. (Do not gauge for size, if in doubt, replace with new part.)

Accelerating Pump: Pump discharge jets (2—in venturi cluster), size .0295 inch drill. Intake ball check seat, size .135 to .140 inch diameter. Discharge ball check seat, size .110 to .120 inch diameter.

Pump Adjustments: See adjustments.

Choke: Carter Climatic® Control, set (2308S-2309S) on index, (2310S) one point rich. Butterfly type, offset valve. Choke heat suction hole, in body, size No. 54 (.055 inch) drill. NOTE: Thermostatic coil should not be removed from delayer mounting post. If defective, replace with complete thermostatic coil and housing assembly.

Vacuum Spark Port: Horizontal, round end type, .030 by .110 inch. Top of port to be .035 to .045 inch above upper edge of valve with valve closed tight.

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .017"	Ignition Timing Breaker Points to Open: 8° B. T. C. At Vibration Damper	Float Setting See Adjustments	Idle Adjustment Screw Setting ½ to 1½ Turns Open Idle Engine at 450 to 500 R.P.M.

NOTE: These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT.

CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3658

Float Level: ¼" (Gauge T109-282) between top of each float and top surface of body casting.
To adjust: bend lip on float arm.

Pump: 1-1/32" from the top of the bowl cover to the top of the plunger shaft. Install throttle connector rod in center hole (medium stroke) of throttle lever and inner hole of pump arm.
To adjust: bend throttle connector rod.

Fast Idle Cam Clearance: With choke valve closed and lip on inner choke shaft lever contacting lug on outer lever there should be .020" (Gauge T109-29) between lip of fast idle cam and boss on casting. Optional adjustment, (late production), align index mark on cam with adjusting screw.
To adjust: bend lip on inner choke shaft lever.

Fast Idle Throttle Valve Clearance: .015" (Gauge T109-44) between lower edge of valve and bore with adjusting screw on high step of cam.

Unloader: 3/16" (Gauge T109-28) between top edge of choke valve and inner wall of air horn with throttle valves wide open.
To adjust: bend unloader arm on throttle lever.

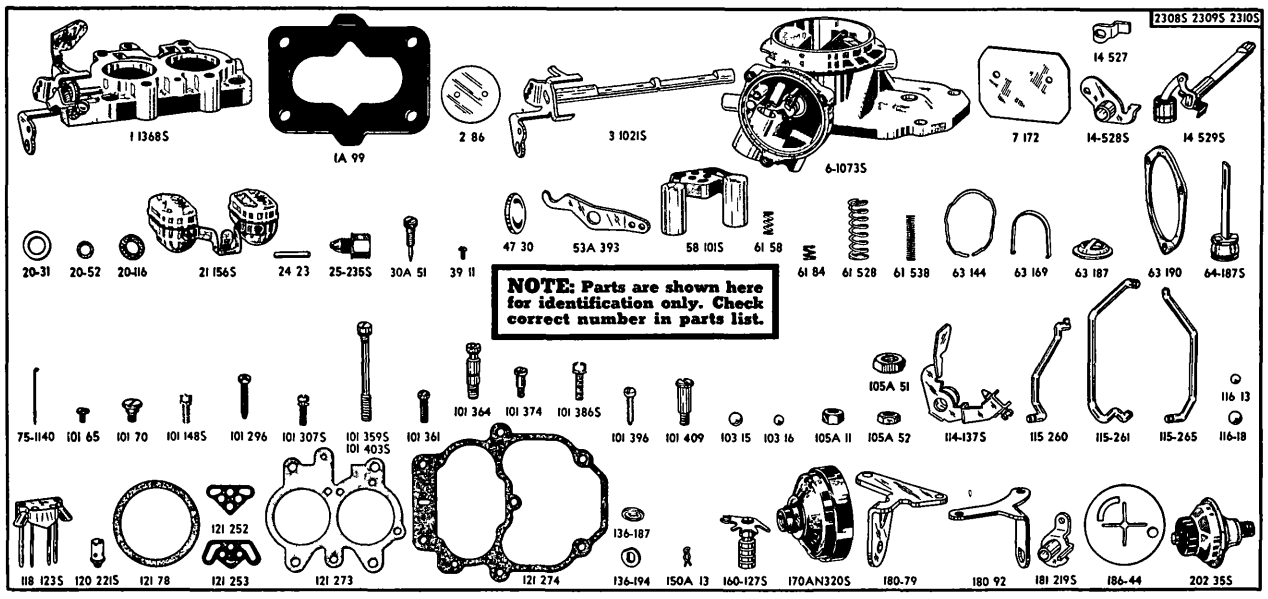
Dash Pot (Slow Closing Throttle): Close throttle valves and bottom plunger shaft with 1/16" gauge between shaft and operating lever.
To adjust: loosen lock nut and turn dash pot unit in or out.

Overdrive Kickdown Switch: With throttle valves wide open there should be 1/64" to 3/64" between kickdown lever and switch stem guide.
To adjust: loosen locknuts and adjust switch.

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De Soto "V-8"—1956—Carbureters Nos. 2308S-2309S-2310S

WHEN SERVICING, USE GASKET ASSORTMENT No 278, REPAIR PACKAGE No. 1826

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part N .	PART NAME	
1-1368S	Body flange assembly	
1A-99	FLANGE GASKET	
2-86	Throttle valve	(2)
3-1021S	Throttle shaft and lever assembly	
6-1073S	Air horn assembly	
7-172	Choke valve	
14-527	Choke shaft lever	
14-528S	Choke lever and collar assembly	
14-529S	Choke piston lever link and shaft assembly	
20-31	Needle seat gasket	
20-52	STEP UP PISTON GASKET	
20-116	Main metering jet gasket	(2)
21-156S	Float and lever assembly	
24-23	Float lever pin	
25-235S	NEEDLE AND SEAT ASSEMBLY	
30A-51	Idle adjustment screw	(2)
39-11	Choke and throttle valve attaching screw	(6)
47-30	Welsh plug	
53A-393	Pump arm	
58-101S	Venturi cluster and nozzle assembly	
61-58	Throttle adjusting screw spring	
61-84	Idle adjustment screw spring	
61-528	PUMP SPRING	
61-538	STEP UP PISTON SPRING	
63-144	Delayer plate retainer ring	
63-169	FLOAT LEVER PIN RETAINER	
63-187	INTAKE CHECK BALL RETAINER	
63-190	Coil housing retainer	
64-187S	PUMP PLUNGER AND ROD ASSEMBLY	
75-1140	Step up rod (Sup by 75 1145)	(2)
75-1145	Step up rod	(2)
101-65	Choke lever attaching screw	
101-70	Pump arm screw	
101-148S	Air horn attaching screw and washer assembly (2308S) (4) (2309S) (3) (2310S) (2)	
101-296	Throttle adjusting screw	
101-307S	Air horn attaching screw and washer assembly (2309S) (1) (2310S) (2)	
101-359S	Body attaching screw and washer assembly (2308S 2310S)	(2)
101-361	Coil housing attaching screw	(3)

Part No.	PART NAME	
101-364	Venturi cluster screw	(2)
101-374	Step up piston plate guide screw	
101-386S	Body flange attaching screw and washer assembly	(2)
101-396	Fast idle adjusting screw	
101-403S	Body attaching screw and washer assembly (2309S)	(2)
101-409	Fast idle cam attaching screw	
103-14	Lead shot	
103-15	Lead shot	(2)
103-16	Lead shot	(2)
105A-11	Flange stud nut	(4)
105A-51	Kickdown switch bracket attaching nut (2309S)	(2)
105A-52	Dash pot lock nut (2310S)	
114 137S	Dash pot and kickdown lever assembly	
115 260	Choke connector rod	
115 261	Throttle connector rod (2310S)	
115-265	Throttle connector rod (2308S 2309S)	
116-13	DISCHARGE CHECK BALL	
116-18	INTAKE CHECK BALL	
118 123S	VENTURI COVER AND TUBE ASSEMBLY	
120-209S	Main metering jet assembly—2 sizes lean	
120 212S	Main metering jet assembly—1 size lean	
120 221S	MAIN METERING JET ASSEMBLY—STANDARD	(2)
121-78	COIL HOUSING GASKET	
121-252	VENTURI HOUSING GASKET	
121-253	VENTURI COVER GASKET	
121-273	BODY FLANGE GASKET	
121-274	BODY GASKET	
136-34	Choke shaft washer (Sup by 136 194)	
136-187	Pump spring retainer washer	-
136-194	Choke shaft washer	
150A-13	PIN SPRING	(3)
160-127S	STEP UP PISTON AND PLATE ASSEMBLY	
170AN-320S	Thermostatic coil and housing assembly	
180-79	Dash pot bracket (2310S)	
180-92	Kickdown switch bracket (2309S)	
181-219S	Fast idle cam assembly	
186-44	Baffle plate	
192-35S	Kickdown switch and bracket assembly (2309S) (Sup by 192 36U)	
192 36U	Unitized package (2309S)	
202-35S	Dash pot assembly (2310S)	

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

Form 3658A
October, 1955
Revised January, 1956

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

CARTER MODEL BBD CARBURETER FOR DESOTO
(SERVICE ADJUSTMENT PROCEDURE)

NOTE: The parts and specification pages referred to are catalog pages. These pages can be obtained from Carter Carburetor Corporation, Catalog Department, St. Louis (7), Missouri. Specify the carbureter number found on the brass identification tag, when requesting specification pages.

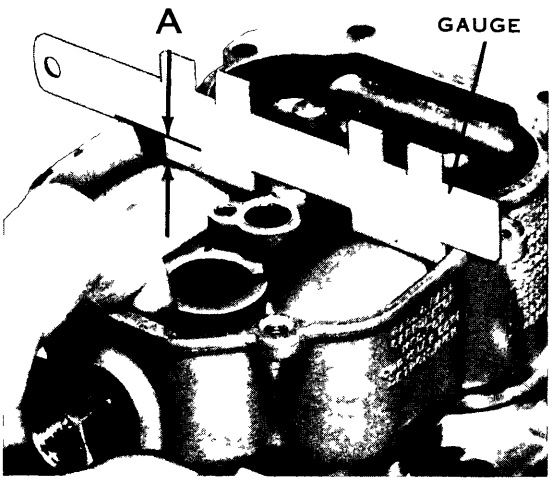


Figure 1
Float Adjustment

FLOAT ADJUSTMENT (Fig. 1):

This adjustment must be made with the bowl cover gasket and float pin retainer removed. Hold the lip on float arm against the seated intake needle, making sure the float pin is at the bottom of its guide slots. The distance (A) from the top surface of the body casting to the top of each float should be as listed on carbureter specification page. If one float is lower than the other, equalize by bending the float arm. If both floats require the same correction, adjust by bending lip on float arm. The floats must not rub anywhere against the inner walls of the bowl. If necessary, bend float arms slightly to provide clearance on all sides of floats.

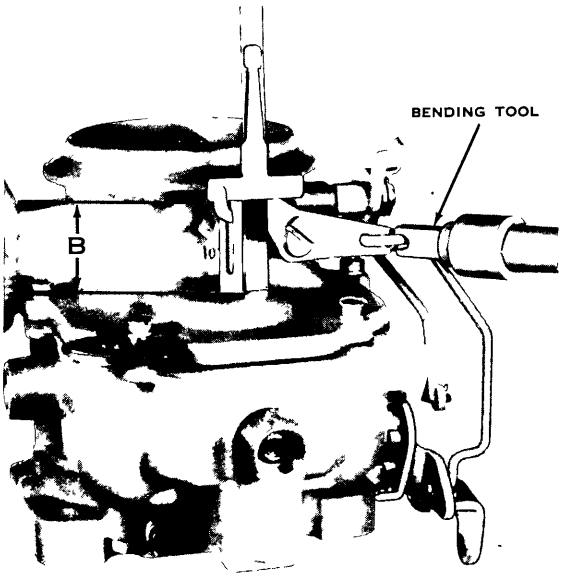


Figure 2
Pump Adjustment

PUMP ADJUSTMENT (Fig. 2):

1. Back out throttle adjustment screw and open choke valve so that throttle valves seat in bores of carbureter.
2. Install throttle connector rod in the holes in the throttle lever and pump arm specified on carbureter specification page.
3. Th distance (B) from the top of the bowl cover to th top of the plunger shaft should be as specified on carbureter specification page.
4. Adjust by bending pump connector rod. (Use bending tool T109-213.)

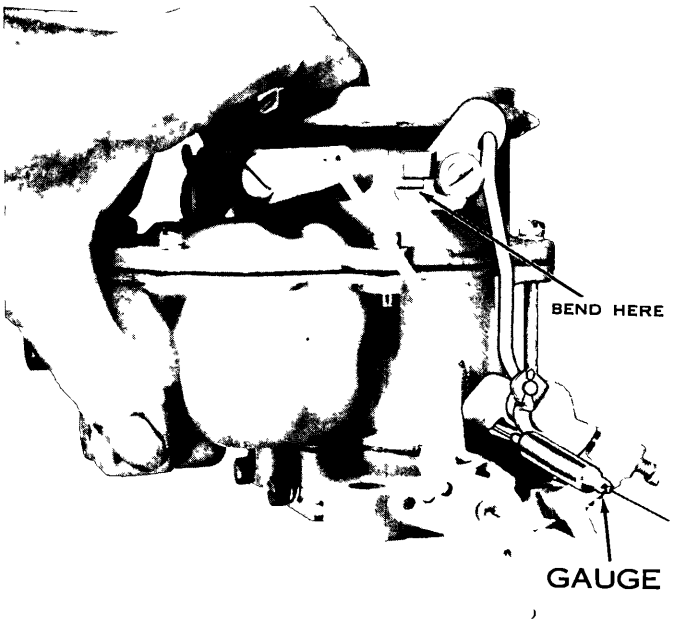


Figure 3
Fast Idle Adjustment

FAST IDLE CAM CLEARANCE ADJUSTMENT (Fig. 3):

1. Hold choke valve tightly closed.
2. With lip on inner choke shaft lever contacting lug on outer lever, there should be the clearance listed on carbureter specification page between lip of fast idle cam and boss on casting. Optional adjustment (late production), align index mark on cam with adjusting scr w.
3. Adjust by bending lip on inner choke shaft lever. (Use bending tool T109-22.)

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CARBURETER
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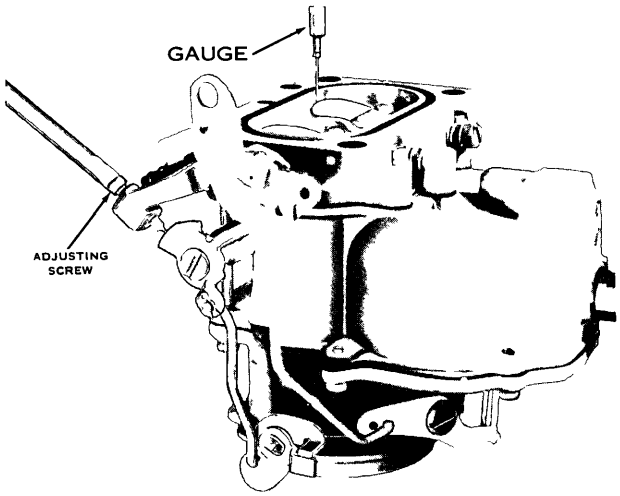


Figure 4
Fast Idle Adjustment

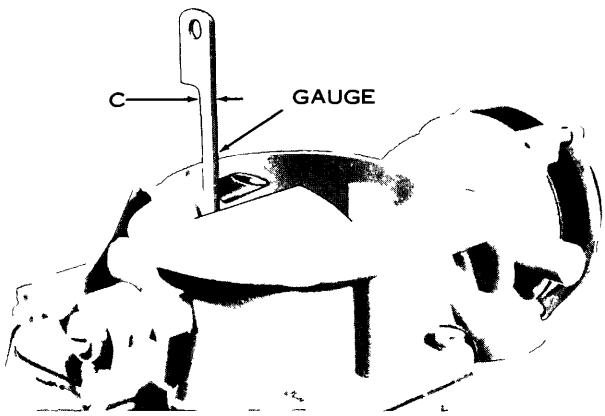


Figure 5
Unloader Adjustment

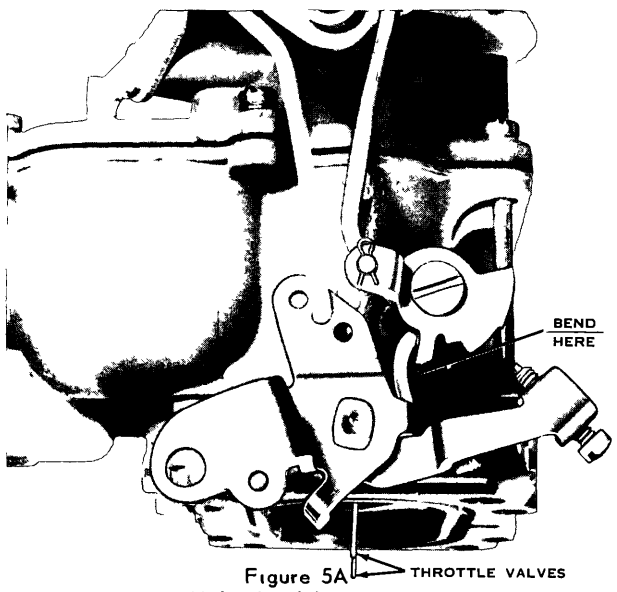


Figure 5A
Unloader Adjustment

UNLOADER ADJUSTMENT (Figs. 5 & 5A):

1. Hold throttle valves wide open.
2. Clos choke valve as far as possible without forcing.
3. Clearance (C) betw n top dg of choke valve and inner wall of air horn (Fig. 5) should be as listed on carbureter specification page.
4. Adjust by bending choke unloader arm on throttle lever (Fig. 5A). (Use bending tool T109-213.)

FAST IDLE THROTTLE VALVE CLEARANCE ADJUSTMENT (Fig. 4):

1. Be sure choke valv is closed.
2. Adjust fast idle adjusting screw against high step of cam until the clearance between throttle valve (side opposite port) and bore is as listed on carbureter specification page.



Figure 6
Dashpot Adjustment

DASH POT (SLOW CLOSING THROTTLE) ADJUSTMENT (Fig. 6):

The purpose of this unit is to prevent the car from stalling when the throttle is released rapidly. Maximum action is obtained by loosening lock nut and adjusting the dash pot unit so that the plunger shaft can be bottomed with a 1/16 inch gauge (D) placed between shaft and operating lever with throttle valves tightly closed.

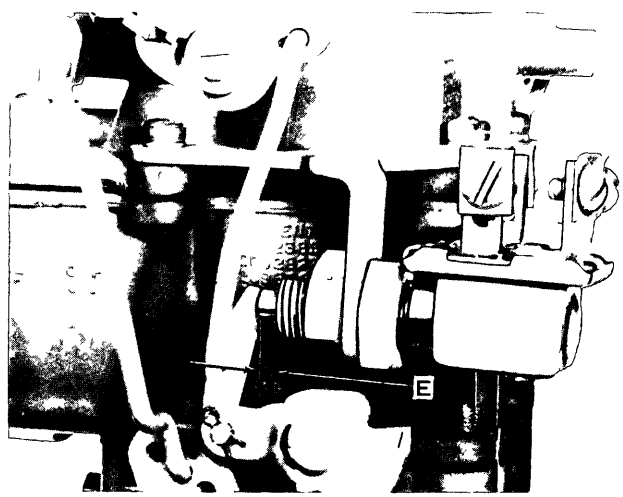


Figure 7
Overdrive Kickdown Switch Adjustment

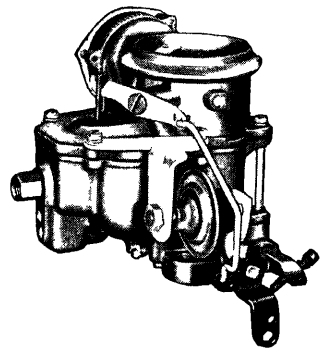
OVERDRIVE KICKDOWN SWITCH ADJUSTMENT (Fig. 7):

With throttle valves in wide open position, adjust hex nuts on switch to have 1/64 inch to 3/64 inch clearance (E) between kickdown lever and switch stem guide.

(2176S-SA)
Standard Transmission

(2177S-SA)
Overdrive Transmission

(2178S-SA)
Power Flite Transmission



DE SOTO FIREDOME "V-8" MODEL S-22 1955

Use 2178SA to replace 2176S-SA—(remove dashpot)
Use 2178SA with 192 34U and adjust, to replace 2177S SA—(remove dashpot)

BBD Dual Down-Draft Climatic® Control Carbureters
Nos. 2176S-2176SA-2177S-2177SA-2178S-2178SA

CARBURETER SPECIFICATIONS

For DeSoto 8 Cylinder Engine 3 720 Inch Bore 3 344 Inch Stroke

Dimensions Flange size 1¼ inch dual 4 bolt type
Throttle bore 1 7/16 inch I D
Primary venturi ⅜ inch I D
Ma n venturi 1 3/16 inch I D

Float Level See adjustments

Vent Inside balance vent tube to bowl in air horn above choke valve

Gasoline Intake Size No 38 (1015 inch) drill hole in needle seat

Idle Tube Jet size 0334 inch drill
Idle bleed (in venturi cluster screw) size 063 inch drill
Idle restriction (in venturi cluster screw) size 0472 inch drill

Idle Port Upper slot type length 149 inch width 030 inch

Idle Port Opening 102 to 106 inch above upper edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw) Size 053 to 057 inch diameter

Set Idle Adjustment Screw ¼ to 1¼ turns open For richer mixture turn screw out With gear shift lever in neutral position idle engine between 475 and 500 RPM

Main Nozzle Nozzle is nstalled permanently DO NOT RE MOVE

Main Vent Tube Side holes 6—bottom three holes (from closed end) size 0354 inch next two holes 0236 inch top hole 0197 inch d ameter
Main vent in top of tube size 0275 inch diameter

Step Up Rod (Vacuum operated) 024 inch diameter

Metering Jet Calibrated to flow 356 to 364 cc per minute (Do not gauge for size if in doubt replace with new part)

Accelerating Pump Pump discharge jets (2—in venturi cluster) size 0275 inch drill
Intake ball check seat size 135 to 140 inch diameter
D scharge ball check seat s ze 110 to 120 inch diameter

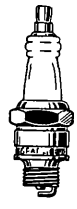
Pump Adjustment See adjustments

Choke Carter Climatic® Control set at index Butterfly type offset valve Choke heat suction hole in body size No 38 (1015 inch) drill
NOTE Thermostatic coil should not be removed from delayer mounting post If defective replace with complete thermo static coil and housing assembly

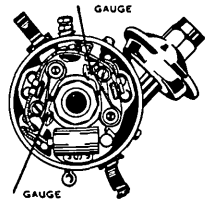
Vacuum Spark Port Horizontal round end type 030 by 110 inch Top of port to be 035 to 045 inch above upper edge of valve with valve closed tight

Motor Tune-Up—Be Accurate!

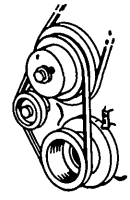
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



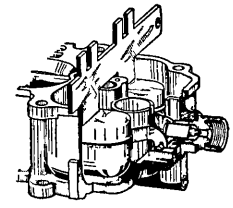
Spark Plug
Gap
035"



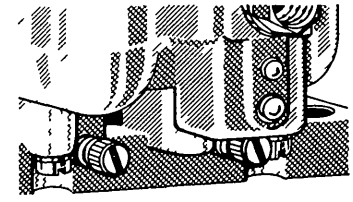
Breaker Point
Setting
017"



Ignition Timing
Breaker Points to Open
10° B T D C



Float Setting
(See Adjustments)



Idle Adjustment
Screw Setting
¼ to 1¼
Turns Open

NOTE These cars equipped with Hydraulic Valve Lifters NO ADJUSTMENT

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: This adjustment must be made with the bowl cover gasket and float pin retainer removed. Hold the lip on float arm against the seated intake needle, making sure the float pin is at the bottom of its guide slots. The distance from the top surface of the body casting to the top of each float should be 7/32 inch (gauge T109-239). If one float is lower than the other, equalize by bending the float arm. If both floats require the same correction, adjust by bending lip on float arm. The floats must not rub anywhere against the inner walls of the bowl. If necessary, bend float arms slightly to provide clearance on all sides of floats.

PUMP ADJUSTMENT: Back out throttle adjustment screw and open choke valve so that throttle valves seat in bores of carbureter. Install throttle connector rod in outer hole (medium stroke) of throttle lever and inner hole of pump arm. The distance from the top of the bowl cover to the top of plunger shaft (not pump arm) should be 1 inch. Adjust by bending pump connector rod (2176S-SA-2177S-SA) at lower angle; (2178S-SA) at upper angle (use tool T109-213).

FAST IDLE ADJUSTMENT: Remove thermostatic coil housing assembly, gasket and baffle plate. With throttle adjusting screw backed out, crack throttle valve and hold choke valve in fully closed position. Then close throttle. This will allow fast idle cam to revolve to fast idle position. There should now be .015"-.019" clearance (use gauge T109-44) between throttle valve and bore of carbureter (side opposite idle port). Adjust by bending the choke connector rod at lower angle (use tool T109-213).

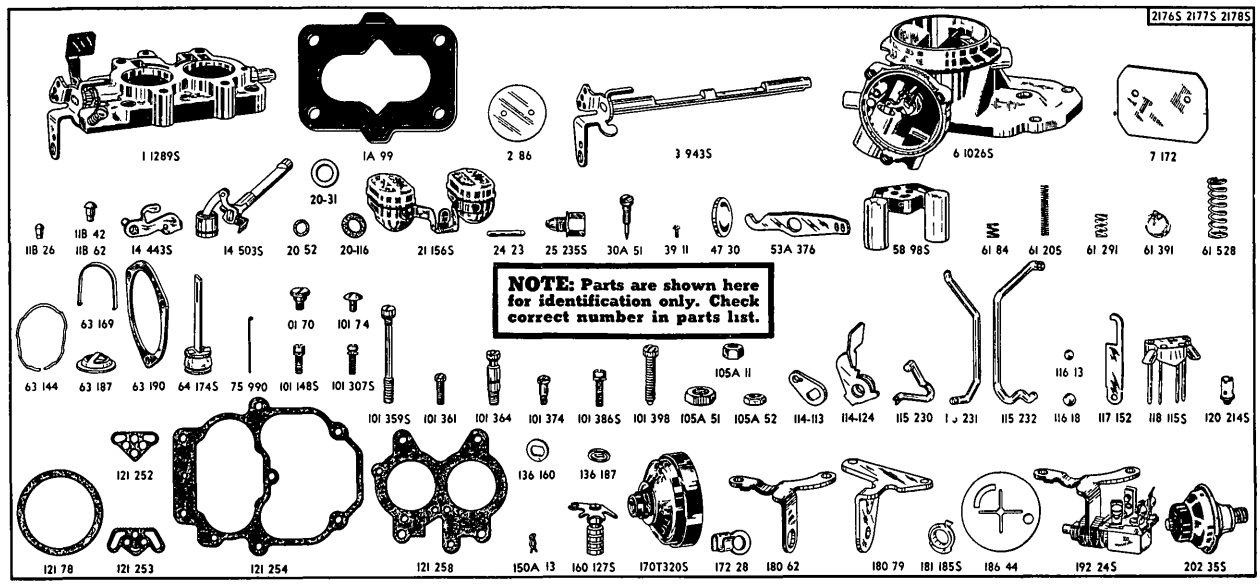
UNLOADER ADJUSTMENT: This adjustment must be made after the fast idle adjustment. Hold throttle valve wide open and close choke valve as far as possible without forcing. There should now be 1/4 inch clearance (use gauge T109-31) between upper edge of choke valve and inner wall of air horn. Adjust by bending arm on choke trip lever (use tool T109-214). When fast idle and unloader adjustments have been made, assemble baffle plate, coil housing gasket and thermostatic coil housing assembly on air horn. Set Climatic® Control at "Index", making sure that hook on coil has picked up coil shaft lever.

DASH POT (SLOW CLOSING THROTTLE) ADJUSTMENT: The purpose of this unit is to prevent the car from stalling when the throttle is released rapidly. Maximum action is obtained by loosening lock nut and adjusting the dash pot unit so that the plunger shaft can be bottomed with a 1/16 inch gauge placed between shaft and operating lever with throttle valves tightly closed. Then tighten lock nut.

OVERDRIVE KICKDOWN SWITCH ADJUSTMENT: With throttle valves in wide open position adjust hex nuts on switch to have 1/64 inch to 3/64 inch clearance between kickdown lever and switch stem guide.

NOTE: If necessary bend kickdown lever to contact switch stem.

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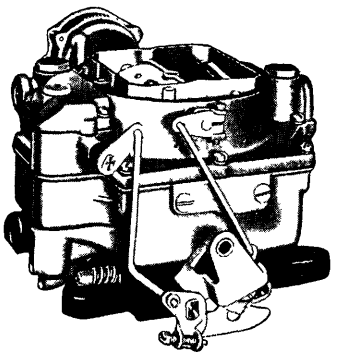


DeSoto "V-8"—1955—Carbureters Nos. 2176S-2176SA-2177S-2177SA-2178S-2178SA

WHEN SERVICING, USE GASKET ASSORTMENT No. 265, REPAIR PACKAGE No 1791
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1235S	Body flange assembly (2176S) (Sup by 1 1289S)	
1-1239S	Body flange assembly (2177S 2178S) (Sup by 1 1289S)	
1-1289S	Body flange assembly	
1A-99	FLANGE GASKET	
2-86	Throttle valve	(2)
3-943S	Throttle shaft and lever assembly	
6-1026S	Air horn assembly	
7-172	Choke valve	
11B-26	Rivet plug (early production)	(2)
11B-42	Rivet plug (early production)	
11B-62	Rivet plug (early production)	
14-443S	Choke trip lever and pin assembly	
14-503S	Choke piston lever link and shaft assembly	
20-31	Needle seat gasket	
20-52	STEP UP PISTON GASKET	
20-116	Main metering jet gasket	(2)
21-156S	Float and lever assembly	
24-23	Float lever pin	
25-235S	NEEDLE AND SEAT ASSEMBLY	
30A-51	Idle adjustment screw	(2)
39-11	Choke and throttle valve attaching screw	(6)
47-30	Welsh plug	
53A-376	Pump arm	
58-98S	Venturi cluster and nozzle assembly	
61-84	Idle adjustment screw spring	(2)
61-205	STEP UP PISTON SPRING	
61-291	Throttle adjusting screw spring	
61-391	Fast idle cam spring	
61-528	PUMP SPRING	
63 144	Delayer plate retainer ring	
63-169	FLOAT LEVER PIN RETAINER	
63-187	INTAKE CHECK BALL RETAINER	
63-190	Coil housing retainer	
64-174S	PUMP PLUNGER AND ROD ASSEMBLY	
75-990	STEP UP ROD	(2)
101-70	Pump arm screw	
101-74	Throttle shaft arm attaching screw	
101-148S	Air horn attaching screw and washer assembly (2176S SA (4) (2177S SA (3) (2178S SA (2)	
101-307S	Air horn attaching screw and washer assembly (2177S SA (1) (2178S SA (2)	
101-359S	Body attaching screw and washer assembly (2176S SA 2178S SA)	(2)
101-361	Coil housing attaching screw	(3)
101-364	Venturi cluster screw	(2)
101-374	Step up piston plate guide screw	
101-386S	Body flange attaching screw and washer assembly	(2)
101-398	Throttle adjusting screw	
101-403S	Body attaching screw and washer assembly (2177S SA)	(2)
103-14	Lead shot	
103-15	Lead shot (late production)	(2)
103-16	Lead shot (late production)	(2)
105A-11	Flange stud nut	(4)
105A-51	Kickdown switch bracket attaching nut (2177S SA)	(2)
105A-52	Dash pot lock nut (2178S SA)	
114-113	Throttle shaft arm	
114-124	Kickdown switch and dash pot operating lever (2177S SA 2178S SA)	
115-230	Choke connector rod	
115-231	Throttle connector rod (2176S SA 2177S SA) (Sup by 115 262)	
115-232	Throttle connector rod (2178S SA) (Sup by 115 263)	
115-245	Throttle connector rod (2176S 2177S) (Sup by 115 231)	
115-246	Throttle connector rod (2178S) (Sup by 115 232)	
115-262	Throttle connector rod (2176S SA 2177S SA)	
115-263	Throttle connector rod (2178S SA)	
116-13	DISCHARGE CHECK BALL	
116-18	INTAKE CHECK BALL	
117-152	Fast idle link	
118-115S	Venturi cover and tube assembly (2176S 2177S 2178S) (Sup by 118-117S)	
118-117S	VENTURI COVER AND TUBE ASSEMBLY	
120-212S	Main metering jet assembly—2 sizes lean	(2)
120-213S	Main metering jet assembly—1 size lean	(2)
120-214S	MAIN METERING JET ASSEMBLY—STANDARD	(2)
121-78	COIL HOUSING GASKET	
121-252	VENTURI HOUSING GASKET	
121-253	VENTURI COVER GASKET	
121-254	Body gasket (Sup by 121 274)	
121-258	BODY FLANGE GASKET	
121-274	BODY GASKET	
136-160	Throttle shaft washer	
136-187	Pump spring retainer washer	
150A-13	PIN SPRING	(2)
160-127S	STEP UP PISTON ROD AND PLATE ASSEMBLY	
170P320S	Thermostatic coil and housing assembly (Sup by 170T 320S)	
170T-320S	Thermostatic coil and housing assembly	
172-28	Choke connector rod retainer	
180-62	Kickdown switch bracket (2177S SA)	
180-79	Dash pot bracket (2178S SA)	
181-185S	Fast idle cam assembly	
186-44	Choke baffle plate	
192-24S	Kickdown switch and bracket assembly (2177S SA) (Sup by 192 34U)	
192-34U	Unitized package (2177S SA)	
202-35S	Dash pot assembly (2178S SA)	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used



DE SOTO FIREFLITE "V-8" MODEL S-21 1955

WCFB Four-Bore Down-Draft Climatic® Control **Carbureter No. 2210S**

CARBURETER SPECIFICATIONS

For DeSoto 8 Cylinder Engine: 3.720 Inch Bore, 3.344 Inch Stroke

Dimensions: Flange size, 1 1/8 inch Four Bore—4 bolt type.
Primary venturi size, 11/32 inch I. D.
Main venturi, size, 1-1/16 inch.

Float Level: See adjustments.

Vents: Outside, 2 on primary side, 2 on secondary side. **Inside,** 2 on primary side, 3 on secondary side.

Gasoline Intake: Size No. 42 (.0935 inch) drill hole in needle seat.

Low Speed Jet Tube: Jet, size No. 69 (.02925 inch) drill.
By Pass, in body, size (.057 inch) drill.
Economizer, size (.0452 inch) drill.
Idle bleed, in body, size No. 44 (.086 inch) drill.

Idle Port: Upper, slot type. Primary, length .136 inch; width .030 inch. Secondary, length .101 inch; width .030 inch.

Idle Port Opening: Primary, .084 to .092 inch above top edge of valve with valve tightly closed. Secondary, .071 to .077 inch.

Lower Port: Primary (for idle adjustment screw), size No. 53 (.0595 inch) drill Secondary, constant feed, size .040 inch diameter.

Set Idle Adjustment Screw: 1 to 2 turns open. For richer mixture turn screw out. Do not idle engine below 500 RPM. in neutral.

Main Nozzle: Installed permanently. DO NOT REMOVE. Anti-percolating jet (off nozzle well), primary side size No. 70 (.028 inch) drill.

Metering Rod: Primary, economy step .072 inch diameter. Middle step tapers to .060 inch diameter. Power step .048 inch diameter. Secondary, none.

Metering Rod Jet: Primary, size 0935 inch diameter (for metering rod). Secondary, size .053 inch diameter (no metering rod).

Metering Rod Setting: See adjustments.

Accelerating Pump: Discharge jet (twin) primary side only, size No. 70 (.028 inch) drill.
Intake ball check seat, size .115 to .120 inch diameter.
Discharge needle seat, size .070 inch diameter.
Relief passage (vent) to fuel chamber No. 42 (.0935 inch) drill.
Discharge relief plug, size No. 74 (.022 inch) drill.

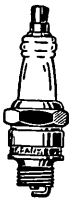
Pump Adjustment: See adjustments.

Choke: Carter Climatic® Control, set on index. Butterfly type, offset choke valve, primary side only. Choke heat suction hole, restriction in piston housing, size No. 40 (.098 inch) drill.

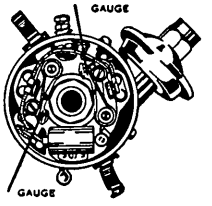
Vacuum Spark Port: Horizontal slot (round end) .045 by .110 inch. Top of port 032 to .042 inch above valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

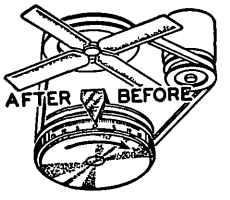
CAUTION: **Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.**



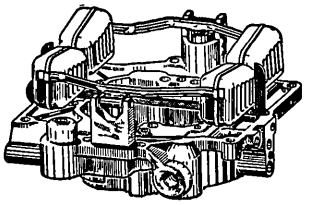
Spark Plug Gap .035"



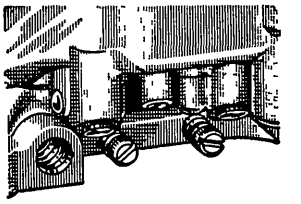
Breaker Point Setting .017"



Ignition Timing Breaker Points to Open: 4° B. T. D. C.



Float Setting See Adjustments



Idle Adjustment Screw Setting 1 to 2 Turns Open

NOTE: **These cars quipped with hydraulic valve lifters.—N adjustment.**

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CARBURETER ADJUSTMENTS

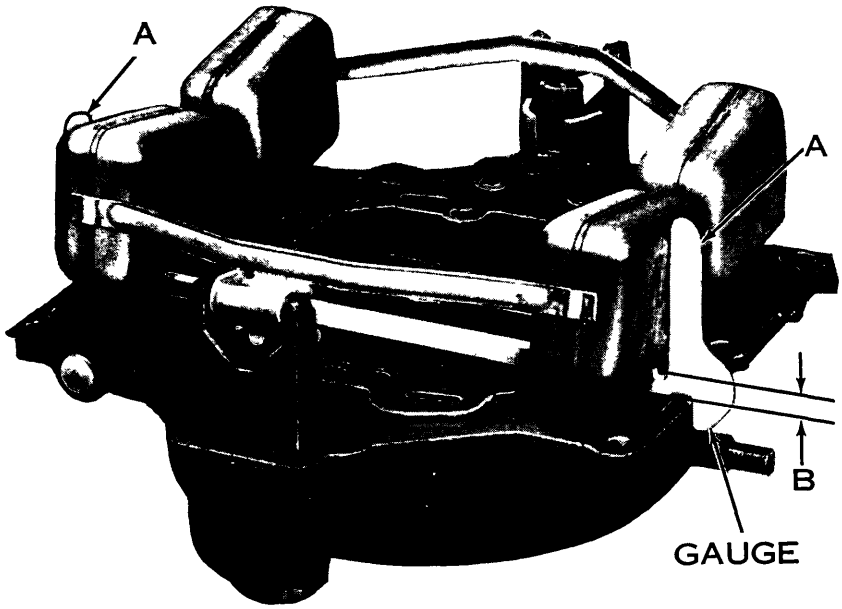


Figure 1
Float Adjustment

FLOAT ADJUSTMENT (Fig. 1)

Two separate float adjustments must be made—lateral and vertical

LATERAL ADJUSTMENT With bowl cover assembly inverted bowl cover gasket removed and float resting on seated needle place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting Side of floats should just clear the vertical uprights of float gauge (A) Adjustment should be made by bending arms of floats

VERTICAL ADJUSTMENT With float gauge in same position floats should just clear the horizontal portion of gauge Vertical distance (B) between top of float and machined surface of casting must be 1/8 inch (gauge T109 232) for primary floats and 3/16 inch (gauge T109 222) for secondary floats Adjust by bending float arms

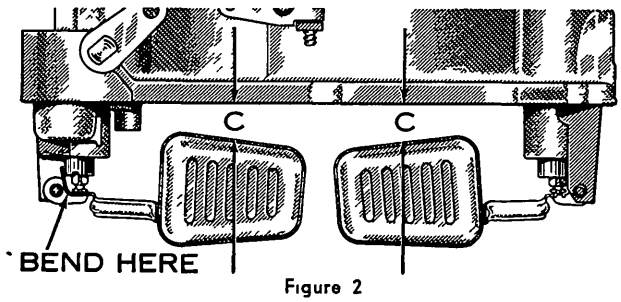


Figure 2
Float Drop Adjustment

FLOAT DROP ADJUSTMENT (Fig. 2)

With bowl cover held in upright position and measuring from center of floats the distance (C) between top of floats and bowl cover should be 5/8 inch for primary floats and 11/16 inch for secondary floats Adjust by bending stop tabs on float bracket

PUMP ADJUSTMENT (Fig. 3)

Install pump connector link in outer hole (long stroke) of pump arm, with ends extending outward toward countershaft arm Back out throttle lever set screw until throttle valves seat in bores of carbureter Hold straight edge across top of dust cover boss at pump arm The flat on top of pump arm should be parallel to straight edge Adjust by bending throttle connector rod at lower angle (Use tool T109 213)

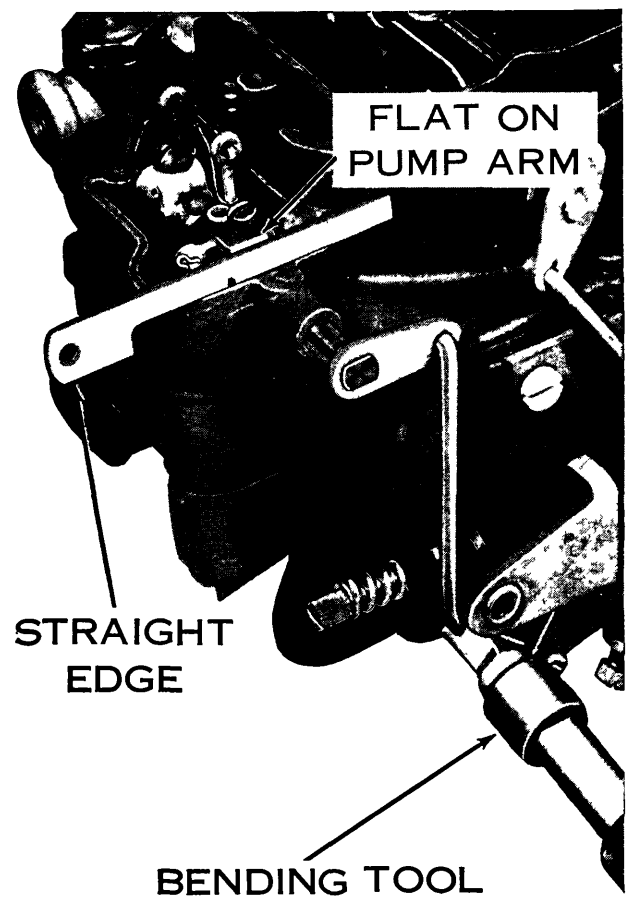


Figure 3
Pump Adjustment

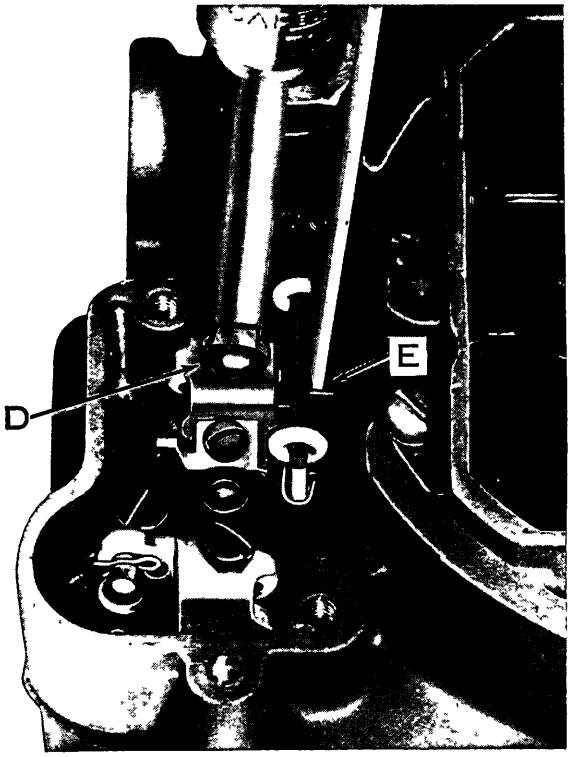


Figure 4
Metering Rod Adjustment

METERING ROD ADJUSTMENT (Fig. 4):

Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows: 1. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw (D). 2. With metering rods in place, press down on vacumeter link (E) until metering rods bottom in carbureter body casting. 3. Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link. Hold in place and carefully tighten clamp screw (D).

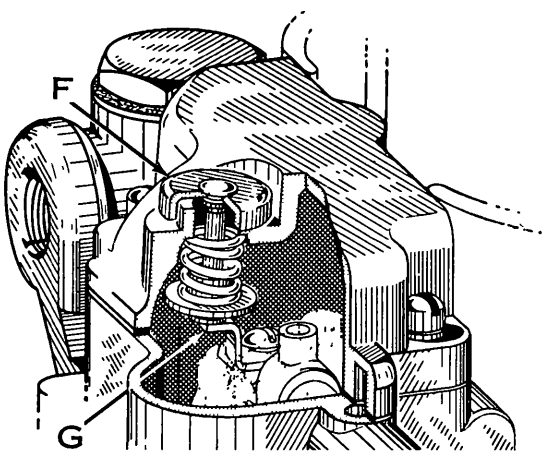


Figure 5
Bowl Vapor Vent Adjustment

BOWL VAPOR VENT ADJUSTMENT (Fig. 5):

This adjustment should be made after completing pump and metering rod adjustments. Install dust cover and dust cover gasket. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter. There should be 1/16 inch (F) (gauge T109-197) between lower edge of bowl vapor vent valve and dust cover. To adjust, remove dust cover and bend vapor vent arm (G).

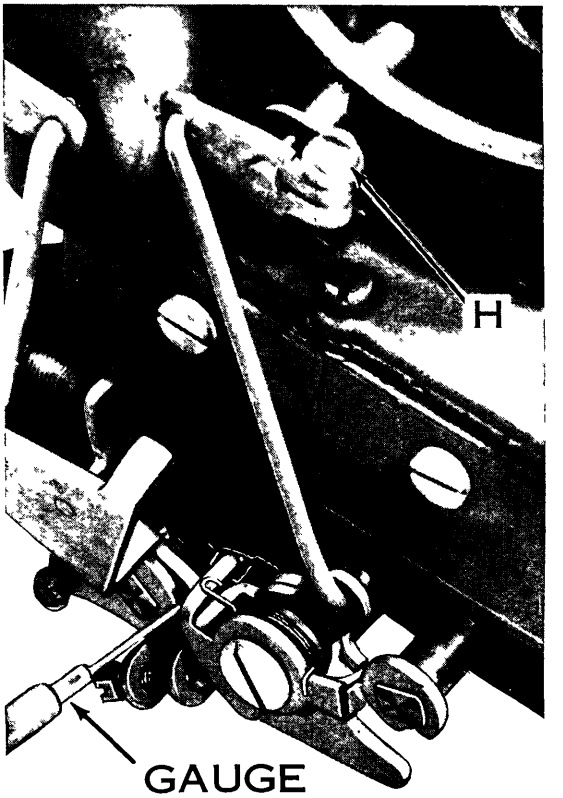


Figure 6A
Fast Idle Adjustment

FAST IDLE ADJUSTMENT (Fig. 6A and 6B):

(a) Loosen choke lever clamp screw (H) on choke shaft. Insert .010 inch wire gauge (T109-200) between lip of fast idle cam and boss of flange casting. Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw (H). (b) With choke valve tightly closed, tighten fast idle adjusting screw (J) until there is .018 inch (gauge T109-44) opening between throttle valve and bore of carbureter side opposite idle port. Be sure fast idle adjusting screw is on high step of cam while making this adjustment.

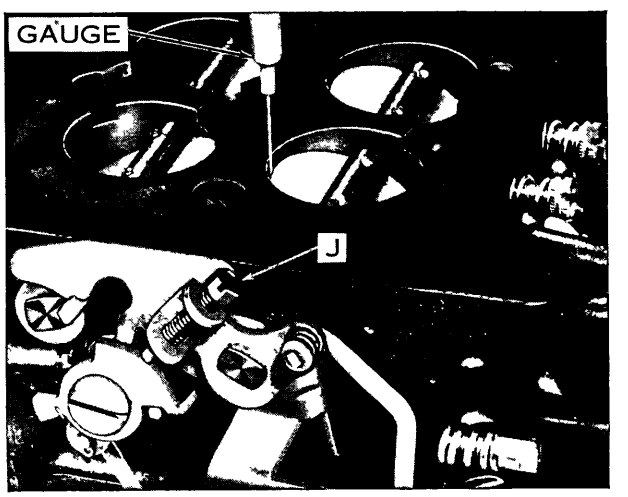


Figure 6B
Fast Idle Adjustment

Part No.	PART NAME	
53A-380	Primary throttle operating lever	
53A-384S	Secondary throttle operating lever assembly	
61-84	Idle adjustment screw spring	(2)
61-128	Connector rod spring	
61-291	Throttle adjusting screw spring	
61-332	VACUUM PISTON SPRING	
61-382	METERING ROD SPRING	
61-413	UPPER PUMP SPRING	
61-454	Fast idle cam spring	
61-474	Bowl vent spring	
61 534	Throttle flex spring (Sup by 61 542)	
61-540	Diaphragm return spring	
61-542	Throttle flex spring	
63-35	Connector rod spring retainer	
63-57	INTAKE CHECK BALL RETAINER	
63-144	Delayer plate retainer ring	
63-149	Bowl vent spring retainer	
63-176	Pump spring retainer	
63-190	Coil housing retainer	
64-145S	PUMP PLUNGER AND ROD ASSEMBLY	
75-1144	METERING ROD—STANDARD	(2)
75-1178	Metering rod—1 size lean	
75-1179	Metering rod—2 sizes lean	
86 12	Flange stud lock washer	(4)
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	(2)
101-120	Fast idle adjustment screw	
101-149S	Body flange attaching screw and washer assembly	
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-263	Diaphragm housing attaching screw	(3)
101-275	Piston housing attaching screw (Use with 6 1214S)	
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet housing attaching screw	
101-284	Piston housing attaching screw (6 1022S)	(2)
101-307S	Air horn attaching screw and washer assembly	(8)
101-324	Fast idle cam attaching screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-348	Primary throttle valve attaching screw	(4)
101-354S	Choke lever clamp screw assembly	
101-361	Coil housing attaching screw	(3)
101-363	Piston housing attaching screw (6 1022S (1), (6-1214S (2)	
101-382S	Body flange attaching screw and washer assembly	(3)
101-388S	Diaphragm housing cover attaching screw and washer assembly	(6)
101-391	Throttle lever adjusting screw	
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
115-215	Choke connector rod	
115-216	THROTTLE CONNECTOR ROD	
115-239	Throttle operating rod	
116-13	PUMP INTAKE CHECK BALL	
117-162	Vacumeter piston link	
117-165	Pump connector link	
118-102S	Dust cover assembly	
120-166	PRIMARY METERING ROD JET	(2)
120-217	SECONDARY METERING JET	(2)
121-78	COIL HOUSING GASKET	
121-196	Delayer plate gasket	
121-208	DUST COVER GASKET	
121-229	AIR CLEANER GASKET	
121-232	AIR HORN GASKET	
121-241	PUMP JET HOUSING GASKET	
121-243	PISTON HOUSING GASKET (Use with 6 1022S)	
121-259	BODY FLANGE GASKET	
121-260	DIAPHRAGM HOUSING GASKET	
121-283	Piston housing gasket (Use with 6 1214S)	
122-102S	Pump relief plug assembly	
136-37	Throttle connector rod and operating rod washer	(5)
136-159	Primary throttle shaft washer	
136-172	Secondary throttle shaft washer	
150 186S	Pin and valve cap assembly	
150-190	Choke piston pin	
150A-10	PIN SPRING	(5)
160-110S	Vacuum piston and pin assembly	
160-117	Choke piston	
170-301S	Piston housing and plug assembly (Use with 6 1022S)	
170-352	Diaphragm housing	
170-460S	Piston housing and plug assembly (Use with 6 1214S)	
170AC323S	Thermostatic coil and housing assembly	
181-204S	Fast idle cam assembly	
184-76	Diaphragm housing cap	
186-42	Choke baffle plate	
203-72S	Secondary throttle shaft diaphragm assembly	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.

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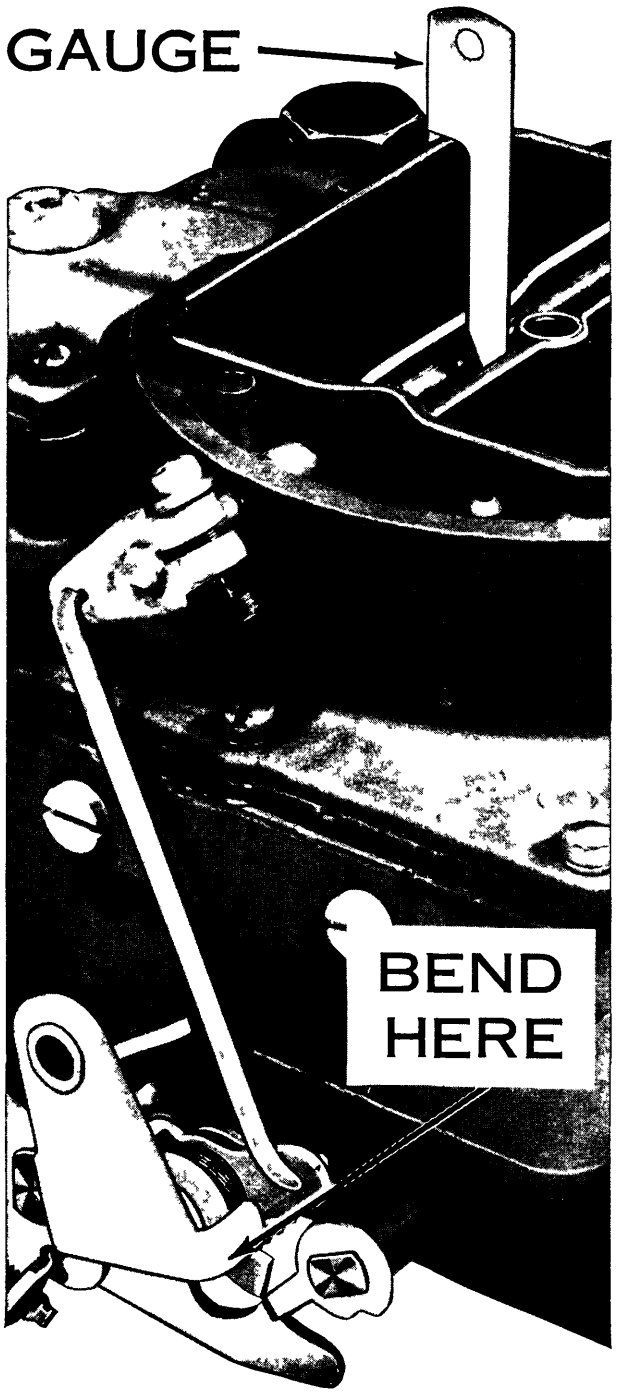


Figure 7
Unloader Adjustment

UNLOADER ADJUSTMENT (Fig. 7)

With throttle wide open there should be 3/16 inch (gauge T109 28) clearance between upper edge of choke valve and inner wall of air horn Adjust by bending unloader lip on throttle shaft lever (use bending tool T109 41)

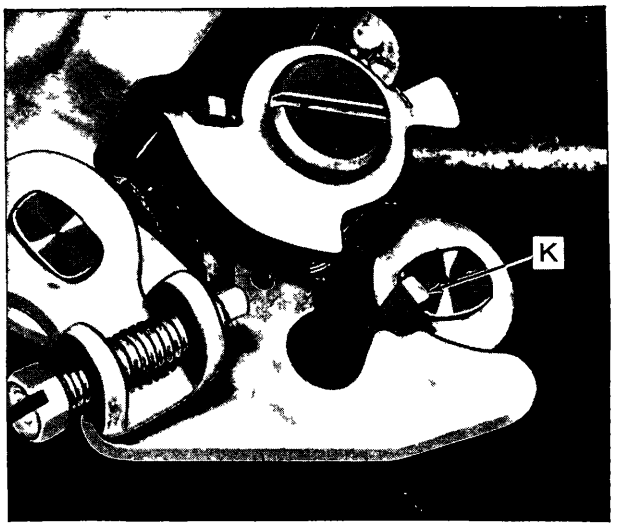


Figure 8
Secondary Throttle Lock-Out Adjustment

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT (Fig. 8): This adjustment should be made after completing fast idle and secondary throttle lever adjustments Crack throttle valves and manually open and close the choke valve Tang (K) on secondary throttle lever should freely engage in notch of lock out dog If necessary to adjust bend tang (K) on secondary throttle lever

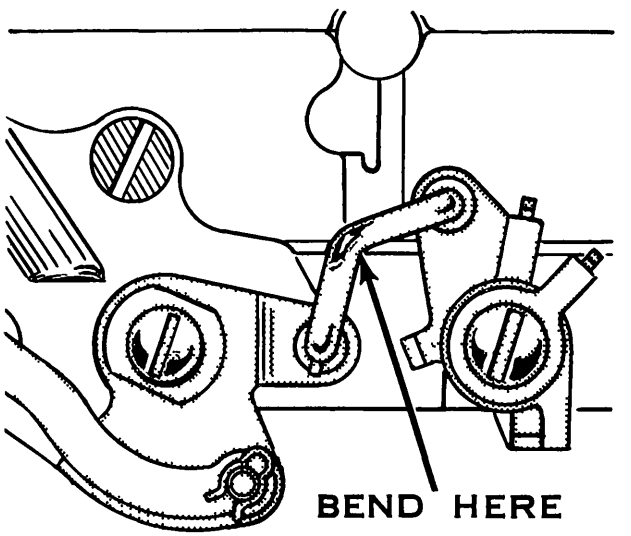
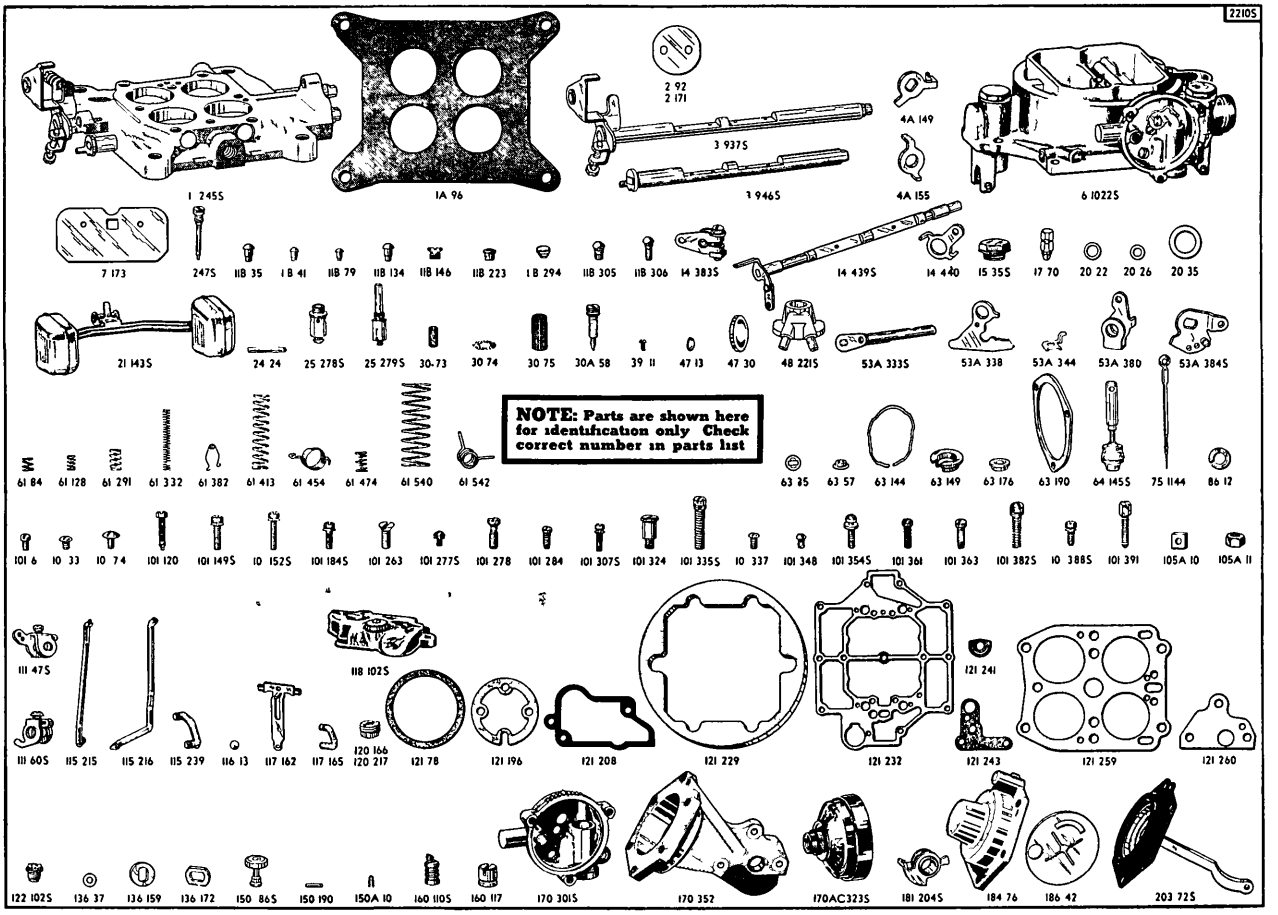


Figure 9
Secondary Throttle Lever Adjustments

SECONDARY THROTTLE LEVER ADJUSTMENT (Fig. 9)

1 Block choke valve wide open
2 Back out throttle lever stop screw so that primary valves seat in carburetor bores
3 While holding the secondary throttle open slightly close the primary valves The primary and secondary valves should become tightly closed at the same time Check to be sure that secondary throttle valves are tightly closed by attempting to open the secondary throttle valves while holding the primary throttle valves closed
4 To adjust bend the throttle operating rod slightly



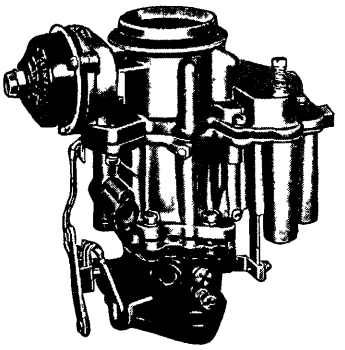
De Soto "V-8"—1955—Carbureter No. 2210S

WHEN SERVICING, USE GASKET ASSORTMENT No 264, REPAIR PACKAGE No 1789

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1 1245S	Body flange assembly	
1A-96	FLANGE GASKET	
2-92	Primary throttle valve	(2)
2-161	Secondary throttle valve (Sup by 2 171)	(2)
2-171	Secondary throttle valve	(2)
3-937S	Primary throttle shaft and lever assembly	
3-946S	Secondary throttle shaft and dog assembly	
4A-149	Throttle shaft dog	
4A-155	Primary throttle flex dog (loose)	
6-1022S	Air horn assembly (Casting No 6 1014)	
6 1214S	Air horn assembly (Casting No 6 1212)	
7-173	Choke valve	
11-247S	LOW SPEED JET ASSEMBLY	(4)
11B-35	Rivet plug	(4)
11B-41	Rivet plug (6 1022S (2), (6 1214S (1)	
11B-79	Rivet plug	(5)
11B-134	Rivet plug	
11B-146	Level sight plug	(2)
11B-194	Pipe plug	
11B-223	Nozzle passage rivet plug	(4)
11B-294	Idle port rivet plug	(4)
11B 305	Rivet plug (6 1022S (1) (6 1214S (2)	
11B-306	Rivet plug (6 1022S (2) (6 1214S (1)	

Part No	PART NAME	
14-383S	Choke lever and screw assembly	
14-439S	Choke piston lever link and shaft assembly	
14-440	Cam trip lever	
15-35S	Strainer nut assembly	(2)
17-70	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	(2)
20-26	Pump relief plug gasket	
20-35	BOWL STRAINER GASKET	(2)
21-143S	Float and lever assembly	(2)
24-24	Float lever pin	(2)
25-278S	PRIMARY NEEDLE AND SEAT ASSEMBLY	
25-279S	SECONDARY NEEDLE AND SEAT ASSEMBLY	
30-73	PRIMARY NEEDLE SEAT STRAINER	
30-74	SECONDARY FUEL INLET STRAINER	
30-75	BOWL STRAINER	
30A-58	Idle adjustment screw	(2)
39-11	Choke valve attaching screw	(2)
47-13	Welsh plug (spark port passage)	
47-30	Welsh plug (choke housing)	
48-221S	Pump jet and housing assembly	
53A 333S	Pump operating lever and countershaft assembly	
53A-338	Lockout arm	
53A-344	Vent arm	



DESOTO 6

MODEL S-20

(With Power Flite Transmission)

1954

BB DOWN-DRAFT CLIMATIC® CONTROL CARBURETER No. E9B1

CARBURETER SPECIFICATIONS

For DeSoto 6 Cylinder Engine· 3-7/16 Inch Bore, 4½ Inch Stroke

Dimensions: Flange Size 1½ inch S A E Throttle bore 1-11/16 inch Main Venturi, 1-11/32 inch I D

Float Setting: See adjustments

Vents. Outside, none Inside balance vent tube in air horn above choke valve

Gasoline Intake: Size No 44 (086 inch) drill in needle seat

Idle Orifice Tube: Jet, size 0295 in diameter Idle passage air bleed in air horn, size No 56 (0465 inch) diameter Restriction in body size 0492 inch diameter

Idle Port: Upper port, slot type length 149 inch width 030 inch

Idle Port Opening: Top or port located 118 to 122 inch above top edge of valve, with valve tightly closed

Lower Port (For Idle Adjustment Screw): Size 053 to 057 inch diameter

Set Idle Adjustment Screw: ½ to 1½ turns open For richer mixture turn screw out Idle engine at 500 r p m

Main Metering Jet: Calibrated to flow 315 to 319 cc per minute (Do not gauge for size If in doubt replace with new part)

Main Vent: Through diffuser (air bleed inside bowl) Size 0315 inch diameter

Main Vent Tube: Side holes 4— 0354 inch diameter

Step-Up Jet: Power orifice 0374 inch diameter

Accelerating Pump: Pump intake passage ball check seat size 107 to 112 inch diameter Pump discharge passage, restriction (unde ball check), size 062 to 065 inch diameter Pump (discharge) jet, size 0413 inch diameter

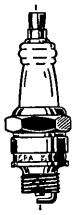
Pump Adjustment: See adjustments

Choke: Carter Climatic ® Control, set on Index Choke heat suction hole in flange insulator size No 38 (1015 inch) drill

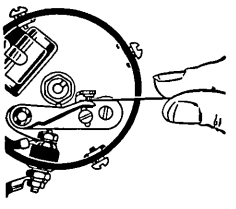
Vacuum Spark Port: Slot, round end type, size 040 by 110 inch Top of port 012 to 018 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

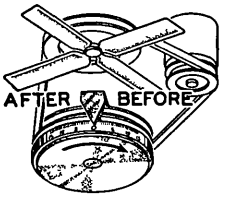
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and tests compression before adjusting carbureter



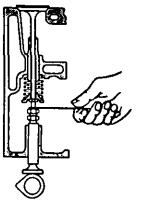
Spark Plug Gap .035"



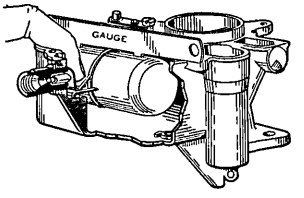
Breaker Point Setting 020"



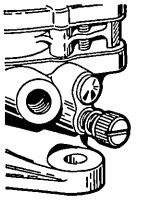
Ignition Timing Breaker Points to Open 2° B.T.D.C.



Valve Setting (Hot) Intake .008" Exhaust .010"



Float Setting 5/64 Inch ± 1/64 Inch (Use Gauge T109-50)



Idle Adjustment Screw Setting ½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

Float Adjustment. This adjustment must be made with the bowl cover gasket and float pin retainer removed Hold the lip on float arm against the seated intake needle, making sure the float pin is at the bottom of its guide slots The distance from the top surface of the body casting to the top of the float should be 5/64 inch (gauge T109-50) To adjust bend lip on float arm

Pump Adjustment: No gauge is necessary Pump lifter arm should be at a right angle to pump lifter shaft Adjustment can be made by bending pump lifter arm up or down (Use tool T109-41) Pump Stroke adjustable for high or low temperatures Set to longest stroke for cold weather shorter stroke for hot weather driving

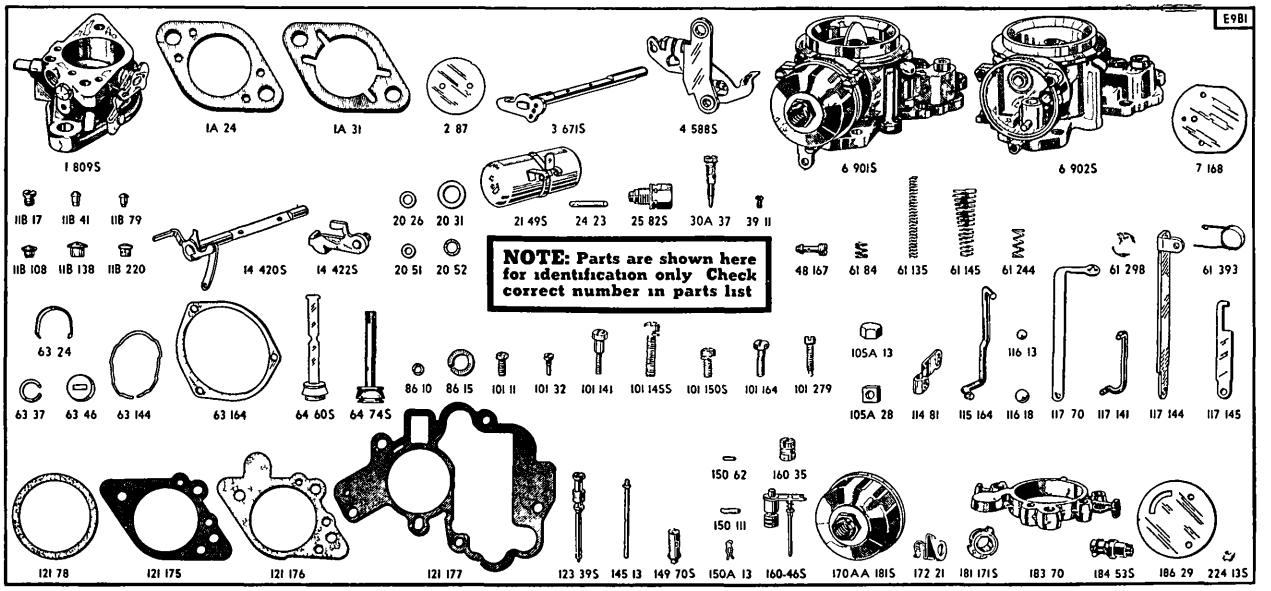
Fast Idle Adjustment: Remove thermostatic coil housing assembly gasket and baffle plate With throttle adjusting screw backed out crack throttle valve and hold choke valve in fully closed position Then close throttle This will allow fast idle cam to revolve to fast idle position There should now be 015"- 019 ' clearance (use gauge T109-44) between throttle valve and bore of carbureter side opposite idle port Adjust by bending the choke connector rod at lower angle (use tool T109-41)

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Unloader Adjustment This adjustment must be made after the fast idle adjustment Hold throttle valve wide open and close choke valve as far as possible without forcing There should now be 5/32 clearance (use gauge T109 154) between upper edge of choke valve and inner wall of air horn Adjust by bending arm on choke trip lever (use tool T109 214) When fast idle and unloader adjustments have been made assemble baffle plate coil housing gasket and thermostatic coil housing assembly on air horn Set Climatic ® Control at Index making sure that hook on coil has picked up coil shaft lever

Dash-Pot Adjustment Tighten adjustment screw — then turn counter clockwise 5 turns Further adjustment outward will increase the action of the dash pot and lengthen its retarding effect



De Soto 6—1954—Carbureter No. E9B1

WHEN SERVICING, USE GASKET ASSORTMENT No 213A, REPAIR PACKAGE No 1579

Part Names in CAPITAL LETTERS, Listed Below, Indicate Contents of Repair Package

Part No	PART NAME
1 809S	Body flange assembly
1A-24	Flange gasket—for use with governor
1A-31	FLANGE GASKET—FOR USE WITHOUT GOVERNOR
2 87	Throttle valve
3 671S	Throttle shaft and arm assembly
4-588S	Throttle lever assembly
6 901S	Air horn and Climatic® control assembly
6 902S	Air horn assembly
7-168	Choke valve
11B 17	Pump discharge passage plug
11B 41	Rivet plug
11B-79	Rivet plug (2)
11B-108	IDLE PORT RIVET PLUG
11B 138	PUMP JET RIVET PLUG
11B-220	HIGH SPEED PASSAGE RIVET PLUG
14-420S	Choke piston lever and shaft assembly
14-422S	Choke trip lever and pin assembly
20 26	Gasket
20-31	Needle seat gasket
20-51	Step up jet gasket
20-52	STEP UP PISTON GASKET
21 49S	Float and lever assembly
24-23	Float lever pin
25-82S	NEEDLE AND SEAT ASSEMBLY
30A-37	Idle adjustment screw
39-11	Choke and Throttle valve attaching screw (4)
48-167	PUMP JET
61-84	Idle adjustment screw spring
61-135	STEP UP PISTON SPRING
61-145	PUMP SPRING
61-244	Dash pot adjustment screw spring
61-298	Fast idle cam spring
61-393	Dash-pot arm spring
63-24	FLOAT LEVER PIN RETAINER
63-37	INTAKE BALL CHECK RETAINER RING
63-46	Pump spring retainer
63-144	Delayer plate retainer ring
63-164	Coil housing retainer (Use with 170AA181S)
63-190	Coil housing retainer (Use with 170AA312S)
64-60S	PUMP PLUNGER AND ROD ASSEMBLY
64-74S	Dash pot plunger and rod assembly
86-10	Dash-pot lifter link attaching screw lock washer
86-15	Flange stud lock washer (2)

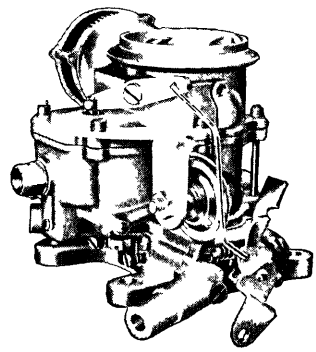
Part No	PART NAME
101-11	Coil housing attaching screw (Use with 170AA181S) (3)
101-32	Dash pot lifter link attaching screw
101 141	Dash pot adjustment screw
101-145S	Body flange attaching screw and washer assy (3)
101-150S	Attaching screw and washer assembly (5)
101-164	Throttle lever clamp screw
101-279	Throttle adjusting screw
101-361	Coil housing attaching screw (Use with 170AA312S) (3)
105A-13	Flange stud nut (2)
105A-28	Throttle lever clamp nut
114 81	Dash pot pick up arm
115 164	Choke connector rod
116-13	PUMP INTAKE CHECK BALL
116 18	PUMP DISCHARGE CHECK BALL
117-70	PUMP LIFTER LINK
117-141	PUMP LINK
117-144	Dash pot lifter link
117-145	Fast idle link
121-78	THERMOSTATIC COIL HOUSING GASKET
121-175	BODY FLANGE GASKET
121-176	CARBURETER BODY TO INSULATOR GASKET
121-177	BODY GASKET
123-39S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY
145-13	MAIN VENT TUBE
149-70S	STEP UP JET ASSEMBLY
150-62	Choke piston pin
150-111	Dash pot pin
150A-13	PIN SPRING
160-35	Choke piston
160-46S	STEP UP PISTON PLATE AND ROD ASSEMBLY
170AA181S	Thermostatic coil and housing assembly (Sup by 170AA312SU)
170AA312S	Thermostatic coil and housing assembly
170AA312SU	Unitized package (Consists of 1—170AA312S 1—63 190 3—101 361 and 1—121 78)
172-21	Choke connector rod retainer clip
181-171S	Fast idle cam assembly
183-70	Insulator
184-53S	Terminal block and retainer clip assembly
186-29	Choke baffle plate
224-13S	MAIN METERING JET ASSEMBLY—STANDARD
224-14S	Main metering jet assembly—1 size lean
224-15S	Main metering jet assembly—2 sizes lean

NOTE Figures in parentheses indicate number f pieces used in ne carbureter. Where no figure is sh wn, nly ne is used.

2067S-2129S Standard Transmission

2068S-2130S Standard Transmission with Overdrive

2070S-2131S Power Flite Transmission



DE SOTO FIREDOME "V-8"

MODEL S-19

1954

(2129S can be used in place of 2067S
2130S can be used in place of 2068S
2131S can be used in place of 2070S)

BBD Dual Down-Draft Climatic® Control **Carbureters Nos.**

2067S-2068S-2070S-2129S-2130S-2131S

CARBURETER SPECIFICATIONS

For DeSoto 8 Cylinder Engine 3⅝ Inch Bore, 3 11/32 Inch Stroke

Dimensions Flange size 1¼ inch dual 4 bolt (water jacket) type
Throttle bore 1 7/16 inch I D
Primary venturi ⅜ inch I D
Main venturi 1 3/16 inch I D

Float Level See adjustments

Vent Inside balance vent tube to bowl in a r horn above choke valve

Gasoline Intake Size No 38 (1015 inch) drill hole in needle seat

Idle Tube Jet size 0295 inch drill
Idle bleed (In venturi cluster screw) size 063 inch drill
Idle restriction (In venturi cluster screw) size 0472 inch dr ll

Idle Port Upper slot type length 149 inch width 030 inch

Idle Port Opening 101 to 105 inch above upper edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw) Size 053 to 057 inch diameter

Set Idle Adjustment Screw ¼ to 1¼ turns open For richer mixture turn screw out With gear shift lever in neutral posi tion idle engine between 475 and 500 R P M

Main Nozzle Nozzle s installed permanently DO NOT RE MOVE

Main Vent Tube Side holes 4—0354 inch diameter Bleed in top of tube size 0196 inch drill

Step Up Rod (Vacuum operated) 024 inch d ameter Length (end of wire to inside of angle) 1⅜ inch

Metering Jet Calibrated to flow 353 to 357 cc per minute (Do not gauge for size if in doubt replace with new part)

Accelerating Pump Pump discharge jets (2) size 0315 inch drill

Intake ball check seat size (2067S 2068S 2070S) 115 to 120 inch diameter (2129S 2130S 2131S) 135 to 140 inch diam eter

Discharge ball check seat size 115 to 120 inch diameter

Pump Adjustment See adjustments

Choke Carter Climatic® Control set one notch lean Butter fly type offset valve Choke heat suction hole in body size No 38 (1015 inch) drill NOTE Thermostatic coil should not be removed from delayer mounting post If defective replace with complete thermostatic coil and housing assembly

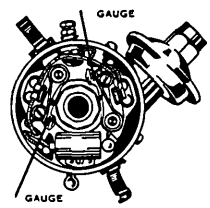
Vacuum Spark Port Horizontal round end type 030 by 110 inch Top of port to be 021 to 031 inch above upper edge of valve with valve closed tight

Motor Tune-Up—Be Accurate! Always Use Feeler Gauges!

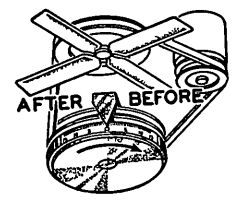
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



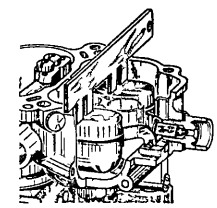
Spark Plug Gap 035"



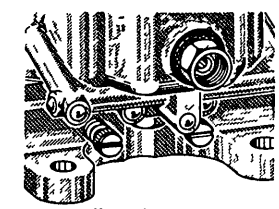
Breaker Point Setting 017"



Ignition Timing Breaker Points to Open 4° B T D C



Float Setting (See Adjustments)



Idle Adjustment Screw Setting ¼ to 1¼ Turns Open

NOTE These cars equipped with Hydraulic Valve Lifters NO ADJUSTMENT

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: This adjustment must be made with the bowl cover gasket and float pin retainer removed. Hold the lip on float arm against the seated intake needle, making sure the float pin is at the bottom of its guide slots. The distance from the top surface of the body casting to the top of each float should be 9/32 inch (gauge T109-239) for floats with flat top or 7/32 inch (gauge T109-239) for floats with curved top. If one float is lower than the other, equalize by bending the float arm. If both floats require the same correction, adjust by bending lip on float arm. The floats must not rub anywhere against the innner walls of the bowl. If necessary, bend float arms slightly to provide clearance on all sides of floats.

PUMP ADJUSTMENT: Back out throttle adjustment screw and open choke valve so that throttle valves seat in bores of carbureter. Install pump connector rod in outer hole of throttle lever and pump arm pin in top hole of the plunger shaft. The distance from the top of the bowl cover to the top of plunger shaft (not pump arm) should be 57/64 inch. Adjust by bending pump connector rod at lower angle (use tool T109-213).

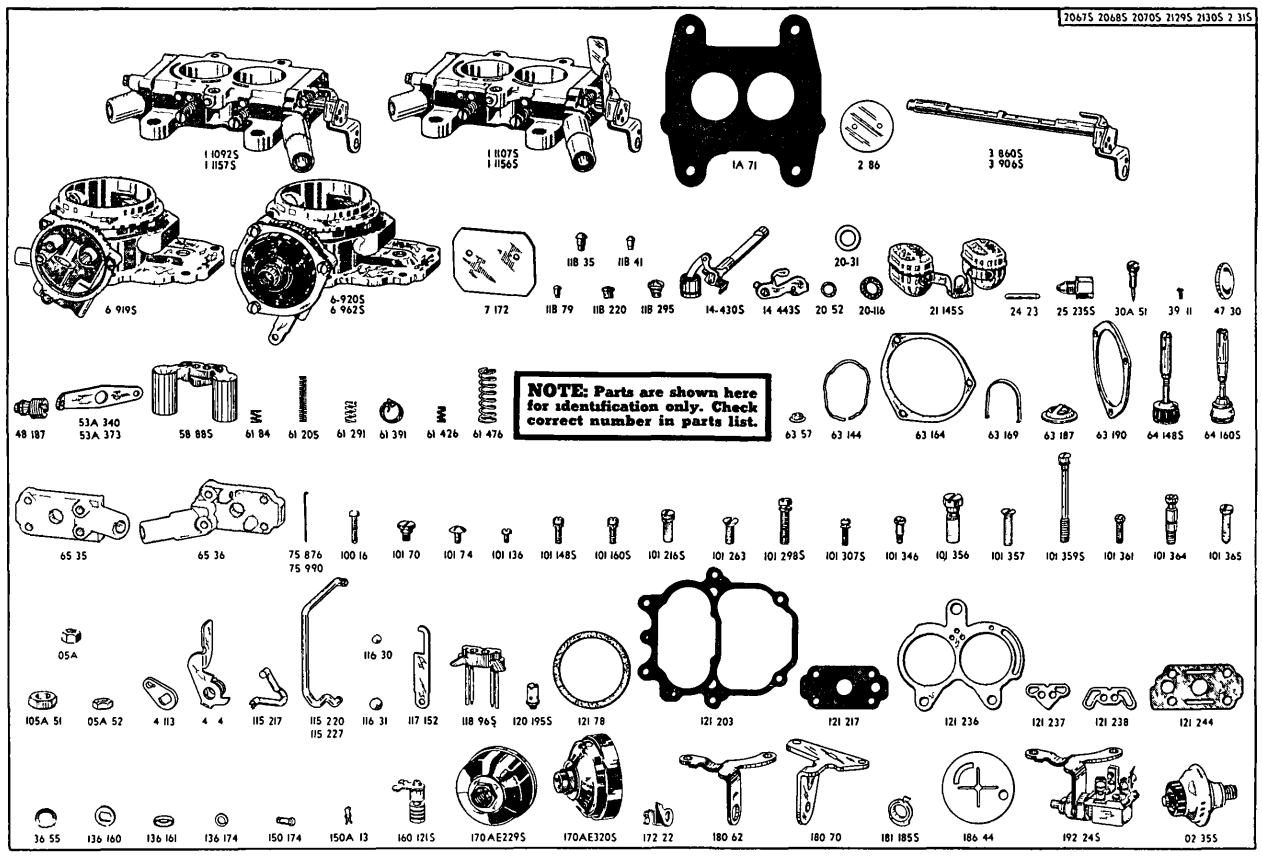
FAST IDLE ADJUSTMENT: Remove thermostatic coil housing assembly, gasket and baffle plate. With throttle adjusting screw backed out, crack throttle valve and hold choke valve in fully closed position. Then close throttle. This will allow fast idle cam to revolve to fast idle position. There should now be .015"-.019" clearance (use gauge T109-44) between throttle valve and bore of carbureter (side opposite idle port). Adjust by bending the choke connector rod at lower angle (use tool T109-213).

UNLOADER ADJUSTMENT: This adjustment must be made after the fast idle adjustment. Hold throttle valve wide open and close choke valve as far as possible without forcing. There should now be 1/4 inch clearance (use gauge T109-31) between upper edge of choke valve and inner wall of air horn. Adjust by bending arm on choke trip lever (use tool T109-214) When fast idle and unloader adjustments have been made, assemble baffle plate, coil housing gasket and thermostatic coil housing assembly on air horn. Set Climatic® Control at "Index", making sure that hook on coil has picked up coil shaft lever.

DASH POT (SLOW CLOSING THROTTLE) ADJUSTMENT: (2070S-2131S ONLY) The purpose of the dashpot is to prevent the car from stalling when the throttle is released rapidly. Maximum dashpot action is obtained by loosening lock nut and adjusting the dashpot unit so that the dashpot plunger shaft can be moved inward approximately 1/16 inch with the throttle valves tightly closed. Then tighten lock nut.

OVERDRIVE KICKDOWN SWITCH ADJUSTMENT: (2068S-2130S ONLY) With throttle valves in wide open position adjust hex nuts on switch to have 1/64 inch to 3/64 inch clearance between kickdown lever and switch stem guide.

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DeSoto "V-8"—1954—Carbureters Nos. 2067S-2068S-2070S-2129S-2130S-2131S

WHEN SERVICING USE GASKET ASSORTMENT No 243 (ALL) REPAIR PACKAGE No 1757 (2067S 2068S 2070S)
No 1758 (2129S 2130S 2131S)

PART NAMES IN CAPITAL LETTERS LISTED BELOW INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-1092S	Body flange assembly (2067S)	
1-1107S	Body flange assembly (2068S 2070S)	
1-1156S	Body flange assembly (2130S 2131S)	
1-1157S	Body flange assembly (2129S)	
1A-71	FLANGE GASKET	
2-86	Throttle valve	
3-860S	Throttle shaft and lever ass y (2067S 2068S 2070S)	
3-906S	Throttle shaft and lever ass y (2129S 2130S 2131S)	
6-919S	Air horn assembly	
6-920S	Air horn and Climatic® control assembly (2067S 2068S 2070S)	
6-962S	Air horn and Climatic® control assembly (2129S 2130S 2131S)	
7-172	Choke valve	
11B-26	Rivet plug	(2)
11B-35	Rivet plug (2067S 2068S 2070S (1) (2129S 2130S 2131S (2)	
11B-41	Rivet plug (Sup by 11B 26)	(2)
11B-79	Rivet plug (2067S 2068S 2070S (6) (2129S 2130S 2131S (1)	
11B-134	Rivet plug (late prod) (2129S 2130S 2131S)	
11B-220	Idle port rivet plug	(2)
11B-295	PUMP JET RIVET PLUG	(2)
11B-319	Rivet plug (2129S 2130S 2131S)	(4)
14-430S	Choke piston lever link and shaft assembly	
14-443S	Choke trip lever and pin assembly	
20-31	Needle seat gasket	
20-52	STEP UP PISTON GASKET	
20-116	Main metering jet gasket	(2)
21-145S	Float and lever assembly	

Part No	PART NAME	
24-23	Float lever pin	
25-235S	NEEDLE AND SEAT ASSEMBLY	
30A-51	Idle adjustment screw	(2)
39-11	CHOKE AND THROTTLE VALVE ATTACHING SCREW	(6)
47-30	WELSH PLUG	
48-187	PUMP JET	(2)
53A-340	Pump arm (2067S 2068S 2070S)	
53A-373	Pump arm (2129S 2130S 2131S)	
58-88S	Venturi cluster and nozzle assembly	
61-84	Idle adjustment screw spring	(2)
61-205	STEP UP PISTON SPRING	
61-291	Throttle adjusting screw spring (2067S 2068S 2070S) (Sup by 61 426)	
61-391	Fast idle cam spring	
61-426	Throttle adjusting screw spring	
61-476	PUMP SPRING	
63-57	INTAKE CHECK BALL RETAINER (2067S 2068S 2070S)	
63-144	Delayer plate retainer ring	
63-164	Thermostatic coil housing retainer (2067S 2068S 2070S) (Use with 170AE229S)	(3)
63-169	FLOAT LEVER PIN RETAINER	
63-187	INTAKE CHECK BALL RETAINER (2129S 2130S 2131S)	
63-190	Thermostatic coil housing retainer (Use with 170AE320S)	(3)
64-148S	PUMP PLUNGER AND ROD ASSEMBLY (2067S 2068S 2070S)	
64-160S	PUMP PLUNGER AND ROD ASSEMBLY (2129S 2130S 2131S)	
65-35	End plate (choke side)	

Part No.	PART NAME
65-36	End plate (throttle side)
75-876	Step up rod (2067S 2068S 2070S) (Sup by 75-990) (2)
75-990	STEP-UP ROD (2)
100-16	Throttle adjusting screw (2067S 2068S 2070S) (Sup by 101-365)
101-70	Pump arm screw
101-74	Throttle shaft arm attaching screw
101-136	Thermostatic coil housing attaching screw (2067S-2068S 2070S) (Use with 170AE229S) (3)
101-148S	Air horn attaching screw and washer assembly (2067S-2129S) (4)
101-160S	Air horn attaching screw and washer assembly (2068S-2070S-2130S (3) (2131S (2)
101-216S	End plate attaching screw and washer assembly (3)
101-263	End plate attaching screw (2)
101-298S	End plate attaching screw and washer assembly (2)
101-307S	Air horn attaching screw and washer assembly (2068S-2070S 2130S (1) (2131S (2)
101-346	Step-up piston plate guide screw
101-356	Step up piston passage screw
101-357	End plate attaching screw
101-359S	Body attaching screw and washer assembly (2)
101-361	Thermostatic coil housing attaching screw (Use with 170AE320S) (3)
101-364	Venturi cluster screw
101-365	Throttle adjusting screw
105A-11	Flange stud nut
105A-51	Kickdown switch bracket attaching nut (2068S-2130S) (2)
105A-52	Dash pot lock nut (2070S 2131S)
114-113	THROTTLE SHAFT ARM
114-114	Kickdown and dash-pot operating lever (2068S-2070S-2130S-2131S)
115-217	Choke connector rod (Sup by 115-244)
115-220	THROTTLE CONNECTOR ROD (2067S-2068S-2070S)
115 227	THROTTLE CONNECTOR ROD (2129S 2130S 2131S)
115-244	*Choke connector rod
116-30	PUMP CHECK BALL (2067S 2068S 2070S (3) (2129S-2130S-2131S (2)
116-31	PUMP INTAKE CHECK BALL (2129S-2130S-2131S)
117-152	Fast idle link
118-96S	VENTURI COVER AND TUBE ASSEMBLY
120-173S	Main metering jet—1 size lean (2)
120-182S	Main metering jet—2 sizes lean (2)
120-195S	MAIN METERING JET—STANDARD (2)
121-78	COIL HOUSING GASKET
121-203	BODY GASKET
121-217	END PLATE GASKET (CHOKE SIDE)
121-236	BODY FLANGE GASKET
121-237	VENTURI HOUSING GASKET
121-238	VENTURI COVER GASKET
121-244	END PLATE GASKET (THROTTLE SIDE)
136-55	Throttle shaft spring washer (2068S-2070S 2130S-2131S)
136-160	Throttle shaft washer
136-161	Pump spring retainer
136-174	Throttle adjusting screw washer
150-174	PUMP ARM PIN
150A-13	PIN SPRING (3)
160-121S	STEP UP PISTON AND PLATE ASSEMBLY
170AE229S	Thermostatic coil and housing assembly (2067S-2068S-2070S) (Sup. by 170AE320SU)
170AE320SU	Unitized package (Consists of 1—170AE320S 1—63-190 3—101-361 and 1—121-78)
170AE320S	Thermostatic coil and housing assembly
172-22	Choke connector rod retainer (Use with 115-217)
172-28	Choke connector rod retainer (Use with 115-244)
180-62	Kickdown switch bracket (2068S-2130S)
180-70	Dash-pot bracket (2070S-2131S)
181-185S	Fast idle cam assembly
186-44	Choke baffle plate
192-24S	Kickdown switch and bracket assembly (complete) (2068S 2130S) (Sup by 192 34U)
192-34U	Unitized package (2068S-2130S)
202-35S	Dash-pot assembly (2070S 2131S)

*When using 115 244 Choke connector rod 172 28 Retainer must be used

NOTE· Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used

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DE SOTO "V-8"

MODELS S-16, S-17, S-19
1952-1954

(2250S)—Power Flite
(2250S With 192-34U and Remove Dashpot)—Overdrive Transmission
(2250S Remove Dashpot)—Standard Transmission

BBD Dual Down-Draft Climatic® Control **Carbureter No. 2250S**

CARBURETER SPECIFICATIONS

For DeSoto 8 Cylinder Engine. 3⅝ Inch Bore, 3-11/32 Inch Stroke

Dimensions. Flange size 1¼ inch dual, 4 bolt type
Throttle bore 1-7/16 inch I D
Primary venturi, ⅜ inch I D
Main venturi, 1-3/16 inch I D

Float Level See adjustments

Vent: Inside, balance vent tube to bowl, in air horn above choke valve

Gasoline Intake· Size No 38 (1015 inch) drill hole in needle seat

Idle Tube. Jet, size 0334 inch drill
Idle bleed (in venturi cluster screw), size 063 inch drill
Idle restriction (in venturi cluster screw), size 0472 inch drill

Idle Port: Upper, slot type, length, 149 inch; width, .030 inch

Idle Port Opening. 102 to 106 inch above upper edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw): Size 053 to 057 inch diameter

Set Idle Adjustment Screw: ¼ to 1¼ turns open For richer mixture turn screw out With gear shift lever in neutral position idle engine between 475 and 500 RPM

Main Nozzle. Nozzle is installed permanently DO NOT REMOVE

Main Vent Tube Side holes 6—bottom three holes (from closed end) size 0354 inch next two holes 0236 inch, top hole 0197 inch diameter
Main vent in top of tube size 0275 inch diameter.

Step-Up Rod: (Vacuum operated) 024 inch diameter

Metering Jet: Calibrated to flow 356 to 364 cc per minute (Do not gauge for size if in doubt, replace with new part)

Accelerating Pump· Pump discharge jets (2—in venturi cluster), size 0275 inch drill
Intake ball check seat, size 135 to 140 inch diameter
Discharge ball check seat, size 110 to 120 inch diameter

Pump Adjustment: See adjustments

Choke Carter Climatic® Control, set at index Butterfly type offset valve Choke heat suction hole, in body, size No 38 (1015 inch) drill
NOTE Thermostatic coil should not be removed from delayer mounting post If defective replace with complete thermostatic coil and housing assembly.

Vacuum Spark Port. Horizontal, round end type, 030 by 110 inch Top of port to be 030 to 040 inch above upper edge of valve with valve closed tight

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open:	Float Setting	Idle Adjustment Screw Setting
.035"	.017"	4° B. T. D. C.	See Adjustments	¼ to 1¼ Turns Open Idle Engine at 475 to 500 R.P.M. In Neutral

NOTE: These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT.

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: This adjustment must be made with the bowl cover gasket and float pin retainer removed Hold the lip on float arm against the seated intake needle making sure the float pin is at the bottom of its guide slots The distance from the top surface of the body casting to the top of each float should be 7/32 inch (gauge T109-239) If one float is lower than the other, equalize by bending the float arm If both floats require the same correction, adjust by bending lip on float arm The floats must not rub anywhere against the inner walls of the bowl If necessary bend float arms slightly to provide clearance on all sides of floats

PUMP ADJUSTMENT: Back out throttle adjustment screw and open choke valve so that throttle valves seat in bores of carbureter Install throttle connector rod in outer hole (medium stroke) of throttle lever and inner hole of pump arm The distance from the top of the bowl cover to the top of plunger shaft (not pump arm) should be 1 inch. Adjust by bending pump connector rod at upper angle (use tool T109-213)

FAST IDLE ADJUSTMENT: Remove thermostatic coil housing assembly gasket and baffle plate With throttle adjusting screw backed out, crack throttle valve and hold choke valve in fully closed position Then close throttle This will allow fast idle cam to revolve to fast idle position There should now be 015"-019" clearance (use gauge T109-44) between throttle valve and bore of carbureter (side opposite idle port) Adjust by bending the choke connector rod at lower angle (use tool T109-213)

UNLOADER ADJUSTMENT: This adjustment must be made after the fast idle adjustment Hold throttle valve wide open and close choke valve as far as possible without forcing There

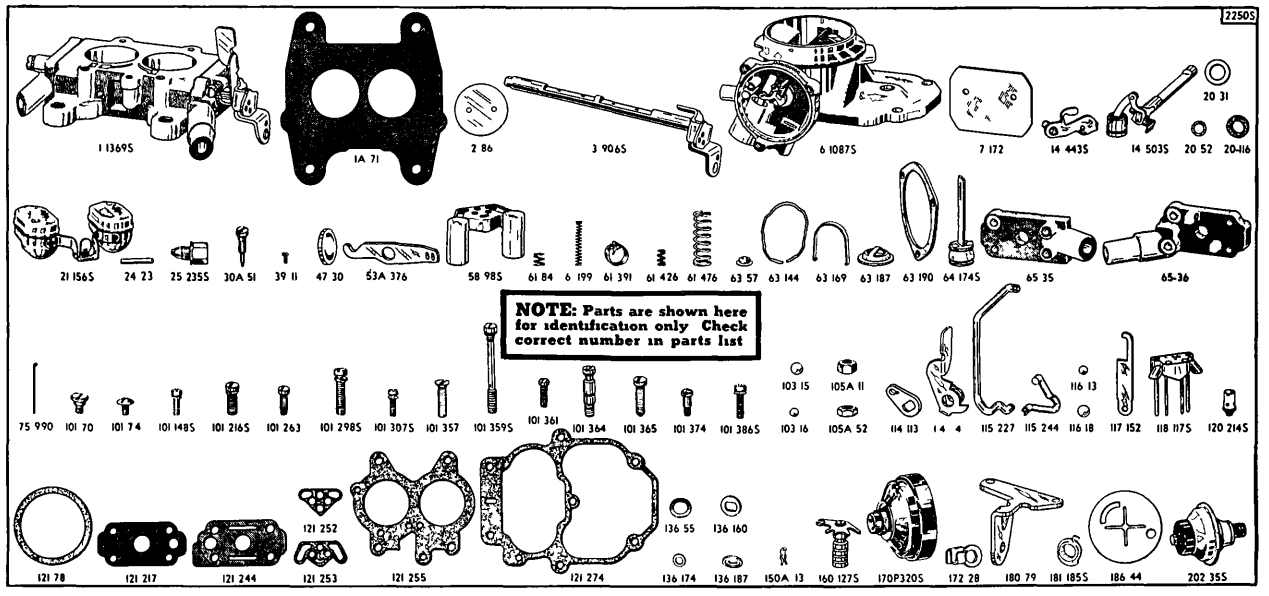
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should now be 1/4 inch clearance (use gauge T109 31) between upper edge of choke valve and inner wall of air horn Adjust by bending arm on choke trip lever (use tool T109 214) When fast idle and unloader adjustments have been made assemble baffle plate coil housing gasket and thermostatic coil housing assembly on air horn Set Climatic® Control at Index making sure that hook on coil has picked up coil shaft lever

DASH POT (SLOW CLOSING THROTTLE) ADJUSTMENT The purpose of this unit is to prevent the car from stalling when the throttle is released rapidly Maximum action is obtained by loosening lock nut and adjusting the dash pot unit so that the plunger shaft can be bottomed with a 1/16 inch gauge placed between shaft and operating lever with throttle valves tightly closed Then tighten lock nut



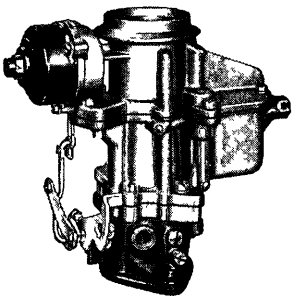
De Soto "V-8"—1952-1954—Carbureter No. 2250S

Part No.	PART NAME	
1-1369S	Body flange assembly	
1A-71	Flange gasket	
2-86	Throttle valve	
3-906S	Throttle shaft and lever assembly	
6-1087S	Air horn assembly	
7-172	Choke valve	
14-443S	Choke trip lever and pin assembly	
14-503S	Choke piston lever link and shaft assembly	
20-31	Needle seat gasket	
20-52	Step up piston gasket	
20-116	Main metering jet gasket	(2)
21-156S	Float and lever assembly	
24-23	Float lever pin	
25-235S	Needle and seat assembly	
30A-51	Idle adjustment screw	(2)
39-11	Choke and throttle valve attaching screw	(6)
47-30	Welsh plug	
53A-376	Pump arm	
58-98S	Venturi cluster and nozzle assembly	
61-84	Idle adjustment screw spring	(2)
61-199	Step up piston spring	
61-391	Fast idle cam spring	
61-426	Throttle adjusting screw spring	
61-476	Pump spring	
63-57	Intake ball check retainer	
63-144	Delayer plate retainer ring	
63-169	Float lever pin retainer	
63-187	Intake check ball retainer	
63-190	Thermostatic coil housing retainer	(3)
64-174S	Pump plunger and rod assembly	
65-35	End plate (choke side)	
65-36	End plate (throttle side)	
75-990	Step up rod	(2)
101-70	Pump arm screw	
101-74	Throttle shaft arm attaching screw	
101-148S	Air horn attaching screw and washer assembly	(2)
101-216S	End plate attaching screw and washer assembly	(3)
101-263	End plate attaching screw	(2)
101-298S	End plate attaching screw and washer assembly	(2)
101-307S	Air horn attaching screw and washer assembly	(2)
101-357	End plate attaching screw	
101-359S	Body attaching screw and washer assembly	(2)

Part No.	PART NAME	
101-361	Thermostatic coil housing attaching screw	(3)
101-364	Venturi cluster screw	
101-365	Throttle adjusting screw	
101-374	Step up piston plate guide screw	
101-417S	Body flange attaching screw and washer assy	(2)
103-14	Lead shot	
103-15	Lead shot	(2)
103-16	Lead shot	(2)
105A-11	Flange stud nut	
105A-52	Dash pot lock nut	
114-113	Throttle shaft arm	
114-114	Kickdown and dash pot operating lever	
115-227	Throttle connector rod	
115-244	Choke connector rod	
116-13	Pump discharge check ball	
116-18	Pump intake check ball	
117-152	Fast idle link	
118-117S	Venturi cover and tube assembly	
120-212S	Main metering jet—2 sizes lean	(2)
120-213S	Main metering jet—1 size lean	(2)
120-214S	Main metering jet—standard	(2)
121-78	Coil housing gasket	
121-217	End plate gasket (choke side)	
121-244	End plate gasket (throttle side)	
121-252	Venturi housing gasket	
121-253	Venturi cover gasket	
121-255	Body flange gasket (Sup by 121-273)	
121-273	Body flange gasket	
121-274	Body gasket	
136-55	Throttle shaft spring washer	
136-160	Throttle shaft washer	
136-174	Throttle adjusting screw washer	
136-187	Pump spring retainer	
150A-13	Pin spring	(3)
160-127S	Step up piston and plate assembly	
170P-320S	Thermostatic coil and housing assembly	
172-28	Choke connector rod retainer	
180-79	Dash pot bracket	
181-185S	Fast idle cam assembly	
186-44	Choke baffle plate	
192-34U	Kickdown switch and bracket assembly	
202-35S	Dash pot assembly	

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only on is used.

This Carbureter also used on Chrysler "C-51", "C-60" and "C-62" Cars equipped with Standard Clutch and Standard Transmission



DE SOTO MODELS S-15, S-18, S-20 1951-1954

(Standard Clutch And Transmission)

BB DOWN-DRAFT CLIMATIC® CONTROL **CARBURETERS Nos. E9C-E9C1**

CARBURETER SPECIFICATIONS

For De Soto 6 Cylinder Engine: 3-7/16 Inch Bore, 4½ Inch Stroke

Dimensions: Flange size, 1½ inch (38.1 mm). Throttle bore, 1-11/16 inch (42.86 mm). Main venturi, 1-11/32 inch (34.13 mm) I. D.

Float Setting: Top of float 5/64 inch (1.98 mm) below top surface of carbureter body casting. Plus or minus 1/64 inch (.397 mm).

Vents: Outside none. Inside balance vent tube in air horn, above choke valve.

Gasoline Intake Needle: Triangular, horizontal No. 44 (2.18 mm) drill in needle seat.

Idle Orifice Tube: Jet size, .0295 inch (.75 mm) drill. Idle passage air bleed, in air horn, size No. 56 (1.18 mm) drill diameter. Restriction in body, .0492 inch (1.25 mm) diameter.

Idle Ports: Upper port. Slot type: length .149 inch (3.78 mm), width .030 inch (.76 mm). Top of port located .118 to .122 inch (3.00 to 3.10 mm) above top edge of valve. Lower port size .053 to .057 inch (1.35 to 1.45 mm) drill. (For idle adjustment screw.)

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture turn screw out. Idle engine between 450 and 500 r.p.m.

Main Metering Screw: Calibrated to flow 315 to 319 cc per minute. (Do not gauge for size. If in doubt replace with new part.)

Main Vent: Through diffuser (air bleed inside bowl). Size .0315 inch (.80 mm) drill.

Main Vent Tube: Side Holes, 4—.0354 inch diameter.

Step-Up Jet: Power orifice .0374 inch (.95 mm) drill.

Accelerating Pump: Type—delayed action, seasonal adjustment Stroke—Summer setting (inner hole, short stroke). Intermediate setting (center hole). Winter setting (outer hole, long stroke). Pump intake passage, ball check seat, size .107 to .112 inch (2.72 to 2.845 mm) diameter in body. Pump discharge passage: Restriction (under ball check) size .062 to .065 inch (1.57 to 1.65 mm) diameter in body. Pump (discharge) jet size .0413 inch (1.05 mm) drill

Pump Adjustment: None.

Choke: Carter Climatic® Control. Set at index. Choke heat suction hole, in flange insulator. Size No. 38 drill.

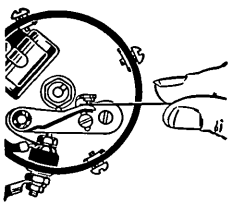
Vacuum Spark Port: Slot (round end) type; size .040 by .110 inch (1.016 by 2.794 mm). Top of port .012 to .018 inch (.305 to .457 mm) above top edge of valve.

Motor Tune-Up—Be Accurate!

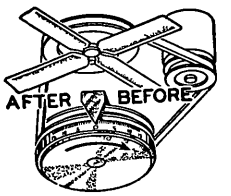
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



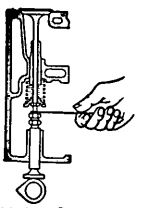
Spark Plug Gap .035"



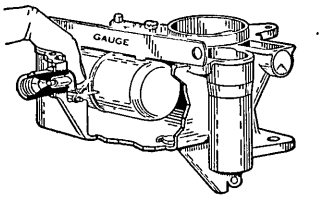
Breaker Point Setting .020"



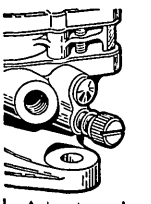
Ignition Timing Breaker Points to Open: 2° B. T. D. C.



Valve Setting (Hot) Intake .008" Exhaust .010"



Float Setting 5/64" ± 1/64" (Gauge T109-50)



Idle Adjustment Screw Setting ½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

If carbureter loads up after considerable service, check float level. Wear on lip of float lever will raise float level. Before adjusting float, be sure float lever pin is firmly seated. Reset float level by bending lip of float lever away from needle to raise level, or bend lip toward needle to lower float level. Bend vertical lip of float only.

If motor stalls while idling, set throttle lever adjusting screw so motor runs 450-500 r.p.m. Then set idle adjustment screw to specifications. If these adjustments do not correct the trouble, remove idle orifice tube and plug assembly. Clean tube passages with compressed air.

If acceleration is not satisfactory, remove pump jet and clean with compressed air. However, it is usually advisable to replace the pump jet, as its cost is nominal. All jets must be seated gasoline tight. Poor acceleration may be due to damaged or worn plunger leather in accelerating pump, sediment in pump cylinder or clogged intake ball check at bottom of pump cylinder and discharge ball check in discharge passage. If plunger is removed from cylinder, use care in installing to avoid damage to plunger leather.

Correct air fuel ratio is provided by a "balance tube" in the air horn. The balance tube should be checked each time the carbureter is serviced to see that the passage is open. The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type, size or condition of air cleaner. Should the cleaner become clogged, the capacity will be reduced but the air-fuel mixture ratio will not be changed.

Excessive richness above 50 miles per hour may be caused by a clogged main vent tube. After removal of rivet plug beneath float bowl with tool No. T109-43, main vent tube can be removed and a new tube inserted with tool No. T109-195. Care must be exercised in inserting new tube which must seat tightly. Use new rivet to complete the installation.

Pump Adjustment: No gauge is necessary. Pump lifter arm should be at a right angle to pump lifter shaft. Adjustment can be made by bending pump lifter arm up or down (use tool T109-41).

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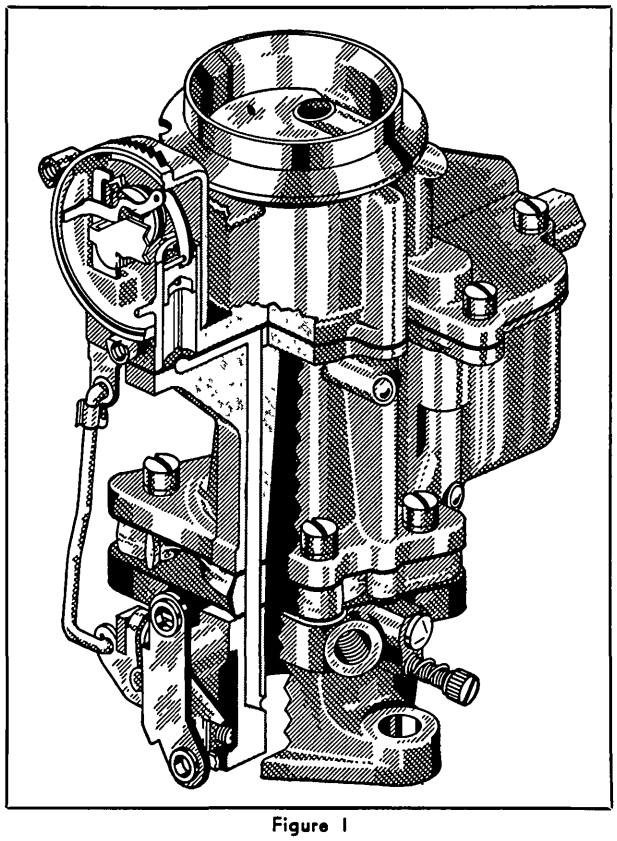


Figure 1

CARTER CLIMATIC® CONTROL CHOKE

The Carter Climatic® Control principle used in this unit is essentially the same as that used in WE type Carter carbureters. The fast idle cam assembly, unloader mechanism, etc., are located in the Climatic® Control housing. In this way all these parts are protected from dirt and other foreign matter. (Fig. 1) However, two important changes have been made. Hot air is introduced at the **center** of the Climatic® Control housing, is drawn through three passages in the housing, around the delayer plate to the thermostatic coil, and then to the manifold.

A **delayer plate** has been added to control the action of the choke, providing longer choke operation during warm-up and preventing the choke from closing too rapidly after the engine is shut off. It should not be necessary to remove the delayer plate and thermostatic coil assembly from the coil housing when servicing the choke. The thermostatic coil must not be removed from the delayer plate.

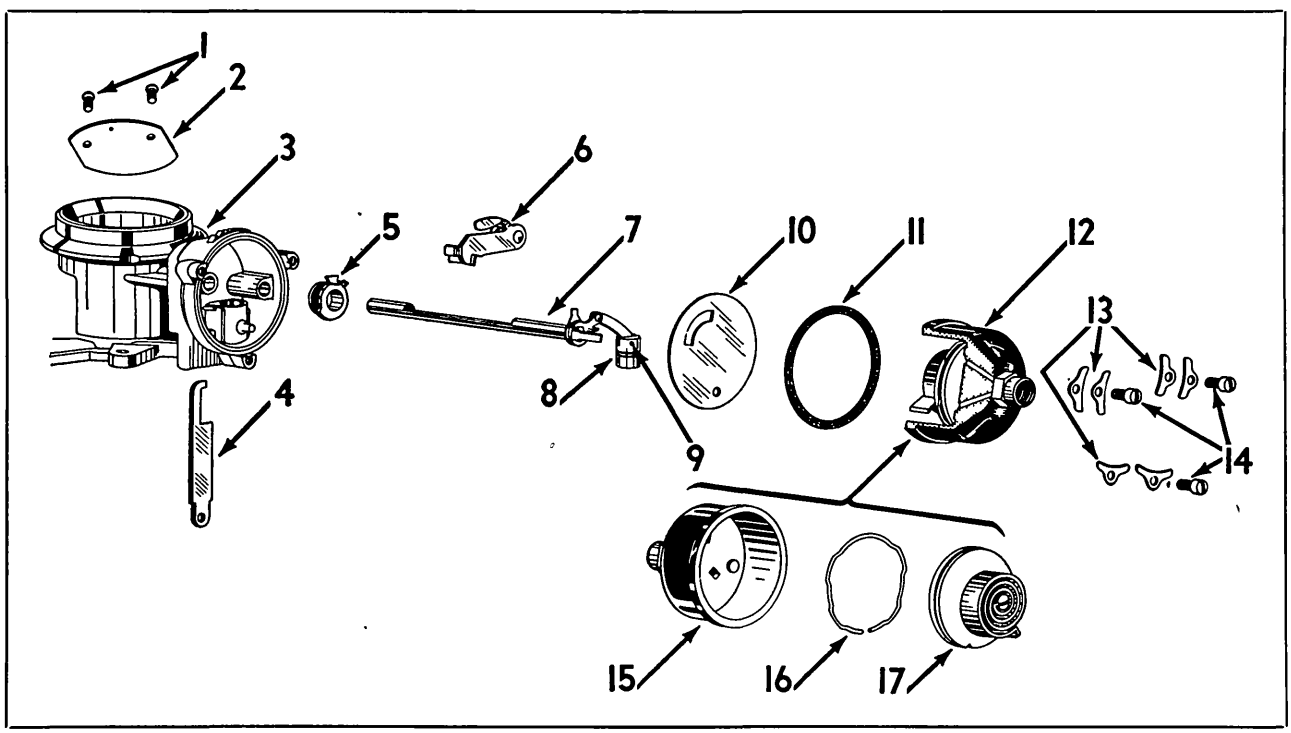


Figure 2

1. Choke Valve Screws
2. Choke Valve
3. Air Horn
4. Fast Idle Link
5. Fast Idle Cam Assembly
6. Choke Trip Lever
7. Choke Piston Lever, Link and Shaft Assy.
8. Choke Piston
9. Choke Piston Pin
10. Choke Baffle Plate
11. Coil Housing Gasket
12. Thermostatic Coil and Housing Assy.
13. Coil Housing Retainers
14. Coil Housing Screws
15. Thermostatic Coil Housing
16. Delayer Plate Retainer Ring
17. Delayer Plate and Thermostatic Coil Assembly

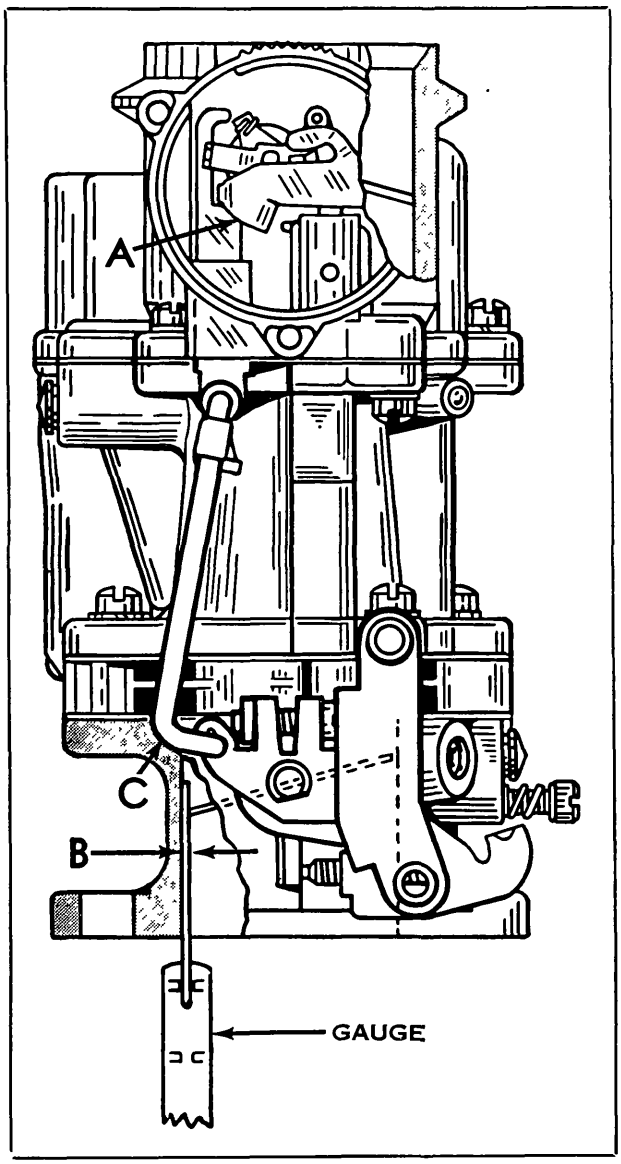


Figure 3
Fast Idle Adjustment

FAST IDLE ADJUSTMENT (Fig. 3):

Remove thermostatic coil housing assembly, gasket and baffle plate. With throttle adjusting screw backed out crack throttle valve and hold choke valve in fully closed position. Then close throttle. This will allow fast idle cam to revolve to fast idle position ("A"—Fig. 3). There should now be .015"-.019" clearance (use gauge T109-44) between throttle valve and bore of carbureter, side opposite idle port ("B"—Fig. 3). Adjust by bending the choke connector rod at lower angle ("C"—Fig 3) (use tool T109-41).

UNLOADER ADJUSTMENT (Fig. 4):

This adjustment must be made after the fast idle adjustment. Hold throttle valve wide open and close choke valve as far as possible without forcing. There should now be 5/32" clearance ("D"—Fig. 4) (use gauge T109-154) between upper edge of choke valve and inner wall of air horn Adjust by bending arm on choke trip lever ("E"—Fig. 4) (use tool T109-187). When fast idle and unloader adjustments have been made assemble baffle plate, coil housing gasket and thermostatic coil housing assembly on air horn. Set Climatic® Control at "Index", making sure that hook on coil has picked up coil shaft lever.

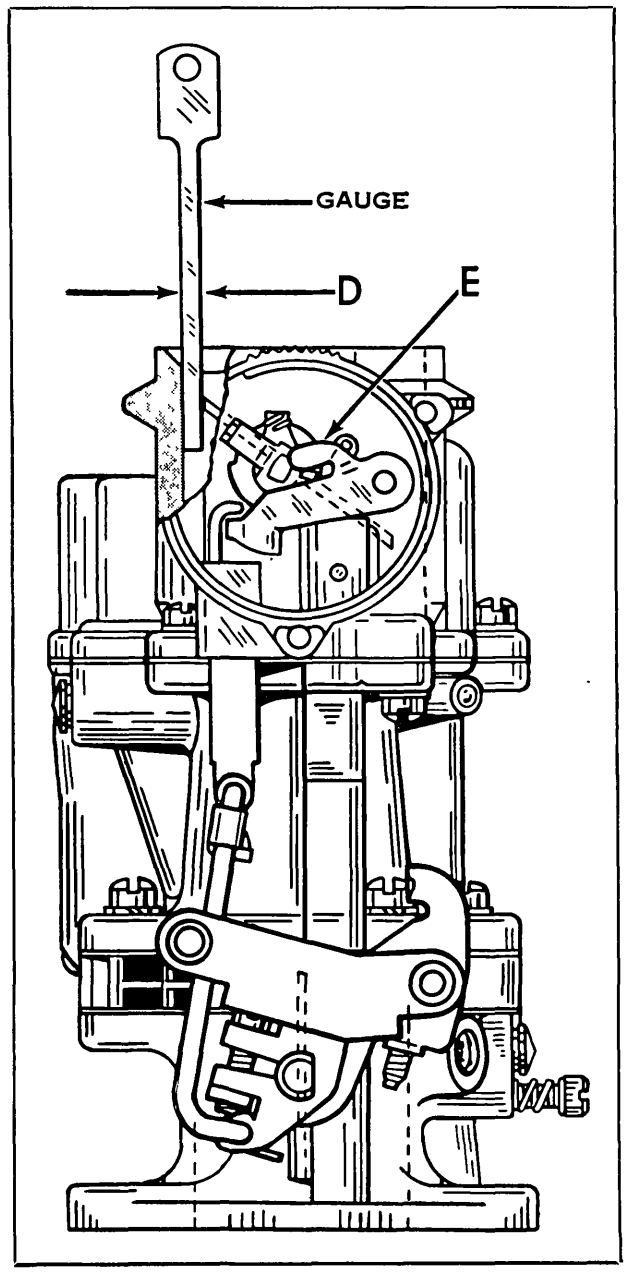
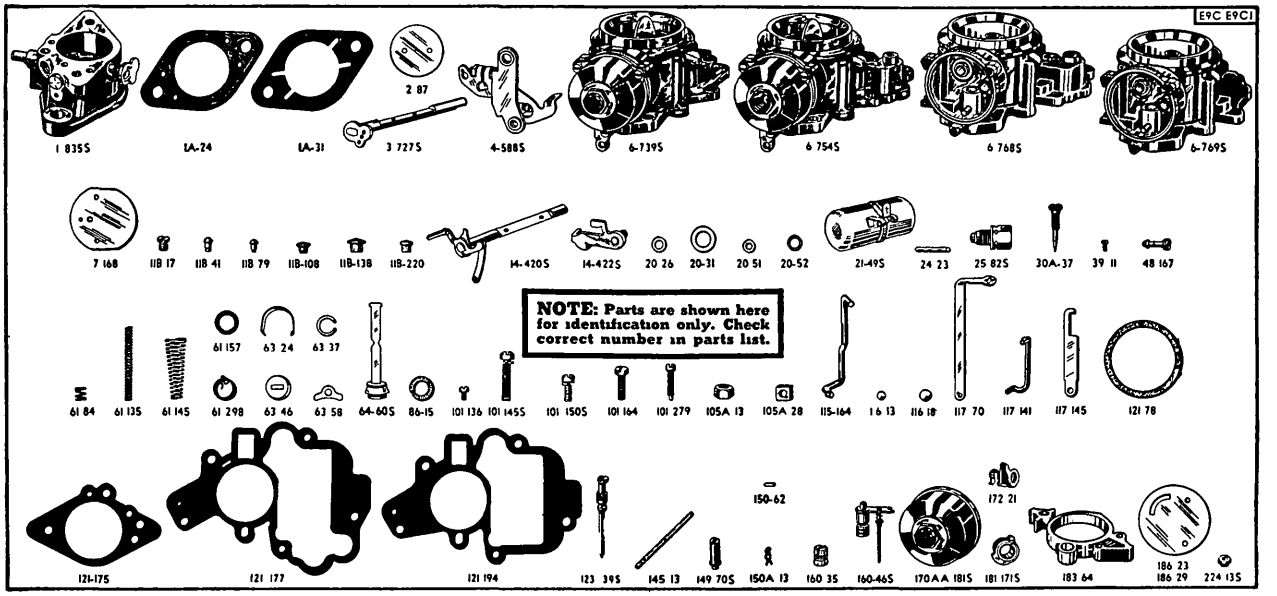


Figure 4
Unloader Adjustment



DeSoto Carbureters Nos. E9C-E9C1—1951-1954

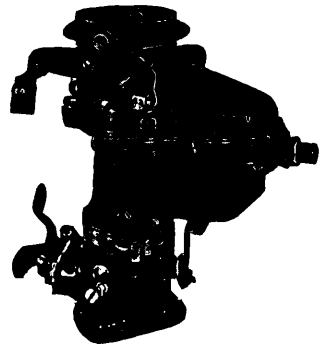
WHEN SERVICING, USE GASKET ASSORTMENT No 214A, REPAIR PKG No 1578, FOR E9C1

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-835S	Body flange assembly	
1A-24	Flange gasket for use with governor	
1A-31	FLANGE GASKET FOR USE WITHOUT GOVERNOR	
2-87	Throttle valve	
3-727S	Throttle shaft and arm assembly	
4-588S	Throttle lever assembly	
6-739S	Air horn and Climatic® control assembly (E9C1)	
6-754S	Air horn and Climatic® control assembly (E9C)	
6-768S	Air horn assembly (E9C)	
6-769S	Air horn assembly (E9C1)	
7-168	Choke valve	
11B-17	Pump discharge passage plug	
11B-41	Rivet plug	
11B-79	Rivet plug	(2)
11B 108	IDLE PORT RIVET PLUG	
11B-138	PUMP JET RIVET PLUG	
11B-220	HIGH SPEED PASSAGE RIVET PLUG	
14-420S	Choke piston lever and shaft assembly	
14-422S	Choke trip lever and pin assembly	
20-26	Gasket	
20-31	Needle seat gasket	
20-51	Step up jet gasket	
20-52	STEP UP PISTON GASKET	
21-49S	Float and lever assembly	
24-23	Float lever pin	
25-82S	NEEDLE AND SEAT ASSEMBLY	
30A-37	Idle adjustment screw	
39-11	Valve attaching screw	(4)
48-167	PUMP JET	
61-84	Idle adjustment screw spring	
61-135	STEP UP PISTON SPRING	
61-145	PUMP SPRING	
61-157	Plunger spring	
61-298	Fast idle cam spring	
63-24	FLOAT LEVER PIN RETAINER	
63-37	PUMP CYLINDER BALL RETAINER	
63-46	Spring retainer	
63-58	Coil housing retainer (Sup by 63 164)	
63-164	Coil housing retainer (Use with 170AA 181S)	(3)
63-190	Coil housing retainer (Use with 170AA 312S)	
64-60S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49 120)	
86-15	Flange stud lock washer	(2)
101-11	Coil housing attaching screw (Use with 170AA 181S)	(3)
101-136	Coil housing attaching screw (Sup by 101 11)	
101-145S	Body flange attaching screw and washer assembly	(3)
101-150S	Air horn attaching screw and washer assembly	(5)
101-164	Throttle lever clamp screw	
101-279	Throttle adjusting screw	
101-361	Coil housing attaching screw (Use with 170AA 312S)	(3)
105A-13	Flange nut	(2)
105A 28	Throttle lever clamp nut	
115-164	Choke connector rod	
116-13	PUMP CHECK BALL	
116-18	PUMP DISCHARGE CHECK BALL	
117-70	PUMP LIFTER	
117-141	PUMP LINK	
117-145	Fast idle link	
121-78	THERMOSTATIC COIL HOUSING GASKET	
121-175	BODY FLANGE GASKET	(2)
121-177	Body gasket (E9C)	
121-194	BODY GASKET (E9C1)	
123-39S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
145-13	MAIN VENT TUBE	
149-70S	STEP UP JET ASSEMBLY	
150-62	Choke piston pin	
150A-13	PIN SPRING	
160-35	Choke piston	
160-46S	STEP UP PISTON PLATE AND ROD ASSEMBLY	
170AA-181S	Thermostatic coil and housing assembly (Sup by 170AA 312SU)	
170AA-312S	Thermostatic coil and housing assembly	
170AA-312SU	Unitized package (Consists of 1—170AA 312S 1—63 190 3—101 361 and 1—121 78)	
172-21	Connector rod retainer	
181-171S	Fast idle cam assembly	
183-64	Insulator	
186-23	Baffle plate (Sup by 186 29)	
186-29	Baffle plate	
224-13S	MAIN METERING JET ASSEMBLY (STANDARD)	
224-14S	Main metering jet assembly (1 size lean)	
224-15S	Main metering jet assembly (2 sizes lean)	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

CARBURETERS
E7V1 - E7W1
(With Throttle Restrictor)



DE SOTO "CITY TRAFFIC" "S-13", "S-14"—1949-50 "S-15"—1951-52 "S-18"—1953 "S-20"—1954

B-B DOWN-DRAFT CARBURETERS—**MODELS E7V1-E7W1**

CARBURETER SPECIFICATIONS

For DeSoto Six Cylinder Engine: 3-7/16 Inch Bore, 4¼ Inch Stroke (1949-51)
For DeSoto Six Cylinder Engine: 3-7/16 Inch Bore, 4½ Inch Stroke (1952-54)

Dimensions: Flange size, 1½ inch (38.1 mm).
Throttle bore, 1-11/16 inch (42.86 mm).
Main venturi, 1-11/32 inch (34.13 mm) I. D.

Float Setting: Top of float 5/64 inch (1.98 mm) below top surface of carbureter body casting. (Plus or minus 1/64 inch (.397 mm).

Vents: Outside none. Inside balance vent .218 inch diameter (5.54 mm).

Gasoline Intake Needle: Triangular, horizontal No. 44 (2.18 mm) drill in needle seat.

Idle Orifice Tube: Jet size (E7V1) .0256 inch (.65 mm) drill; (E7W1) .0236 inch (.60 mm) drill. Idle passage air bleed, in body, (E7V1) size .063 inch (1.60 mm) diameter; (E7W1) in air horn, size .0465 inch (1.18 mm) diameter. Restriction in body, (E7V1) size .053 inch (1.35 mm) diameter; (E7W1) size .0452 inch (1.15 mm) diameter.

Idle Ports: (E7V1) Upper Port. Keyhole type: length .128 inch (3.25 mm); width .027 inch (.69 mm). .063 inch (1.60 mm) diameter hole at top. Top of port located .093 to .097 inch (2.36 to 2.46 mm) above top edge of valve.
(E7W1) Upper port. Slot type: length .149 inch (3.78 mm); width .030 inch (.76 mm). Top of port located .118 to .122 inch (3.00 to 3.10 mm) above top edge of valve.
Lower port size .053 to .057 inch (1.35 to 1.45 mm) drill. (For idle adjustment screw.)

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture turn screw out. Idle engine between 450-500 r.p.m.

Main Metering Screw: (E7V1) Calibrated to flow 312 to 316 cc per minute; (E7W1) 315 to 319 cc per minute. (Do not gauge for size. If in doubt replace with new part.)

Main Vent: Through diffuser (air bleed inside bowl). Size .0315 inch (.80 mm) drill.

Main Vent Tube: Side holes, 4—.0354 inch diameter.

Step-Up Jet: Power orifice .0315 inch (.80 mm) drill.

Accelerating Pump: Type—delayed action. Stroke—Summer setting (inner hole, short stroke). Intermediate setting (center hole). Winter setting (outer hole, long stroke).
Pump intake passage, seat size .107 to .112 inch (2.72 to 2.84 mm) diameter in body.
Pump discharge passage: Restriction (under ball check) size .062 to .065 inch (1.57 to 1.65 mm) diameter in body.
Pump (discharge) jet size, .0334 inch (.85 mm) drill.

Pump Adjustment: (E7W1 equipped with 3-452S or 3-459S, and also E7V1). 26/64 inch plunger travel—full throttle position, medium stroke. Use gauge T109-117S. (E7W1 equipped with 3-728S). None.

Choke: Offset butterfly type, with poppet valve.

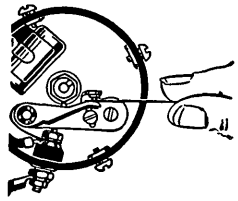
Vacuum Spark Port: Slot (round end) type; size .040 by .110 inch (1.016 by 2.794 mm). Top of port .052 to .058 inch (1.32 to 1.47 mm) above top edge of valve.

Motor Tune-Up—Be Accurate! Always Use Feeler Gauges!

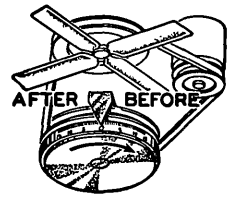
CAUTION: Change worn or leaky flange gasket. Tighten manifold bolts and test compression before adjusting carbureter.



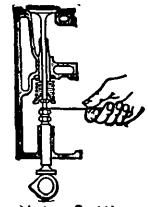
Spark Plug Gap
.038" (E7V1)
.035" (E7W1)



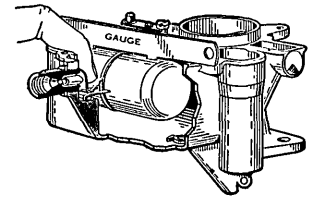
Breaker Point Setting
.020"



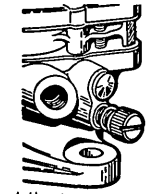
Ignition Timing
Breaker Points to Open:
T. D. C. (1949-51)
2° B. T. D. C. (1952-54)



Valve Setting (Hot)
Intake .008"
Exhaust .010"



Float Setting
(Use Gauge)
5/64 Inch



Idle Adjustment Screw Setting
½ to 1½
Turns Open

CARBURETER ADJUSTMENTS

If carbureter loads up after considerable service, check float level. Wear on lip of float lever will raise float level. Before adjusting float, be sure float lever pin is firmly seated. Reset float level by bending lip of float lever away from needle to raise level, or bend lip toward needle to lower float level. Bend vertical lip of float only.

If motor stalls while idling, set throttle lever adjusting screw so motor runs between 450-500 r. p. m. Then set idle adjustment screw to specifications. If these adjustments do not correct the trouble, remove idle orifice tube and plug assembly. Clean tube passages with compressed air.

If acceleration is not satisfactory, remove pump jet and clean with compressed air. However, it is usually advisable to replace the pump jet, as its cost is nominal. All jets must be seated gasoline tight. Poor acceleration may be due to damaged or worn plunger leather in accelerating pump.

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sediment in pump cylinder or clogged intake ball check at bottom of pump cylinder and discharge ball check in discharge passage If plunger is removed from cylinder, use care in installing to avoid damage to plunger leather

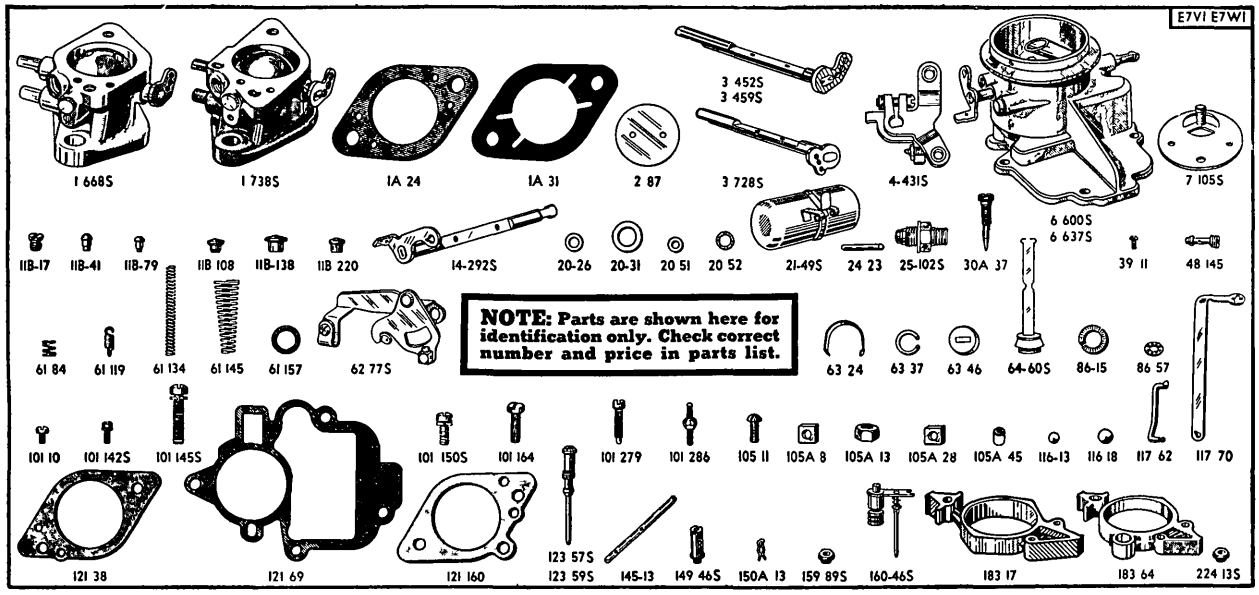
Correct air fuel ratio is provided by a "balance tube" in the air horn The balance tube should be checked each time the carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type size or condition of air cleaner Should the cleaner become clogged the capacity will be reduced but the air-fuel mixture ratio will not be changed

Excessive richness above 50 miles per hour may be caused by a clogged main vent tube After removal of rivet plug beneath float bowl with tool No T109-43 main vent tube can be removed and a new tube inserted with tool No T109-195 Care must be exercised in inserting new tube which must seat tightly Use new rivet to complete the installation.

Pump Adjustment (E7W1 equipped with 3-452S or 3-459S, and also E7V1) Remove air horn assembly, back out throttle adjustment screw, and place pump operating link in center hole of throttle shaft arm Place gauge T109-117S on edge of bowl cover so that lip of gauge extends over top of plunger shaft Turn knurled nut of gauge until lip contacts plunger shaft at closed and wide open throttle positions Difference in readings obtained at closed and wide open throttle positions should be "26" (26/64') plunger travel

(E7W1 equipped with 3-728S) No gauge is necessary Be sure pump lifter link arm is at right angle to lifter link shaft Adjustments can be made by bending horizontal portion of pump lifter link

Pump stroke adjustable for high or low temperature Set to long stroke for cold weather, short stroke for hot weather driving



DeSoto Carbureters Nos. E7V1-E7W1—1949-1954

WHEN SERVICING E7V1, USE REPAIR PACKAGE No 1540, E7W1, REPAIR PACKAGE No 1541A
E7W1, GASKET ASSORTMENT No 137A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME
1-668S	Body flange assembly (E7V1)
1-738S	Body flange assembly (E7W1)
1A-24	Flange gasket (for use with governor)
1A-31	FLANGE GASKET (FOR USE WITHOUT GOVERNOR)
2-87	Throttle valve
3-452S	THROTTLE SHAFT AND ARM ASSEMBLY (Use with 48-145 and 117-62)
3-459S	Throttle shaft and arm assembly (E7V1) (Sup by 3-452S)
3-728S	Throttle shaft and arm assembly (Use with 48-167 and 117-141) (E7W1) (Sup by 3-452S)
4-431S	Throttle lever assembly
6 600S	Air horn assembly (E7V1)
6-637S	Air horn assembly (E7W1)
7-105S	Choke valve assembly
11B-17	Pump check passage plug
11B-41	Rivet plug
11B-79	Rivet plug (2)
11B-108	IDLE PORT RIVET PLUG
11B-138	PUMP JET RIVET PLUG
11B-220	HIGH SPEED PASSAGE PLUG
14-292S	Choke control lever and shaft assembly
20-26	Gasket
20-31	Needle seat gasket
20-51	Step-up jet gasket
20-52	STEP-UP PISTON GASKET
21-49S	Float and lever assembly (Sup by 21-123S)
21-123S	Float and lever assembly
24-23	Float lever pin
25-102S	NEEDLE AND SEAT ASSEMBLY
30A-37	Idle adjustment screw
39-11	Choke valve attaching screw (2)
48-145	PUMP JET (Use with 3-452S or 3-459S and 117-62)
48-167	Pump jet (Use with 3-728S and 117-141)
61-84	Idle adjustment screw spring
61-119	Choke pull-back spring
61-134	STEP-UP PISTON SPRING
61-145	PUMP SPRING
61-157	Plunger spring
62-77S	Choke tube bracket assembly
63-24	FLOAT LEVER PIN RETAINER
63 37	PUMP RETAINER RING
63-46	Spring retainer
64-60S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49-120)
86-15	Flange stud lock washer (2)

Part No.	PART NAME
86-57	LOCK WASHER (4)
101-10	Wire clamp screw
101-142S	Choke bracket attaching screw and washer assembly
101-145S	Body flange attaching screw and washer assembly (3)
101-150S	Air horn attaching screw and washer assembly (4)
101-164	Clamp screw
101-279	Throttle adjusting screw
101-286	THROTTLE RESTRICTOR SCREW (2)
105-11	Choke tube clamp screw
105A-8	Choke tube clamp nut
105A-13	Flange nut (2)
105A-28	Throttle lever clamp nut
105A-45	THROTTLE RESTRICTOR NUT (4)
116-13	PUMP INTAKE CHECK BALL
116-18	PUMP DISCHARGE CHECK BALL
117-62	PUMP LEVER (Use with 3-452S or 3-459S and 48-145)
117-70	PUMP LIFTER LINK
117-141	Pump lever (Use with 3-728S and 48-167)
121-38	BODY FLANGE GASKET (E7V1) (2)
121-69	BODY GASKET
121-160	BODY FLANGE GASKET (E7W1) (2)
123-57S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY (E7V1)
123-59S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY (E7W1)
145-13	MAIN VENT TUBE
149-46S	STEP-UP JET ASSEMBLY
150A-13	PIN SPRING
159-63S	Main metering jet assembly—2 sizes lean (E7V1)
159-76S	Main metering jet assembly—3 sizes lean (E7V1)
159 87S	Main metering jet assembly—1 size lean (E7V1)
159-89S	MAIN METERING JET ASSEMBLY—STANDARD (E7V1)
160 46S	STEP-UP PISTON, PLATE AND ROD ASSEMBLY
183-17	Insulator (E7V1) (Sup by 183-64)
183-64	Insulator (E7V1-E7W1)
224-12S	Main metering jet assembly—3 sizes lean (E7W1)
224-13S	MAIN METERING JET ASSEMBLY—STANDARD (E7W1)
224-14S	Main metering jet assembly—1 size lean (E7W1)
224-15S	Main metering jet assembly—2 sizes lean (E7W1)

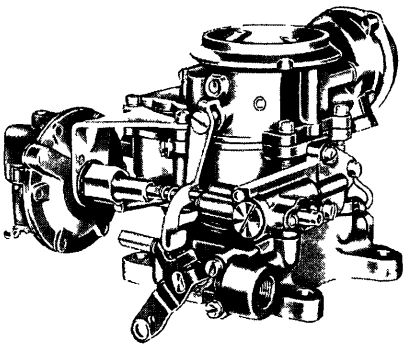
NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

CARTER CARBURETOR CORPORATION, ST. LOUIS, MO., U. S. A.

911S Fluid Drive or Torque Converter and M6 Transmission

912S Standard Transmission

913S Standard Transmission with Overdrive



DE SOTO MODEL S-16 FIREDOME "V-8" 1953

(2216S can be used in place of 911S)

2250 can be used in place of 912S—remove dashpot

2250S with 192-34U can be used in place of 913S and remove dashpot

BBD Dual Down-Draft Climatic® Control **Carbureters Nos. 911S-912S-913S**

CARBURETER SPECIFICATIONS

For DeSoto 8 Cylinder Engine 3⅝ Inch Bore, 3-11/32 Inch Stroke

Dimensions Flange size 1¼ inch dual 4 bolt (water jacket) type
Throttle bore 1 7/16 inch I D
Primary venturi ⅜ inch I D
Main venturi 1 3/16 inch I D

Float Level See adjustments

Vent Inside balance vent tube to bowl in air horn above choke valve
Kickdown switch vent tube (911S) in air horn above choke valve

Gasoline Intake Size No 38 (.1015 inch) drill hole in needle seat

Idle Tube Jet size 0295 inch drill
Idle bleed (In venturi cluster screw) size 059 inch drill
Idle restriction (In venturi cluster screw) size 0472 inch drill

Idle Port Upper slot type length 149 inch width 030 inch

Idle Port Opening 101 to 105 inch above upper edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw) Size 053 to 057 inch diameter

Set Idle Adjustment Screw ¼ to 1¼ turns open For richer mixture turn screw out With gear shift lever in neutral position idle engine between 475 and 500 R P M

Main Nozzle Nozzle is installed permanently DO NOT REMOVE

Main Vent Tube Side holes (4) 0354 inch diameter
Bleed in top of tube size 0196 inch diameter

Step Up Rod (Vacuum operated) 022 inch diameter Length (end of wire to inside of angle) 1 11/32 inch

Metering Jet Calibrated to flow 338 to 342 cc per minute (Do not gauge for size if in doubt replace with new part)

Accelerating Pump Pump discharge jets (2) size 0315 inch drill
Intake ball check seat size 115 to 120 inch diameter
Discharge ball check seat size 115 to 120 inch diameter

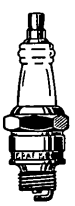
Pump Adjustment See adjustments

Choke Carter Climatic® Control set at index Butterfly type offset valve Choke heat suction hole in body size No 38 (.1015 inch) drill NOTE Thermostatic coil should not be removed from delayer mounting post If defective replace with complete thermostatic coil and housing assembly

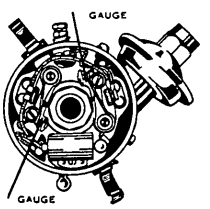
Vacuum Spark Port Horizontal round end type (Early prod.) 020 by 110 inch (late prod.) 030 by 110 inch Top of port to be (early prod.) 017 to 023 inch (late prod.) 021 to 031 inch above upper edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

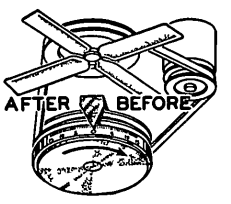
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



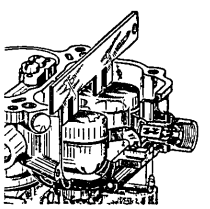
Spark Plug Gap .035"



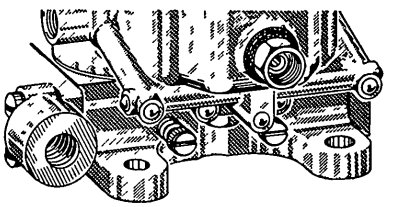
Breaker Point Setting .017"



Ignition Timing Breaker Points to Open 4° B T D C



Float Setting (See Adjustments)



Idle Adjustment Screw Setting ¼ to 1¼ Turns Open

NOTE These cars equipped with Hydraulic Valve Lifters NO ADJUSTMENT

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: This adjustment must be made with the bowl cover gasket and float pin retainer removed. Hold the lip on float arm against the seated intake needle, making sure the float pin is at the bottom of its guide slots. The distance from the top surface of the body casting to the top of each float should be 9/32 inch (gauge T109-239) for floats with flat top or 7/32 inch (gauge T109-239) for floats with curved top. If one float is lower than the other, equalize by bending the float arm. If both floats require the same correction, adjust by bending lip on float arm. The floats must not rub anywhere against the inner walls of the bowl. If necessary, bend float arms slightly to provide clearance on all sides of floats.

PUMP ADJUSTMENT: Back out throttle adjusting screw and open choke valve so that throttle valves seat in bores of carbureter. Install pump connector rod in outer hole of throttle shaft arm and pump arm pin in top hole of the plunger shaft. The distance from the top of the bowl cover to the top of plunger shaft (not pump arm) should be 57/64 inch. Adjust by bending pump connector rod at lower angle (use Tool T109-213).

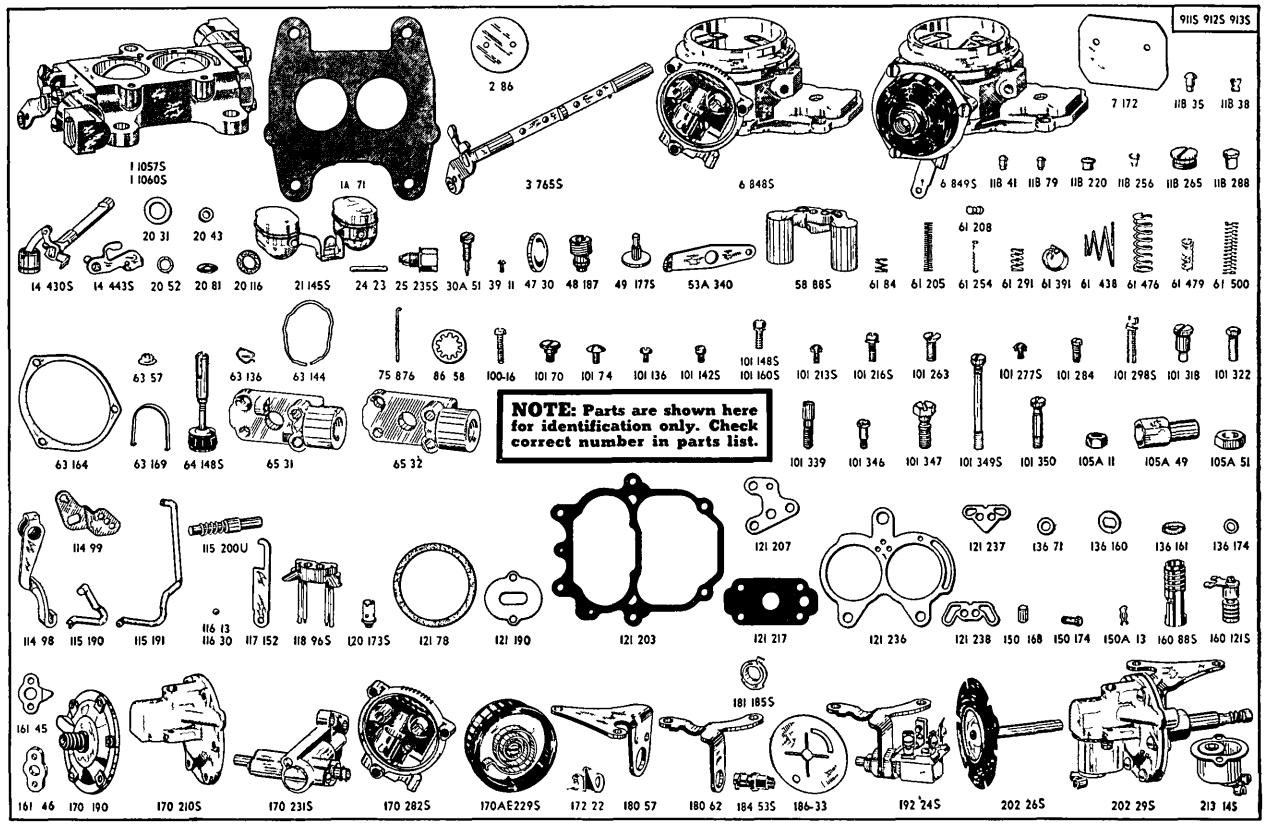
FAST IDLE ADJUSTMENT: Remove thermostatic coil housing assembly, gasket and baffle plate. With throttle adjusting screw backed out, crack throttle valve and hold choke valve in fully closed position. Then close throttle. This will allow fast idle cam to revolve to fast idle position. There should now be .015"-.019" clearance (use gauge T109-44) between throttle valve and bore of carbureter (side opposite idle port). Adjust by bending the choke connector rod at lower angle (use tool T109-213).

UNLOADER ADJUSTMENT: This adjustment must be made after the fast idle adjustment. Hold throttle valve wide open and close choke valve as far as possible without forcing. There should now be 1/4 inch clearance (use gauge T109-31) between upper edge of choke valve and inner wall of air horn. Adjust by bending arm on choke trip lever (use tool T109-214). When fast idle and unloader adjustments have been made, assemble baffle plate, coil housing gasket and thermostatic coil housing assembly on air horn. Set Climatic® Control at "Index", making sure that hook on coil has picked up coil shaft lever.

DASH POT (SLOW CLOSING THROTTLE) ADJUSTMENT: (911S ONLY) The purpose of the dashpot is to prevent the car from stalling when the trottle is released rapidly. Maximum dashpot action is obtained by adjustment of diaphragm adjusting screw so that the dashpot plunger shaft can be moved inward approximately 1/16 inch after engine and throttle have returned to normal idle. This adjustment should be made with the carbureter on the car, with engine running and transmission in driving range.

OVERDRIVE KICKDOWN SWITCH ADJUSTMENT: (913S ONLY) (1) With throttle valves seated in bores of carbureter and kickdown switch lever held against stop on switch bracket, bend lip on throttle lever until it just contacts kickdown lever. (2) With throttle valves in wide open position adjust hex nuts on switch to have 1/64 inch to 3/64 inch clearance between kickdown lever and switch stem guide.

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DeSoto "V-8"—1953—Carbureters Nos. 911S-912S-913S

WHEN SERVICING, USE GASKET ASSORTMENT No 225; REPAIR PACKAGE No. 1728A

PART NAMES IN CAPITAL LETTERS LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1057S	Body flange assembly	
1-1060S	Body flange assembly (912S 913S) (Sup by 1-1057S)	
1A-71	FLANGE GASKET	
2-86	Throttle valve	(2)
3-765S	Throttle shaft and lever assembly	
6-848S	Air horn assembly	
6-849S	Air horn and Climatic® control assembly	
7-172	Choke valve	
11B-35	Rivet plug	
11B-38	Air horn screw plug (912S)	
11B-41	Rivet plug	(2)
11B-79	Rivet plug (911S (6) (912S 913S) (8)	
11B-220	Idle port rivet plug (late prod.)	(2)
11B-256	Magneto coil rivet plug (911S)	
11B-265	Kickdown switch screw plug (911S)	
11B-288	PUMP JET RIVET PLUG	(2)
14-430S	Choke piston lever link and shaft assembly	
14-443S	Choke trip lever and pin assembly	
20-31	Needle seat gasket	
20-43	PISTON HOUSING GASKET	
20-52	STEP-UP PISTON GASKET	
20-81	KICKDOWN SWITCH PLUNGER GASKET (911S)	
20-116	Main metering jet gasket	(2)
21-145S	Float and lever assembly	
24-23	Float lever pin	
25-235S	NEEDLE AND SEAT ASSEMBLY	
30A-51	Idle adjustment screw	(2)
39-11	CHOKE AND THROTTLE VALVE ATTACHING SCREW	(6)
47-30	WELSH PLUG	
48-187	PUMP JET	(2)
49-177S	Electro magnet plunger assembly (911S)	

Part No.	PART NAME	
53A-340	Pump arm	
58-88S	Venturi cluster and nozzle assembly	
61-84	Idle adjustment screw spring	(2)
61-205	STEP UP PISTON SPRING	
61-208	Diaphragm adjusting screw spring (911S)	
61-251	Switch piston spring (911S) (Sup by 61-500)	
61-254	Electro magnet plunger spring	
61-291	Throttle adjusting screw spring	
61-391	Fast idle cam spring	
61-438	Dashpot diaphragm return spring (911S)	
61-476	PUMP SPRING	
61-479	Push rod sleeve spring (911S)	
61-500	Switch piston spring (911S)	
63-57	INTAKE CHECK BALL RETAINER	
63-136	Kickdown switch terminal retainer clip (911S)	
63-144	Delayer plate retainer ring	
63-164	Thermostatic coil housing retainer (Use with 170AE229S)	
63-169	FLOAT LEVER PIN RETAINER	
63-190	Thermostatic coil housing retainer (Use with 170AE320S)	
64-148S	PUMP PLUNGER AND ROD ASSEMBLY	
65-31	End plate (throttle side)	
65-32	End plate (choke side)	
75-876	STEP-UP ROD	(2)
86-58	Dashpot bracket nut lock washer (911S)	
100-16	Throttle adjusting screw (912S 913S)	
101-70	Pump arm screw	
101-74	Throttle shaft arm attaching screw	
101-136	Thermostatic coil housing attaching screw (Use with 170AE229S)	(3)
101-142S	Electro magnet housing attaching screw and washer assembly (911S)	(2)

Part No	PART NAME	
101-148S	Air horn attaching screw and washer assembly (912S)	(4)
101-160S	Air horn and end plate attaching screw and washer assembly (913S)	(4)
101-213S	Diaphragm cover attaching screw and washer assembly (911S)	(6)
101-216S	Kickdown switch bowl cover and end plate attaching screw and washer assembly (911S) (9) (912S 913S) (2)	
101-263	End plate attaching screw	(2)
101-277S	Kickdown switch plate attaching screw and washer assembly (911S)	(4)
101-284	Piston housing attaching screw	(2)
101-298S	End plate attaching screw and washer assembly	(4)
101-318	Kickdown switch lever screw (911S 913S)	
101-322	Diaphragm shaft adjusting screw (911S)	
101-339	Throttle adjusting screw (911S)	
101-346	Step up piston plate guide screw	
101-347	Step up piston passage screw	
101-349S	Body attaching screw and washer assembly	(2)
101-350	Venturi cluster screw	(2)
101-361	Thermostatic coil housing attaching screw (Use with 170AE320S)	(2)
105A-11	Flange stud nut	(4)
105A-49	Diaphragm to bracket attaching nut (911S)	
105A-51	Kickdown switch bracket attaching nut (913S)	(2)
114-98	Kickdown switch lever (911S)	
114-99	THROTTLE SHAFT ARM	
115-190	Choke connector rod	
115-191	THROTTLE CONNECTOR ROD	
115-200U	Push rod assembly and spring unit (Consists of 1—115 180S and 1—61 479) (911S)	
116-13	DASHPOT CHECK BALL (911S)	
116-30	PUMP INTAKE AND DISCHARGE CHECK BALL	(3)
117-152	Fast idle link	
118-96S	VENTURI COVER AND TUBE ASSEMBLY	
120-173S	MAIN METERING JET ASSEMBLY	(2)
120-182S	Main metering jet assembly—1 size lean	(2)
120-183S	Main metering jet assembly—2 sizes lean	(2)
121-78	COIL HOUSING GASKET	
121-190	ELECTRO MAGNET HOUSING GASKET (911S)	
121-203	BODY GASKET	
121-207	KICKDOWN SWITCH HOUSING GASKET (911S)	
121-217	END PLATE GASKET	(2)
121-236	BODY FLANGE GASKET	
121-237	VENTURI HOUSING GASKET	
121-238	VENTURI COVER GASKET	
136-71	Kickdown switch push rod washer (911S)	
136-160	Throttle shaft washer	
136-161	Pump spring retainer	
136-174	Throttle adjusting screw washer	
150-168	Dashpot air bleed pin (911S)	
150-174	PUMP ARM PIN	
150A-13	PIN SPRING	(3)
160-88S	Piston and contact plate assembly (911S)	
160-121S	STEP UP PISTON AND PLATE ASSEMBLY	
161-45	Terminal end plate (911S)	
161-46	Push rod end plate (911S)	
170-190	Diaphragm housing (inner) (911S)	
170-210S	Dashpot diaphragm outer housing assembly (911S)	
170-231S	Kickdown switch assembly (complete) (911S)	
170-282S	Piston housing and plug assembly	
170AE229S	Thermostatic coil and housing assembly (Sup by 170AE320SU)	
170AE320S	Thermostatic coil and housing assembly	
170AE320SU	Unitized package (Consists of 1—170AE320S 1—63 190 3—101 361 and 1—121 78)	
172-22	Choke connector rod retainer	
180-57	Dashpot mounting bracket (911S)	
180-62	Kickdown switch bracket (913S)	
181-185S	Fast idle cam and spring assembly	
184-53S	Terminal block and retainer clip assembly (911S)	
186-33	Choke baffle plate	
192-24S	Kickdown switch and bracket assembly (complete) (913S) (Sup by 192 34U)	
192-34U	Unitized package (913S)	
202-26S	Diaphragm and shaft assembly (911S)	
202-29S	Dashpot unit (complete) (911S)	
213-14S	Electro magnet and housing assembly (911S)	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

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DESOTO "V-8"

MODELS S-16, S-17
1952-1953

FLUID DRIVE OR TORQUE CONVERTER AND M6 TRANSMISSION

BBD Dual Down-Draft Climatic® Control Carbureter **No. 2216S**

CARBURETER SPECIFICATIONS

For De Soto 8 Cylinder Engine: 3⅝ Inch Bore, 3-11/32 Inch Stroke

Dimension: Flange size, 1¼ inch dual 4 bolt (water jacket) type
Throttle bore, 1 7/16 inch I D
Primary venturi ⅜ inch I D
Main venturi 1-3/16 inch I D

Vent. Inside balance vent tube to bowl, in air horn above choke valve
Kickdown switch vent tube in air horn above choke valve

Gasoline Intake. Size No 38 (.1015 inch) drill hole in needle seat

Idle Tube: Jet size 0334 inch drill
Idle bleed (in venturi cluster screw), size 0629 inch drill
Idle restriction (in venturi cluster screw) size 0472 inch drill

Idle Port: Upper, slot type length .149 inch, width .030 inch

Idle Port Opening: .102 to .106 inch above upper edge of valve with valve tightly closed

Lower Port (For idle adjustment screw): Size .053 to .057 inch diameter

Set Idle Adjustment Screw: ¼ to 1¼ turns open For richer mixture, turn screw out. With gear shift lever in neutral position idle engine between 475 and 500 R P M

Main Nozzle: Nozzle is installed permanently DO NOT REMOVE

Main Vent Tube: Side holes (6) from closed end first three holes size .0354 inch, next two holes .0236 inch, last hole .0197 inch diameter Bleed in top of tube, size .0275 inch diameter.

Step-Up Rod. (Vacuum operated) .024 inch diameter Length (end of wire to inside of angle) 1⅜ inch

Metering Jet: Calibrated to flow 338 to 342 cc per minute (Do not gauge for size, if in doubt, replace with new part)

Accelerating Pump: Pump discharge jets (2), size .0295 inch drill Intake ball check seat, size .130 to .140 inch diameter. Discharge ball check seat, size .110 to .120 inch diameter

Choke: Carter Climatic® Control, set at index Butterfly type, offset valve Choke heat suction hole, in body, size No 38 (.1015 inch) drill NOTE Thermostatic coil should not be removed from delayer mounting post If defective replace with complete thermostatic coil and housing assembly.

Vacuum Spark Port: Horizontal, round end type .030 by .110 inch Top of port to be .030 to .040 inch above upper edge of valve with valve tightly closed

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Motor Tune-Up—Be Accurate!

Spark Plug Gap .035"	Breaker Point Setting .017"	Ignition Timing Breaker Points to Open: 4° B. T. D. C. At Vibration Damper	Float Setting 7/32 Inch (Use Gauge T109-239)	Idle Adjustment Screw Setting ¼ to 1¼ Idle engine at 475 to 500 R.P.M. in Neutral

NOTE: These cars equipped with Hydraulic Valve Lifters. NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: This adjustment must be made with the bowl cover gasket and float pin retainer removed. Hold the lip on float arm against the seated intake needle, making sure the float pin is at the bottom of its guide slots. The distance from the top surface of the body casting to the top of each float should be 7/32 inch (gauge T109-239). If one float is lower than the other, equalize by bending the float arm. If both floats require the same correction, adjust by bending lip on float arm. The floats must not rub anywhere against the inner walls of the bowl. If necessary, bend float arms slightly to provide clearance on all sides of floats.

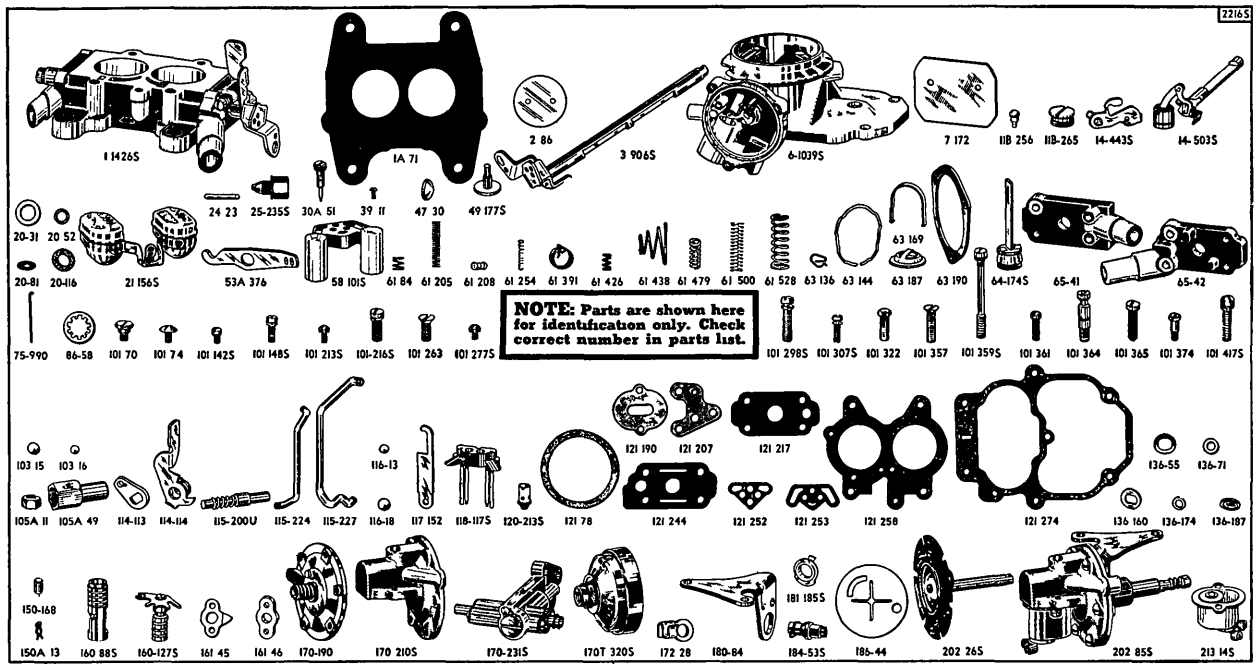
PUMP ADJUSTMENT: Back out throttle adjusting screw and open choke valve so that throttle valves seat in bores of carbureter. Install pump connector rod in outer hole of throttle lever and inner hole of pump arm. The distance from the top of the bowl cover to the top of plunger shaft (not pump arm) should be 1 inch. Adjust by bending pump connector rod at lower angle (use tool T109-213).

FAST IDLE ADJUSTMENT: Remove thermostatic coil housing assembly, gasket and baffle plate. With throttle adjusting screw backed out, crack throttle valve and hold choke valve in fully closed position. Then close throttle. This will allow fast idle cam to revolve to fast idle position. There should now be .015"-.019" clearance (use gauge T109-44) between throttle valve and bore of carbureter (side opposite idle port). Adjust by bending the choke connector rod at lower angle (use tool T109-213).

UNLOADER ADJUSTMENT: This adjustment must be made after the fast idle adjustment. Hold throttle valve wide open and close choke valve as far as possible without forcing. There should now be 1/4 inch clearance (use gauge T109-31) between upper edge of choke valve and inner wall of air horn. Adjust by bending arm on choke trip lever (use tool T109-214). When fast idle and unloader adjustments have been made, assemble baffle plate, coil housing gasket and thermostatic coil housing assembly on air horn. Set Climatic® Control at "Index," making sure that hook on coil has picked up coil shaft lever.

DASH POT (SLOW CLOSING THROTTLE) ADJUSTMENT: The purpose of the dashpot is to prevent the car from stalling when the throttle is released rapidly. Maximum dashpot action is obtained by adjustment of diaphragm adjusting screw so that the dashpot plunger shaft can be moved inward approximately 1/16 inch after engine and throttle have returned to normal idle. This adjustment should be made with the carbureter on the car, with engine running and transmission in driving range.

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DeSoto "V-8"—1952-1953—Carbureter No. 2216S

Part No.	PART NAME	
1-1426S	—Body flange assembly	
1A-71	Flange gasket	
2-86	Throttle valve	(2)
3-906S	Throttle shaft and lever assembly	
6-1039S	—Air horn assembly	
7-172	Choke valve	
11B-256	Magneto coil rivet plug	
11B-265	Kickdown switch screw plug	
14-443S	Choke trip lever and pin assembly	
14-503S	Choke piston lever link and shaft assembly	
20-31	Needle seat gasket	
20-52	Step up piston gasket	
20-81	Kickdown switch plunger gasket	
20-116	Main metering jet gasket	(2)
21-156S	Float and lever assembly	
24-23	Float lever pin	
25-235S	Needle and seat assembly	
30A-51	Idle adjustment screw	(2)
39-11	Choke and throttle valve attaching screw	(6)
47-30	Welsh plug	
49-177S	Electro magnet plunger assembly	
53A-376	Pump arm	
58-101S	Venturi cluster and nozzle assembly	
61-84	Idle adjustment screw spring	(2)
61-205	Step up piston spring	
61-208	Diaphragm adjustment screw spring	
61-254	Electro magnet plunger spring	
61-391	Fast idle cam spring	
61-426	Throttle adjusting screw spring	

Part No.	PART NAME	
61-438	Dashpot diaphragm return spring	
61-479	Push rod sleeve spring	
61-500	Switch piston spring	
61-528	Pump spring	
63-136	Kickdown switch terminal retainer clip	
63-144	Delayer plate retainer ring	
63-169	Float lever pin retainer	
63-187	Intake check ball retainer	
63-190	Thermostatic coil housing retainer	
64-174S	Pump plunger and rod assembly	
65-41	—End plate (choke side)	
65-42	—End plate (throttle side)	
75-990	Step up rod	(2)
86-58	Dashpot bracket nut lock washer	
101-70	Pump arm screw	
101-74	Throttle shaft arm attaching screw	
101-142S	Electro Magnet housing attaching screw and washer assembly	(2)
101-148S	Air horn attaching screw and washer assembly	(2)
101-213S	Diaphragm cover attaching screw and washer assembly	(6)
101-216S	Kickdown switch and end plate attaching screw and washer assembly	(6)
101-263	End plate attaching screw	(2)
101-277S	Kickdown switch plate attaching screw and washer assembly	(4)
101-298S	End plate attaching screw and washer assembly	(2)
101-307S	Air horn attaching screw and washer assembly	(2)
101-322	Diaphragm shaft adjusting screw	

Part No	PART NAME	
101-357	End plate attaching screw	
101-359S	Body attaching screw and washer assembly	(2)
101-361	Thermostatic coil housing attaching screw	(3)
101-364	Venturi cluster screw	(2)
101-365	Throttle adjusting screw	
101-374	Step up piston plate guide screw	
101-417S	—Body flange attaching screw and washer assembly	(2)
103-14	Lead shot	
103-15	Lead shot	(2)
103-16	Lead shot	(2)
105A-11	Flange stud nut	(4)
105A-49	Diaphragm to bracket attaching nut	
114-113	Throttle shaft arm	
114-114	Kickdown switch lever	
115-200U	Push rod assembly and spring unit (Consists of 1—115 180S and 1—61 479)	
115-224 294	Choke connector rod	
115-227	Throttle connector rod	
116-13	Dashpot and pump discharge check ball	(2)
116-18	Pump intake check ball	
117-152	Fast idle link	
118-117S	Venturi cover and tube assembly	
120-213S	Main metering jet assembly	(2)
121-78	Coil housing gasket	
121-190	Electro magnet housing gasket	
121-207	Kickdown switch housing gasket	
121-217	End plate gasket (choke side)	

Part No.	PART NAME	
121-244	End plate gasket (throttle side)	
121-252	Venturi housing gasket	
121-253	Venturi cover gasket	
121-258	Body flange gasket	
121-274	Body gasket	
136-55	Throttle shaft spring washer	
136-71	Kickdown switch push rod washer	
136-160	Throttle shaft washer	
136-174	Throttle adjusting screw washer	
136-187	Pump spring retainer	
150-168	Dashpot air bleed pin	
150A-13	Pin spring	(2)
160-88S	Piston and contact plate assembly	
160-127S	Step up piston and plate assembly	
161-45	Terminal end plate	
161-46	Push rod end plate	
170-190	Diaphragm housing (inner)	
170-210S	Dash pot and outer diaphragm housing assembly	
170-231S	Kickdown switch assembly (complete)	
170T-320S	Thermostatic coil and housing assembly	
172-28	Choke connector rod retainer	
180-84	—Dashpot bracket	
181-185S	Fast idle cam and spring assembly	
184-53S	Terminal block and retainer clip assembly	
186-44	Choke baffle plate	
202-26S	Diaphragm and shaft assembly	
202-85S	—Dashpot assembly (complete)	
213-14S	Electro magnet and housing assembly	

—Parts so marked are new and listed for the first time

NOTE **Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used**

CARBURETER
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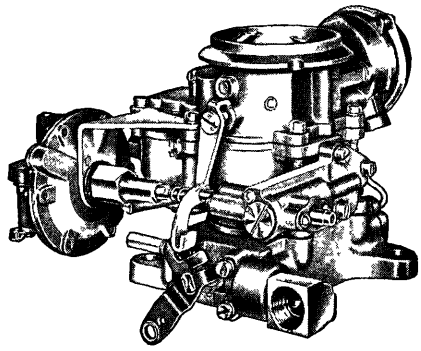
CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO, U. S. A.

DE SOTO 908S-909S-910S
December, 1952
Revised November, 1956

908S Fluid Drive or Torque Converter and M6 Transmission

909S Standard Transmission

910S Standard Transmission with Overdrive



DE SOTO FIREDOME "V-8" MODELS S-17, 1952 S-16, 1953

(2216S can be used in place of 908S)

(2250S can be used in place of 909S and 910S)

BBD Dual Down-Draft Climatic® Control **Carbureters Nos. 908S-909S-910S**

CARBURETER SPECIFICATIONS

For DeSoto 8 Cylinder Engine: 3⅝ Inch Bore, 3-11/32 Inch Stroke

Dimensions: Flange size, 1¼ inch dual, 4 bolt (water jacket) type.
Throttle bore, 1-7/16 inch I. D.
Primary venturi, ⅜ inch I. D.
Main venturi, 1-3/16 inch I. D.

Float Level: See adjustments.

Vent: Inside, balance vent tube to bowl, in air horn above choke valve.
Kickdown switch vent tube (908S), in air horn above choke valve.

Gasoline Intake: Size No. 38 (.1015 inch) drill hole in needle seat.

Idle Tube: Jet, size .0295 inch drill.
Idle bleed (In venturi cluster screw), size .059 inch drill.
Idle restriction (In venturi cluster screw), size .0472 inch drill

Idle Port: Upper, slot type, length, .149 inch; width, .030 inch.

Idle Port Opening: .101 to .105 inch above upper edge of valve with valve tightly closed.

Lower Port (For Idle Adjustment Screw): Size, .053 to .057 inch diameter.

Set Idle Adjustment Screw: ¼ to 1¼ turns open. For richer mixture, turn screw out. With gear shift lever in neutral position idle engine between 475 to 500 R.P.M.

Main Nozzle: Nozzle is installed permanently, DO NOT REMOVE.

Main Vent Tube: Side holes, 4—0354 inch diameter. Bleed in top of tube, 0196 inch diameter.

Step-Up Rod: (Vacuum operated) .022 inch diameter. Length (end of wire to inside of angle), 1-11/32 inch.

Metering Jet: Calibrated to flow 338 to 342 cc per minute (Do not gauge for size, if in doubt, replace with new part.)

Accelerating Pump: Pump discharge jets (2), size 0315 inch drill
Intake ball check seat, size .115 to .120 inch diameter
Discharge ball check seat, size .115 to .120 inch diameter.

Pump Adjustment: See adjustments.

Choke: Carter Climatic ® Control, set at index. Butterfly type, offset valve. Choke heat suction hole, in body, size No. 38 (.1015 inch) drill. NOTE: Thermostatic coil should not be removed from delayer mounting post. If defective replace with complete thermostatic coil and housing assembly.

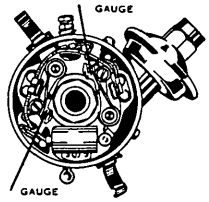
Vacuum Spark Port: Horizontal, round end type. (Early prod.) .020 by 110 inch; (late prod.) .030 by .110 inch. Top of port to be ,early prod.) .017 to .023 inch; (late prod.) .021 to .031 inch above upper edge of valve with valve closed tight.

Motor Tune-Up—Be Accurate!

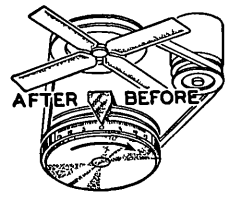
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



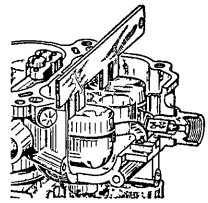
Spark Plug Gap .035"



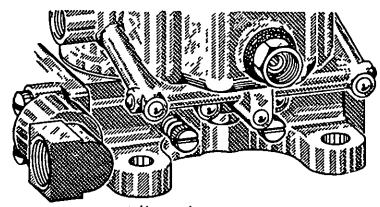
Breaker Point Setting .017"



Ignition Timing Breaker Points to Open: 4° B. T. D. C.



Float Setting See Adjustments



Idle Adjustment Screw Setting ¼ to 1¼ Turns Open

NOTE: These cars equipped with Hydraulic Valve Lifters. NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: This adjustment must be made with the bowl cover gasket and float pin retainer removed. Hold the lip on float arm against the seated intake needle, making sure the float pin is at the bottom of its guide slots. The distance from the top surface of the body casting to the top of each float should be 9/32 inch (gauge T109-239) for floats with flat top or 7/32 inch (gauge T109-239) for floats with curved top. If one float is lower than the other, equalize by bending the float arm. If both floats require the same correction, adjust by bending lip on float arm. The floats must not rub anywhere against the inner walls of the bowl. If necessary, bend float arms slightly to provide clearance on all sides of floats.

PUMP ADJUSTMENT: Back out throttle adjusting screw and open choke valve so that throttle valves seat in bores of carbureter. Install pump connector rod in outer hole of throttle shaft arm and pump arm pin in top hole of the plunger shaft. The distance from the top of the bowl cover to the top of plunger shaft (not pump arm) should be 57/64 inch. Adjust by bending pump connector rod at lower angle (use Tool T109-213).

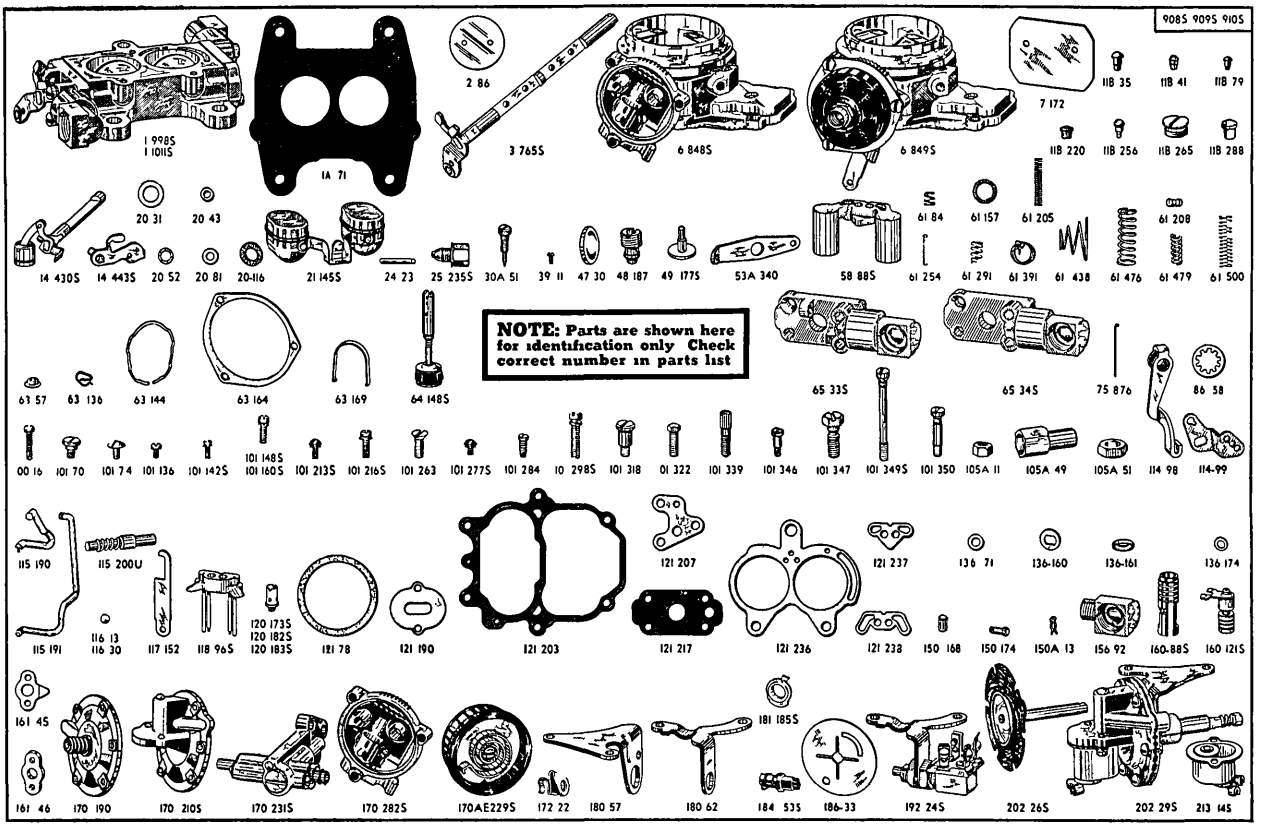
FAST IDLE ADJUSTMENT: Remove thermostatic coil housing assembly, gasket and baffle plate. With throttle adjusting screw backed out, crack throttle valve and hold choke valve in fully closed position. Then close throttle. This will allow fast idle cam to revolve to fast idle position. There should now be .015″-.019″ clearance (use gauge T109-44) between throttle valve and bore of carbureter (side opposite idle port). Adjust by bending the choke connector rod at lower angle (use tool T109-213).

UNLOADER ADJUSTMENT: This adjustment must be made after the fast idle adjustment. Hold throttle valve wide open and close choke valve as far as possible without forcing. There should now be 1/4 inch clearance (use gauge T109-31) between upper edge of choke valve and inner wall of air horn. Adjust by bending arm on choke trip lever (use tool T109-214). When fast idle and unloader adjustments have been made, assemble baffle plate, coil housing gasket and thermostatic coil housing assembly on air horn. Set Climatic® Control at "Index", making sure that hook on coil has picked up coil shaft lever.

DASH POT (SLOW CLOSING THROTTLE) ADJUSTMENT: (908S ONLY) The purpose of the dashpot is to prevent the car from stalling when the throttle is released rapidly. Maximum dashpot action is obtained by adjustment of diaphragm adjusting screw so that the dashpot plunger shaft can be moved inward approximately 1/16 inch after engine and throttle have returned to normal idle. This adjustment should be made with the carbureter on the car, with engine running and transmission in driving range.

OVERDRIVE KICKDOWN SWITCH ADJUSTMENT: (910S ONLY) (1) With throttle valves seated in bores of carbureter and kickdown switch lever held against stop on switch bracket, bend lip on throttle lever until it just contacts kickdown lever. (2) With throttle valves in wide open position adjust hex nuts on switch to have 1/64 inch to 3/64 inch clearance between kickdown lever and switch stem guide.

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DeSoto "V-8"—1952-1953—Carbureters Nos. 908S-909S-910S

WHEN SERVICING, USE GASKET ASSORTMENT No. 225, REPAIR PACKAGE No. 1728A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-998S	Body flange assembly (908S)	
1-1011S	Body flange assembly (909S 910S)	
1A-71	FLANGE GASKET	
2-86	Throttle valve	(2)
3-765S	Throttle shaft and lever assembly	
6-848S	Air horn assembly	
6-849S	Air horn and Climatic ® control assembly	
7-172	Choke valve	
11B-35	Rivet plug (early prod—(3) (late prod	(1)
11B-38	Air horn screw plug (909S)	
11B-41	Rivet plug	(2)
11B-79	Rivet plug 908S—(6) 909S 910S—(8)	
11B-220	Idle port rivet plug—late prod	(2)
11B-223	Pump passage rivet plug (Sup by 11B 288)	(2)
11B-256	Magneto coil rivet plug (908S)	
11B-265	Kickdown switch screw plug (908S)	
11B-288	PUMP PASSAGE RIVET PLUG	
14-430S	Choke piston lever link and shaft assembly	
14-443S	Choke trip lever and pin assembly	
20-31	Needle seat gasket	
20-43	PISTON HOUSING GASKET	
20-52	STEP UP PISTON GASKET	

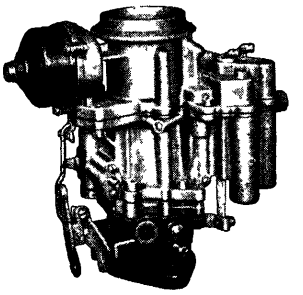
Part No	PART NAME	
20-81	KICKDOWN SWITCH PLUNGER GASKET (908S)	
20-116	Main metering jet gasket	(2)
21-145S	Float and lever assembly	
24-23	Float lever pin	
25-235S	NEEDLE AND SEAT ASSEMBLY	
30A-51	Idle adjustment screw	(2)
39-11	CHOKE AND THROTTLE VALVE ATTACHING SCREW	(6)
47-30	WELSH PLUG	
48-187	PUMP JET	(2)
49-177S	Electro magnet plunger assembly (908S)	
53A-340	Pump arm	
58-88S	Venturi cluster and nozzle assembly	
61-84	Idle adjustment screw spring	(2)
61-134	Step-up piston spring (Sup by 61-205)	
61-157	Pump plunger spring	
61-205	STEP UP PISTON SPRING	
61 208	Diaphragm adjusting screw spring (908S)	
61-251	Switch piston spring (908S) (Sup by 61-500)	
61 254	Electro magnet plunger spring (908S)	
61-291	Throttle adjusting screw spring	
61-391	Fast idle cam spring	
61-438	Dashpot diaphragm return spring (908S)	

Part No.	PART NAME	
61-476	PUMP SPRING	
61-479	Push rod sleeve spring (908S)	
61-500	Switch piston spring (908S)	
63-57	INTAKE CHECK BALL RETAINER	
63-136	Kickdown switch terminal retainer clip (908S)	
63-144	Delayer plate retainer ring	
63-164	Thermostatic coil housing retainer (Use with 170AE229S)	
63-169	FLOAT LEVER PIN RETAINER	
63-190	Thermostatic coil housing retainer (Use with 170AE320S)	
64-148S	PUMP PLUNGER AND ROD ASSEMBLY	
65-33S	End plate and elbow assembly (throttle side)	
65-34S	End plate and elbow assembly (choke side)	
75 876	STEP UP ROD	(2)
86-58	Dashpot bracket nut lock washer (908S)	
100-16	Throttle adjusting screw (909S 910S)	
101-70	Pump arm screw	
101-74	Throttle shaft arm attaching screw	
101-136	Thermostatic coil housing attaching screw (Use with 170AE229S)	(3)
101-142S	Electro magnet housing attaching screw and washer assembly (908S)	(2)
101-148S	Air horn attaching screw and washer assembly 909S—(4), 910S—(3)	
101-160S	End plate attaching screw and washer assembly (910S)	
101-213S	Diaphragm cover attaching screw and washer assembly	(6)
101-216S	Kickdown switch bowl cover and end plate attaching screw and washer assembly 908S—(9), 909S 910S—(2)	
101-263	End plate attaching screw	(2)
101-277S	Kickdown switch plate attaching screw and washer assembly (908S)	(4)
101-284	Piston housing attaching screw	(2)
101-298S	End plate attaching screw and washer assembly	(4)
101-318	Kickdown switch lever screw (908S 910S)	
101-322	Diaphragm shaft adjusting screw (908S)	
101-339	Throttle adjusting screw (908S)	
101-346	Step up piston plate guide screw	
101-347	Step up piston passage screw	
101-349S	Body attaching screw and washer assembly	(2)
101-350	Venturi cluster screw	(2)
101-361	Thermostatic coil housing attaching screw (Use with 170AE320S)	(2)
105A-11	Flange stud nut	(4)
105A-49	Diaphragm to bracket attaching nut (908S)	
105A-51	Kickdown switch bracket attaching nut (910S)	(2)
114-98	Kickdown switch lever (908S 910S)	
114-99	THROTTLE SHAFT ARM	
115-190	Choke connector rod	
115-191	THROTTLE CONNECTOR ROD	
115-200U	Push rod assembly and spring unit (Consists of 1—115 180S and 1—61 479) (908S)	

Part No.	PART NAME	
116-13	DASHPOT CHECK BALL (908S)	
116-30	PUMP INTAKE AND DISCHARGE CHECK BALL	(3)
117-152	Fast idle link	
118-96S	VENTURI COVER AND TUBE ASSEMBLY	
120-173S	MAIN METERING JET ASSEMBLY	(2)
120-182S	Main metering jet assembly—1 size lean	(2)
120-183S	Main metering jet assembly—2 sizes lean	(2)
121-78	COIL HOUSING GASKET	
121-190	ELECTRO MAGNET HOUSING GASKET (908S)	
121-203	BODY GASKET	
121-207	KICKDOWN SWITCH HOUSING GASKET (908S)	
121-217	END PLATE GASKET	(2)
121 236	BODY FLANGE GASKET	
121-237	VENTURI HOUSING GASKET	
121-238	VENTURI COVER GASKET	
136-71	Kickdown switch push rod washer (908S)	
136-160	Throttle shaft washer	
136-161	Pump spring retainer	
136-174	Throttle adjusting screw washer	
150-168	Dashpot air bleed pin (908S)	
150-174	PUMP ARM PIN	
150A-13	PIN SPRING	(3)
156-92	Elbow	(2)
160-88S	Piston and contact plate assembly (908S)	
160 121S	STEP UP PISTON AND PLATE ASSEMBLY	
161-45	Terminal end plate (908S)	
161-46	Push rod end plate (908S)	
170-190	Diaphragm housing (inner) (908S)	
170-210S	Dashpot diaphragm outer housing assembly (908S)	
170-231S	Kickdown switch assembly (complete) (908S)	
170 282S	Piston housing and plug assembly	
170AE229S	Thermostatic coil and housing assembly (Sup by 170AE320SU)	
170AE320S	Thermostatic coil and housing assembly	
170AE320SU	Unitized package (consists of 1—170AE320S 1—63 190 3—101 361 and 1—121-78)	
172-22	Choke connector rod retainer	
180-57	Dashpot mounting bracket (908S)	
180-62	Kickdown switch bracket (910S)	
181-185S	Fast idle cam and spring assembly	
184-53S	Terminal block and retainer clip assembly (908S)	
186-33	Choke baffle plate	
192-24S	Kickdown switch and bracket assembly (complete) (910S) (Sup by 192 34U)	
192-34U	Unitized package (910S)	
202-26S	Diaphragm and shaft assembly (908S)	
202-29S	Dashpot unit (complete) (908S)	
213-14S	Electro magnet and housing assembly (908S)	

NOTE: Figures in parentheses indicate number of pieces used in ne carbureter Where no figure is shown only one is used

This Carbureter also used on Chrysler "C-51" and "C-60" Cars equipped with Fluid Drive and M6 Transmission



DESOTO 6
MODELS S-15, S-18
(Fluid Drive or Torque Converter and M6 Transmission)
1951-1953

BB DOWN-DRAFT **CARBURETER No. E9A1**

CARBURETER SPECIFICATIONS

For DeSoto 6 Cylinder Engine: 3-7/16 Inch Bore, 4½ Inch Stroke

Dimensions: Flange size, 1½ inch S. A. E. Throttle bore, 1-11/16 inch (42.86 mm). Main venturi, 1-11/32 inch (34.13 mm) I. D.

Float Setting: Top of float 5/64 inch (1.98 mm) below top surface of carbureter body casting. Plus or minus 1/64 inch (.397 mm). (Gauge T109-50.)

Vents: Outside none. Inside balance vent tube in air horn, above choke valve.

Gasoline Intake Needle: No 44 (2.18 mm) drill in needle seat.

Idle Orifice Tube: Jet size, .0295 inch (.75 mm) drill. Idle passage air bleed, in air horn, size No 56 (1.18 mm) drill diameter. Restriction in body .0492 inch (1.25 mm) diameter

Idle Ports: Upper port Slot type: length .149 inch (3.78 mm), width .030 inch (.76 mm). Top of port located .118 to .122 inch (3.00 to 3.10 mm) above top edge of valve. Lower port size .053 to .057 inch (1.35 to 1.45 mm) drill. (For idle adjustment screw.)

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture, turn screw out. With gear shift lever in neutral position, idle engine between 450 to 500 r.p.m.

Main Metering Screw: Calibrated to flow 315 to 319 cc per minute. (Do not gauge for size. If in doubt replace with new part.)

Main Vent: Through diffuser (air bleed inside bowl). Size 0315 inch (.80 mm) drill.

Main Vent Tube: Side Holes, 4—.0354 inch diameter.

Step-Up Jet: Power orifice .0374 inch (.95 mm) drill.

Accelerating Pump: Type—delayed action, seasonal adjustment. Stroke—Summer setting (inner hole, short stroke). Intermediate setting (center hole). Winter setting (outer hole, long stroke). Pump intake passage, ball check seat, size 107 to 112 inch (2.72 to 2.845 mm) diameter in body. Pump discharge passage. Restriction (under ball check) size .062 to .065 inch (1.57 to 1.65 mm) diameter in body. Pump (discharge) jet size, 0413 inch (1.05 mm) drill.

Pump Adjustment: None.

Choke: Carter Climatic® Control Set at Index. Choke heat suction hole, in flange insulator. Size No. 38 drill.

Slow Closing Throttle: Dash pot with discharge (by-pass), size .018 to .020 inch (.457 to 508 mm) drill, through valve cage

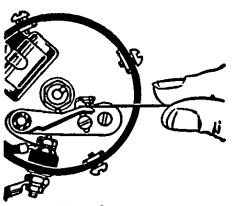
Vacuum Spark Port: Slot (round end) type; size .040 by .110 inch (1.016 by 2.794 mm). Top of port .012 to .018 inch (.305 to .0457 mm) above top edge of valve.

Motor Tune-Up—Be Accurate!

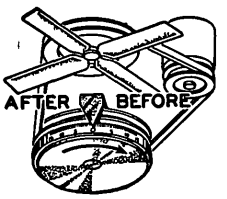
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



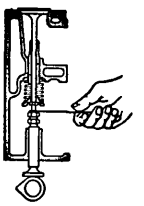
Spark Plug Gap .035"



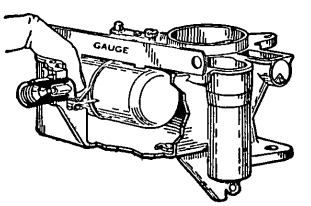
Breaker Point Setting .020"



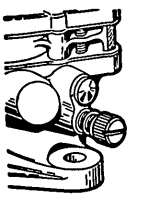
Ignition Timing Breaker Points to Open 2° B. T. D. C.



Valve Setting (Hot) Intake .008" Exhaust .010"



Float Setting 5/64 Inch ± 1/64 Inch (Use Gauge T109-50)



Idle Adjustment Screw Setting ½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

If carbureter loads up after considerable service, check float level. Wear on lip of float lever will raise float level. Before adjusting float, be sure float lever pin is firmly seated. Reset float level by bending lip of float lever away from needle to raise level, or bend lip toward needle to lower float level. Bend vertical lip of float only.

If motor stalls while idling, set throttle lever adjusting screw so motor runs 450-500 r.p.m., with gear shift lever in neutral position. Then set idle adjustment screw to specifications. If these adjustments do not correct the trouble, remove idle orifice tube and plug assembly. Clean tube passages with compressed air.

If acceleration is not satisfactory, remove pump jet and clean with compressed air. However, it is usually advisable to replace the pump jet, as its cost is nominal. All jets must be seated gasoline tight. Poor acceleration may be due to damaged or worn plunger leather in accelerating pump, sediment in pump cylinder or clogged intake ball check at bottom or pump cylinder and discharge ball check in discharge passage. If plunger is removed from cylinder, use care in installing to avoid damage to plunger leather.

Correct air fuel ratio is provided by a "balance tube" in the air horn. The balance tube should be checked each time the carbureter is serviced to see that the passage is open. The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type, size or condition of air cleaner. Should the cleaner become clogged, the capacity will be reduced but the air-fuel mixture ratio will not be changed.

Excessive richness above 50 miles per hour may be caused by a clogged main vent tube. After removal of rivet plug beneath float bowl with tool No. T109-43, main vent tube can be removed and a new tube inserted with tool No. T109-195. Care must be exercised in inserting new tube which must seat tightly. Use new rivet to complete the installation.

Pump Adjustment: No gauge is necessary. Pump lifter arm should be at a right angle to pump lifter shaft. Adjustment can be made by bending pump lifter arm up or down (use tool T109-41).

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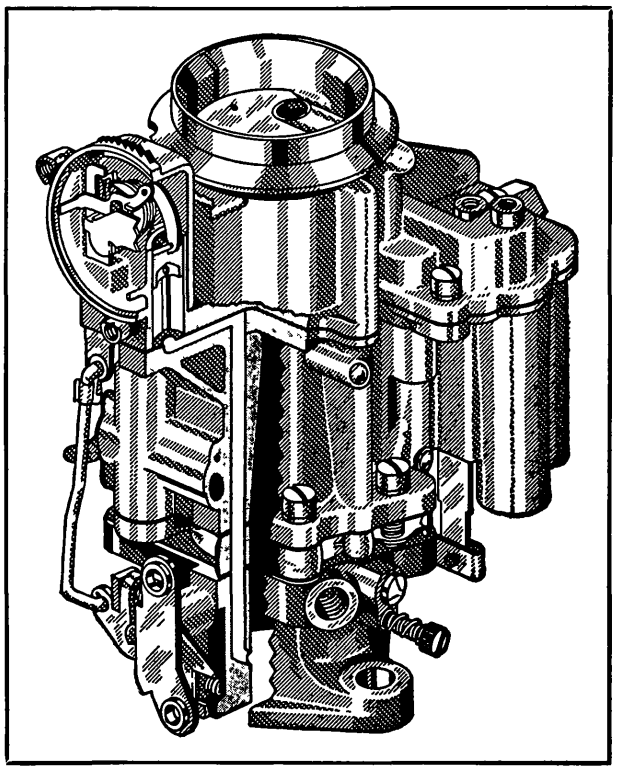


Figure 1

CARTER CLIMATIC® CONTROL CHOKE

The Carter Climatic® Control principle used in this unit is essentially the same as that used in WE type Carter carbureters. The fast idle cam assembly, unloader mechanism, etc., are located in the Climatic® Control housing. In this way all these parts are protected from dirt and other foreign matter (Fig. 1).

However, two important changes have been made (Fig. 2). Hot air is introduced at the **center** of the Climatic® Control housing, is drawn through three passages in the housing, around the delayer plate to the thermostatic coil, and then to the manifold.

A **delayer plate** has been added to control the action of the choke, providing longer choke operation during warm-up and preventing the choke from closing too rapidly after the engine is shut off. It should not be necessary to remove the delayer plate and thermostatic coil assembly from the coil housing when servicing the choke. The thermostatic coil **must not** be removed from the delayer plate.

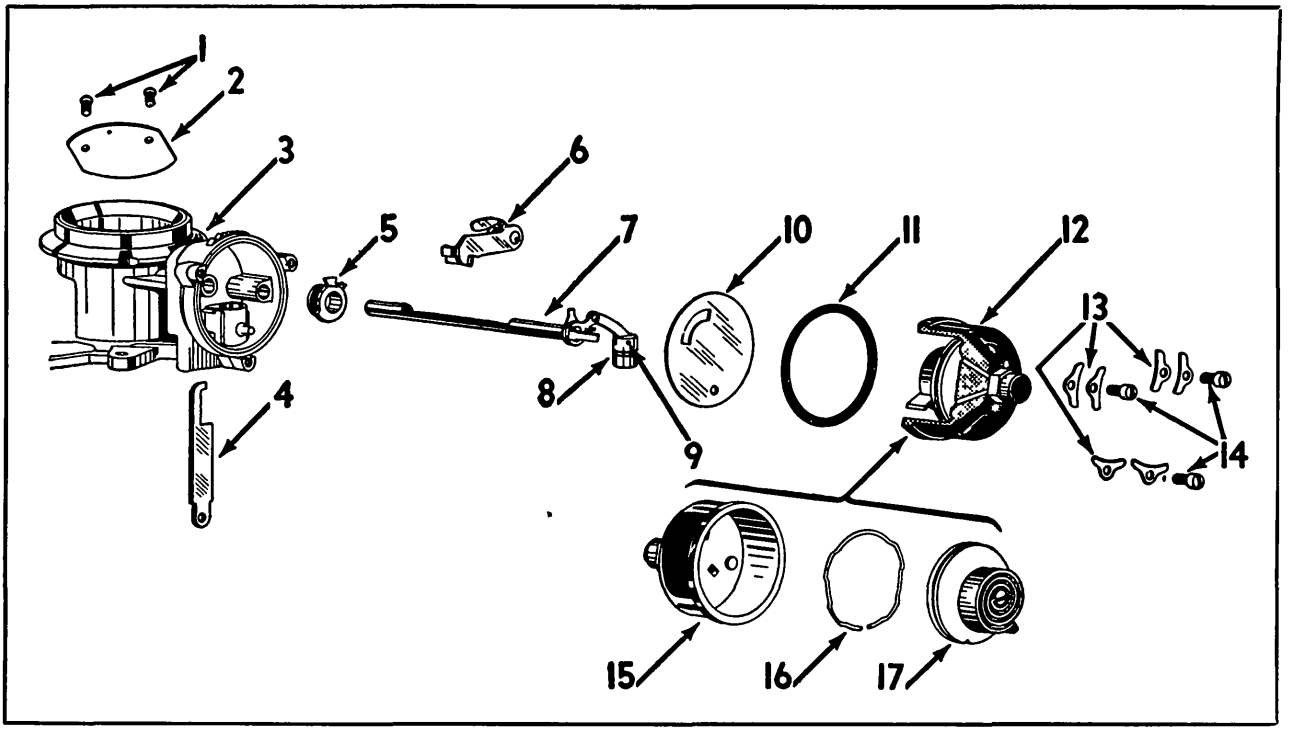


Figure 2

1. Choke Valve Screws
2. Choke Valve
3. Air Horn
4. Fast Idle Link
5. Fast Idle Cam Assembly
6. Choke Trip Lever
7. Choke Piston Lever, Link and Shaft Assy.
8. Choke Piston
9. Choke Piston Pin
10. Choke Baffle Plate
11. Coil Housing Gasket
12. Thermostatic Coil and Housing Assy.
13. Coil Housing Retainers
14. Coil Housing Screws
15. Thermostatic Coil Housing
16. Delayer Plate Retainer Ring
17. Delayer Plate and Thermostatic Coil Assembly

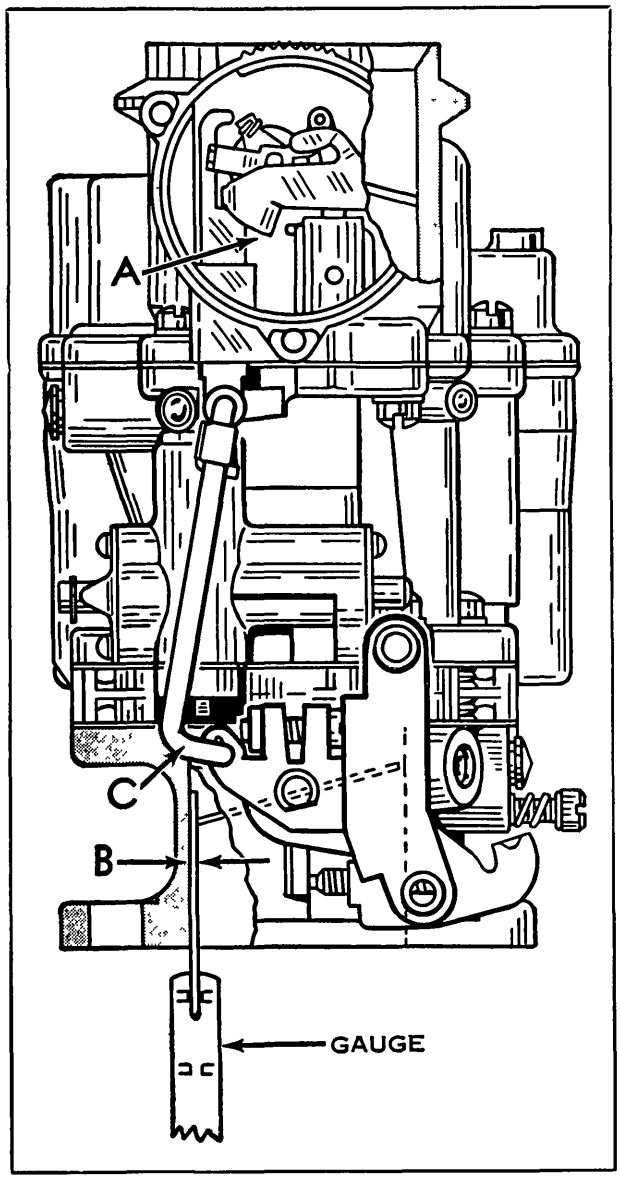


Figure 3
Fast Idle Adjustment

FAST IDLE ADJUSTMENT (Fig. 3):

Remove thermostatic coil housing assembly, gasket and baffle plate. With throttle adjusting screw backed out, crack throttle valve and hold choke valve in fully closed position. Then close throttle. This will allow fast idle cam to revolve to fast idle position ("A"—Fig. 3) There should now be .015"-.019" clearance ("B") (use gauge T109-44) between throttle valve and bore of carbureter, side opposite idle port. Adjust by bending the choke connector rod at lower angle ("C") (use tool T109-41).

UNLOADER ADJUSTMENT (Fig. 4):

This adjustment must be made after the fast idle adjustment Hold throttle valve wide open and close choke valve as far as possible without forcing. There should now be 5/32" clearance ("D"—Fig. 4) (use gauge T109-154) between upper edge of choke valve and inner wall of air horn. Adjust by bending arm on choke trip lever ("E"—Fig 4) (use tool T109-187). When fast idle and unloader adjustments have been made assemble baffle plate, coil housing gasket and thermostatic coil housing assembly on air horn Set Climatic® Control at "Index", making sure that hook on coil has picked up coil shaft lever

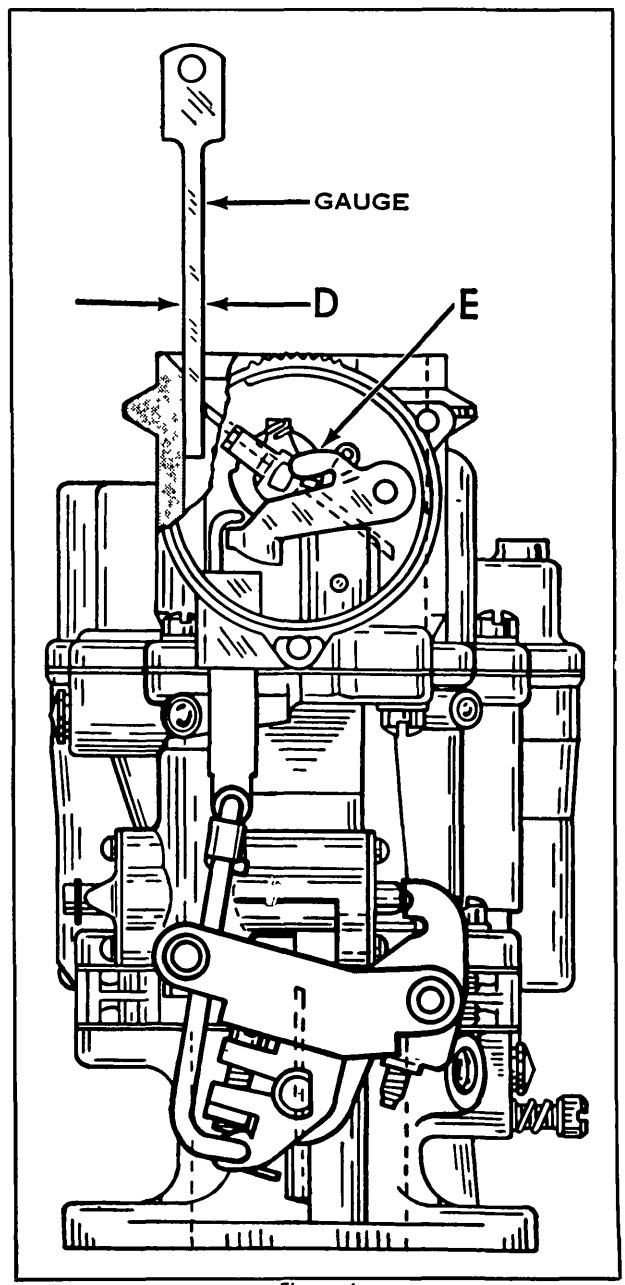
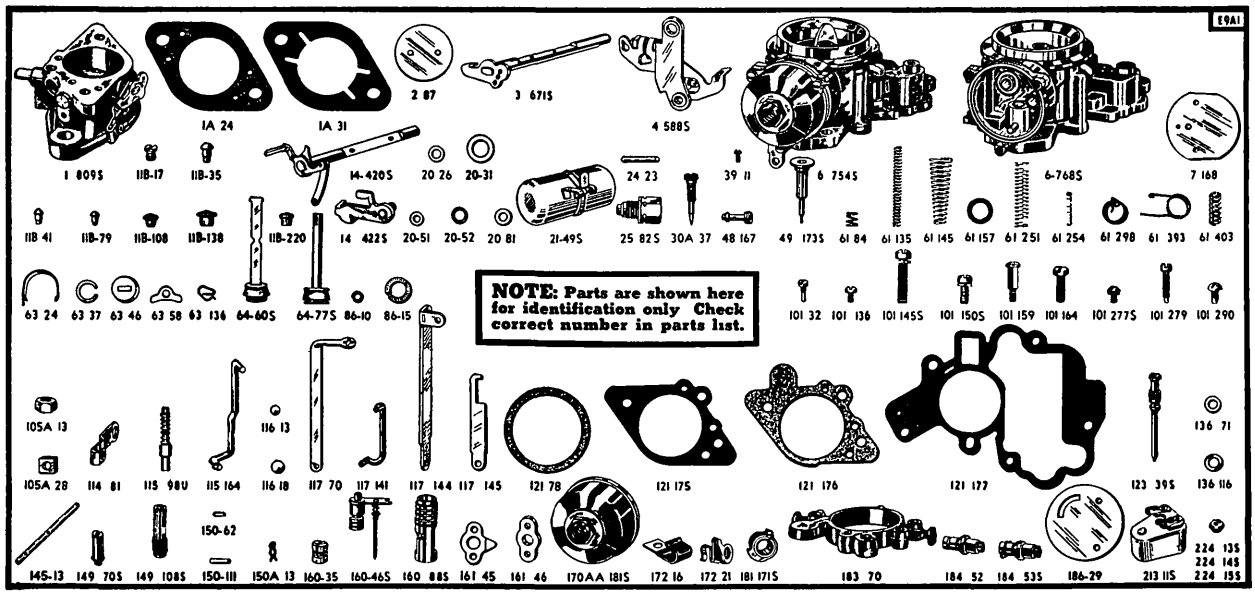


Figure 4
Unloader Adjustment



DeSoto 6—1951-1953—Carbureter No. E9A1

WHEN SERVICING, USE GASKET ASSORTMENT No 213A, REPAIR PACKAGE No. 1579

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

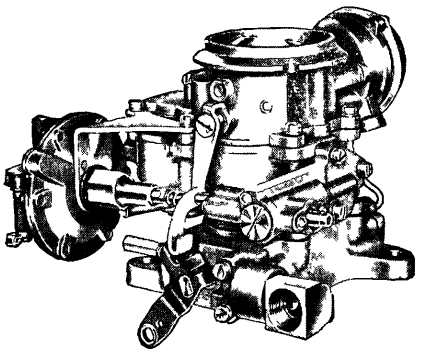
Part No	PART NAME	
1 809S	Body flange assembly	
1A 24	Flange gasket (for use with governor)	
1A 31	FLANGE GASKET (FOR USE WITHOUT GOVERNOR)	
2 87	Throttle valve	
3 671S	Throttle shaft and arm assembly	
4-588S	Throttle lever assembly	
6 754S	Air horn and Climatic® control assembly	
6-768S	Air horn assembly	
7 168	Choke valve	
11B 17	Pump discharge passage plug	
11B 35	Rivet plug	
11B 41	Rivet plug	
11B 79	Rivet plug	(3)
11B 108	IDLE PORT RIVET PLUG	
11B 138	PUMP JET RIVET PLUG	
11B-220	HIGH SPEED PASSAGE RIVET PLUG	
14-420S	Choke piston lever and shaft assembly	
14 422S	Choke trip lever and pin assembly	
20 26	Gasket	
20-31	Needle seat gasket	
20-51	Step-up jet gasket	
20 52	STEP-UP PISTON GASKET	
20 81	SWITCH PLUNGER GASKET	
21 49S	Float and lever assembly	
24 23	Float lever pin	
25 82S	NEEDLE AND SEAT ASSEMBLY	
30A-37	Idle adjustment screw	
39 11	Valve attaching screw	(4)
48 167	PUMP JET	
49 173S	Valve plunger rod and plate assembly	
61 84	Idle adjustment screw spring	
61 135	STEP-UP PISTON SPRING	
61 145	PUMP SPRING	
61 157	Plunger spring	(2)
61 251	Switch piston spring	
61 254	Plunger operating spring	
61 298	Fast idle cam spring	
61 393	Dash-pot pick-up arm spring	
61-403	Push rod sleeve spring	
63 24	FLOAT LEVER PIN RETAINER	
63 37	PUMP CYLINDER BALL RETAINER	
63 46	Spring retainer	
63 58	Coil housing retainer (Sup by 63-164)	
63-136	Connector retainer clip	
63 144	Delayer plate retainer	
63 164	Coil housing retainer (use with 170AA181S)	(3)
63-190	Coil housing retainer (use with 170AA312S)	
64-60S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49-120)	
64-77S	Dash-pot plunger and rod assembly	
86-10	Throttle shaft arm lock washer	
86-15	Flange stud lock washer	(2)
101 11	Coil housing attaching screw (use with 170AA181S)	(3)
101 32	Throttle shaft arm screw	
101 136	Coil housing attaching screw (Sup by 101-11)	(3)

Part No	PART NAME	
101-145S	Body flange attaching screw and washer assembly	(3)
101-150S	Air horn attaching screw and washer assembly	(5)
101-159	Electro magnet assembly attaching screw	
101-164	Throttle lever clamp screw	
101-277S	Plate attaching screw and washer assembly	(4)
101-279	Throttle adjusting screw	
101 290	Terminal attaching screw	
101-361	Coil housing attaching screw (use with 170AA312S)	(3)
105A-13	Flange nut	(2)
105A-28	Throttle lever clamp nut	
114-81	Throttle shaft arm	
115 98U	Push rod assembly and spring unit (Consists of 61-403 and 115-79S)	
115-164	Choke connector rod	
116-13	PUMP CHECK BALL	
116-18	PUMP DISCHARGE CHECK BALL	
117-70	PUMP LIFTER	
117-141	PUMP LINK	
117-144	Dash-pot lifter	
117-145	Fast idle link	
121-78	THERMOSTATIC COIL HOUSING GASKET	
121-175	BODY FLANGE GASKET	
121-176	CARBURETER BODY TO INSULATOR GASKET	
121-177	BODY GASKET	
123-39S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
136-71	Plunger washer	
136-116	Terminal attaching screw washer	
145-13	MAIN VENT TUBE	
149-70S	STEP-UP JET ASSEMBLY	
149-108S	Dash-pot valve cage assembly	
150-62	Choke piston pin	
150-111	Dash-pot pin	
150A-13	PIN SPRING	
160 35	Choke piston	
160-46S	STEP-UP PISTON, PLATE AND ROD ASSEMBLY	
160-88S	Kick-down switch piston assembly	
161-45	Switch terminal end plate	
161 46	Switch push rod end plate	
170AA-181S	Thermostatic coil and housing assembly (Sup by 170AA312SU)	
170AA312S	Thermostatic coil and housing assembly	
170AA312SU	Unitized package (consists of 1—170AA312S, 1—63-190, 1—101-361 and 1—121-78)	
172-16	Cable clip	
172-21	Connector rod retainer	
181-171S	Fast idle cam assembly	
183-70	Insulator	
184-52	Terminal block (Sup by 184-53S)	
184-53S	Terminal block and retainer clip assembly	
186 29	Baffle plate	
195-47U	Unitized package (for kick-down switch)	
213 11S	Electro magnet and housing assembly	
224-13S	MAIN METERING JET ASSEMBLY—STANDARD	
224-14S	Main metering jet assembly—1 size lean	
224-15S	Main metering jet assembly—2 sizes lean	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

CARBURETER
TRADE MARK REG U S PAT FF.
MARCA REGISTRADA

901S Fluid Drive or Torque Converter and M6 Transmission
905S Standard Transmission
906S Standard Transmission With Overdrive



DE SOTO FIREDOME "V-8" MODEL S-17 1952

908S can be used in place of 901S
909S can be used in place of 905S
910S can be used in place of 906S

BBD Dual Down-Draft Climatic® Control **Carbureters Nos. 901S-905S-906S**

CARBURETER SPECIFICATIONS

For DeSoto 8 Cylinder Engine 3⅝ Inch Bore 3-11/32 Inch Stroke

Dimensions Flange size 1¼ inch dual 4 bolt (water jacket) type
Throttle bore 1 7/16 inch I D
Primary venturi ⅜ inch I D
Main venturi 1 3/16 inch I D

Float Level See adjustments

Vent Inside balance vent tube to bowl in air horn above choke valve
Kickdown switch vent tube (901S) in air horn above choke valve

Gasoline Intake Size No 38 (.1015 inch) drill hole in needle seat

Idle Tube Jet size .0295 inch drill
Idle bleed (In venturi cluster screw) size .059 inch drill
Idle restriction (In venturi cluster screw) size .0472 inch drill

Idle Port Upper slot type length .149 inch width .030 inch

Idle Port Opening .101 to .105 inch above upper edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw) Size .053 to .057 inch diameter

Set Idle Adjustment Screw ¼ to 1¼ turns open For richer mixture turn screw out With gear shift lever in neutral position idle engine between 475 to 500 R P M

Main Nozzle Nozzle is installed permanently DO NOT REMOVE

Main Vent Tube Side holes 4—.0354 inch diameter Bleed in top of tube .0196 inch diameter

Step Up Rod (Vacuum operated) .022 inch diameter Length (end of wire to inside of angle) 1 1/16 inch

Metering Jet Calibrated to flow 338 to 342 cc per minute (Do not gauge for size if in doubt replace with new part)

Accelerating Pump Pump discharge jets (twin) size .0315 inch drill
Intake ball check seat size .115 to .120 inch diameter
Discharge ball check seat size .115 to .120 inch diameter

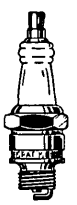
Pump Adjustment See adjustments

Choke Carter Climatic® Control set at index Butterfly type offset valve Choke heat suction hole in body size No 38 (.1015 inch) drill NOTE Thermostatic coil should not be removed from delayer mounting post If defective replace with complete thermostatic coil and housing assembly

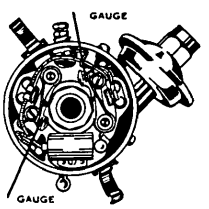
Vacuum Spark Port Horizontal round end slot type .020 by .110 inch Top of port to be .017 to .023 inch above upper edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate! Always Use Feeler Gauges!

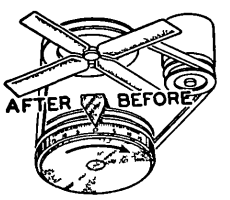
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



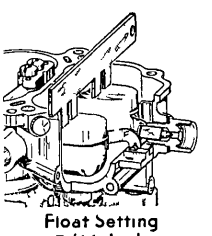
Spark Plug Gap .035"



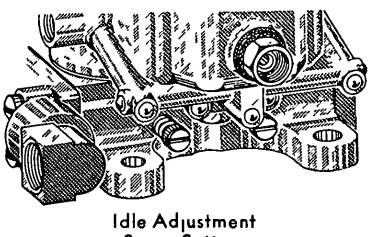
Breaker Point Setting .017"



Ignition Timing Breaker Points to Open 4° B T D C



Float Setting 5/16 Inch Use Gauge T109-230 Plus 1/32 Inch



Idle Adjustment Screw Setting ¼ to 1¼ Turns Open

NOTE These cars equipped with Hydraulic Valve Lifters NO ADJUSTMENT

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CARBURETER ADJUSTMENTS

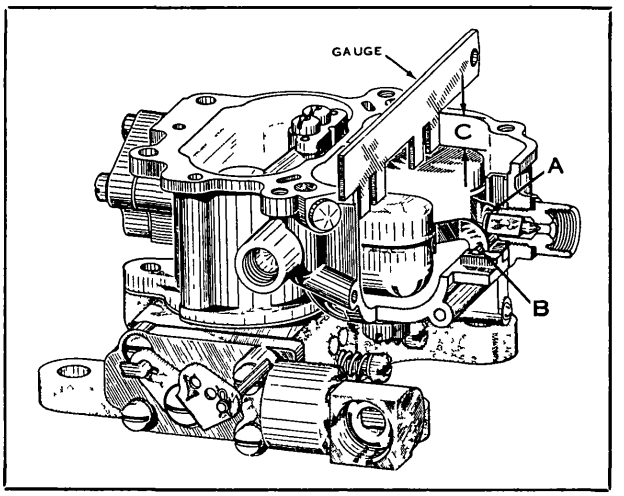


Figure 1
Float Adjustment

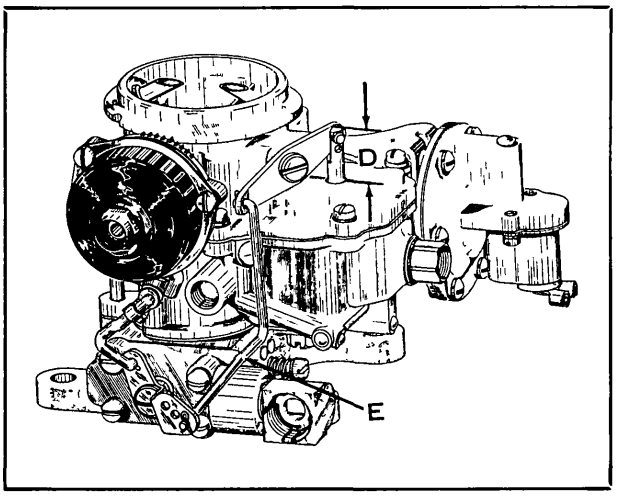


Figure 2
Pump Adjustment

FLOAT ADJUSTMENT (Fig. 1):

This adjustment must be made with the bowl cover gasket and float pin retainer removed Hold the lip (A) on float arm against the seated intake needle, making sure the float pin is at the bottom of its guide slots (B). The distance (C) from the top surface of the body casting to the top of each float should be 5/16 inch (gauge T109-230 plus 1/32 inch). If one float is lower than the other, equalize by bending the float arm. It both floats require the same correction, adjust by bending lip on float arm. The floats must not rub anywhere against the inner walls of the bowl. If necessary, bend float arms slightly to provide clearance on all sides of floats.

PUMP ADJUSTMENT (Fig. 2):

(EARLY PRODUCTION—CODE DATE "G2" AND EARLIER). With throttle valves in wide open position and pump connector rod in center of hole of throttle shaft arm, the distance from the top of the bowl cover to the top of the plunger shaft (not pump arm) should be 33/64 inch. (Use gauge T109-230 held in vertical position.) Adjust by bending connector rod at lower angle (E) (use tool T109-213) (LATE PRODUCTION—CODE DATE "H2" AND LATER USING 64-148S PLUNGER AND ROD ASSEMBLY. IDENTIFY BY 2 HOLES THROUGH PLUNGER SHAFT.) Back out throttle adjusting screw and open choke valve so that throttle valves seat in bores of carbureter Install pump connector rod in outer hole of throttle shaft arm and pump arm pin in top hole of the plunger shaft. The distance (D) from the top of the bowl cover to the top of plunger shaft (not pump arm) should be 57/64 inch. Adjust by bending pump connector rod at lower angle (E) (use tool T109-213)

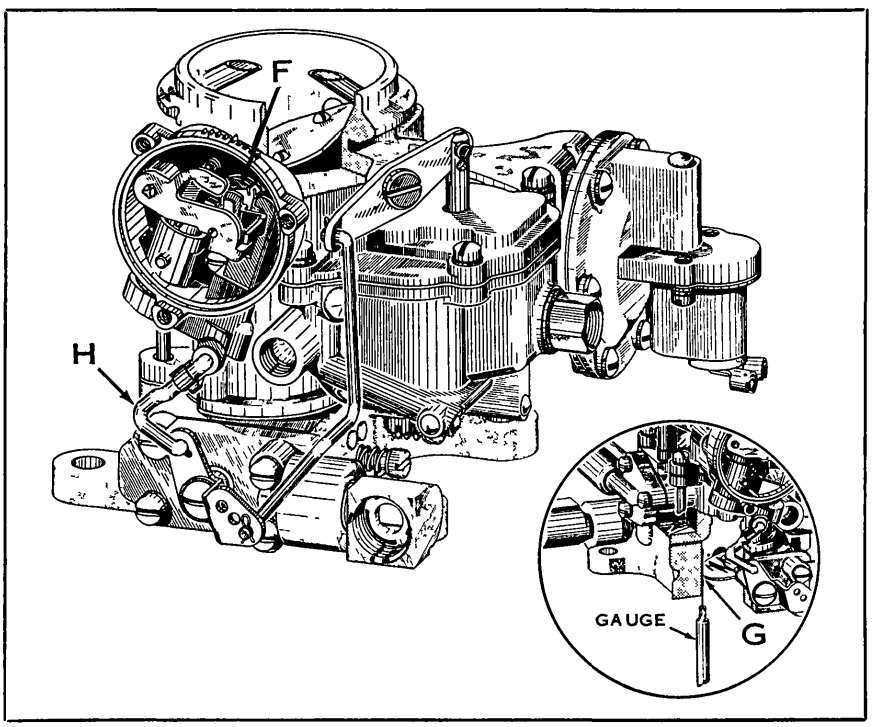


Figure 3
Fast Idle Adjustment

FAST IDLE ADJUSTMENT (Fig. 3):

Remove thermostatic coil housing assembly, gasket and baffle plate. With throttle adjusting screw backed out, crack throttle valve and hold choke valve in fully closed position. Then close throttle. This will allow fast idle cam (F) to revolve to fast idle position. There should now be .015"-.019" clearance (G) (use gauge T109-44) between throttle valve and bore of carbureter (side opposite idle port) Adjust by bending the choke connector rod at lower angle (H) (use tool T109-213).

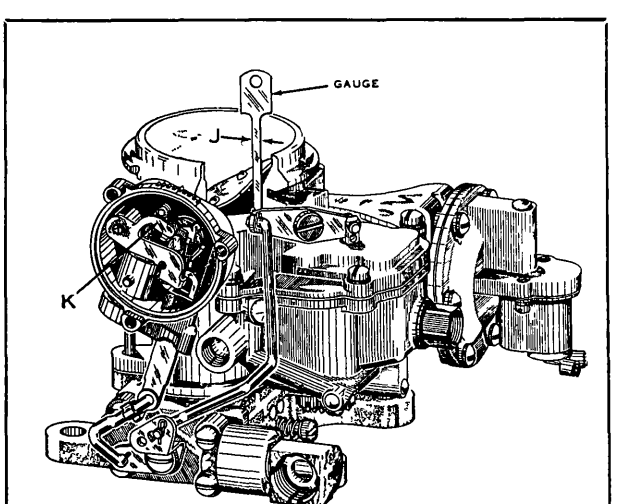


Figure 4
Unloader Adjustment

UNLOADER ADJUSTMENT (Fig. 4):

This adjustment must be made after the fast idle adjustment. Hold throttle valves wide open and close choke valve as far as possible without forcing. There should now be 1/4 inch clearance (J) (use gauge T109-31) between upper edge of choke valve and inner wall of air horn. Adjust by bending arm (K) on choke trip lever (use tool T109-214). When fast idle and unloader adjustments have been made, assemble baffle plate, coil housing gasket and thermostatic coil housing assembly on air horn Set Climatic® Control at 'Index", making sure that hook on coil has picked up coil shaft lever.

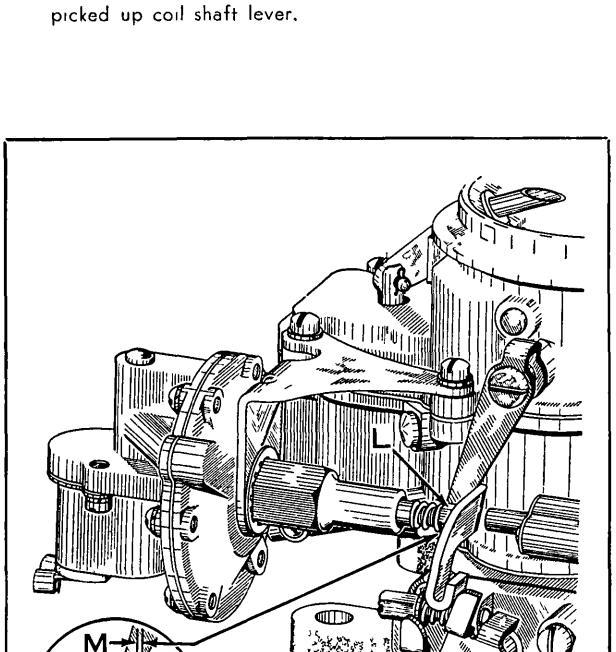


Figure 5
Dashpot Adjustment

DASHPOT (SLOW CLOSING THROTTLE ADJUSTMENT) (901S ONLY) (Fig. 5):

The purpose of the dashpot is to prevent the car from stalling when the throttle is released rapidly. Maximum dashpot action is obtained by adjustment of diaphragm adjusting screw (L) so that the dashpot plunger shaft can be moved inward approximately 1/16 inch (M) after engine and throttle have returned to normal idle. This adjustment should be made with the carbureter on the car, with engine running and transmission in driving range.

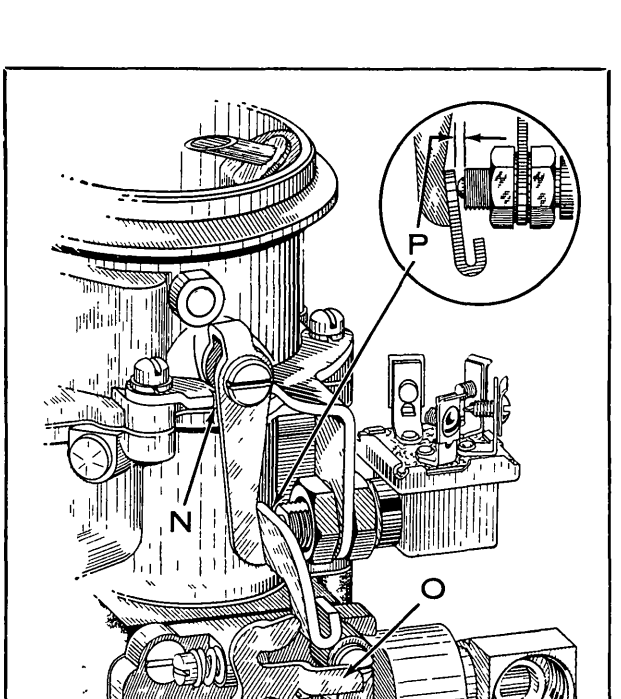
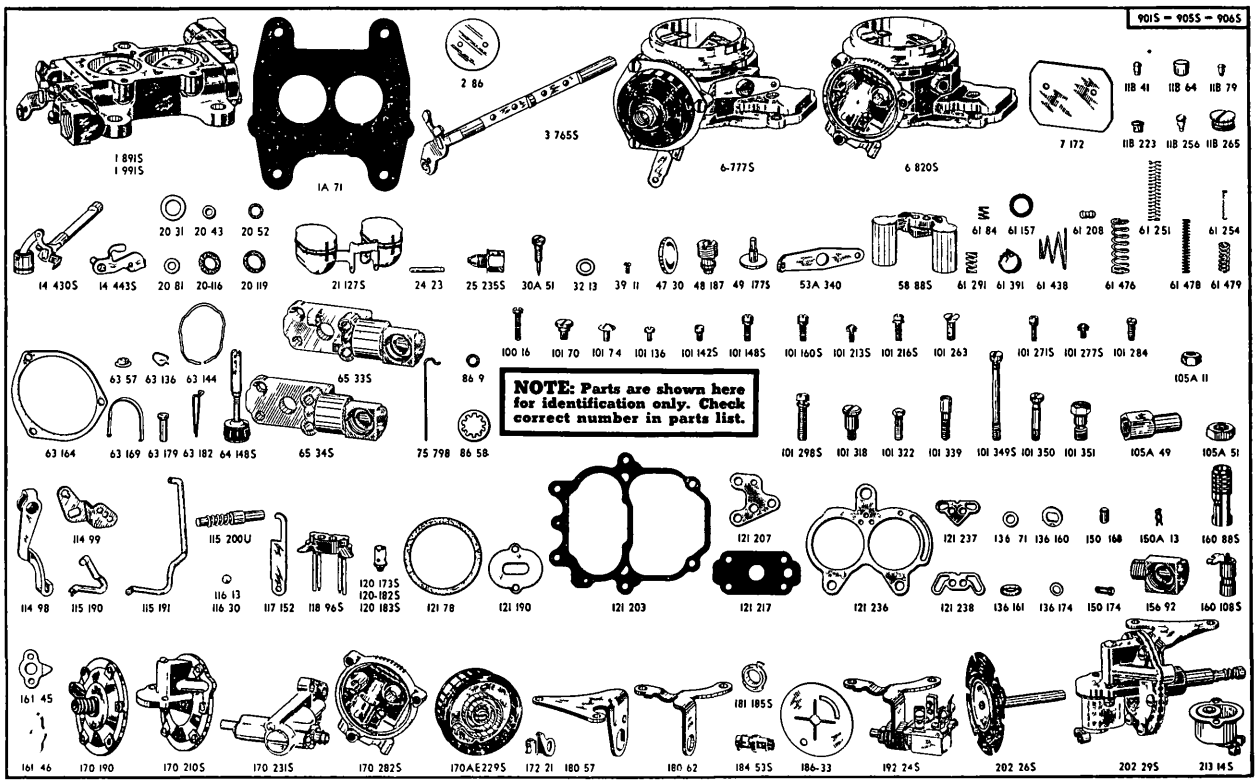


Figure 6
Overdrive Kickdown Switch Adjustment

OVERDRIVE KICKDOWN SWITCH ADJUSTMENT (906S ONLY) (Fig. 6):

(1) With throttle valves seated in bores of carbureter and kickdown switch lever held against stop (N) on switch bracket, bend lip (O) on throttle lever until it just contacts kickdown lever. (2) With throttle valves in wide open position adjust hex nuts on switch to have 1/64 inch to 3/64 inch clearance (P) between kickdown lever and switch stem guide.



DeSoto "V-8"—1952—Carbureters Nos. 901S-905S-906S

WHEN SERVICING, USE GASKET ASSORTMENT No. 225; REPAIR PACKAGE No. 1717

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-891S	Body flange assembly (901S) (Sup by 1-991S on 905S-906S)	
1-991S	Body flange assembly (905S 906S)	
1A-71	FLANGE GASKET	
2-86	Throttle valve	(2)
3-765S	Throttle shaft and lever assembly	
6-777S	Air horn and Climatic ® control assembly	
6-820S	Air horn assembly	
7-172	Choke valve	
11B-38	Air horn screw plug (905S)	
11B-41	Rivet plug	(2)
11B-64	Rivet plug	(3)
11B-79	Rivet plug (901S) (5), (905S-906S) (7)	
11B-223	PUMP PASSAGE RIVET PLUG	(2)
11B-256	Magneto coil rivet plug (901S)	
11B-265	Kickdown switch screw plug (901S)	
14-430S	Choke piston lever link and shaft assembly	
14-443S	Choke trip lever and pin assembly	
20-31	Needle seat gasket	
20-43	PISTON HOUSING GASKET	
20-52	STEP-UP PISTON GASKET	
20-81	KICKDOWN SWITCH PLUNGER GASKET (901S)	
20-116	Main metering jet gasket	(2)
20-119	VENTURI CLUSTER SCREW GASKET (Early Production)	(2)
21-127S	Float and lever assembly	
24-23	Float lever pin	

Part No.	PART NAME	
25-63S	Needle and seat assembly (Sup by 25 235S)	
25-235S	NEEDLE AND SEAT ASSEMBLY	
30A-51	Idle adjustment screw	(2)
32-13	STEP-UP PISTON PASSAGE SCREW GASKET (Early Production)	
39-11	Choke and throttle valve attaching screw	(6)
47-30	WELSH PLUG	
48-187	PUMP JET	(2)
49-177S	Electro magnet plunger assembly (901S)	
53A-340	Pump arm	
58-88S	Venturi cluster and nozzle assembly	
61-84	Idle adjustment screw spring	(2)
61-157	Pump plunger spring	
61-208	Diaphragm adjusting screw spring (901S)	
61-251	Switch piston spring (901S) (Sup by 61-500)	
61-254	Armature plate spring (901S)	
61-291	Throttle adjusting screw spring	
61-391	Fast idle cam spring	
61-438	Dash pot diaphragm return spring (901S)	
61-476	PUMP SPRING	
61-478	STEP UP PISTON SPRING	
61-479	Push rod sleeve spring (901S)	
61-500	Switch piston spring (901S)	
63-57	*Intake check ball retainer	
63-136	Kickdown switch terminal retainer clip (901S)	
63-144	Delayer plate retainer ring	
63-164	Thermostatic coil housing retainer (Use with 170AE229S)	
63-169	FLOAT LEVER PIN RETAINER	

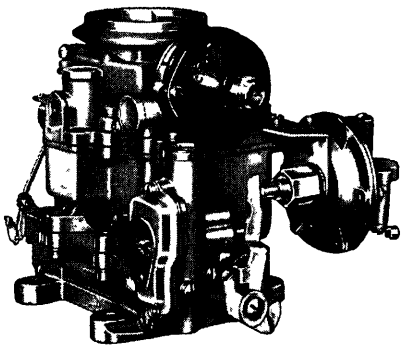
Part No	PART NAME	
63-179	Pump discharge ball check retainer (Discontinued)	(2)
63-182	*Piston retainer	
63-190	Thermostatic coil housing retainer (Use with 170AE320S)	
64-140S	Pump plunger and rod assembly (Sup by 64 149U)	
64-148S	*Pump plunger and rod assembly	
64-149U	**UNITIZED PACKAGE (Consists of (1) 63 57 (1) 63 182 (1) 64 148S (3) 116 30 (1) 121 203)	
65-33S	End plate and elbow assembly (throttle side)	
65-34S	End plate and elbow assembly (choke side)	
75-798	STEP UP ROD	(2)
86-9	Body attaching screw lock washer	(2)
86-58	Dash pot bracket nut lock washer (901S)	
100-16	Throttle adjusting screw (905S 906S)	
101-70	Pump arm screw	
101 74	Throttle shaft arm attaching screw	
101-136	Thermostatic coil housing attaching screw (Use with 170AE229S)	(3)
101-142S	Electro magnet housing attaching screw assembly (901S)	(2)
101-148S	Air horn attaching screw and washer assembly (905S) (4) (906S) (3)	
101-160S	End plate attaching screw and washer assembly (906S) (Sup by 101 216S on 901S 905S)	
101-213S	Diaphragm cover attaching screw assembly (901S)	(6)
101-216S	Air horn end plate dash pot bracket and kickdown switch housing attaching screw and washer assembly (901S) (9) (905S 906S) (2)	
101-263	End plate screw	(2)
101-271S	Choke housing attaching screw and washer assembly (Early Production)	(2)
101-277S	Kickdown switch plate attaching screw and washer assembly (901S)	(4)
101-284	Piston housing attaching screw	(2)
101-298S	End plate attaching screw and washer assembly	(4)
101-312	Step up piston passage screw (Sup by 101 351)	
101-313	Venturi cluster screw (Sup by 101 350)	(2)
101 314	Body attaching screw (Sup by 101 349S)	(2)
101-318	Kickdown switch lever screw (901S 906S)	
101-322	Diaphragm adjusting screw (901S)	
101-339	Throttle adjusting screw (901S)	
101-349S	Body attaching screw and washer assembly	(2)
101-350	Venturi cluster screw	(2)
101-351	Step up piston passage screw	
101-361	Thermostatic coil housing attaching screw (Use with 170AE320S)	(2)
105A-11	Flange stud nut	(4)
105A-49	Diaphragm to bracket attaching nut (901S)	
105A-51	Kickdown switch bracket attaching nut (906S)	(2)
114-98	Kickdown switch lever (901S 906S)	
114-99	THROTTLE SHAFT ARM	
115-190	Choke connector rod	
115-191	THROTTLE CONNECTOR ROD	
115-200U	Push rod assembly and spring unit (901S) (Consists of (1) 115 180S and (1) 61 479)	
116-13	CHECK BALL (901S)	
116-30	*Check ball	(3)
117-152	Fast idle link	
118-96S	VENTURI COVER AND TUBE ASSEMBLY	
120-173S	MAIN METERING JET ASSEMBLY	(2)
120-182S	Main metering jet assembly—1 size lean	(2)
120-183S	Main metering jet assembly—2 sizes lean	(2)
121-78	COIL HOUSING GASKET	
121-190	ELECTRO MAGNET HOUSING GASKET (901S)	
121-203	*Body gasket	
121-205	Venturi housing gasket (Sup by 121 237)	
121-206	Body flange gasket (Sup by 121 236)	
121-207	KICKDOWN SWITCH HOUSING GASKET (901S)	
121-217	END PLATE GASKET	(2)
121-219	Venturi cover gasket (Sup by 121 238)	
121-236	BODY FLANGE GASKET	
121-237	VENTURI HOUSING GASKET	
121-238	VENTURI COVER GASKET	
121-239U	Unitized package (Consists of (1) 121 236 (1) 121 237 (1) 121 238 (1) 101 351 (1) 101 350 (1) 107 44)	
136-71	Kickdown switch push rod washer (901S)	
136-160	Throttle shaft washer	
136-161	Pump spring retainer	
136-174	Throttle adjusting screw washer	
150-168	Dash pot air bleed pin (901S)	
150-174	PUMP ARM PIN	
150A-13	PIN SPRING	(3)
156-92	Elbow	(2)
160-88S	Piston contact plate assembly (901S)	
160-108S	STEP UP PISTON AND PLATE ASSEMBLY	
161-45	Terminal end plate (901S)	
161-46	Push rod end plate (901S)	
170-190	Diaphragm housing (inner) (901S)	
170-210S	Dash pot diaphragm outer housing assembly (901S)	
170-231S	Kickdown switch assembly (complete) (901S)	
170-282S	Piston housing and plug assembly	
170AE229S	Thermostatic coil and housing assembly (Sup by 170AE320SU)	
170AE320S	Thermostatic coil and housing assembly	
170AE320SU	Unitized package (Consists of 1—170AE320S 1—63 190 3—101 361 and 1—121 78)	
172-21	CHOKE CONNECTOR ROD RETAINER	
180-57	Dash pot mounting bracket (901S)	
180 62	Kickdown switch bracket (906S)	
181-185S	Fast idle cam assembly	
184-53S	Terminal block and retainer clip assembly (901S)	
186-33	Choke baffle plate	
192-24S	Kickdown switch and bracket assembly (complete) (906S) (Sup by 192 34U)	
192-34U	Unitized package (906S)	
202-26S	Diaphragm shaft and retainer assembly (901S)	
202-29S	Dashpot unit (complete) (901S)	
213 14S	Electro magnet and housing assembly (901S)	

*Part of 64 149U Unitized Package

**64 149U Unitized Package is to be used for modification of early production carbureters

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

CARTER CARBURETOR CORPORATION, ST. LOUIS, MO., U. S. A.



DE SOTO "V-8"
MODEL S-17
1952

WCD Down-Draft Climatic® Control **Carbureters Nos. 884S-884SA-884SC**

CARBURETER SPECIFICATIONS

For DeSoto 8 Cylinder Engine: 3⅝ Inch Bore, 3-11/32 Inch Stroke

Dimensions: Flange size 1¼ inch (37.75 mm) dual, 4 bolt (water jacket) type.
Throttle bore, 1-7/16 inch (36.51 mm).
Primary venturi, 11/32 inch, (8.73 mm) I. D.
Main venturi, 1⅛ inch, (30.16 mm) I. D.

Float Level: See adjustments.

Vents: Inside; balance vent tube to bowl, in air horn, above choke valve. Outside; none.
Vent to kickdown switch, in air horn, on automatic choke side.

Gasoline Intake: Size No. 38 (.1015 inch) (2.58 mm) drill hole in needle seat.

Low Speed Jet Tube: Jet size .0295 inch (.75 mm) drill. By-pass, size No. 58 (.042 inch) (1.07 mm) drill. Economizer, size .0452 inch (1.15 mm) drill. Idle bleed, size No. 58 (.042 inch) (1.07 mm) drill.

Idle Port: Upper port; length .175 inch (4.45 mm), width .030 inch (.76 mm).

Idle Port Opening: .136 to .140 inch (3.46 to 3.56 mm) above upper edge of valve with valve tightly closed.

Lower Ports (for Idle Adjustment Screws): Size .0615 to .0655 inch (1.56 to 1.66 mm) diameter.

Set Idle Adjustment Screw: ½ to 1 turn open. For richer mixture, turn screw out. With gear shift lever in neutral position idle engine between 475 to 500 R. P. M.

Main Nozzle: Nozzles are installed permanently. **Do Not Remove.**

Metering Rod: Vacumeter type. Economy step .0665 inch (1.69 mm) diameter. Middle step tapers to .061 inch (1.55 mm) diameter. Power step, .057 inch (1.42 mm) diameter.

Metering Rod Jet: .086 inch (2.18 mm) diameter.

Metering Rod Setting: See adjustments.

Accelerating Pump: Pump discharge jets: (twin) size (.0315 inch) drill. Intake ball check seat, size No. 32 (.116 inch) drill. Discharge needle seat, size No. 50 (.070 inch) drill.

Pump Adjustment: See adjustments.

Choke: Carter Climatic® Control—set at index. Butterfly type, offset valve. Choke heat suction hole, in bowl cover, size No. 43 (.089 inch) (2.26 mm) drill.

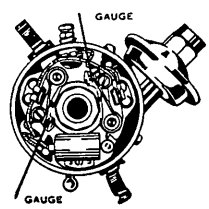
Vacuum Spark Port: .030 x .110 inch (.76 x 2.80 mm). Top of port to be .035 to .041 inch (.89 to 1.04 mm) above top edge of valve.

Motor Tune-Up—Be Accurate!

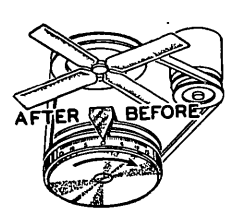
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



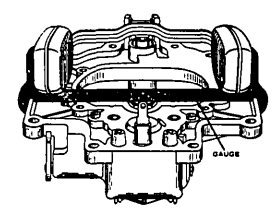
Spark Plug Gap .035"



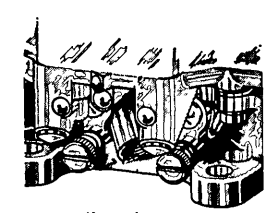
Breaker Point Setting .013"-.018"



Ignition Timing Breaker Points to Open: 4° B. T. D. C.



Float Setting 11/64" (Use Gauge T109-205)



Idle Adjustment Screw Setting ½ to 1 Turn Open

NOTE: These cars equipped with hydraulic valve lifters.—No adjustment.

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT (Fig. 1):

Two separate float adjustments must be made—lateral and vertical

Lateral Adjustment With bowl cover assembly inverted bowl cover gasket removed and lip of float resting on seated needle, place float gauge T109-205 directly under float with notched portions of gauge fitted over edges of casting Sides of floats should barely touch the vertical uprights of float gauge (A) Adjustment should be made by bending arms of floats

Vertical Adjustment: With float gauge in position shown floats should just clear the horizontal portion of gauge (B) Vertical distance between top of float and machined surface of casting should be 11/64 inch (gauge T109 205) Adjustment can be made by bending arms of floats Carefully remove float assembly, install bowl cover gasket and then reinstall float assembly A fast check of the fuel level can be made on the car by removing the inspection hole plug in the side of carbureter body Fuel should just run out of the hole with engine idling

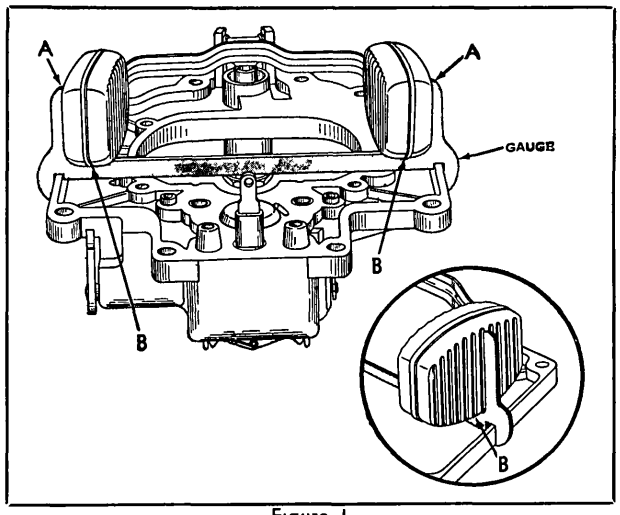


Figure 1
Float Adjustment

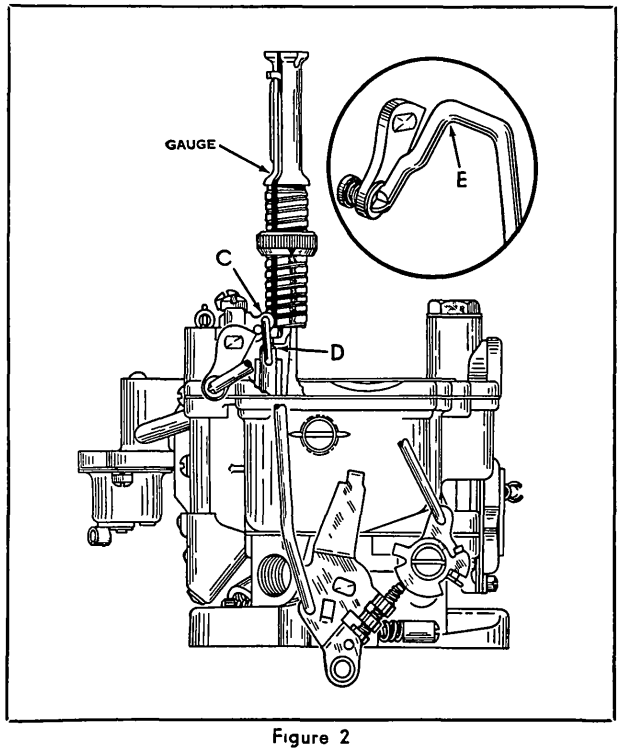


Figure 2
Pump Adjustment

PUMP ADJUSTMENT (Fig 2).

The total distance the plunger head (not shaft) moves from closed to wide open throttle position determines the amount of fuel discharged Correct pump plunger travel is important and should be checked each time the carbureter is disassembled or when leaner than standard metering rods are installed Procedure is as follows

Install pump connector link in outer hole (long stroke) of pump arm (C) Back out throttle lever set screw until throttle valves seat in bores of carbureter Be sure fast idle adjustment screw does not hold throttle open With air horn assembly removed place Universal pump travel gauge T109-117S, inverted on edge of dust cover boss of bowl cover Turn knurled nut of gauge until finger just touches upper end of plunger shaft (D) Number indicated on gauge should be 33 Hold the gauge vertical to insure correct reading Adjust by bending throttle connector rod at upper angle (E) (Use tool T109 213)

Optional Adjustment· With throttle valves seated in bores of carbureter the distance from the top of the plunger shaft to the top of the dust cover boss should be 23/64" Adjust as mentioned above

METERING ROD ADJUSTMENT (Fig. 3):

Metering rod adjustment is important and must be made after completing the pump adjustment No metering rod gauges are necessary Procedure is as follows

Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw (F) With metering rods in place, press down on vacumeter link (G) until metering rods bottom in carbureter body casting (H) Holding rods in downward position and throttle valves seated revolve metering rod arm until finger on arm contacts lip of vacumeter hnk (J). Hold in place and carefully tighten clamp screw (F).

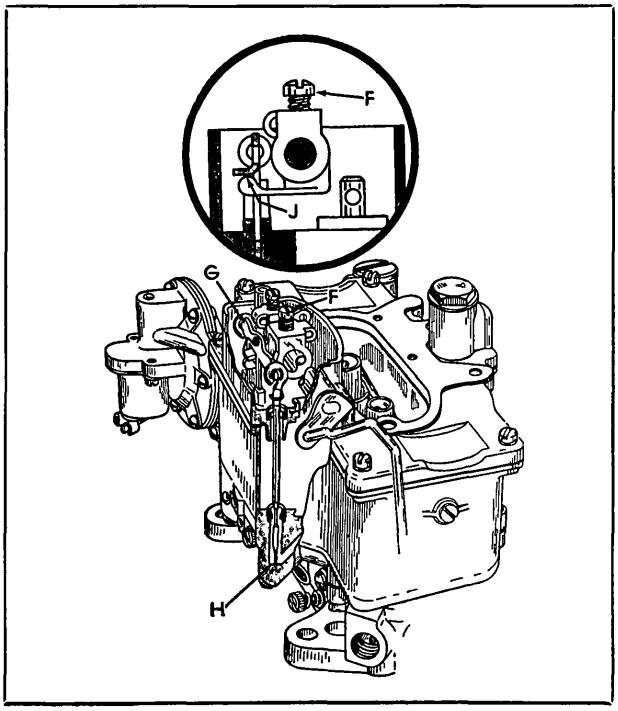


Figure 3
Metering R d Adjustment

FAST IDLE ADJUSTMENT (Fig. 4):

1. Loosen choke lever clamp screw (K) on choke shaft. Insert .040" feeler gauge T109-193 between lip of fast idle cam and boss of flange casting (L). Hold choke valve tightly closed and take slack out of linkage by pressing choke lever toward closed position — hold in place and tighten clamp screw (K).

2. With choke valve tightly closed, tighten fast idle adjusting screw (M) until there is .017"-.021" opening (N) (wire gauge T109-44 may be used) between throttle valve and bore of carbureter (side opposite idle port). Be sure fast idle adjusting screw is on high step of cam (O) while making this adjustment.

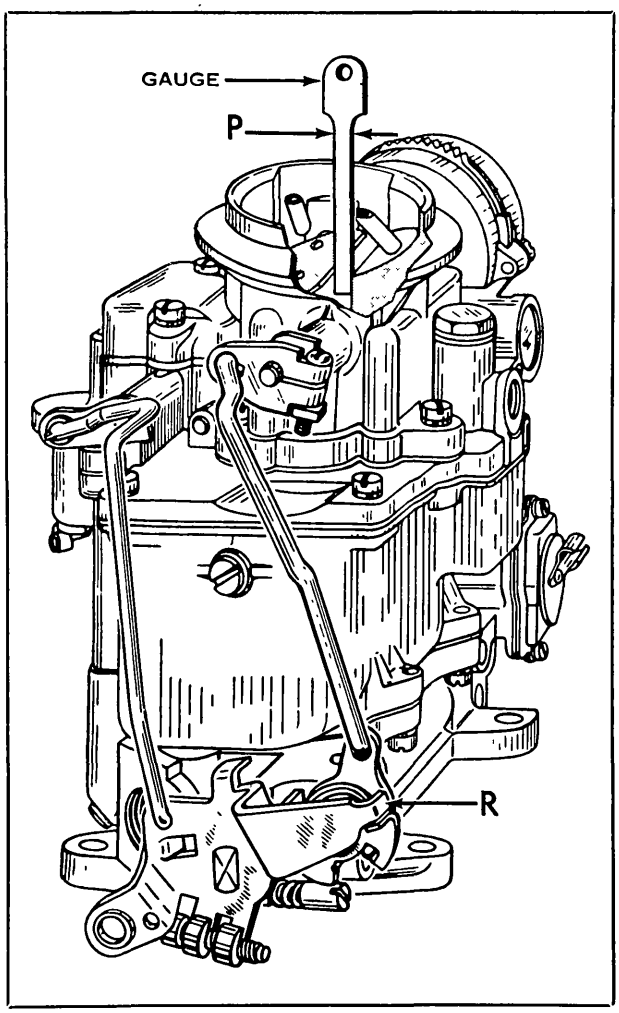


Figure 5
Unloader Adjustment

DASHPOT (SLOW CLOSING THROTTLE) ADJUSTMENT (Fig. 6):

The purpose of the dashpot is to prevent the car from stalling when the throttle is released rapidly. Maximum dashpot action is obtained by adjusting screw (S) so that the dashpot plunger shaft (T) can be moved inward approximately 1/16" after engine and throttle have returned to normal idle. This adjustment should be made with the carbureter on the car, with engine running and transmission in driving range.

Service parts and complete unit assemblies are available for servicing the dash p t and kickdown switch units pictur d in Fig. 6.

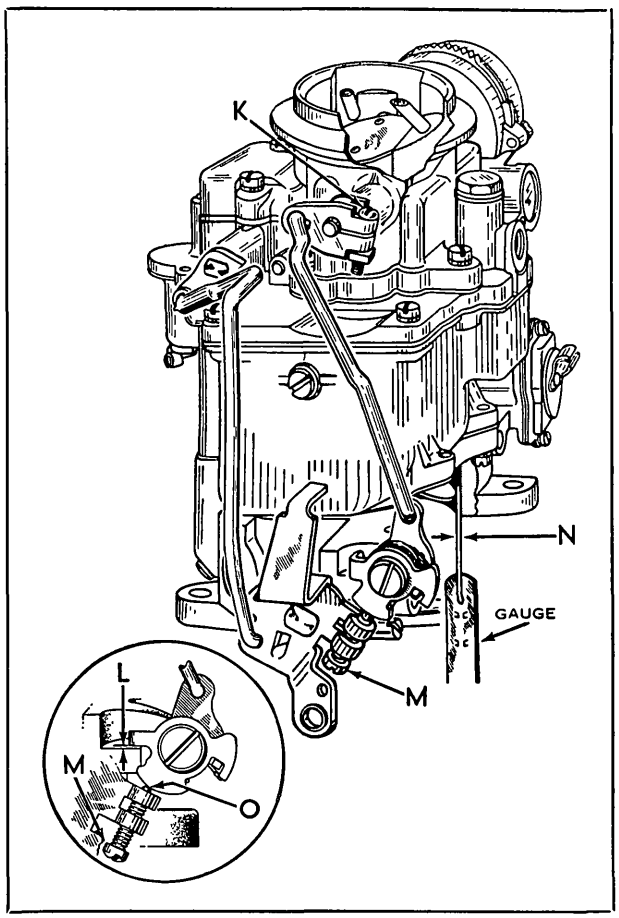


Figure 4
Fast Idle Adjustment

UNLOADER ADJUSTMENT (Fig. 5):

With throttle wide open there should be 7/32" clearance between upper edge of choke valve and inner wall of air horn (P) (gauge T109-106). Adjust by bending unloader lip on throttle shaft lever (R) (use bending tool T109-41).

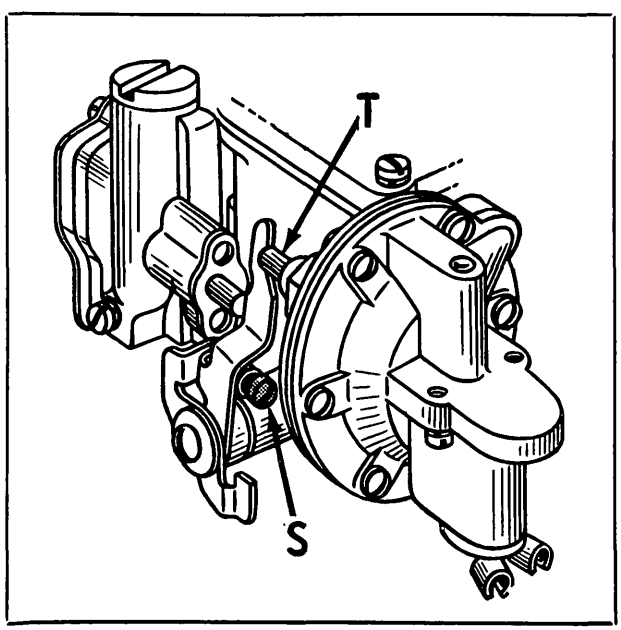


Figure 6
Dashp t Adjustment

Part No	PART NAME	
101-354S	Choke lever clamp screw assembly	
101-361	Thermostatic coil housing attaching screw (Use with 170AC325S)	(2)
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
105A-48	Dashpot bracket nut	
111-47S	Pump arm and screw assembly	
111-55S	Metering rod arm and screw assembly	
114-87S	Kickdown switch lever and collar assembly	
114-88	Throttle shaft arm	
115-167S	Kickdown switch push rod assembly	
115-168	THROTTLE CONNECTOR ROD	
115-169	Choke connector rod	
116-13	INTAKE CHECK BALL	(2)
117-28	Pump connector link (Sup by 117 170)	
117-136	Vacumeter piston link (884S)	
117-156	Vacumeter piston link (884SA SC)	
117-170	Pump connector link	
118-69	Dust cover (884S)	
118-86S	Kickdown snap switch and cover assembly	
118-97	Dust cover (884SA SC)	
120-165	METERING ROD JET	(2)
121-78	COIL HOUSING GASKET	
121-188	KICKDOWN SWITCH COVER PLATE GASKET	
121-189	KICKDOWN SWITCH HOUSING GASKET	
121-190	ELECTRO MAGNET HOUSING GASKET	
121-193	DUST COVER GASKET	
121-196	Delayer plate gasket	
121-197	PUMP JET HOUSING GASKET	
121-198	BODY FLANGE GASKET	
121-213	AIR HORN GASKET	
121-214	BOWL COVER GASKET	
129-24	Metering rod disk	(2)
136-37	Throttle connector rod washer	
136-49	Vacuum piston washer (Sup by 136 169)	
136-55	Throttle centering spring washer (884S SA SC early production)	
136-71	Kickdown switch push rod washer	
136-77	Throttle shaft lever attaching screw washer	
136-169	Vacuum piston washer (884SA) (Sup by 63 186)	
146-209S	Bowl cover and strainer assembly	
150-168	Dashpot air bleed pin	
150-170	Choke piston pin	
150-179	Vacumeter link pin (884SA SC)	
150A-10	PIN SPRING	(3)
160-99	Kickdown switch piston	
160-101S	Vacuum piston and pin assembly (884S)	
160-102	Choke piston	
160-111	Choke piston (Sup by 160 102)	
160-112	Vacuum piston (884SA SC)	
161-46	Kickdown switch push rod plate	
161-82	Kickdown switch blocker plate	
170-190	Diaphragm housing (inner)	
170-194S	Kickdown switch assembly (complete)	
170-210S	Dashpot diaphragm outer housing assembly	
170-216S	Kickdown switch piston housing and plug assembly	
170AC206S	Thermostatic coil and housing assembly (Sup by 170AC325SU)	
170AC325S	Thermostatic coil and housing assembly	
170AC325SU	Unitized package (Consists of 1—170AC325S 1—63 189 2—101 361 and 1—121 78)	
180-56	Dashpot mounting bracket	
181-174S	Fast idle cam assembly	
186-36	Choke baffle plate	
202-22S	Diaphragm and shaft assembly	
202-24S	Dashpot unit (complete)	
213-14S	Electro magnet and housing assembly	

*11B 223 used as idle port rivet plug on 884S and 884SA early production

NOTE **Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.**

CARBURETER
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CARTER CLIMATIC® CONTROL CHOKE

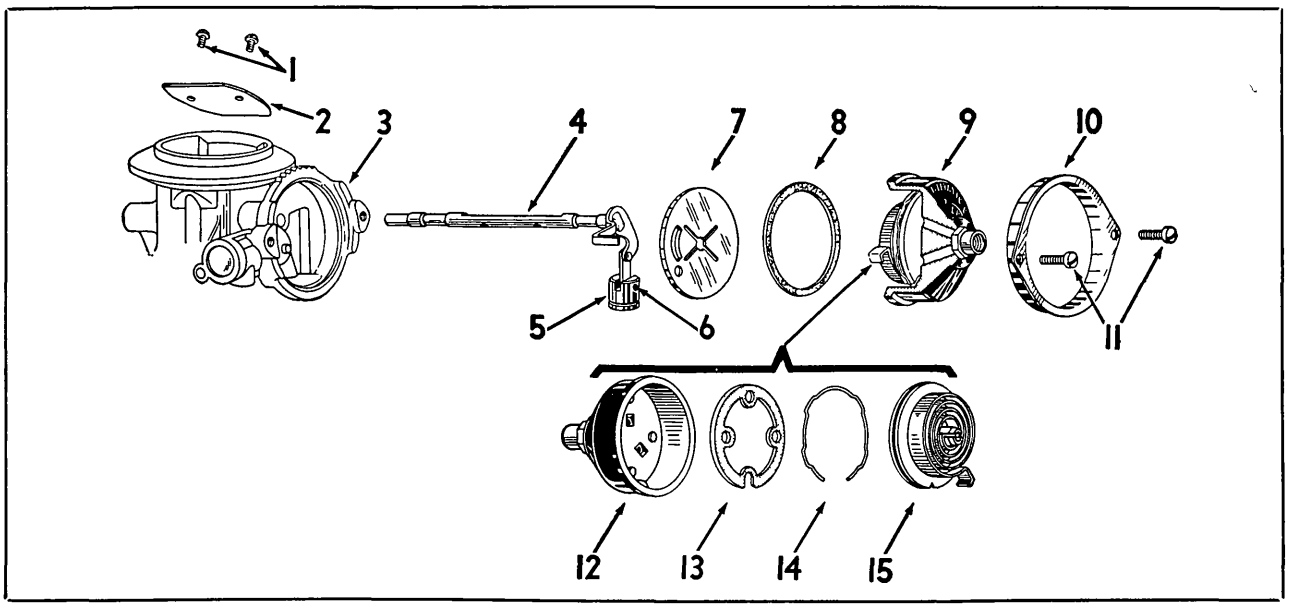
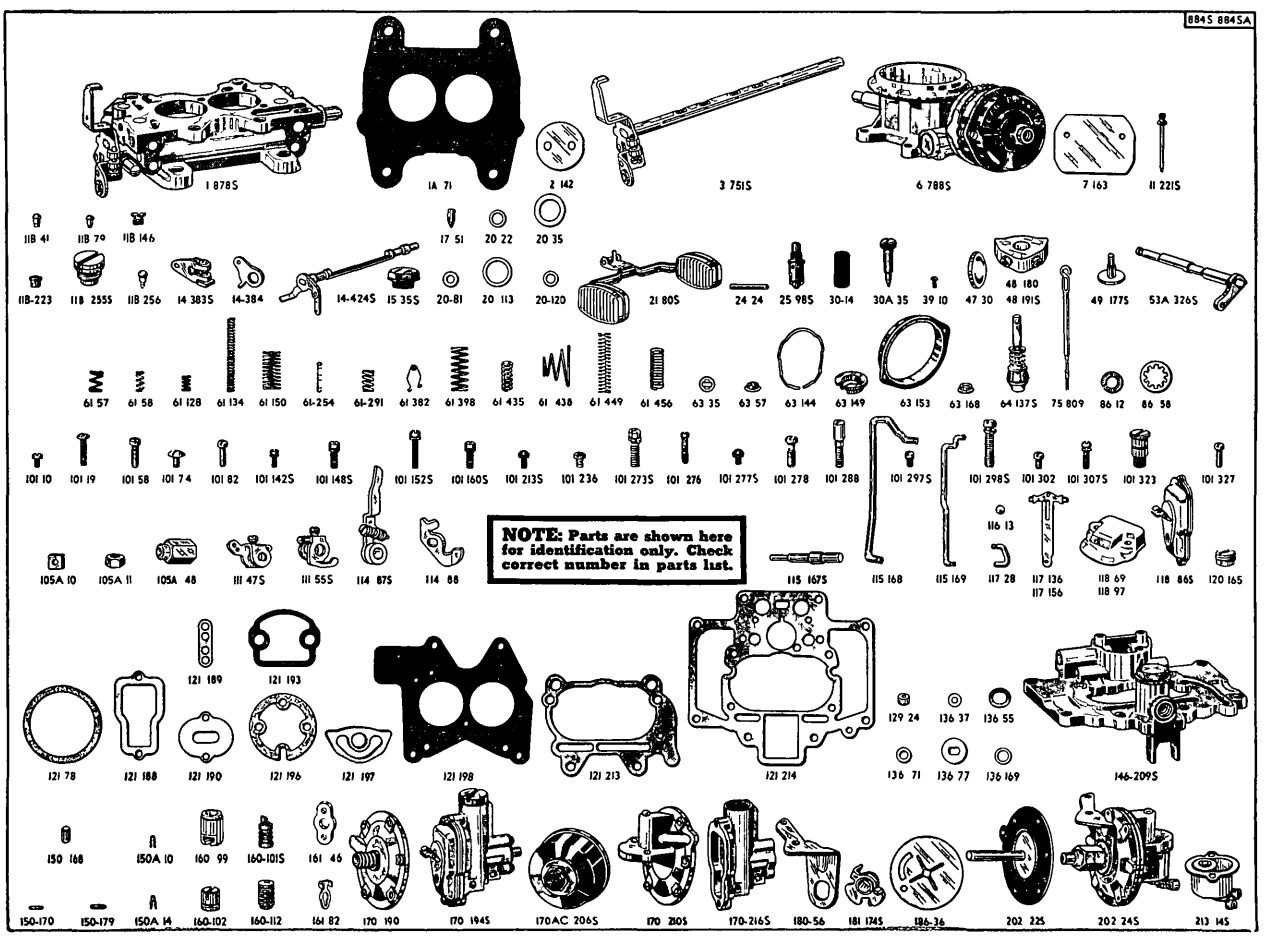


Figure 7

1 Choke valve screws
2 Choke valve
3 Air horn
4 Choke piston lever link and shaft assy
5 Choke piston
6 Choke piston pin
7 Choke baffle plate
8 Coil housing gasket
9 Thermostatic coil and housing assy
10 Coil housing retainers
11 Coil housing screws
12 Thermostatic coil housing
13 Delayer plate gasket
14 Delayer plate retainer ring
15 Delayer plate and thermostatic coil assembly

The Carter Climatic® Control principle used in this unit is essentially the same as that used in other WCD carbureters However heat is introduced at the center of the thermostatic coil housing. Hot air is drawn through three passages in the coil housing through the center of the delayer plate and then to the manifold

The purpose of the delayer plate is to control the action of the choke providing longer choke operation during warm up and prevent ing the choke from closing too rapidly after the engine is shut off Should it be necessary to replace the delayer plate gasket, the delayer plate and thermostatic coil assembly may be removed by striking the coil housing assembly sharply against the cupped palm of the hand Care should be taken during removal and reassembly to avoid damage to the thermostatic coil The thermostatic coil **must not** be removed from the delayer plate



De Soto "V-8"—1952—Carbureters Nos. 884S-884SA-884SC

WHEN SERVICING, USE GASKET ASSORTMENT No 212D, REPAIR PACKAGE No 1704B

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

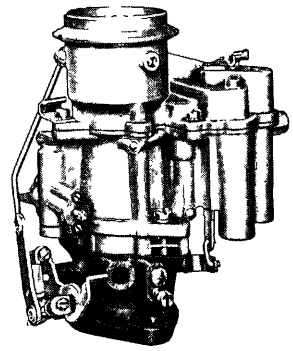
Part No	PART NAME	
1-878S	Body flange assembly	
1A-71	FLANGE GASKET	
2-142	Throttle valve	(2)
3-751S	Throttle shaft and lever assy (Sup by 3 853S)	
3-853S	Throttle shaft and lever assy	
6-788S	Air horn and Climatic® control assembly (884S SA) (Sup by 6 844S)	
6-843S	Air horn assembly (Use with 75 810)	
6-844S	Air horn and Climatic® control assembly (Use with 75 810)	
7-163	Choke valve	
11-221S	Low speed jet assembly (Sup by 11 235S)	(2)
11-235S	LOW SPEED JET ASSEMBLY	(2)
11B-41	Rivet plug	(2)
11B-79	Rivet plug	(7)
11B-138	IDLE PORT RIVET PLUG (884SA Late Prod — 884SC)	(2)
11B-146	Level sight plug	
11B-223	*NOZZLE RIVET PLUG	(2)
11B-255S	Kickdown switch plug assembly	
11B-256	Dashpot check ball retainer plug	
11B-257	Body flange rivet plug (Sup by 11B 285)	
11B-258	Body flange rivet plug (Sup by 11B 286)	
11B-259	Body flange rivet plug (Sup by 11B 287)	
11B-285	Rivet plug (approx 9/16" dia)	(2)
11B-286	Rivet plug (approx 3/8" dia)	(5)
11B-287	Rivet plug (approx 5/16" dia)	(3)
14-383S	Choke lever and screw assembly	
14-384	Cam trip lever	
14-424S	Choke piston lever link and shaft assembly	
15-35S	Strainer nut assembly	
17-51	PUMP CHECK NEEDLE	
17-92	Pump check needle (Sup by 17 51)	
20-22	Needle seat gasket	
20-35	BOWL STRAINER GASKET	
20-81	KICKDOWN SWITCH PLUNGER GASKET	
20-113	KICKDOWN SWITCH PLUG GASKET	
20-120	VACUMETER PISTON GASKET (884SA)	
21-80S	Float and lever assembly	
24-24	Float lever pin	
25-98S	NEEDLE AND SEAT ASSEMBLY	
30-14	BOWL COVER STRAINER	
30A-35	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
47-30	WELSH PLUG	
48-180	Pump jet housing (884S SA) (Sup by 48 191S)	
48-191S	Pump jet housing assembly (884S SA) (Sup by 48 204S)	
48-204S	Pump jet and housing assembly	
49-177S	Electro magnet plunger assembly	
53A-326S	Pump operating lever and countershaft assembly	
61-57	Idle adjustment screw lock spring	(2)
61-58	Dashpot adjusting screw lock spring	
61-128	CONNECTOR ROD SPRING	
61-134	VACUUM PISTON SPRING	
61-150	PUMP SPRING (LOWER)	
61-254	Plunger operating spring	
61-291	Throttle lever adjustment screw lock spring	
61-382	METERING ROD SPRING	
61-398	Pump spring (upper)	
61-435	Kickdown switch push rod spring	
61-438	Dashpot diaphragm return spring	
61-449	Kickdown switch piston spring	
61-456	Vacumeter piston spring (884SA SC)	
63-35	CONNECTOR ROD SPRING RETAINER	
63-57	INTAKE CHECK BALL RETAINER	
63-144	Delayer plate retainer ring	
63-149	Upper pump spring retainer	
63-153	Thermostatic coil housing retainer (Use with 170AC206S)	
63-168	Piston link spring retainer (884SA SC)	
63-186	Vacuum piston spring retainer (884SA SC)	
63 189	Thermostatic coil housing retainer (Use with 170AC325S)	
64-137S	PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
75-809	Metering rod—standard (Sup by 75 859U)	(2)
75-810	Metering rod—standard (Use with 6 843S or 6 844S)	
75 811	Metering rod—1 size lean	(2)
75-841	Metering rod—1 size rich	(2)
75-842	Metering rod—2 sizes rich	(2)
75-859U	UNITIZED PACKAGE (CONSISTS OF (2) 75 810 (1) 11B 228)	
86-12	Flange stud lock washer	(4)
86-58	Dashpot bracket nut lock washer	
101-6	Pump arm clamp screw	
101-10	Pump arm clamp screw (Sup by 101 6)	
101-19	Choke lever clamp screw (Sup by 101 354S)	
101 58	Dashpot arm adjusting screw	
101-74	Throttle shaft lever attaching screw	
101-82	Thermostatic coil housing attaching screw (Sup by 101 327)	(2)
101-142S	Electro magnet housing attaching screw assembly	(2)
101-148S	Dust cover attaching screw and washer assembly	(2)
101-152S	Air horn attaching screw and washer assembly	(4)
101-160S	Bowl cover and kickdown housing attaching screw and washer assembly	(5)
101-213S	Diaphragm cover attaching screw assembly	(6)
101-236	Metering rod arm clamp screw	
101-273S	Body flange attaching screw and washer assembly	(4)
101-276	Fast idle adjustment screw	
101-277S	Kickdown switch push rod plate screw assembly	(2)
101-278	Pump jet housing attaching screw (Sup by 101 342)	
101-288	Throttle lever adjustment screw	
101-297S	Kickdown switch cover attaching screw assembly	(2)
101-298S	Kickdown attaching screw assembly	
101-302	THROTTLE VALVE ATTACHING SCREW	(4)
101-307S	Dashpot bracket attaching screw and washer assembly	(2)
101-323	Fast idle cam attaching screw	
101-327	Thermostatic coil housing attaching screw (Use with 170AC206S)	(2)
101-342	Pump jet housing attaching screw	

PARTS LIST CONTINUED ON PAGE 6

CARTER CARBURETOR

DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

MOTOR SERIAL NUMBERS
1001 and higher



DE SOTO

MODELS
"S-13"—1949 "S-14"—1950
FLUID DRIVE &
M6 TRANSMISSION

1949-50

B-B DOWN-DRAFT CARBURETERS—**MODELS E7L1-L2-L3-L4**

CARBURETER SPECIFICATIONS

For De Soto Six Cylinder Engine: 3-7/16 Inch Bore, 4¼ Inch Stroke

Dimensions: Flange size, 1½ inch (38.1 mm). Throttle bore, 1-11/16 inch (42.86 mm). Main venturi, 1-11/32 inch (34.13 mm) I. D.

Float Setting: Top of float 5/64 inch (1.98 mm) below top surface of carbureter body casting. Plus or minus 1/64 inch (.397 mm).

Vents: Outside none. Inside balance vent tube .218 inch diameter (5.54 mm).

Gasoline Intake Needle: Triangular, horizontal No. 44 (2.18 mm) drill in needle seat.

Idle Orifice Tube: Jet size, .0276 inch (.70 mm) drill. (E7L1) Idle passage air bleed, in air horn, size .0531 inch (1.35 mm) diameter. Restriction in body, size .0531 inch (1.35 mm) diameter. (E7L2-L3-L4) Idle passage air bleed, in air horn, size No. 56 (1.18 mm) drill diameter. Restriction in body .0452 inch (1.15 mm) diameter.

Idle Ports: Upper port. Slot type: length .149 inch (3.78 mm), width .030 inch (.76 mm). Top of port located .118 to .122 inch (3.00 to 3.10 mm) above top edge of valve. Lower port size .053 to .057 inch (1.35 to 1.45 mm) drill. (For idle adjustment screw).

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture turn screw out. With gear shift lever in neutral position, idle engine between 450 and 500 r.p.m.

Main Metering Screw: Calibrated to flow 315 to 319 cc per minute. (Do not gauge for size. If in doubt replace with new part.)

Main Vent: Through diffuser (air bleed inside bowl). Size .0315 inch (.80 mm) drill.

Main Vent Tube: Side Holes, 4—.0354 inch diameter.

Step-Up Jet: Power orifice .0413 inch (1.05 mm) drill.

Accelerating Pump: Type—delayed action, seasonal adjustment. Stroke—Summer setting (inner hole, short stroke). Intermediate setting (center hole). Winter setting (outer hole, long stroke).
Pump intake passage ball check seat, size .115 to .120 inch (2.93 to 3.05 mm) diameter in body. Pump discharge passage: Restriction (under ball check) size .062 to .065 inch (1.57 to 1.65 mm) diameter in body. Pump (discharge) jet size, (E7L1-L2) .0334 inch (.85 mm) drill. Pump (discharge) jet size, (E7L3-L4) .0413 inch (1.05 mm) drill.

Pump Adjustment: (E7L1-L2) 20/64 inch plunger travel—full throttle position, medium stroke. Use gauge T109-117S. (E7L3-L4) None.

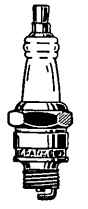
Choke: Offset butterfly type (with poppet valve) interconnected to open throttle valve to fast idle position when choke is used.

Slow Closing Throttle: Dash pot with discharge (By-pass), size .018 to .020 inch (.457 to .508 mm) drill, through valve cage.

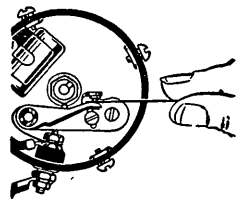
Vacuum Spark Port: Slot (round end) type; size .040 by .110 inch (1.016 by 2.794 mm). Top of port .052 to .058 inch (1.32 to 1.47 mm) above top edge of valve (early production); .012 to .018 inch (.305 to .457 mm) above top edge of valve (late production).

Motor Tune-Up—Be Accurate!

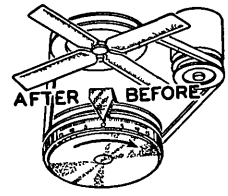
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



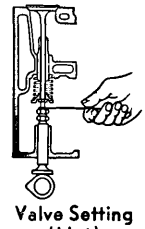
Spark Plug Gap .038"



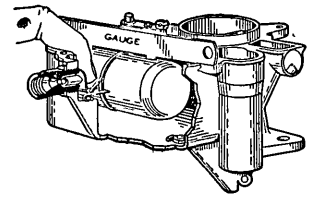
Breaker Point Setting .020"



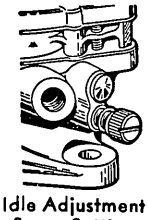
Ignition Timing Breaker Points to Open T. D. C.



Valve Setting (Hot) Intake .008" Exhaust .010"



Float Setting (Use Gauge) 5/64 Inch



Idle Adjustment Screw Setting ½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

If carbureter loads up after considerable service, check float level. Wear on lip of float lever will raise float level. Before adjusting float, be sure float lever pin is firmly seated. Reset float level by bending lip of float lever away from needle to raise level, or bend lip toward needle to lower float level. Bend vertical lip of float only.

If motor stalls while idling, set throttle lever adjusting screw so motor runs 450-500 r. p. m., with gear shift lever in neutral position. Then set idle adjustment screw to specifications. If these adjustments do not correct the trouble, remove idle orifice tube and plug assembly. Clean tube passages with compressed air.

If acceleration is not satisfactory, remove pump jet and clean with compressed air. However, it is usually advisable to replace the pump jet, as its cost is nominal. All jets must be seated gasoline tight. Poor acceleration may be due to damaged or worn plunger leather in accelerating pump, sediment in pump cylinder or clogged intake ball check at bottom of pump cylinder and discharge ball check in discharge passage. If plunger is removed from cylinder, use care in installing to avoid damage to plunger leather.

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CARBURETER

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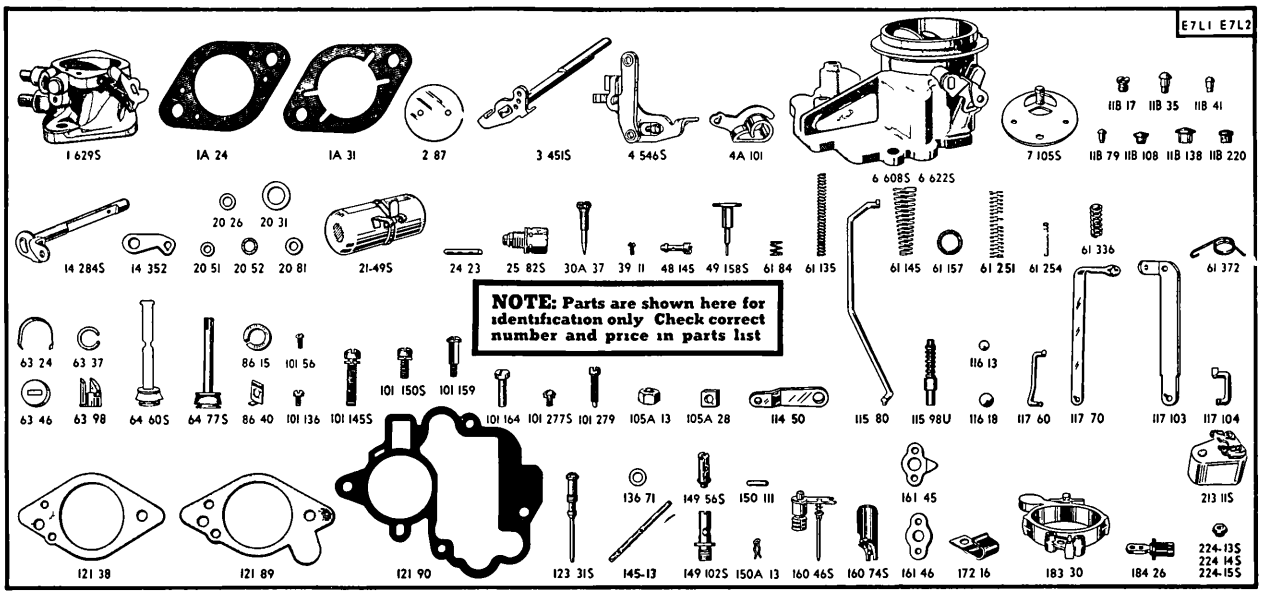
Correct air fuel ratio is provided by a "balance tube" in the air horn The balance tube should be checked each time the carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type, size or condition of air cleaner Should the cleaner become clogged, the capacity will be reduced but the air-fuel mixture ratio will not be changed

Excessive richness above 50 miles per hour may be caused by a clogged main vent tube After removal of rivet plug beneath float bowl with tool No T109-43, main vent tube can be removed and a new tube inserted with tool No T109-195 Care must be exercised in inserting new tube which must seat tightly Use new rivet to complete the installation

Pump Adjustment. (E7L1-L2) Remove air horn assembly back out throttle adjustment screw, and place pump operating link in center hole of throttle shaft arm Place gauge T109-117S on edge of bowl cover so that lip of gauge extends over top of plunger shaft Turn knurled nut of gauge until lip contacts plunger shaft at closed and wide open throttle positions Difference in readings should be "20 ' 20/64 inch plunger travel

(E7L3-L4) No gauge is necessary Be sure pump lifter link arm is at right angle to lifter link shaft Adjustments can be made by bending horizontal portion of pump lifter link

Pump stroke adjustable for high or low temperature Set to long stroke for cold weather, short stroke for hot weather driving



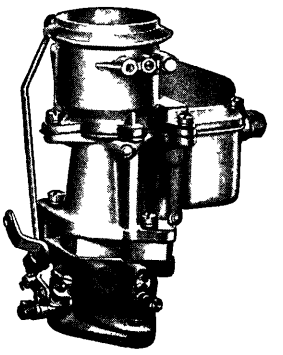
De Soto—1949-1950—Nos. E7L1-L2-L3-L4

WHEN SERVICING, USE GASKET ASSORTMENT No. 164A, REPAIR PACKAGE (E7L1-L2) No 1510A, (E7L3 L4) No 1528
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-629S	Body flange assembly (E7L1-L2)	
1 663S	Body flange assembly (Sup by 1-687S)	
1-687S	Body flange assembly (E7L3-L4)	
1A-24	Flange gasket—for use with governor	
1A-31	FLANGE GASKET—FOR USE WITHOUT GOVERNOR	
2 87	Throttle valve	
3-451S	Throttle shaft and arm asesmbly (E7L1-L2)	
3-671S	Throttle shaft and arm assembly (E7L3-L4)	
4-546S	Throttle lever assembly	
4A-101	Fast idle cam	
6-608S	Air horn assembly (E7L1)	
6-622S	Air horn assembly (E7L2-L3-L4)	
7-105S	Choke valve assembly	
11B 17	Pump discharge passage plug	
11B 35	Rivet plug	
11B-41	Rivet plug	
11B-79	Rivet plug	(3)
11B-108	IDLE PORT RIVET PLUG	
11B-138	PUMP JET RIVET PLUG	
11B-220	HIGH SPEED PASSAGE RIVET PLUG	
14-284S	Choke lever and shaft assembly	
14 352	Choke lever (loose)	
20-26	Main metering jet gasket	
20-31	Needle seat gasket	
20-51	Step-up jet gasket	
20-52	STEP UP PISTON GASKET	
20-81	SWITCH PLUNGER GASKET	
21-49S	Float and lever assembly	
24-23	Float lever pin	
25 82S	NEEDLE AND SEAT ASSEMBLY	
30A-37	Idle adjustment screw	
39-11	Valve attaching screw	(4)
48-145	PUMP JET (E7L1-L2)	
48-167	PUMP JET (E7L3-L4)	
49-158S	Valve plunger rod and plate assembly (E7L1-L2 L3)	
49-173S	Valve plunger rod and plate assembly (E7L4)	
61 84	Idle adjustment screw spring	
61-135	STEP UP PISTON SPRING	
61 145	PUMP SPRING	
61 157	Plunger spring	(2)
61-251	Switch piston spring	
61 254	Plunger operating spring	
61 336	Push rod sleeve spring (Sup by 61-403)	
61-372	Dash pot pick-up arm spring (E7L1-L2)	
61 393	Dash-pot pick up arm spring (E7L3-L4)	
61 403	Push rod sleeve spring	
63-24	FLOAT LEVER PIN RETAINER	
63 37	PUMP CYLINDER BALL RETAINER	
63 46	Spring retainer	
63 98	Switch piston locator (Use with 160-74S)	
63 136	Connector retainer clip (Use with 184-53S)	
64 60S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49 120)	
64 77S	Dash-pot plunger and rod assembly	
76 77	Grounding wire	
86 15	Flange stud lock washer	(2)
86-40	Terminal lock washer (Use with 101-136)	
101-136	Terminal connector screw (Use with 184-26)	
101-145S	Body flange attaching screw and washer assy	(2)
101-150S	Air horn attaching screw and washer assy	(4)
101-159	Electro magnet assembly attaching screw	
101-164	Throttle lever clamp screw	
101-277S	Attaching screw and washer assembly	(4)
101-279	Throttle adjusting screw	
101-290	Terminal attaching screw	
105A-13	Flange nut	(2)
105A-28	Throttle lever clamp nut	
114-50	Dash-pot pick-up arm	
115-80	Fast idle rod	
115-98U	Push rod assembly and spring unit (Consists of 61-403 and 115-79S)	
116-13	PUMP INTAKE CHECK BALL	
116 18	PUMP DISCHARGE CHECK BALL	
117 60	PUMP LINK (E7L1-L2)	
117 70	PUMP LIFTER	
117-103	Dash pot lifter link	
117-104	Dash-pot connector link	
117 141	PUMP LINK (E7L3-L4)	
121-38	Body flange gasket (Sup by 121-160)	
121 89	Carbureter body to insulator gasket (Sup by 121-163)	
121-90	BODY GASKET	
121-160	BODY FLANGE GASKET	
121-163	BODY TO INSULATOR GASKET	
123-31S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
136-71	Washer	
136-116	Terminal attaching screw washer	
145-13	MAIN VENT TUBE	
149-56S	STEP UP JET ASSEMBLY	
149-102S	Dash-pot valve cage assembly (E7L1-L2-L3)	
149-108S	Dash-pot valve cage assembly (E7L4)	
150-111	Dash-pot pin	
150A-13	PIN SPRING	(2)
160-46S	STEP-UP PISTON, PLATE AND ROD ASSEMBLY	
160-74S	Kick down switch piston assembly (Sup by 160-88S)	
160-88S	Kick-down switch piston assembly	
161 45	Terminal end plate	
161-46	Push rod end plate	
172-16	Cable clip	
183-30	Insulator (Sup by 183-66)	
183 66	Insulator	
184-26	Terminal block (E7L1-L2) (Sup by 184 53S, 101-290 and 136 116)	
184 52	Terminal block (Sup by 184-53S)	
184 53S	Terminal block and clip assembly	
195-42U	Unitized package (E7L1-L2) (Sup by 195-47U)	
195 47U	Unitized package (For kick-down switch)	
213 11S	Electro magnet and housing assembly	
224 13S	MAIN METERING JET ASSEMBLY	
224-14S	Main metering jet assembly—1 size lean	
224 15S	Main metering jet assembly—2 sizes lean	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

These Carbureters also used on Chrysler "C38", "C45", "C48" Cars equipped with Standard Transmission



DE SOTO

MODELS

"S11C" - "S11S" - "S13" - "S14"

1946-1950

B-B Down-Draft Carbureters—**Models EX1-EX2-EX3-EX1R-EX2R-EX3R**

CARBURETER SPECIFICATIONS

For De Soto Six Cylinder Engine: 3-7/16 Inch Bore, 4¼ Inch Stroke

Dimensions: Flange size, 1½ inch (38.1 mm).
Throttle bore, 1-11/16 inch (42.86 mm).
Main venturi, 1-11/32 inch (34.13 mm) I. D.

Float Setting: Top of float 5/64 inch (1.98 mm) below top surface of carbureter body casting. Plus or minus 1/64 inch (.397 mm).

Vents: Outside, none. Inside, balance vent tube .218 inch diameter (5.54 mm).

Gasoline Intake Needle: Triangular, horizontal No. 44 (2.18 mm) drill in needle seat.

Idle Orifice Tube: Jet size .0276 inch (.70 mm) drill. Idle passage air bleed, in body, size .063 inch (1.60 mm) diameter (EX1-EX2-EX1R-EX2R). Idle passage air bleed, in air horn, size .0465 inch (1.18 mm) diameter (EX3-EX3R). Restriction in body, size .053 inch (1.35 mm) diameter (EX1-EX2-EX1R-EX2R), size .0452 inch (1.15 mm) diameter (EX3-EX3R).

Idle Ports: Upper port. Keyhole type: length, .128 inch (3.25 mm); width .027 inch (.69 mm). .063 inch (1.60 mm) diameter hole at top (EX1-EX2-EX1R-EX2R). Slot type: length .149 inch (3.78 mm); width .030 inch (.76 mm) (EX3-EX3R). Top of port located .088 to .092 inch (2.24 to 2.34 mm) (EX1-EX2-EX1R-EX2R), and .118 to .122 inch (3.00 to 3.10 mm) (EX3-EX3R) above top edge of valve. Lower port size .053 to .057 inch (1.35 to 1.45 mm) drill. (For idle adjustment screw.)

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture, turn screw out. Idle engine between 450 and 500 r.p.m.

Main Metering Screw: Calibrated to flow 312 to 316 cc per minute (EX1-EX2-EX1R-EX2R); 315 to 319 cc per minute (EX3-EX3R). (Do not gauge for size. If in doubt replace with new part.)

Main Vent: Through diffuser (air bleed inside bowl). Size .0315 inch (.80 mm) drill.

Main Vent Tube: Side holes, 4—.0354 inch diameter.

Step-Up Jet: Power orifice .0413 inch (1.05 mm) drill.

Accelerating Pump: Type—delayed action, seasonal adjustment. Stroke—Summer setting (inner hole, short stroke). Intermediate setting (center hole). Winter setting (outer hole, long stroke). Pump intake passage ball check seat, size .107 to .112 inch (2.72 to 2.85 mm) diameter in body. Pump discharge passage: Restriction (under ball check) size .062 to .065 inch (1.57 to 1.65 mm) diameter in body. Pump (discharge) jet size, .0374 inch (.95 mm) drill 48-75 (EX1-EX1R); .0334 inch (.85 mm) drill 48-145 (EX2-EX2R); .0413 (1.05 mm) drill 48-167 (EX3-EX3R).

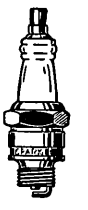
Pump Adjustment: 26/64 inch plunger travel (early production), 20/64 inch plunger travel (late production)—full throttle position, medium stroke. Use gauge T109-117S (EX1-EX2-EX1R-EX2R). Pump adjustment (EX3-EX3R): None.

Choke: Offset butterfly type (with poppet valve) interconnected to open throttle valve to fast idle position when choke is used.

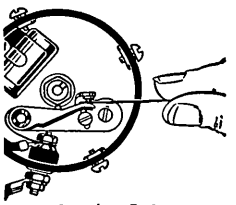
Vacuum Spark Port: Slot (round end) type; size .040 by .110 inch (1.016 by 2.794 mm). Top of port .052 to .058 inch (1.32 to 1.47 mm) above top edge of valve.

Motor Tune-Up—Be Accurate!

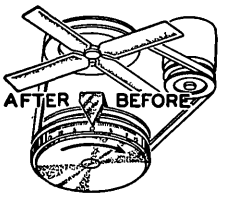
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



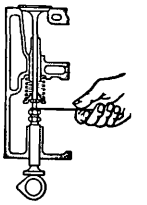
Spark Plug Gap .030"



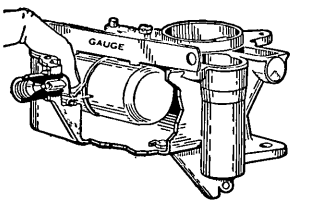
Breaker Point Setting .017"-.019"



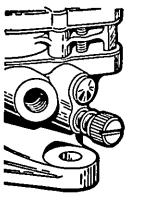
Ignition Timing Breaker Points to Open 2° B. T. D. C.



Valve Setting (Hot) Intake .008" Exhaust .010"



Float Setting (Use Gauge) 5/64 Inch



Idle Adjustment Screw Setting ½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

If carbureter loads up after considerable service, check float level. Wear on lip of float lever will raise float level. Before adjusting float, be sure float lever pin is firmly seated. Reset float level by bending lip of float lever away from needle to raise level, or bend lip toward needle to lower float level. Bend vertical lip of float only.

If motor stalls while idling, set throttle lever adjusting screw so motor runs approximately 300 r. p. m. Then set idle adjustment screw to specifications. If these adjustments do not correct the trouble, remove idle orifice tube and plug assembly. Clean tube and passages with compressed air.

If acceleration is not satisfactory remove pump jet and clean with compressed air. However, it is usually advisable to replace the pump jet, as its cost is nominal. All jets must be seated gasoline tight. Poor acceleration may be due to damaged or worn plunger leather in accelerating pump, sediment in pump cylinder or clogged intake ball check at bottom of pump cylinder and discharge ball check in discharge passage. If plunger is removed from cylinder, use care in installing to avoid damage to plunger leather.

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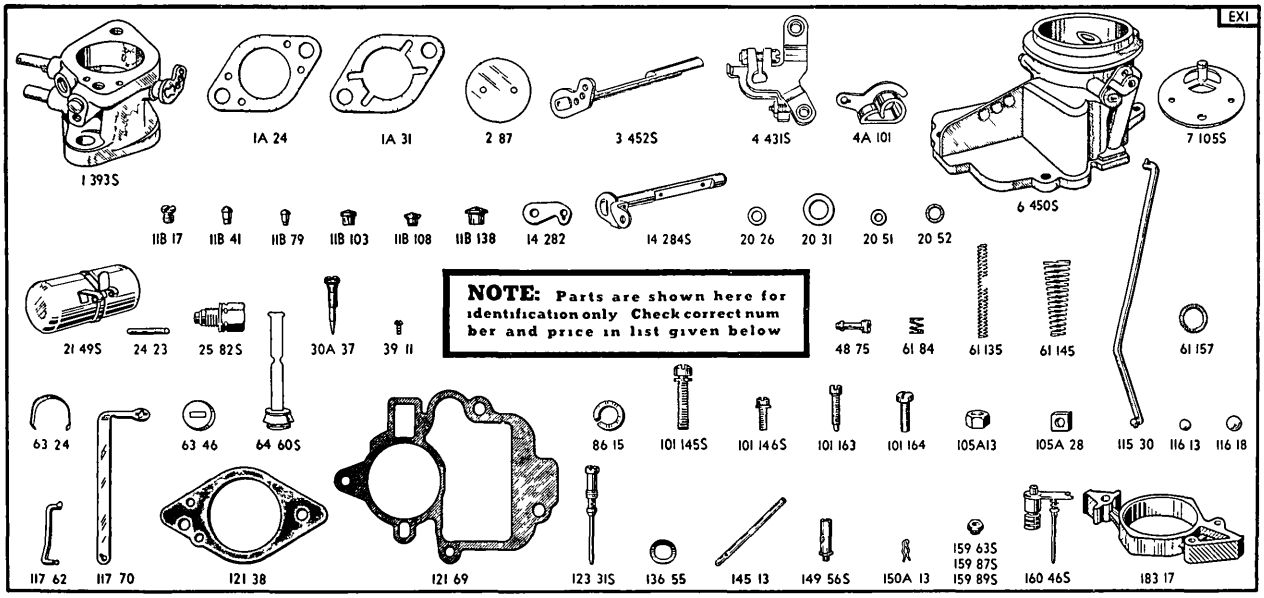
CARBURETER
TRADE MARK REG. U. S. PAT. OFF.
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Correct air fuel ratio is provided by a "balance tube" in the air horn The balance tube should be checked each time the carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type, size or condition of air cleaner Should the cleaner become clogged, the capacity will be reduced but the air-fuel mixture ratio will not be changed

Excessive richness above 50 miles per hour may be caused by a clogged main vent tube After removal of rivet plug beneath float bowl with tool No T109-43, main vent tube can be removed and a new tube inserted with tool No T109-195 Care must be exercised in inserting new tube which must seat tightly Use new rivet to complete the installation

Pump Adjustment: Remove air horn assembly, back out throttle lever adjustment screw and install pump operating link in center hole of throttle shaft arm Place pump travel gauge T109-117S on upper surface of body casting with lip of gauge extending over top of plunger shaft Turn knurled nut of gauge until lip rests on top of plunger shaft Difference in readings obtained at closed and wide open throttle should be "26" (early production), "20" (late production) Adjustment can be made by bending horizontal portion of pump lifter link



DeSoto—1946-1950—Nos. EX1-EX2-EX3-EX1R-EX2R-EX3R

WHEN SERVICING, USE GASKET ASSORTMENT No 137A, REPAIR PACKAGE No. 1594A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

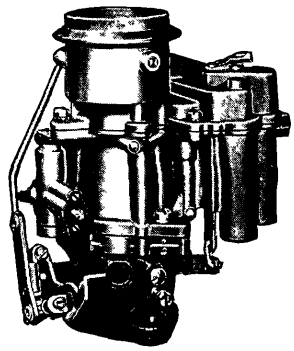
Part No	PART NAME
1-393S	Body flange assembly (EX1 2 1R 2R)
1-685S	Body flange assembly (EX3 3R)
1A-24	Flange gasket—for use with governor
1A-31	FLANGE GASKET—FOR USE WITHOUT GOVERNOR
2-87	Throttle valve
3-452S	Throttle shaft and arm assembly (Use with 1 393S)
3-682S	Throttle shaft and arm assembly (Use with 1 685S)
4-431S	Throttle lever assembly
4A-101	Fast idle cam
6-450S	Air horn assembly (Sup by 6 560S)
6-560S	Air horn assembly (EX1 2 1R 2R)
6-639S	Air horn assembly (EX3 3R)
7-105S	Choke valve assembly
11B-17	Pump discharge passage screw plug
11B-41	Rivet plug
11B-79	Rivet plug (2)
11B-103	Main vent tube passage rivet plug (Sup by 11B 220)
11B-108	IDLE PORT RIVET PLUG
11B-138	PUMP JET RIVET PLUG
11B-220	MAIN VENT TUBE PASSAGE RIVET PLUG
14-282	Choke lever (loose) (Sup by 14 352)
14-284S	Choke lever and shaft assembly
14-352	Choke lever (loose)
20-26	Main metering jet gasket
20-31	Needle seat gasket
20-51	Step up jet gasket
20-52	STEP UP PISTON GASKET
21-49S	Float and lever assembly
24-23	Float lever pin
25-82S	NEEDLE AND SEAT ASSEMBLY
30A-37	Idle adjustment screw
39-11	Valve attaching screw (4)
48-75	Pump jet (Sup by 48 145)
48-145	Pump jet (Sup by 48 167)
48-167	PUMP JET
61-84	Idle adjustment screw spring
61-135	STEP-UP PISTON SPRING
61-145	PUMP SPRING
61-157	Plunger spring
63-24	FLOAT PIN RETAINER
63-37	CYLINDER BALL RETAINER
63-46	Pump spring retainer
64-60S	PUMP PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49-120)
86-15	Flange stud lock washer
101-145S	Flange attaching screw and washer assembly (2)
101-146S	Bowl cover attaching screw and washer assembly (Sup by 101 150S)
101-150S	†Bowl cover attaching screw (4)
101-163	Throttle lever adjusting screw (Sup by 101 279)
101-164	Throttle lever clamp screw
101-279	Throttle lever adjusting screw
105A-13	Flange nut
105A-28	Throttle lever clamp nut
115-30	Fast idle rod
116-13	PUMP INTAKE CHECK BALL
116-18	PUMP DISCHARGE BALL
117-60	PUMP LINK (Use with 1-393S)
117-62	Pump link (Sup by 117 60)
117-70	PUMP LIFTER LINK
117-141	PUMP LINK (Use with 1 685S)
121-38	Body flange gasket (Sup by 121-160) (2)
121-69	BODY GASKET
121-160	BODY FLANGE GASKET (2)
123-31S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY
136-55	Throttle shaft spring washer
145-13	MAIN VENT TUBE
149-56S	STEP UP JET ASSEMBLY
150A-13	PIN SPRING
156-29	Gas line fitting
159-63S	Main metering jet assembly—2 sizes lean (Sup by 224 15S)
159 87S	Main metering jet assembly—1 size lean (Sup by 224 14S)
159-89S	Main metering jet assembly (Sup by 224 13S)
160-46S	STEP-UP PISTON PLATE AND ROD ASSEMBLY
183-17	Insulator (Sup by 183 64)
183-64	Insulator
224-13S	MAIN METERING JET ASSEMBLY—STANDARD
224-14S	Main metering jet assembly—1 size lean
224-15S	Main metering jet assembly—2 sizes lean

† Install 101-150S in bowl cover attaching screw to the rear of the air horn

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.

CAR SERIAL NUMBERS
5784001 and higher
6154001 and higher

MOTOR SERIAL NUMBERS
1001 and Higher



Cut shows EV2

DE SOTO
MODEL "S11"
FLUID DRIVE &
VACUMATIC TRANSMISSION
1946-1948
(E7L4 can also be used)

B-B DOWN-DRAFT CARBURETERS—**MODELS EV1-EV2**

CARBURETER SPECIFICATIONS

For De Soto Six Cylinder Engine 3 7/16 Inch Bore 4¼ Inch Stroke

Dimensions Flange size 1½ inch (38 1 mm)
Throttle bore 1 11/16 inch (42 86 mm)
Main venturi 1 11/32 inch (34 13 mm) I D

Float Setting Top of float 5/64 inch (1 98 mm) below top surface of carbureter body casting Plus or minus 1/64 inch (397 mm)

Vent Outside none Inside balance vent 218 inch diameter (5 54 mm)

Gasoline Intake Needle Triangular horizontal No 44 (2 18 mm) drill in needle seat

Idle Orifice Tube Jet size 0276 inch (70 mm) drill Idle passage air bleed in body size 063 inch (1 60 mm) diameter Restriction in body size 053 inch (1 35 mm) diameter

Idle Ports Upper port Keyhole type length 128 inch (3 25 mm) width 027 inch (69 mm) 063 inch (1 60 mm) diameter hole at top Top of port 088 to 092 inch (2 24 to 2 34 mm) above top edge of valve (early production) 093 to 097 inch (2 36 to 2 46 mm) above top edge of valve (late production)
Lower port size 053 to 057 inch (1 35 to 1 45 mm) drill (For idle adjustment screw)

Set Idle Adjustment Screw ¾ to 1¼ turns open For richer mixture turn screw out Do not idle engine below 300 r p m or 6 miles per hour

Main Metering Screw Calibrated to flow 3 12 to 316 cc per minute (Do not gauge for size If in doubt replace with new part)

Main Vent Through diffuser (air bleed inside bowl) Size 0315 inch (80 mm) drill

Main Vent Tube Side Holes 4—0354 inch diameter

Step up Jet Power orifice 0413 inch (1 05 mm) drill

Accelerating Pump Type—delayed action
Stroke—Summer setting (inner hole short stroke)
Intermediate setting (center hole)
Winter Setting (outer hole long stroke)
Pump intake passage size 115 to 120 inch (2 93 to 3 05 mm) diameter in body
Pump discharge passage Restriction (under ball check) size 062 to 065 inch (1 57 to 1 65 mm) diameter in body
Pump (discharge) jet size 0374 inch (95 mm) drill

Pump Adjustment 26/64 inch plunger travel (EV1) 20/64 inch plunger travel (EV2) full throttle position medium stroke (Use gauge T109 117S)

Choke Offset butterfly type (with poppet valve) inter connected to open throttle valve to fast idle position when choke is used

Slow Closing Throttle Dash pot with discharge (By pass) size 0197 (5 mm) drill through valve cage

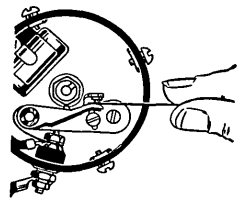
Vacuum Spark Port Slot (round end) type size 040 by 110 inch (1 016 by 2 794 mm) Top of port 052 to 058 inch (1 32 to 1 47 mm) above top edge of valve

Motor Tune-Up—Be Accurate! Always Use Feeler Gauges!

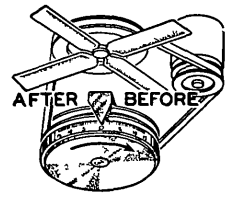
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



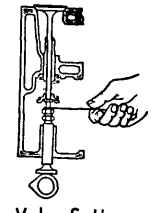
Spark Plug Gap 030"



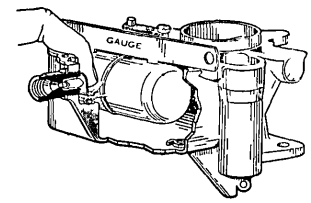
Breaker Point Setting 017" to 019"



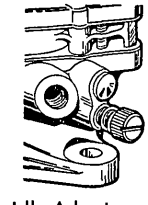
Ignition Timing Breaker Points to Open 2° B T D C



Valve Setting (Hot) Intake 008" Exhaust 010"



Float Setting (Use Gauge) 1/16 Inch



Idle Adjustment Screw Setting ¾ to 1¼ Turns Open

CARBURETER ADJUSTMENTS

If carbureter loads up after considerable service check float level Wear on lip of float lever will raise float level Before adjusting float be sure float lever pin is firmly seated Reset float level by bending lip of float lever away from needle to raise level or bend lip toward needle to lower float level Bend vertical lip of float only

If motor stalls while idling set throttle lever adjusting screw so motor runs approximately 300 r p m then set idle adjustment screw to specifications If these adjustments do not correct the trouble remove idle orifice tube and plug assembly Clean tube and passages with compressed air

If acceleration is not satisfactory remove pump jet and clean with compressed air However it is usually advisable to replace the pump jet as its cost is nominal All jets must be seated gasoline tight Poor acceleration may be due to damaged or worn plunger leather in accelerating pump, sediment in pump cylinder or clogged intake ball check at bottom of pump cylinder and discharge ball check in discharge passage If plunger is removed from cylinder, use care in installing to avoid damage to plunger leather

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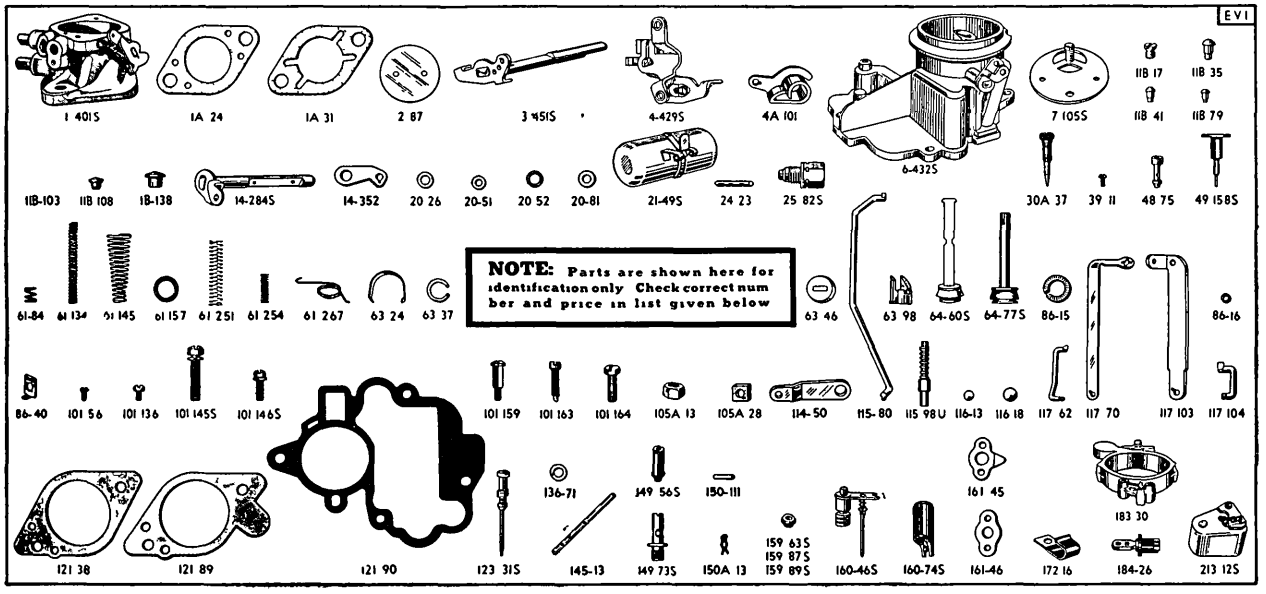
PRINTED IN U S A

Correct air fuel ratio is provided by a "balance tube" in the air horn The balance tube should be checked each time the carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type, size or condition of air cleaner Should the cleaner become clogged, the capacity will be reduced but the air-fuel mixture ratio will not be changed

Excessive richness above 50 miles per hour may be caused by a clogged main vent tube After removal of rivet plug beneath float bowl with tool No T109-43, main vent tube can be removed and a new tube inserted with tool No T109-195 Care must be exercised in inserting new tube which must seat tightly Use new rivet to complete the installation

Pump Adjustment Remove air horn assembly, back out throttle adjustment screw, and place pump operating link in center hole of throttle shaft arm Place gauge T109-117S on edge of bowl cover so that lip of gauge extends over top of plunger shaft Turn knurled nut of gauge until lip contacts plunger shaft at closed and wide open throttle positions. Difference in readings obtained at closed and wide open throttle positions should be "26" (26/64" EV1, using 117-62 link), "20" (20/64" EV2, using 117-60 link) Adjustment can be made by bending horizontal portion of pump lifter link

Pump stroke adjustable for high or low temperature Set to long stroke for cold weather, short stroke for hot weather driving



De Soto "S11"—1946-1948—Nos. EV1-EV2

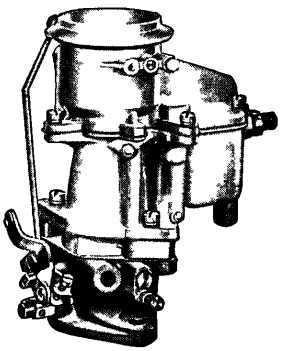
WHEN SERVICING, USE GASKET ASSORTMENT No. 164A, REPAIR PACKAGE No 1367C

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME
1-401S	Body flange assembly
1A-24	Flange gasket—for use with governor
1A-31	FLANGE GASKET—FOR USE WITHOUT GOVERNOR
2-87	Throttle valve
3-451S	Throttle shaft and arm assembly
4-429S	Throttle lever assembly (Sup by 4-546S)
4-546S	Throttle lever assembly
4A-101	Fast idle cam
6-432S	Air horn assembly
7-105S	Choke valve assembly
11B-17	Pump discharge passage plug
11B-35	Rivet passage plug
11B-41	Rivet passage plug
11B-79	Rivet passage plug (3)
11B-103	High speed passage rivet plug (Sup by 11B-220)
11B-108	IDLE PORT RIVET PLUG
11B-138	PUMP JET RIVET PLUG
11B-220	HIGH SPEED PASSAGE RIVET PLUG
14-284S	Choke lever and shaft assembly
14-352	Choke lever (loose)
20-26	Main metering jet gasket
20-31	Needle seat gasket
20-51	Step-up jet gasket
20-52	STEP-UP PISTON AND SWITCH GASKET
20-81	SWITCH PLUNGER GASKET
21-49S	Float and lever assembly
24-23	Float lever pin
25-82S	NEEDLE AND SEAT ASSEMBLY
30A-37	Idle adjustment screw
39-11	Valve attaching screw (4)
48-75	Pump jet (Sup by 48-145)
48-145	PUMP JET
49-158S	Valve plunger rod and plate assembly
61-84	Idle adjustment screw spring
61-134	Step-up piston spring (Sup by 61-135)
61-135	STEP-UP PISTON SPRING
61-145	PUMP SPRING
61-157	Plunger spring (2)
61-251	Switch piston spring
61-254	Dash-pot valve operating spring
61-267	Dash-pot arm spring (Sup by 61-372)
61-372	Dash-pot arm spring
61-403	Push rod sleeve spring
63-24	FLOAT PIN RETAINER
63-37	PUMP CYLINDER BALL RETAINER
63 46	Pump spring retainer
63-98	Piston locator (Use with 160-74S)
64-60S	PUMP PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49-120)
64-77S	Dash-pot plunger and rod assembly (Identify by shaft No 49-132)
86-15	Flange stud lock washer
86-16	Lock washer (switch) (4)
86-40	Lock washer (Use with 101-136)
101-56	Plate attaching screw (switch) (4)
101-136	Terminal connector screw (Use with 184-26)
101-145S	Body flange attaching screw and washer assembly (2)
101-146S	Air horn attaching screw and washer assembly (Sup by 101-150S)
101-150S	Air horn attaching screw and washer assembly (4)
101-159	Electro magnet assembly attaching screw
101-163	Throttle lever adjusting screw (Sup by 101-279)
101-164	Throttle lever clamp screw
101-279	Throttle adjusting screw
101-290	Terminal attaching screw
105A-13	Flange nut
105A-28	Throttle lever clamp nut
114-50	Dash pot pick-up arm
115-80	Fast idle rod
115-98U	Push rod assembly and spring unit (Consists of 61-403 and 115-79S, the entire step-down switch plunger assembly and spring)
116-13	PUMP INTAKE CHECK BALL
116-18	PUMP DISCHARGE BALL
117-60	PUMP LINK
117-62	Pump link (Sup by 117-60)
117-70	PUMP LIFTER LINK
117-103	Dash-pot lifter link
117-104	Dash-pot connector link
121-38	FLANGE TO INSULATOR GASKET
121-89	CARBURETER BODY TO INSULATOR GASKET
121-90	BODY GASKET
123-31S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY
136-71	Switch plunger washer
136-116	Terminal attaching screw washer
145-13	MAIN VENT TUBE
149-56S	STEP-UP JET ASSEMBLY
149-73S	Dash pot valve cage assembly (Sup by 149-102S)
149-102S	Dash pot valve cage assembly
150-111	Dash-pot pin
150A-13	PIN SPRING (2)
159-63S	Main metering jet assembly—2 sizes lean
159-87S	Main metering jet assembly—1 size lean
159-89S	MAIN METERING JET ASSEMBLY
160-46S	STEP-UP PISTON, PLATE AND ROD ASSEMBLY
160-74S	Switch piston assembly (Sup by 160-88S)
160-88S	Kick-down switch piston assembly
161-45	Switch terminal end plate
161-46	Switch push rod end plate
172-16	Cable clip
183 30	Insulator
184 26	Switch terminal block (Sup by 184-53S 101-290 and 136-116)
184-52	Terminal block (Sup by 184-53S)
184-53S	Terminal block and clip assembly
195-42U	Unitized package (Sup by 195-47U)
195-47U	Unitized package (for kick-down switch)
213-12S	Electro magnet and housing assembly

NOTE· Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used

MOTOR SERIAL NUMBERS
1001 and higher



DESOTO TAXI MODEL "S11" 1946-47

(EX3R can also be used)

B-B DOWN-DRAFT CARBURETER—**MODEL EL1**

CARBURETER SPECIFICATIONS

For De Soto Six Cylinder Engine 3 7/16 Inch Bore, 4 1/4 Inch Stroke

Dimensions Flange size 1 1/2 inch (38 1 mm)
Throttle bore 1 11/16 inch (42 86 mm)
Main venturi 1 11/32 inch (34 13 mm) I D

Float Setting Top of float 5/64 inch (1 98 mm) below top surface of carbureter body casting (Plus or minus 1/64 inch (397 mm)

Vents Outside none Inside balance vent 218 inch diameter (5 54 mm)

Gasoline Intake Needle Triangular horizontal No 44 (2 18 mm) drill in needle seat

Idle Orifice Tube Jet size 0276 nch (70 mm) drill
Idle passage air bleed (in body) size 063 inch (1 60 mm) diameter
Restriction in body—size 053 inch (1 35 mm) diameter

Idle Ports Upper port Keyhole type length 128 inch (3 25 mm) width 027 inch (69 mm) 063 inch (1 60 mm) d am eter hole at top
Top of port located 088 to 092 (2 24 to 2 34 mm) above top edge of valve
Lower port size 053 to 057 inch (1 35 to 1 45 mm) drill (For idle adjustment screw)

Set Idle Adjustment Screw 1/2 to 1 1/2 turns open For r cher mixture turn screw out Do not idle engine below 300 r p m or 6 miles per hour

Main Metering Screw Calibrated to flow 312 to 316 cc per minute (Do not gauge for size If in doubt replace with new part)

Main Vent Through diffuser (air bleed inside bowl) size 0315 inch (80 mm) drill

Main Vent Tube
Side holes 4—0354 inch diameter

Step up Jet Size 0413 inch (1 05 mm) drill

Accelerating Pump Type delayed action Stroke Summer setting (inner hole short stroke)
Intermediate setting (center hole)
Winter setting (outer hole long stroke)
Pump intake passage size 115 to 120 inch (2 93 to 3 05 mm) diameter in body Pump discharge passage restriction (under ball check) size 062 to 065 inch (1 57 to 1 65 mm) diameter in body Pump (discharge) jet size 0374 inch (95 mm) drill

Pump Adjustment 26/64 inch plunger travel full throttle pos tion medium stroke Use gauge T109 117S

Choke Offset butterfly type (with poppet valve) inter con nected to open throttle valve to fast idle position when choke is used

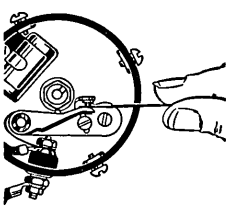
Vacuum Spark Port Slot (round end) type Size 040 by 110 inch (1 016 by 2 794 mm) Top of port 052 to 058 inch (1 32 to 1 47 mm) above top edge of valve

Motor Tune-Up—Be Accurate!

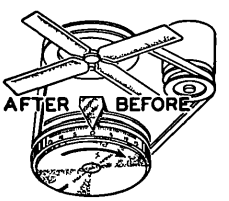
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



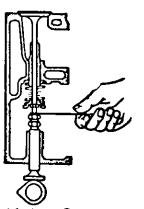
Spark Plug Gap 030"



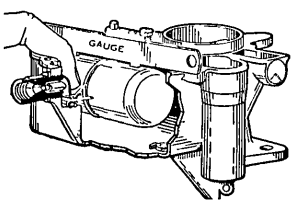
Breaker Point Setting 017"-019"



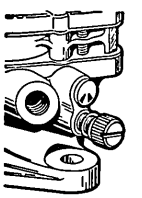
Ignition Timing Breaker Points to Open 2° B T D C



Valve Setting (Hot) Intake 008" Exhaust 010"



Float Setting (Use Gauge) 5/64 Inch



Idle Adjustment Screw Setting 1/2 to 1 1/2 Turns Open

CARBURETER ADJUSTMENTS

If carbureter loads up after considerable service check float level Wear on lip of float lever will raise float level Before adjusting float be sure float lever pin is firmly seated Reset float level by bending lip of float lever away from needle to raise level or bend lip toward needle to lower float level Bend vertical lip of float only

If motor stalls while idling set throttle lever adjusting screw so motor runs approximately 300 r p m Then set idle adjustment screw to specifications If these adjustments do not correct the trouble remove idle orifice tube and plug assembly Clean tube and passages with compressed air

If acceleration is not satisfactory remove pump jet and clean with compressed air However it is usually advisable to replace the pump jet as its cost is nominal All jets must be seated gasoline tight Poor acceleration may be due to damaged or worn plunger leather in accelerating pump sediment in pump cylinder or clogged intake ball check at bottom of pump cylinder and discharge ball check in dis charge passage If plunger is removed from cylinder use care in installing to avoid damage to plunger leather

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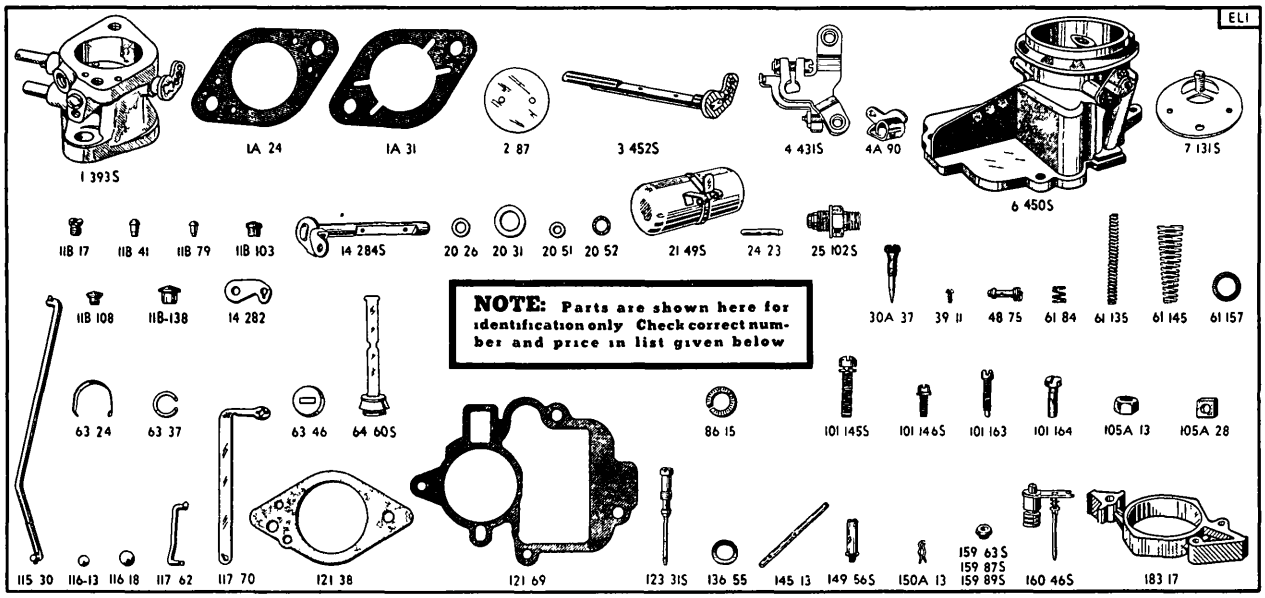
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Correct air fuel ratio is provided by a balance tube in the air horn The balance tube should be checked each time the carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type size or condition of air cleaner Should the cleaner become clogged the capacity will be reduced but the air fuel mixture ratio will not be changed

Excessive richness above 50 miles per hour may be caused by a clogged main vent tube After removal of rivet plug beneath float bowl with tool No T109 43 main vent tube can be removed and a new tube inserted with tool No T109-195 Care must be exercised in inserting new tube which must seat tightly Use new rivet to complete the installation

Pump Adjustment Remove air horn assembly back out throttle adjustment screw and place pump operating link in center hole of throttle shaft arm Place gauge T109-117S on edge of bowl cover so that lip of gauge extends over top of plunger shaft Turn knurled nut of gauge until lip contacts plunger shaft Difference in readings obtained at closed and wide open throttle positions should be 26 (26/64' plunger travel) Adjustment can be made by bending horizontal portion of pump lifter link

Pump stroke adjustable for high or low temperature Set to long stroke for cold weather short stroke for hot weather or high altitude driving



De Soto "S11"—1946-47—No. EL1

WHEN SERVICING, USE REPAIR PACKAGE No 1311C

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME
1-393S	Body flange assembly
1A 24	★Flange gasket—for use with governor
1A 31	FLANGE GASKET—FOR USE WITHOUT GOVERNOR
2 87	Throttle valve
3-452S	Throttle shaft and arm assembly
4-431S	Throttle lever assembly
4A-90	Fast idle cam
6-450S	Air horn assembly
7-105S	Choke valve assembly
7-131S	Choke valve assembly (Sup by 7-105S)
11B 17	Screw passage plug
11B 41	Rivet plug
11B 79	Rivet plug (2)
11B 103	Main vent tube rivet plug (Sup by 11B 220)
11B 108	IDLE PORT RIVET PLUG
11B 138	Pump jet rivet plug
11B 220	MAIN VENT TUBE RIVET PLUG
14 282	Choke lever (loose)
14 284S	Choke lever and shaft assembly
20 26	Main metering jet gasket
20 31	Needle seat gasket
20 51	Step-up jet gasket
20-52	STEP-UP PISTON GASKET
21 49S	Float and lever assembly
24 23	Float lever pin
25 102S	NEEDLE AND SEAT ASSEMBLY
30A 37	Idle adjustment screw
39-11	Valve attaching screw (4)
48 75	PUMP JET
61 84	Idle adjustment screw spring
61-135	STEP-UP PISTON SPRING
61-145	PUMP SPRING
61-157	Plunger spring

Part No	PART NAME
63-24	FLOAT LEVER PIN RETAINER
63-37	PUMP RETAINER RING
63-46	Spring retainer
64-60S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49-120)
86 15	Flange stud lock washer (2)
101-145S	Attaching screw and washer assembly (2)
101-146S	Attaching screw and washer assembly (Sup by 101-150S)
101-150S	Air horn attaching screw and washer assembly (4)
101-163	Throttle adjusting screw
101-164	Clamp screw
105A-13	Flange nut (2)
105A-28	Clamp nut
115-30	Fast idle rod
116-13	PUMP CYLINDER BALL
116-18	PUMP CHECK BALL
117-62	PUMP LIFTER LINK
117-70	PUMP LINK
121-38	BODY FLANGE GASKET (2)
121-69	BODY GASKET
123-31S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY
136-55	Spring washer
145-13	MAIN VENT TUBE
149-56S	STEP-UP JET ASSEMBLY
150A-13	PIN SPRING
159 63S	Main metering jet assembly—2 sizes lean
159-87S	Main metering jet assembly—1 size lean
159-89S	MAIN METERING JET ASSEMBLY—STANDARD
160 46S	STEP-UP PISTON, PLATE AND ROD ASSEMBLY
183-17	Insulator (Sup by 183-64)
183-64	Insulator

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

★This gasket to be installed between carbureter and governor when governor is installed Original flange gasket to remain between governor and manifold

CARBURETER
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DODGE
Models MD2, MD3
High Performance
1959

2790S
Front
Carbureter

2791S
Rear
Carbureter

Also used n
DeSoto Models
MS1, MS2 & MS3
High Performance

AFB Four-Bore Down-Draft Climatic® Control **Carbureters Nos. 2790S 2791S**

CARBURETER SPECIFICATIONS

For Dodge 8 Cylinder 383 Cu. In. Engine: Vacuum at Idle 19.5 Inches

Dimensions: Flange, four bore – 4 bolt type.
Throttle Bore, primary, 1-7/16 inch.
Secondary 1-9/16 inch I.D.
Primary venturi size, primary side, 7/16 inch, secondary side, 11/32 inch I.D.
Main venturi size, primary side 1-1/16 inch, secondary side, 1-1/4 inch I.D.

Vents: Inside (4) in air horn. Outside (5) in air horn.

Low Speed Circuit: (Primary side only)
Jet, size No. 68 (.031 inch) drill.
By-pass, size (.0492 inch) diameter.
Economizer, size No. 57 (.043 inch) drill.
Idle bleed, size No. 55 (.052 inch) drill.
Idle port, slot type, length .166 inch; width .030 inch.

Idle Port Opening: : (2790S) .094 to .100 inch; (2791S) .085 to .091 inch above top edge of valve with valve tightly closed.

Set Idle Adjustment Screw: 1/2 to 2 turns open. For richer mixture turn screw out. Do not idle engine below 650 R.P.M.
Transmission in neutral.

Main Nozzle. Installed permanently. DO NOT REMOVE.
Anti-percolator bleed, primary, (tube in venturi assembly) size No. 70 (.028 inch) drill.
Secondary, drilled hole in venturi assembly size No. 60 (.040 inch) drill.

Main Vent Tube: (In venturi assembly, primary side only). Side holes 11 – size No. 70 (.028 inch) drill, 1 – size No. 65 (.035 inch) drill.

Secondary Initial Discharge: (In venturi assembly). Pick up tube size No. 60 (.040 inch) drill. Air bleed size (.0275 inch) diameter. Discharge port size No. 53 (.0595 inch) drill.

Accelerating Pump: Discharge jet (twin) primary side only, size No. 68 (.031 inch) drill. Intake ball check seat (screw plug), size .115 to .120 inch diameter. Discharge needle seat size No. 50 (.070 inch) drill.

Choke: (2791S) Carter Climatic® Control set 1 point rich. Butterfly type – offset choke valve, primary side only. Choke heat suction hole, bushing between body and piston housing, size No. 48 (.076 inch) drill.

Vacuum Spark Port: (2791S) Round type, .060 inch diameter. Top of port .012 to .018 inch above upper edge of valve with valve tightly closed.

Motor Tune-Up – Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .017"	Ignition Timing Breaker Points to Open: 10° B. T. C. At Vibration Damper	Float Setting (2790S) 9/32" (Use Gauge T109-126) (2791S) 7/32" (Use Gauge T109-106)	Idle Adjustment Screw Setting 1/2 to 2 Turns Open 650 R. P. M.

NOTE: These cars are equipped with Hydraulic Valve Lifters – NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

FLOAT ALIGNMENT: Side of floats parallel to edg of casting. Minimum clearance between lever and air horn lugs without binding. To adjust, bend float lever.

FLOAT LEVEL: (2790S) 9/32 inch (gauge T109-126). (2791S) 7/32 inch (gauge T109-106) between top of floats (at outer end) and air horn gasket. To adjust, bend float lever.

FLOAT DROP: 23/32 inch between top of floats (at out r end) and air horn gasket. To adjust, b nd stop tabs on float bracket.

PUMP: 7/16 inch from the top of the bowl cover to th top of the plunger shaft with throttle connector rod in center hole (medium stroke) of pump arm. To adjust, band throttle connector rod.

CHOKE PISTON LEVER ADJUSTMENT: (2791S only). 1/8 inch (gauge T109-36) between choke lever and stop in piston housing with choke valve closed. To adjust, bend choke connector rod.

FAST IDLE LINKAGE ADJUSTMENT: (2791S only). With choke valve tightly closed and lug on out r choke shaft lever contacting stop on inner chok shaft lever align center of fast idl screw with index mark on cam. To adjust, bend fast idle connector rod.

FAST IDLE THROTTLE VALVE CLEARANCE! (2791S only) .012 inch (gauge T109-200) between lower edge of valve and bore with adjusting screw on index mark of cam.

FAST IDLE ON CAR: (2791S only) 1400 R.P.M. hot engine with fast idle screw on index mark of cam.

UNLOADER: (2791S only) 1/4 inch (gauge T109-31) betw en upper edge of choke valve and inner wall of air horn. To adjust, bend unloader lip on throttle lever.

SECONDARY THROTTLE LEVER ADJUSTMENT: 1. Block choke valve wide open. 2. With 23/64 inch between lower edge of primary valve and bore (opposite idle port) sec ondary valves should just start to open. To adjust, bend throttle operating rod. NOTE: At wide open throttle primary and secondary valves will reach full vertical position. 3. With primary and secondary valves in tightly closed position there should be . .010" to .030" (gauge T109-29) between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on secondary lever.

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: (2791S only) 1. Crack throttle valves and manually open and close the choke valve. Tang on secondary throttle lever should freely engage in notch of lock out dog. To adjust, bend tang on secondary throttle lever. 2. With lock-out dog held tight against stop on flange casting and secondary throttle valves partially open there should be a .020 inch (gauge T109-29) between tang on secondary throttle lever and lock-out arm. To adjust, bend arm at slot on lock-out dog. NOTE: Fast idle cam may be removed to facilitate gauging and adjusting.

IDLE SPEED AND MIXTURE ADJUSTMENT (Normal Engine Temp): In making the idle adjustment on the engine, the air adjustment screw is used to adjust idle speed in a similar manner as the throttle speed screw used previously. Turning the air adjustment screw outward increases engine speeds, but also leans the mixture supplied to the manifold which must be compensated for by adjustment of the idle mixture adjusting screws.

TOOLS REQUIRED FOR SERVICING CARBURETERS:

T109-29	.020" – .030" wire gauge	T109-106	7/32" Float gauge
T109-31	1/4 Unloader gauge	T109-126	9/32" float gauge
T109-36	1/8" gauge	T109-200	.012" wire gauge
T109-41	Bending tool	T109-213	Bending tool

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Dodge – 1959 – Carbureters Nos. 2790S-2791S

WHEN SERVICING, USE GASKET ASSORTMENT No. 319 (2790S) : No. 320 (2791S)

Part No.	PART NAME	
1A-135	–Flange gasket	
2-197	Secondary throttle valve	(2)
2-223	Primary throttle valve	(2)
3-1133	Secondary throttle shaft (2790S)	
3-1135S	Secondary throttle shaft and dog assembly (2791S)	
3-1171S	Auxiliary throttle shaft, valve and weight assembly	
3-1173S	Primary throttle shaft and lever assembly (2790S)	
3-1174S	Primary throttle shaft and lever assembly (2791S)	
4A-175	Primary throttle shaft dog	
6-1344S	Air horn assembly (2790S)	
6-1362S	Air horn assembly (2791S)	
7-218	Choke valve (2791S)	
11B-69	Rivet plug	(2)
11B-79	Rivet plug	(2)
11B-176	Idle port rivet plug	(2)
11B-363	Pump intake screw plug	
11B-366	Nozzle well plug	(4)
11B-372	Level sight plug	(2)
11B-385	Fuel inlet passage plug	
14-512	Outside choke shaft lever (2791S)	
14-550	Inside choke shaft lever (2792S)	
14-609S	Choke piston lever, link and pin and assembly (2791S)	
14-612S	Choke shaft and lever assembly (piston housing) (2791S)	
14-614S	Choke lever and shaft assembly (2791S)	
15-58S	Strainer nut assembly (2791S)	
15-62S	Strainer nut assembly (2790S)	
16-26	Step-up rod .0675" x .056" (Standard) (2791S)	(2)
16-27	Step-up rod .0685"x0585" (1 size lean) (2791S)	(2)
16-40	Step-up rod .0675" x .064" (Standard) (2790S)	(2)
16-81	–Step-up rod .070"x.067" (2 sizes lean) (2790S)	(2)
16-109	–Step-up rod .0685x.066" (1 size lean) (2790S)	(2)
16-110	–Step-up rod .078"x.060" (2 sizes lean) (2791S)	(2)
17-51	Pump discharge check needle	
20-35	Strainer nut gasket (2790S)	
20-43	Piston housing gasket (2791S)	
20-126	Needle seat gasket	(2)
20-127	Strainer nut gasket (2791S)	
21-179S	Float and lever assembly	(2)
24-29	Float lever pin	(2)
25-348S	Needle and seat assembly (.076")	(2)
30-78	Fu l inlet strainer	
30A-81	Idle adjustment screw	(2)
30A-83	Idle air adjustment screw	
38A-107	Pump intake check ball seat	
39-11	Choke valve attaching screw (2791S)	(2)

Part No.	PART NAME	
47-30	Piston housing welsh plug (2791S)	
47-33	Venturi welsh plug	(4)
47-34	Spark port welsh plug (2791S)	
48-258S	Pump jet and housing assembly	
53A-419	Secondary throttle operating lever	
53A-440S	Lockout arm and collar assembly (2791S)	
58-221S	Secondary venturi assembly (choke side)	
58-222S	Secondary venturi assembly (pump side)	
58-324S	–Primary venturi assembly (choke side)	
58-325S	–Primary venturi assembly (pump side)	
61-84	Idle adjusting screw spring	(2)
61-389	Pump spring	
61-484	Vacuum piston spring	(2)
61-585	Step-up rod retaining spring	(2)
61-599	Idle air adjustment screw spring	
61-618	Secondary throttle return spring	
61-623	Throttle flex spring	
63-144	Delayer plate retainer ring (2791S)	
63-176	Pump spring retainer	
63-225	Coil housing retainer (2791S)	
63-229	Heat tube retainer (2791S)	
64-215S	Pump plunger and rod assembly	
65-43	Step-up piston cover plate	(2)
101-65	Choke shaft lever attaching screw (2791S)	(2)
101-74	Throttle shaft lever attaching screw	(2)
101-152S	Air horn attaching screw and washer assembly	
101-184S	Pump jet housing attaching screw and washer assembly	(2)
101-362S	Air horn attaching screw and washer assembly	(8)
101-379S	Secondary venturi attaching screw and washer assembly	(4)
101-419	Secondary throttle valve attaching screw	(4)
101-420	Primary throttle valve attaching screw	(4)
101-421	Pump arm attaching screw	
101-426	Coil housing attaching screw (2791S)	(3)
101-429	Fast idle adjustment screw (2791S)	
101-430	Fast idle cam attaching screw (2791S)	
101-431S	Air horn attaching screw and washer assembly	
101-435S	Step-up piston cover plate attaching screw and washer assembly	(2)
101-436	Piston housing attaching screw (2791S)	(3)

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Part No.	PART NAME	
101-442S	Primary venturi attaching scr w and washer assembly	(4)
103-12	Lead shot (.130")	(2)
103-14	L ad shot (.180")	
103-16	Lead shot (.200") (2790S(1), (2791S (2)	
111-76	Pump arm	
114-146	Primary throttle shaft arm (outer)	
114-147	Primary throttle shaft arm (inner)	
115-284	Fast idle connector rod (2791S)	
115-285	Choke connector rod (2791S)	
115-308	Throttle operating rod	
115-323	–Throttle connector rod	
116-13	Pump intake check ball	
117-174	Pump connector link	
120-159	Primary metering jet (.089")	(2)
120-174	Secondary metering jet (.055") (2791S)	(2)
120-185	Secondary metering jet (.067") (2790S)	(2)
121-78	Coil housing gasket (2791S)	
121-287	Pump jet housing gasket	
121-291	Heat tube cap gasket (2791S)	
121-292	Air horn gask t	
121-293	Secondary venturi cluster gasket	(2)
121-302	Primary venturi cluster gasket	(2)
121-312	Air cleaner gasket	
136-34	Choke piston lever retaining washer (2791S)	(2)
136-159	Primary throttle shaft washer	
136-160	Secondary throttle shaft washer	
150-190	Choke piston pin (2791S)	
150A-10	Pin spring (2790S (3), (2791S (6)	
150A-21	Pin spring	
160-137	–Choke piston (2791S)	
160-153	Step-up piston	(2)
170-577S	Piston housing and plug assembly (2791S)	
170AZ-538S	Thermostatic coil and housing assembly (2791S)	
172-22	Throttle connector rod retainer	
181-254	Fast idle cam (2791S)	
184-85	Choke heat tube cap (2791S)	
186-65	Choke baffle plate (2791S)	
186-70	Fuel bowl baffle	(2)

–Parts so marked are new and listed for the first time.

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

DODGE

MODEL MD2, D500

1959

(POLICE SPECIAL)

AFB Four-Bore Down-Draft Climatic® Control Carbureter No. 2854S

CARBURETER SPECIFICATIONS

For Dodge 8 Cylinder 383 Cu. In Engine: Vacuum at Idle 19.5 Inches

Dimensions: Flange four bore—4 bolt type
Throttle bore primary 1 7/16 inch secondary 1-9/16 inch
Primary venturi size primary side 7/16 inch secondary side 11/32 inch I D
Main venturi, primary, 1 3/16 inch secondary, 1 5/16 inch

Vents: Inside (4) in air horn Outside (5) in air horn

Low Speed Circuit: (Primary side only)
Jet size No 66 (.033 inch) drill
By pass size (.0492 inch) diameter
Economizer size (.0452 inch) diameter
Idle bleed size (.0492 inch) diameter
Idle port slot type length .198 inch width .030 inch

Idle Port Opening: .142 to .148 inch above top edge of valve with valve tightly closed

Set Idle Adjustment Screw: 1/2 to 2 turns open For richer mixture turn screw out Do not idle engine below 500 R P M Transmission in neutral

Main Nozzle: Install permanently DO NOT REMOVE Antipercolator bleed, primary (tube in venturi assembly), size No 68 (.031 inch) drill Secondary (drilled hole in venturi assembly) size No 60 (.040 inch) drill

Main Vent Tube: (In venturi assembly) Side holes primary side 1—size No 70 (.028 inch) 1—size No 65 (.035 inch) drill, secondary side 2—size No 57 (.043 inch) 1—size No 70 (.028 inch) drill

Accelerating Pump. Discharge jet (twin) primary side only size No 68 (.031 inch) drill Intake ball check seat (screw plug) size .115 to .120 inch diameter Discharge needle seat size No 50 (.070 inch) drill

Choke: Carter Climatic® Control Cross Over type set on index Butterfly type offset valve primary side only Choke heat suction hole in air horn size No 44 (.086 inch) drill

Vacuum Spark Port: Slot type (round end) .045 x .110 inch Top of port .026 to .034 inch above top edge of valve with valve tightly closed

Motor Tune-Up — Be Accurate!

CAUTION Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open	Float Setting	Idle Adjustment Screw Setting
.035"	.017"	10° B. T. C. At Vibration Damper	(See Adjustments)	1/2 to 2 Turns Open 500 R. P. M. In Neutral

NOTE These cars are equipped with Hydraulic Valve Lifters — NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3735

FLOAT ALIGNMENT: Side of floats parallel to edge of casting. Minimum clearance between lever and air horn lugs without binding. To adjust, bend float lever.

FLOAT LEVEL: 7/32 inch (gauge T109-106) plus or minus 1/64 inch, between top of floats (at outer end) and air horn gasket. To adjust, bend float lever.

FLOAT DROP: 23/32 inch plus or minus 1/16 inch between top of floats (at outer end) and air horn gasket. To adjust, bend stop tabs on float brackets.

PUMP: 7/16 inch from the top of the bowl cover to the top of the plunger shaft with throttle connector rod in center hole (medium stroke) of pump arm. To adjust, bend throttle connector rod.

FAST IDLE LINKAGE ADJUSTMENT: With choke valve tightly closed and lug on outer choke shaft lever contacting stop on inner choke shaft lever align center of fast idle screw with index mark on cam. To adjust, bend fast idle connector rod.

FAST IDLE THROTTLE VALVE CLEARANCE: .015 inch (gauge T109-44) between lower edge of valve and bore with adjusting screw on index mark of cam.

FAST IDLE ON CAR: 1400 R. P. M. hot engine with fast idle screw on index mark of cam.

UNLOADER: 1/4 inch (gauge T109-31) between upper edge of choke valve and inner wall of air horn. To adjust, bend unloader lip on throttle lever.

SECONDARY THROTTLE LEVER ADJUSTMENT: 1. Block choke valve wide open. 2. With 3/8 inch between lower edge of primary valve and bore (opposite idle port) secondary valves should just start to open. To adjust, bend throttle operating rod. NOTE: At wide open throttle primary and secondary valves will reach full vertical position. 3. With primary and secondary throttle valves in tightly closed position there should be .010" to .030" (gauge T109-29) between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on secondary lever.

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: Crack throttle valves and manually open and close the choke valve. Tang on secondary throttle lever should freely engage in notch of lock-out dog. To adjust, bend tang on secondary throttle lever.

CHOKE ADJUSTMENT (CROSS OVER TYPE) SEE FORM 3661: 1. Loosen mounting post lock nut and turn mounting post with screw driver until index mark on disk is positioned as listed on carbureter specification page. Hold in this position with screw driver and tighten lock nut. NOTE: Screw driver may be held in vise so that one hand may be used to support housing while tightening nut. 2. After adjustment is completed and coil housing and rod assembly and carbureter is installed on engine lift cover disk and open and close choke valve manually to see if connector rod clears sides of hole in housing cover. If rod does not clear hole in housing cover without binding replace with a new unit since connector rod cannot be bent without affecting calibration.

TOOLS REQUIRED FOR SERVICING CARBURETERS:

T109-29	.020" Wire gauge	T109-44	.015" Wire gauge
T109-31	1/4" Unloader gauge	T109-106	7/32" Float gauge
T109-41	Bending tool	T109-213	Bending tool

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Dodge — 1959 — Carbureter No. 2854S

WHEN SERVICING, USE GASKET ASSORTMENT No. 326

Part No.	PART NAME	
1A-132	Flange gasket	
2-185	Primary throttle valve	(2)
2-197	Secondary throttle valve	(2)
3-1140S	Secondary throttle shaft and dog assembly	
3-1165S	Primary throttle shaft and lever assembly	
4A-175	Primary throttle shaft dog	
6-1392S	Air horn assembly	
7-229S	Choke valve and bracket assembly	
11B-69	Rivet plug	(2)
11B-79	Rivet plug	(4)
11B-176	Idle port rivet plug	(2)
11B-363	Pump intake screw plug	
11B-366	Nozzle well lead plug	(4)
11B-385	Fuel passage rivet plug	
14-550	Inside choke shaft lever	
14-613	Outside choke shaft lever	
14-616S	Choke lever and shaft assembly	
15-58S	Fuel inlet assembly	
16-25	Step-up rod .066" x 054"—1 size lean	(2)
16-26	Step-up rod .0675" x .056"—2 sizes lean	(2)
16-29	Step-up rod .0645" x .052"—Standard	(2)
17-51	Pump discharge check needle	
20-126	Needle seat gasket	(2)
20-127	Fuel inlet gasket	
21-179S	Float and lever assembly	(2)
24-29	Float lever pin	(2)
25-343S	Needle and seat assembly (.0935")	(2)
30-78	Fuel inlet strainer	
30A-81	Idle adjustment screw	(2)
38A-107	Pump intake check ball seat	
39-11	Choke valve attaching screw	(2)
47-30	Choke piston welsh plug	
47-33	Venturi welsh plug	(4)
47-34	Spark port welsh plug	
48-258S	Pump jet and housing assembly	
53A-412	Lockout dog	
53A-423	Secondary throttle operating lever	
58-232S	Secondary venturi assembly (opposite pump)	
58-233S	Secondary venturi assembly (pump side)	
58-322S	Primary venturi assembly (opposite pump)	
58-323S	Primary venturi assembly (pump side)	

Part No.	PART NAME	
61-84	Idle adjusting screw spring	(2)
61-171	Pump spring (lower)	
61-291	Throttle lever adjusting screw spring	
61-585	Step-up rod retaining spring	(2)
61-604	Vacuum piston spring	(2)
61-618	Secondary throttle return spring	
61-623	Throttle flex spring	
64-212S	Pump plunger, rod and spring assembly	
65-43	Step-up piston cover plate	(2)
101-65	Choke shaft lever attaching screw	
101-74	Throttle shaft lever attaching screw	(2)
101-120	Fast idle adjustment screw	
101-152S	Air horn attaching screw and washer assembly	
101-184S	Pump jet housing attaching screw and washer assembly	(2)
101-323	Fast idle cam attaching screw	
101-362S	Air horn attaching screw and washer assembly	(8)
101-379S	Secondary venturi attaching screw and washer assembly	(4)
101-419	Secondary throttle valve attaching screw	(4)
101-420	Primary throttle valve attaching screw	(4)
101-421	Pump arm attaching screw	
101-431S	Air horn attaching screw and washer assembly	
101-435S	Step-up piston cover plate attaching screw and washer assembly	(2)
101-441	Throttle lever adjusting screw	
101-442S	Primary venturi attaching screw and washer assembly	(4)
103-12	Lead shot (.130")	(2)
103-14	Lead shot (.180")	
103-16	Lead shot (.200")	
106-19	Cotter pin	
111-76	Pump arm	
114-144	Primary throttle shaft arm (outer)	
114-152	Primary throttle shaft arm (inner)	
115-308	Throttle operating rod	
115-313	Choke connector rod	
115-322	Throttle connector rod	
116-13	Pump intake check ball	
117-174	Pump connector link	
120-155	Primary metering jet (.091")	(2)
120-175	Secondary metering jet (.073")	(2)

Part No.	PART NAME	
121-287	Pump jet housing gasket	
121-288	Secondary venturi cluster gasket	(2)
121-302	Primary venturi cluster gasket	(2)
121-309	Air horn gasket	
121-312	Air cleaner gasket	
136-34	Choke shaft washer	
136-159	Primary throttle shaft washer	
136-160	Secondary throttle shaft washer	
136-174	Throttle lever adjusting screw washer	

Part No.	PART NAME	
150A-10	Pin spring	(4)
150A-21	Pin spring	
160-153	Step-up piston	(2)
160-194S	Choke piston and link assembly (Use 160-204S)	
160-204S	Choke piston and link assembly	
170AU-515S	Thermostatic coil, housing and rod assembly	
172-22	Throttle connector rod retainer	
181-269S	Fast idle cam and collar assembly	
186-70	Fuel bowl baffle	(2)

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

CARBURETER
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Form 3771
October, 1958

CARTER CARBURETOR

DIVISION OF acf INDUSTRIES INCORPORATED
ST LOUIS, MO., U. S. A.

File Under Dodge

CARTER MODEL BBD CARBURETER FOR DODGE (SERVICE ADJUSTMENT PROCEDURE)

NOTE: The parts and specification pages referred to are catalog pages. These pages can be obtained from Carter Carburetor, Catalog Department, St. Louis (7), Missouri. Specify the carbureter number found on the brass identification tag, when requesting specification pages.

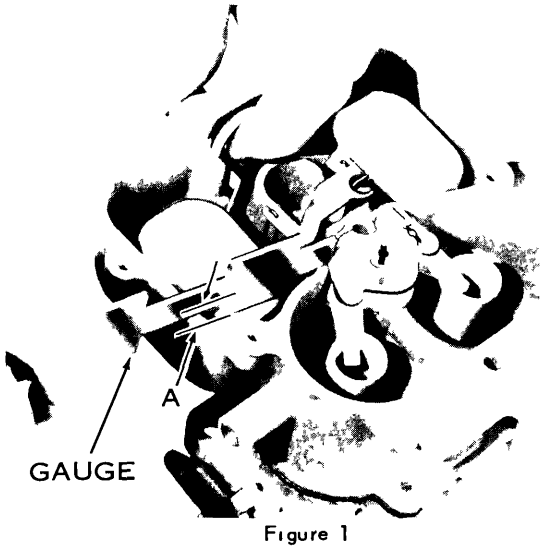


Figure 1

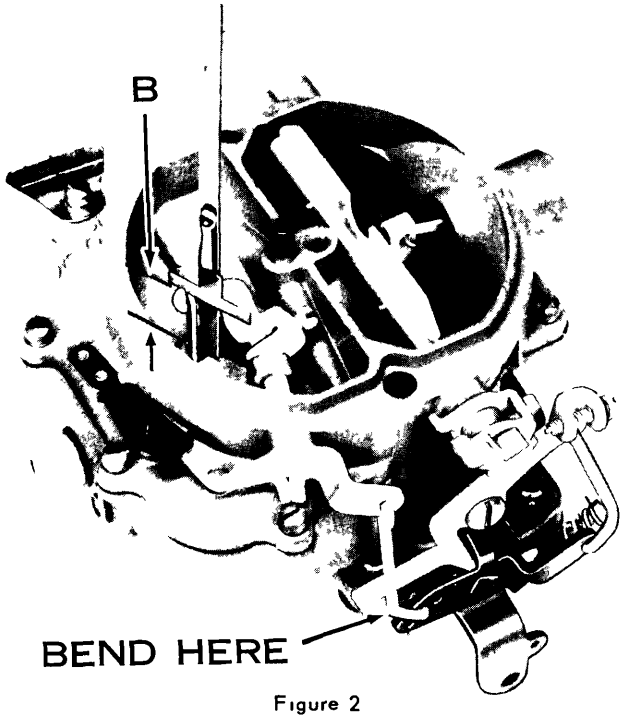


Figure 2

PUMP ADJUSTMENT (Fig. 2):

1. Back out throttle adjustment screw and open choke valve so that throttle valves seat in bores of carbureter.
2. Install throttle connector rod in the hole in the throttle lever specified on carbureter specification page.
3. The distance (B) from the top of the bowl cover to the top of the plunger shaft should be as specified on carbureter specification page.
4. Adjust by bending pump connector rod. (Use bending tool T109-213)

FLOAT ADJUSTMENT (Fig. 1):

This adjustment must be made with the bowl cover gasket removed. Hold the lip on float arm against the seated intake needle, making sure the float pin is at the bottom of its guide slots. The distance (A) from the top surface of the body casting to the top of each float (at free end) should be as listed on carburetter specification page. If one float is lower than the other, equalize by bending the float arm. If both floats require the same correction, adjust by bending lip on float arm. The floats must not rub anywhere against the inner walls of the bowl. If necessary, bend float arms slightly to provide clearance on all sides of floats.

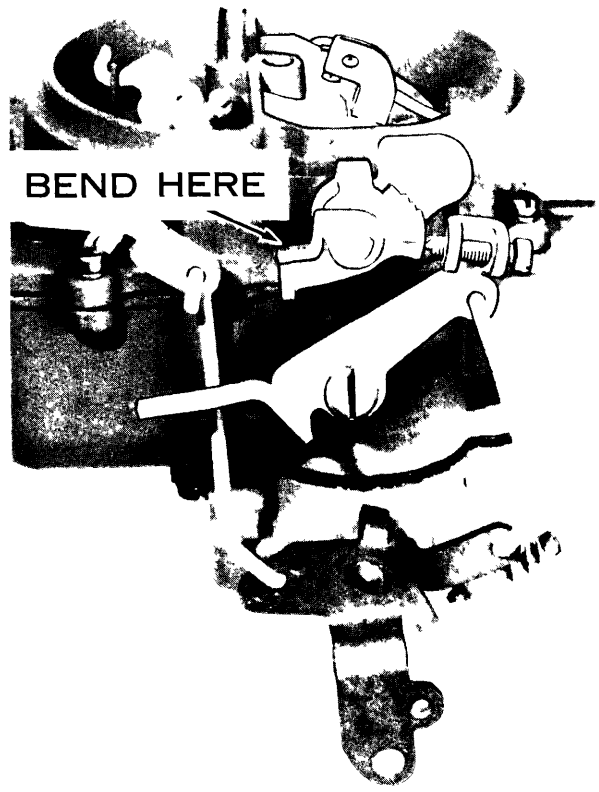


Figure 3

FAST IDLE LINKAGE ADJUSTMENT (Fig. 3):

With choke valve tightly closed and lug on fast idle cam contacting lip on choke shaft lever align center of fast idle screw with index mark on cam. To adjust bend lip on choke shaft lever (use tool T109-22).

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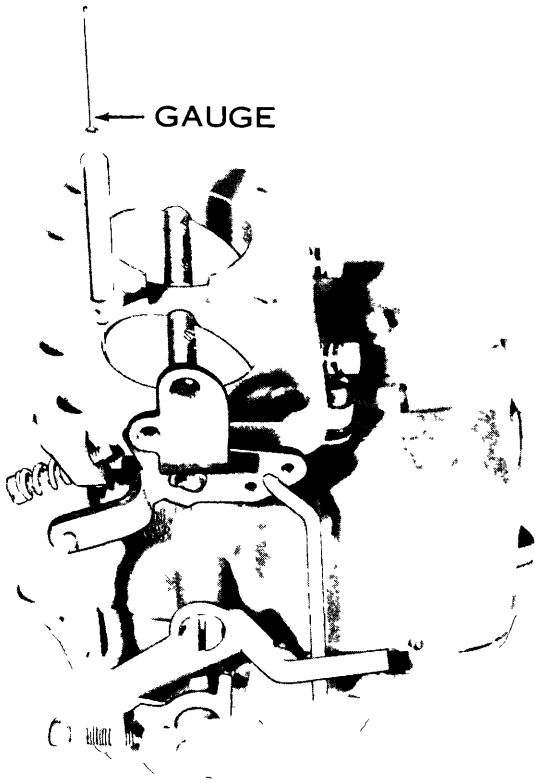


Figure 4

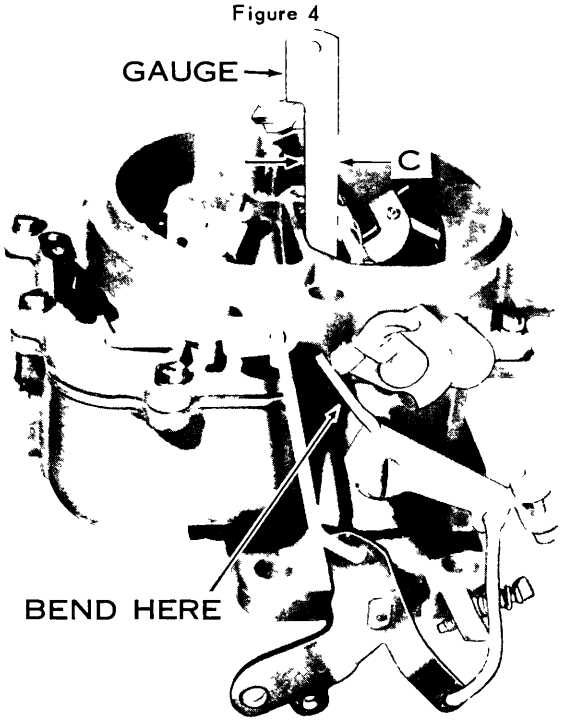


Figure 5

UNLOADER ADJUSTMENT (Fig. 5):

1. Hold throttle valves wide open.
2. Close choke valve as far as possible without forcing.
3. Clearance (C) between top edge of choke valve and inn r wall of air horn sh uld be as listed on carbureter specification page.
4. Adjust by bending unl ad r fing r on fast idle arm. (Use tool T109-22).

FAST IDLE THROTTLE VALVE CLEARANCE ADJUSTMENT (Fig. 4):

1. Be sure choke valve is closed.
2. Adjust fast idle adjusting screw against index mark of cam (revolve cam if necessary) until the clearance between throttle valve (side opposite port) and bore is as listed on carbureter specification page.

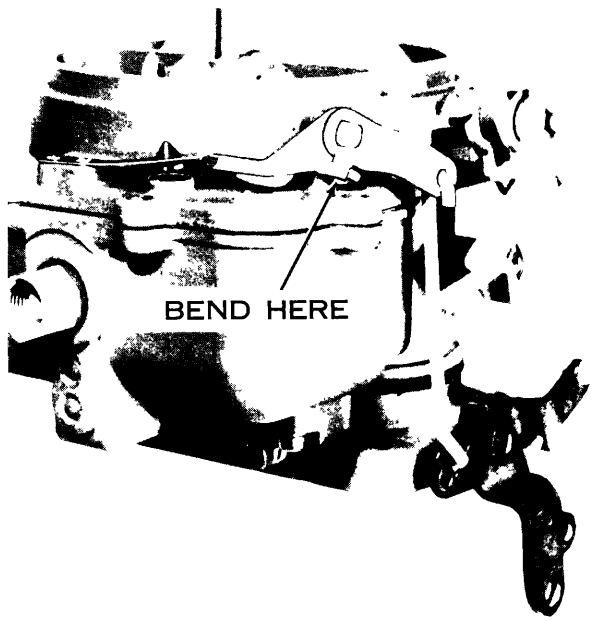


Figure 6

BOWL VAPOR VENT ADJUSTMENT (Fig. 6):

With throttle valve tightly closed the clearance between the heel of the rubber grommet and its seat on the bowl cover should be as listed on carbureter specification page. To adjust, bend lip on vapor vent arm (Use tool T109-22)

CAUTION:

When servicing carbureter use elevating legs (T109-289U) to prevent damaging throttle valves.

DODGE--1959
MODELS
MD3-L & MD3-M

Use 2871S to replace 2870S

(Also used on Canadian Dodge, Model MD3)

BBD Dual Down-Draft Climatic® Control Carbureter No. 2870S

CARBURETER SPECIFICATIONS

For Dodge 8 Cylinder 360 Cu. In. Engine: Vacuum at Idle 19.5 Inches

Dimensions: Flange dual, 4 bolt type Throttle bore, 1-9/16 inch I D Primary venturi, 15/32 inch I D Main venturi 1-5/16 inch I D

Vent: Inside in air horn Outside, none

Low Speed Circuit: Jet, in venturi assembly, size (0295 inch) diameter Idle bleed, in venturi cluster screw, size (059 inch) diameter Idle restriction in venturi cluster screw, size (051 inch) diameter Venturi idle bleed in body size (040 inch) diameter Idle port slot type, length 198 inch width 030 inch

Idle Port Opening: 140 to 144 inch above upper edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw): Size 055 inch diameter

Set Idle Adjustment Screw: 1/4 to 1 1/4 turns open For richer mixture turn screw out With gear shift in neutral position, idle engine at 500 R P M

Main Nozzle: Nozzle is installed permanently DO NOT REMOVE

Main Vent Tube: Side holes 2—size 0292 inch, 1—size 038 inch diameter

Accelerating Pump: Pump discharge jets (2—in venturi cluster), size 0275 inch diameter Intake ball check seat, size 130 to 140 inch diameter Discharge ball check seat, size 110 to 120 inch diameter

Choke: Carter Climatic® cross over type, set at index Butterfly type offset valve Choke heat suction hole in air horn size (0905 inch) diameter

Vacuum Spark Port: Horizontal round end type 030 by 090 inch Top of port to be 015 to 025 inch above upper edge of valve with valve closed tight.

Motor Tune-Up — Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .017" Canadian MD3 .020"	Ignition Timing Breaker Points to Open: 10° B. T. C. At Vibration Damper	Float Setting 5/16 Inch (Use Gauge T109-280)	Idle Adjustment Screw Setting 1/4 to 1 1/4 Turns Open Idle Engine at 500 R. P. M. In Neutral

NOTE: These cars are equipped with Hydraulic Valve Lifters — NO ADJUSTMENT.

CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3771

Float Level: 5/16 inch (gauge T109-280) between top of each float ridge (at free end of float) and top surface of body casting To adjust bend lip on float arm

Pump: 1 inch from top of the bowl cover to the top of the plunger shaft Install throttle connector rod in center hole medium stroke) of throttle lever To adjust, bend throttle connector rod When throttle connector rod is installed in a different hole for seasonal operation the bowl vapor vent must be readjusted

Fast Idle Linkage Adjustment: With choke valve tightly closed and lug on fast idle cam contacting lip on choke shaft lever align center of fast idle screw with index mark on cam To adjust bend lip on choke shaft lever

Fast Idle Throttle Valve Clearance: 018 inch (gauge T109 44) between lower edge of valve and bore with adjusting screw on index mark of cam

Fast Idle on Car: 1400 R P M hot engine, with fast idle screw on index mark of cam

Unloader: 15/64 inch (gauge T109-32) between top edge of choke valve and inner wall of air horn with throttle valve wide open To adjust bend unloader finger on fast idle arm

Bowl Vapor Vent Adjustment: 062" to 093" (gauge T109-234) between the heel of the rubber grommet and its seat on the bowl cover with throttle valve seated To adjust, bend lip on vapor vent arm If the pump has been changed to the long or short stroke readjust the bowl vapor vent

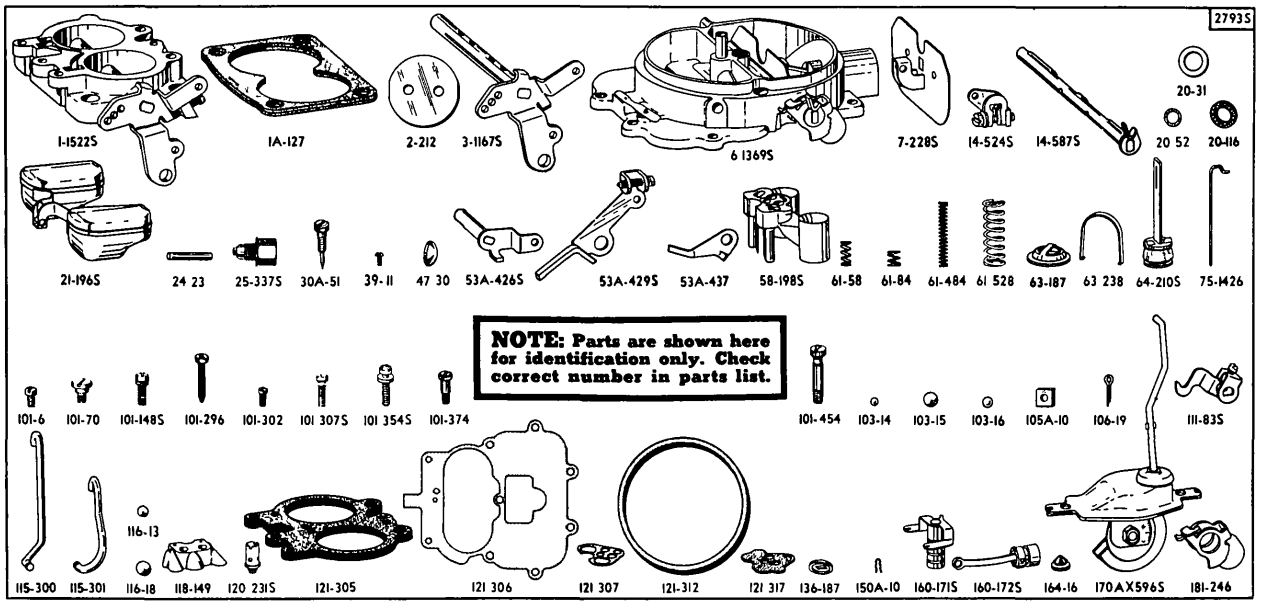
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Choke Adjustment (Cross Over Type) See Form 3661: 1 Loosen mounting post lock nut and turn mounting post with screwdriver until index mark on disk is positioned as listed on carbureter specification page. Hold in this position with screw driver and tighten lock nut. NOTE: Screw driver may be held in vise so that one hand may be used to support housing while tightening nut.

2 After adjustment is completed and coil housing and rod assembly and carbureter is installed on engine lift cover disk and open and close choke valve manually to see if connector rod clears sides of hole in housing cover. If rod does not clear hole in housing cover without binding replace with a new unit since connector rod cannot be bent without affecting calibration.



Dodge — 1959 — Carbureter No. 2870S

WHEN SERVICING, USE GASKET ASSORTMENT No. 325; RE-CARBURETION KIT No. 1976N

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF RE-CARBURETION KIT

Part No.	PART NAME	
1-1590S	—Body flange assembly	
1A-127	FLANGE GASKET	
2-212	Throttle valve	(2)
3-1231S	—Throttle shaft and lever assembly	
6-1369S	Air horn assembly	
7-228S	Choke valve and bracket assembly	
14-524S	Choke lever assembly	
14-587S	Choke lever and shaft assembly	
20-31	Needle seat gasket	
20-52	STEP-UP PISTON GASKET	
20-116	Main metering jet gasket	(2)
21-196S	Float and lever assembly	
24-23	Float lever pin	
25-337S	NEEDLE AND SEAT ASSEMBLY (.111")	
30A-51	Idle adjustment screw	(2)
39-11	Choke valve attaching screw	(2)
47-30	Welsh plug	
53A-426S	Pump arm and countershaft assembly	
53A-429S	Fast idle arm and screw assembly	
53A-437	Loose lever	
58-198S	Venturi cluster tube and nozzle assembly	
61-58	Throttle adjusting screw spring	
61-84	Idle adjustment screw spring	(2)
61-484	STEP-UP PISTON SPRING	
61-528	Pump spring	
63-187	Intake check ball retainer	
63-238	Float lever pin retainer	
64-210S	PUMP PLUNGER AND ROD ASSEMBLY	
75-1426	Step-up rod (.031")	(2)
101-6	Pump arm screw	
101-70	Fast idle arm attaching screw	
101-148S	Air horn attaching screw and washer assembly	(8)
101-296	Throttle and fast idle adjusting screw	(2)
101-302	Throttle valve attaching screw	(4)
101-307S	Body flange attaching screw and washer assembly	(4)
101-354S	Choke lever clamp screw and washer assembly	
101-374	Step-up piston plate screw	
101-454	Venturi cluster screw	(2)
103-14	Lead shot	
103-15	Lead shot	(2)
103-16	Lead shot	(2)
105A-10	Choke lever clamp screw nut	
106-19	Cotter pin	
111-83S	Pump arm and screw assembly	
115-300	Throttle connector rod	
115-301	Fast idle connector rod	
116-13	Pump discharge check ball	
116-18	Pump intake check ball	
118-149	Venturi cover	
120-199S	Main metering jet assembly (448 to 458cc)— 1 size lean	(2)
120-205S	Main metering jet assembly (426 to 434cc)— 2 sizes lean	(2)
120-232S	MAIN METERING JET ASSEMBLY (470 to 480 cc) — STANDARD	(2)
121-305	BODY FLANGE GASKET	
121-306	BODY GASKET	
121-307	VENTURI HOUSING GASKET	
121-312	AIR CLEANER GASKET	
121-317	VENTURI COVER GASKET	
136-187	Pump spring retainer washer	
150A-10	Pin spring	(2)
160-171S	Step-up piston and plate assembly	
160-172S	Choke piston and link assembly	
164-16	Grommet seal	
170AX-596S	Thermostatic coil, housing and rod assembly	
181-246	Fast idle cam	

—Parts so marked are new and listed for the first time.

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

CARTER CARBURETOR
DIVISION OF ACF INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

DODGE

MODEL MD3-H

1959

(Also used on Canadian Dodge, Model MD3-H)

AFB Four-Bore Down-Draft Climatic® Control Carbureter No. 2787S

CARBURETER SPECIFICATIONS

For Dodge 8 Cylinder 360 Cu. In. Engine: Vacuum at Idle 19.5 Inches

Dimensions Flange four bore—4 bolt type
Throttle bore 1 7/16 inch
Primary venturi size primary side, 7/16 inch, secondary side, 11/32 inch I D
Main venturi size, 1-3/16 inch

Vents: Inside (4) in air horn Oustide (5) in air horn

Low Speed Circuit: (Primary side only)
Jet size No 66 (033 inch) drill
By pass size (0492 inch) diameter
Economizer size (0452 inch) diameter
Idle bleed size (0492 inch) diameter
Idle port slot type length 198 inch width 030 inch

Idle Port Opening: 167 to 173 inch above top edge of valve with valve tightly closed

Set Idle Adjustment Screw: 3/4 to 2 1/4 turns open. For richer mixture turn screw out Do not idle engine below 500 R P. M Transmission in neutral

Main Nozzle: Install permanently DO NOT REMOVE Antipercolator bleed primary (tube in venturi assembly), size No 68 (031 inch) drill Secondary (drilled hole in venturi assembly) size No 60 (040 inch) drill

Main Vent Tube: (In venturi assembly) Side holes primary side 11—size No 70 (028 inch) 1—size No 65 (035 inch) drill secondary side 2—size No 57 (043 inch) 1—size No 70 (028 inch) drill.

Accelerating Pump: Discharge jet (twin) primary side only size No 68 (031inch) drill Intake ball check seat (screw plug) size 115 to 120 inch diameter Discharge needle seat size No 50 (070 inch) drill.

Choke: Carter Climatic® Control Cross Over type set on index Butterfly type offset valve, primary side only Choke heat suction hole in air horn, size No 44 (086 inch) drill

Vacuum Spark Port: Slot type (round end) 045 x 110 inch Top of port 026 to 034 inch above top edge of valve with valve tightly closed

Motor Tune-Up — Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .017" Canadian .020"	Ignition Timing Breaker Points to Open: 10° B. T. C. At Vibration Damper	Float Setting 7/32" ± 1/64" (Use Gauge T109-106)	Idle Adjustment Screw Setting 3/4 to 2 1/4 Turns Open Idle Engine at 500 R. P. M. In Neutral

NOTE: These cars are equipped with Hydraulic Valve Lifters — NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3735

FLOAT ALIGNMENT: Side of floats parallel to edge of casting. Minimum clearance between lever and air horn lugs without binding. To adjust, bend float lever.

FLOAT LEVEL: 7/32 inch (gauge T109-106) plus or minus 1/64 inch, between top of floats (at outer end) and air horn gasket. To adjust, bend float lever.

FLOAT DROP: 23/32 inch plus or minus 1/16 inch between top of floats (at outer end) and air horn gasket. To adjust, bend stop tabs on float brackets.

PUMP: 7/16 inch from the top of the bowl cover to the top of the plunger shaft with throttle connector rod in center hole (medium stroke) of pump arm. To adjust, bend throttle connector rod.

FAST IDLE LINKAGE ADJUSTMENT: With choke valve tightly closed and lug on outer choke shaft lever contacting stop on inner choke shaft lever align center of fast idle screw with index mark on cam. To adjust, bend fast idle connector rod.

FAST IDLE THROTTLE VALVE CLEARANCE: .015 inch (gauge T109-44) between lower edge of valve and bore with adjusting screw on index mark of cam.

FAST IDLE ON CAR: 1400 R. P. M. hot engine with fast idle screw on index mark of cam.

UNLOADER: 1/4 inch (gauge T109-31) between upper edge of choke valve and inner wall of air horn. To adjust, bend unloader lip on throttle lever.

SECONDARY THROTTLE LEVER ADJUSTMENT: 1. Block choke valve wide open. 2. With 3/8 inch between lower edge of primary valve and bore (opposite idle port) secondary valves should just start to open. To adjust, bend throttle operating rod. NOTE: At wide open throttle primary and secondary valves will reach full vertical position. 3. With primary and secondary throttle valves in tightly closed position there should be .010" to .030" (gauge T109-29) between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on secondary lever.

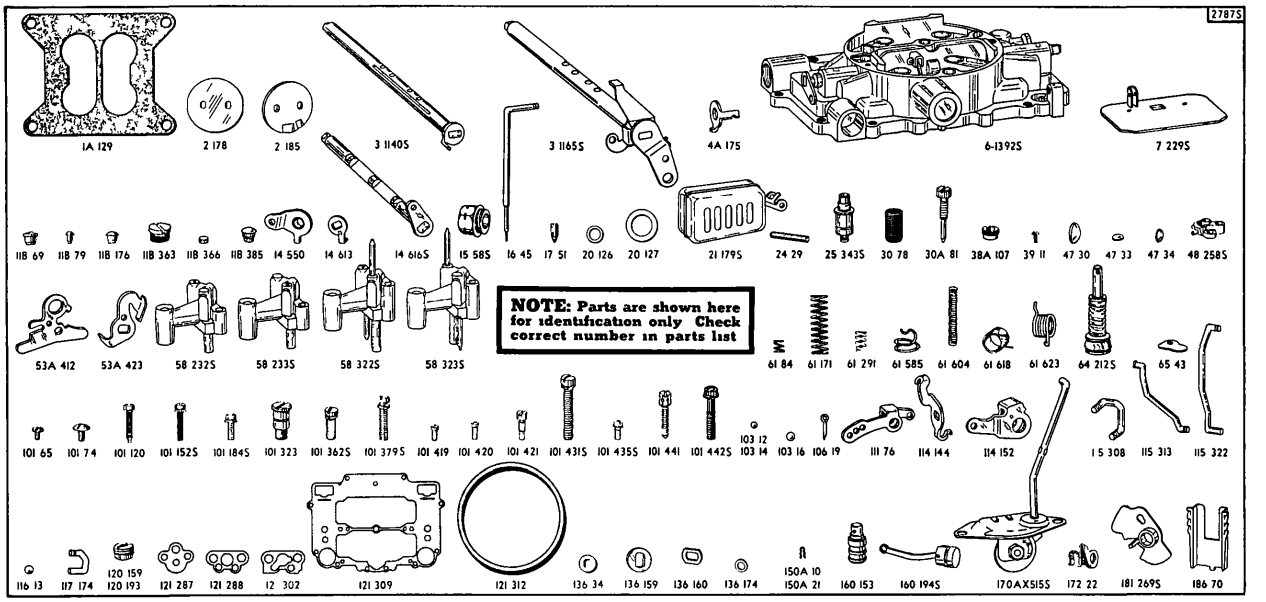
SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: Crack throttle valves and manually open and close the choke valve. Tang on secondary throttle lever should freely engage in notch of lock-out dog. To adjust, bend tang on secondary throttle lever.

CHOKE ADJUSTMENT (CROSS OVER TYPE) SEE FORM 3661: 1. Loosen mounting post lock nut and turn mounting post with screw driver until index mark on disk is positioned as listed on carbureter specification page. Hold in this position with screw driver and tighten lock nut. NOTE: Screw driver may be held in vise so that one hand may be used to support housing while tightening nut. 2. After adjustment is completed and coil housing and rod assembly and carbureter is installed on engine lift cover disk and open and close choke valve manually to see if connector rod clears sides of hole in housing cover. If rod does not clear hole in housing cover without binding replace with a new unit since connector rod cannot be bent without affecting calibration.

TOOLS REQUIRED FOR SERVICING CARBURETERS:

T109-29	.020" Wire gauge	T109-44	.015" Wire gauge
T109-31	1/4" Unloader gauge	T109-106	7/32" Float gauge
T109-41	Bending tool	T109-213	Bending tool

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Dodge — 1959 — Carbureter No. 2787S

WHEN SERVICING, USE GASKET ASSORTMENT No 317; RE-CARBURETION KIT No. 1915N

PART NAMES IN CAPITAL LETTERS, LISTED BELOW INDICATE CONTENTS OF RE-CARBURETION KIT

Part No.	PART NAME	
1A-129	FLANGE GASKET	
2-178	Secondary throttle valve	(2)
2-185	Primary throttle valve	(2)
3-1140S	Secondary throttle shaft and dog assembly	
3-1165S	Primary throttle shaft and lever assembly	
4A 175	Primary throttle shaft dog	
6-1392S	Air horn assembly	
7-229S	Choke valve and bracket assembly	
11B-69	Rivet plug	(2)
11B-79	Rivet plug	(4)
11B-176	Idle port rivet plug	(2)
11B-363	Pump intake screw plug	
11B-366	Nozzle well lead plug	(4)
11B-385	Fuel passage rivet plug	
14-550	Inside choke shaft lever	
14-613	—Outside choke shaft lever	
14-616S	Choke lever and shaft assembly	
15-58S	Fuel inlet assembly	
16-35	Step up rod 064" x 058"—1 size lean	(2)
16-39	Step up rod 066" x 061"—2 sizes lean	(2)
16-45	STEP UP ROD 0635" x 055"	(2)
17-51	Pump discharge check needle	
20-126	Needle seat gasket	(2)
20-127	Fuel inlet gasket	
21-179S	Float and lever assembly	(2)
24-29	Float lever pin	(2)
25-343S	NEEDLE AND SEAT ASSEMBLY (0935")	(2)
30-78	Fuel inlet strainer	

Part No.	PART NAME	
30A-81	Idle adjustment screw	(2)
38A-107	Pump intake check ball seat	
39-11	Choke valve attaching screw	(2)
47-30	Choke piston welsh plug	
47-33	Venturi welsh plug	(4)
47-34	Spark port welsh plug	
48-258S	Pump jet and housing assembly	
53A-412	Lockout dog	
53A-423	Secondary throttle operating lever	
58-232S	Secondary venturi assembly (opposite pump)	
58-233S	Secondary venturi assembly (pump side)	
58-322S	Primary venturi assembly (opposite pump)	
58-323S	Primary venturi assembly (pump side)	
61-84	Idle adjusting screw spring	(2)
61-171	Pump spring (lower)	
61-291	Throttle lever adjusting screw spring	
61-585	Step up rod retaining spring	(2)
61-604	VACUUM PISTON SPRING	(2)
61-618	Secondary throttle return spring	
61-623	Throttle flex spring	
64-212S	PUMP PLUNGER ROD AND SPRING ASSEMBLY	
65-43	Step up piston cover plate	(2)
101-65	Choke shaft lever attaching screw	
101-74	Throttle shaft lever attaching screw	(2)
101-120	Fast idle adjustment screw	
101-152S	Air horn attaching screw and washer assembly	
101-184S	Pump jet housing attaching screw and washer assembly	(2)

Part No.	PART NAME	
101-323	Fast idle cam attaching screw	
101-362S	Air horn attaching screw and washer assembly	(8)
101-379S	Secondary venturi attaching screw and washer assembly	(4)
101-419	Secondary throttle valve attaching screw	(4)
101-420	Primary throttle valve attaching screw	(4)
101-421	Pump arm attaching screw	
101-431S	Air horn attaching screw and washer assembly	
101-435S	Step-up piston cover plate attaching screw and washer assembly	(2)
101-441	Throttle lever adjusting screw	
101-442S	Primary venturi attaching screw and washer assembly	(4)
103-12	Lead shot (.130")	(2)
103-14	Lead shot (.180")	
103-16	Lead shot (.200")	
106-19	Cotter pin	
111-76	Pump arm	
114-144	Primary throttle shaft arm (outer)	
114-152	Primary throttle shaft arm (inner)	
115-308	Throttle operating rod	
115-313	—Choke connector rod	
115-322	—Throttle connector rod	

Part No.	PART NAME	
116-13	Pump intake check ball	
117-174	Pump connector link	
120-159	PRIMARY METERING JET (.089")	(2)
120-193	Secondary metering jet (.057")	(2)
121-287	PUMP JET HOUSING GASKET	
121-288	SECONDARY VENTURI CLUSTER GASKET	(2)
121-302	PRIMARY VENTURI CLUSTER GASKET	(2)
121-309	AIR HORN GASKET	
121-312	Air cleaner gasket	
136-34	Choke shaft washer	
136-159	Primary throttle shaft washer	
136-160	Secondary throttle shaft washer	
136-174	Throttle lever adjusting screw washer	
150A-10	Pin spring	(4)
150A-21	Pin spring	
160-153	Step-up piston	(2)
160-194S	Choke piston and link assembly (Use 160-204S)	
160-204S	—Choke piston and link assembly	
170AU-515S	Thermostatic coil, housing and rod assembly	
172-22	Throttle connector rod retainer	
181-269S	—Fast idle cam and collar assembly	
186-70	Fuel bowl baffle	(2)

—Parts so marked are new and listed for the first time.

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

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DODGE "V-8"

(POLICE SPECIAL)

1958

AFB Four-Bore Down-Draft Climatic® Control **Carbureter No. 2801S**

CARBURETER SPECIFICATIONS

For Dodge 8 Cylinder 360 Cu. In. Engine: Vacuum at Idle 19.5 Inches

Dimensions: Flange, four bore—4 bolt type.
Throttle bore 1-7/16 inch
Primary venturi size, primary side 7/16 inch, secondary side, 11/32 inch I D
Main venturi size, 1-3/16 inch

Vents Inside (4) in air horn, Outside (4) in body, (5) in air horn

Low Speed Circuit: (Primary side only)
Jet size No 66 (.033 inch) drill
By-pass, size (.0492 inch) diameter.
Economizer, size (.0492 inch) diameter
Idle bleed, size (.0492 inch) diameter.
Idle port slot type, length .198 inch, width .030 inch

Idle Port Opening: .142 to .148 inch above top edge of valve with valve tightly closed

Set Idle Adjustment Screw: ¾ to 1¾ turns open For richer mixture turn screw out Do not idle engine below 500 r p m Transmission in neutral.

Main Nozzle: Install permanently DO NOT REMOVE Anti-percolator bleed primary (tube in venturi assembly), size No 68 (.031 inch) drill Secondary (drilled hole in venturi assembly) size No 60 (.040 inch) drill

Main Vent Tube: (In venturi assembly) Side holes primary side 1—size No 70 (.028 inch) 1—size No 65 (.035 inch) drill, secondary side 2—size No 57 (.043 inch) 1—size No 70 (.028 inch) drill

Accelerating Pump: Discharge jet (twin) primary side only, size No 70 (.028 inch) drill Intake ball check seat (screw plug) size .115 to .120 inch diameter Discharge needle seat size No 50 (.070 inch) drill

Choke: Carter Climatic® Control Cross Over type set 2 points rich Butterfly type offset valve, primary side only Choke heat suction hole in air horn, size No 44 (.086 inch) drill

Vacuum Spark Port: Slot type (round end) .045 x .110 inch Top of port .026 to .034 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .017"	Ignition Timing Breaker Points to Open: 6° B. T. C. At Vibration Damper	Float Setting (See Adjustments)	Idle Adjustment Screw Setting ¾ to 1¾ Turns Open 500 R. P. M. In Neutral

NOTE: These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

Adjustments Illustrated on S rvice Adjustment Procedure Form 3735

FLOAT ALIGNMENT: Side of floats parallel to edge of casting. Minimum clearance between lever and air horn lugs without binding. To adjust, bend float lever.

FLOAT LEVEL: 7/32 inch (gauge T109-106) between top of floats (at outer end) and air horn gasket. To adjust, bend float lever.

FLOAT DROP: 23/32 inch between top of floats (at outer end) and air horn gasket. To adjust, bend stop tabs on float brackets.

PUMP: 7/16 inch from the top of the bowl cover to the top of the plunger shaft with throttle connector rod in center hole (medium stroke) of pump arm. To adjust, bend throttle connector rod.

FAST IDLE LINKAGE ADJUSTMENT: With choke valve tightly closed and lug on outer choke shaft lever contacting stop on inner choke shaft lever align center of fast idle screw with index mark on cam. To adjust, bend fast idle connector rod.

FAST IDLE THROTTLE VALVE CLEARANCE: .012 inch (gauge T109-200) between lower edge of valve and bore with adjusting screw on index mark of cam.

FAST IDLE ON CAR: 1400 R. P. M. hot engine with fast idle screw on index mark of cam.

UNLOADER: 1/4 inch (gauge T109-31) between upper edge of choke valve and inner wall of air horn. To adjust, bend unloader lip on throttle lever.

SECONDARY THROTTLE LEVER ADJUSTMENT: 1. Block choke valve wide open. 2. With 3/8 inch between lower edge of primary valve and bore (opposite idle port) secondary valves should just start to open. To adjust, bend throttle operating rod. NOTE: at wide open throttle primary and secondary valves will reach full vertical position. 3. With primary and secondary throttle valves in tightly closed position there should be .010" to .030" (gauge T109-29) between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on secondary lever.

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: Crack throttle valves and manually open and close the choke valve. Tang on secondary throttle lever should freely engage in notch of lock-out dog. To adjust, bend tang on secondary throttle lever.

CHOKE ADJUSTMENT (CROSS OVER TYPE) SEE FORM 3661: 1. Loosen mounting post lock nut and turn mounting post with screw driver until index mark on disk is positioned as listed on carbureter specification page. Hold in this position with screw driver and tighten lock nut. NOTE: Screw driver may be held in vise so that one hand may be used to support housing while tightening nut. 2. After adjustment is completed and coil housing and rod assembly and carbureter is installed on engine lift cover disk and open and close choke valve manually to see if connector rod clears sides of hole in housing cover. If rod does not clear hole in housing cover without binding replace with a new unit since connector rod cannot be bent without affecting calibration.

TOOLS REQUIRED FOR SERVICING CARBURETERS:

T109-29	.020" Wire gauge	T109-106	7/32" Float gauge
T109-31	1/4" Unloader gauge	T109-200	.012" Wire gauge
T109-41	Bending tool	T109-213	Bending tool

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Dodg — 1958 — Carburet r No. 2801S

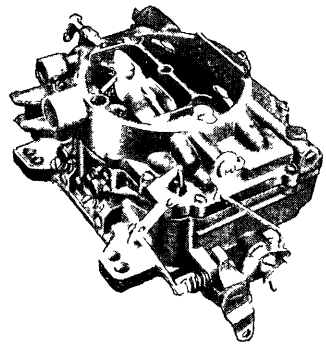
WHEN SERVICING, USE GASKET ASSORTMENT No. 317

Part No.	PART NAME	
1A-129	Flange gasket	
2-178	Secondary throttle valve	(2)
2-185	Primary throttle valve	(2)
3-1140S	Secondary throttle shaft and dog assembly	
3-1165S	Primary throttle shaft and lever assembly	
4A-175	Primary throttle shaft dog	
6-1330S	Air horn assembly	
7-229S	Choke valve and bracket assembly	
11B-69	Rivet plug	(2)
11B-79	Rivet plug (early prod (2) (late prod (4)	
11B-176	Idle port rivet plug	(2)
11B-363	Pump intake screw plug	
11B-366	Nozzle well lead plug	(4)
11B-385	Fuel passage rivet plug	
14-512	Outside choke shaft lever	
14-550	Inside choke shaft lever	
14-616S	Choke lever and shaft assembly	
15-58S	Fuel inlet assembly	
16-35	Step up rod—1 size lean 0645" x 058"	(2)
16-39	Step up rod—2 sizes lean 066" x 061"	(2)
16-45	Step up rod—standard 0635" x 055"	(2)
17-51	Pump discharge check needle	
20-126	Needle seat gasket	(2)
20-127	Fuel inlet gasket	
21-179S	Float and lever assembly	(2)
24-29	Float lever pin	(2)
25-343S	Needle and seat assembly (0935")	(2)
30-78	Fuel inlet strainer	
30A-81	Idle adjustment screw	(2)
38A-107	Pump intake check ball seat	
39-11	Choke valve attaching screw	(2)
47-30	Choke piston welsh plug	
47-33	Venturi welsh plug	(4)
47-34	Spark port welsh plug	
48-258S	Pump jet and housing assembly	
53A-412	Lockout dog	
53A-423	Secondary throttle operating lever	
58-232S	Secondary venturi assembly (opposite pump)	
58-233S	Secondary venturi assembly (pump s de)	
58-306S	—Primary venturi assembly (opposite pump)	
58-307S	—Primary venturi assembly (pump side)	
61-84	Idle adjusting screw spring	(2)
61-128	Throttle connector rod spring	
61-171	Pump spring (lower)	
61-291	Throttle lever adjusting screw spring	
61-585	Step up rod retaining spring	(2)
61-604	Vacuum piston spring	(2)
61-618	Secondary throttle return spring	
61-623	—Throttle flex spring	
63-35	Throttle connector rod retainer	
64-212S	Pump plunger rod and spring assembly	

Part No.	PART NAME	
65-43	Step up piston cover plate	(2)
101-65	Choke shaft lever attaching screw	
101-74	Throttle shaft lever attaching screw	(2)
101-120	Fast idle adjustment screw	
101-152S	Air horn attaching screw and washer assembly	
101-184S	Pump jet housing attaching screw and washer assembly	(2)
101-298S	Secondary venturi attaching screw and washer assembly (length 1 1/8") (early prod)	(4)
101-323	Fast idle cam attaching screw	
101-362S	Air horn attaching screw and washer assembly	(8)
101-379S	Secondary venturi attaching screw and washer assembly (length 1") (late prod)	(4)
101-419	Secondary throttle valve attaching screw	(4)
101-420	Primary throttle valve attaching screw	(4)
101-421	Pump arm attaching screw	
101-431S	Air horn attaching screw and washer assembly	
101-435S	Step up piston cover plate attaching screw and washer assembly	(2)
101-441	Throttle lever adusting screw	
101-442S	Primary venturi attaching screw and washer assembly	(4)
103-12	Lead shot	(2)
103-14	Lead shot (late prod)	
103-15	Lead shot (early prod)	
103-16	Lead shot	
106-19	Cotter pin	
111-76	Pump arm	
114-144	Primary throttle shaft arm (outer)	
114-152	Primary throttle shaft arm (inner)	
115-275	Choke connector rod	
115-276	Throttle connector rod	
115-308	Throttle operating rod	
116-13	Pump intake check ball	
117-174	Pump connector link	
120-155	Primary metering jet (091")	(2)
120-185	Secondary metering jet (067")	(2)
121-287	Pump jet housing gasket	
121-288	Secondary venturi cluster gasket	(2)
121-302	Primary venturi cluster gasket	(2)
121-309	Air horn gasket	
121-312	Air cleaner gasket	
136-34	Choke shaft washer	
136-37	Throttle operating rod washer	
136-159	Primary throttle shaft washer	
136-160	Secondary throttle shaft washer	
136-174	Throttle lever adjusting screw washer	
150A-10	Pin spring	(4)
150A-21	Pin spring	
160-153	Step up piston	(2)
160-174S	Choke piston and link assembly	
170AX-515S	Thermostatic coil housing and rod assembly	
181-251S	Fast idle cam and collar assembly	
186-70	Fuel bowl baffle	(2)

—Parts so marked are new and listed for the first time

NOTE **Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.**



DODGE "V-8"
MODELS
LD3-H and
LD3-S (D500)
1958

AFB Four-Bore Down-Draft Climatic® Control Carbureter No. 2642S

CARBURETER SPECIFICATIONS

For Dodge 8 Cylinder 350 (LD3-H) 360 (LD3-S) Cu In Engine Vacuum at Idle 19 5 Inches

Dimensions Flange four bore—4 bolt type
Throttle bore 1 7/16 inch
Primary venturi size primary side 7/16 inch secondary side 11/32 inch I D
Main venturi size 1 3/16 inch

Vents Inside (4) in air horn Outside (4) in body (5) in air horn

Low Speed Circuit (Primary side only)
Jet s ze No 66 (033 inch) drill
By pass size (0492 inch) diameter
Economizer size (0452 inch) diameter
Idle bleed size (0492 inch) diameter
Idle port slot type length 198 inch width 030 inch

Idle Port Opening 142 to 148 inch above top edge of valve with valve tightly closed

Set Idle Adjustment Screw 3/4 to 1 3/4 turns open For richer mixture turn screw out Do not idle engine below 500 r p m Transmission in neutral

Main Nozzle Install permanently DO NOT REMOVE Anti percolator bleed primary (tube in venturi assembly) size No 68 (031 inch) drill Secondary (drilled hole in venturi assembly) size No 60 (040 inch) drill

Main Vent Tube (In venturi assembly) Side holes primary side 1—size No 70 (028 inch) 1—size No 65 (035 inch) drill secondary side 2—size No 57 (043 inch) 1—size No 70 (028 inch) drill

Accelerating Pump Discharge jet (twin) primary side only size No 68 (031 inch) drill Intake ball check seat (screw plug) size 115 to 120 inch diameter Discharge needle seat size No 50 (070 inch) drill

Choke Carter Climatic® Control Cross Over type set 2 points rich Butterfly type offset valve primary side only Choke heat suction hole in air horn size No 44 (086 inch) drill

Vacuum Spark Port Slot type (round end) 045 x 110 inch Top of port 026 to 034 inch above top edge of valve with valve tightly closed

Motor Tune-Up — Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter

Spark Plug Gap 035"	Breaker Point Setting 017"	Ignition Timing Breaker Points to Open 6° B. T. C At Vibration Damper	Float Setting (See Adjustments)	Idle Adjustment Screw Setting 3/4 to 1 3/4 Turns Open 500 R P M In Neutral

NOTE These cars are equipped with Hydraulic Valve Lifters — NO ADJUSTMENT

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CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3735

FLOAT ALIGNMENT: Side of floats parallel to edge of casting. Minimum clearance between lever and air horn lugs without binding. To adjust, bend float lever.

FLOAT LEVEL: 5/16 inch (gauge T109-107) for 21-188S floats (identify by smooth sides); 7/32 inch (gauge T109-106) for 21-179S floats (identify by ribs on floats) between top of floats (at outer end) and air horn gasket. To adjust, bend float lever.

FLOAT DROP: 23/32 inch between top of foats (at outer end) and air horn gasket. To adjust, bend stop tabs on float brackets.

PUMP: 7/16 inch from the top of the bowl cover to the top of the plunger shaft with throttle connector rod in center hole (medium stroke) of pump arm. To adjust, bend throttle connector rod.

FAST IDLE LINKAGE ADJUSTMENT: With choke valve tightly closed and fast idle lug on outer choke shaft lever contacting stop on inner choke shaft lever align center of fast idle screw with index mark on cam. To adjust, bend fast idle connector rod.

FAST IDLE THROTTLE VALVE CLEARANCE: .012 inch (gauge T109-200) between lower edge of valve and bore with adjusting screw on index mark of cam.

FAST IDLE ON CAR: 1400 R. P. M. hot engine with fast idle screw on index mark of cam.

UNLOADER: 1/4 inch (gauge T109-31) between upper edge of choke valve and inner wall of air horn. To adjust, bend unloader lip on throttle lever.

SECONDARY THROTTLE LEVER ADJUSTMENT: 1. Block choke valve wide open. 2. With 3/8 inch between lower edge of primary valve and bore (opposite idle port) secondary valves should just start to open. To adjust, bend throttle operating rod. NOTE: at wide open throttle primary and secondary valves will reach full vertical position. 3. With primary and secondary throttle valves in tightly closed position there should be .010" to .030" (gauge T109-29) between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on secondary lever.

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: Crack throttle valves and manually open and close the choke valve. Tang on secondary throttle lever should freely engage in notch of lock-out dog. To adjust, bend tang on secondary throttle lever.

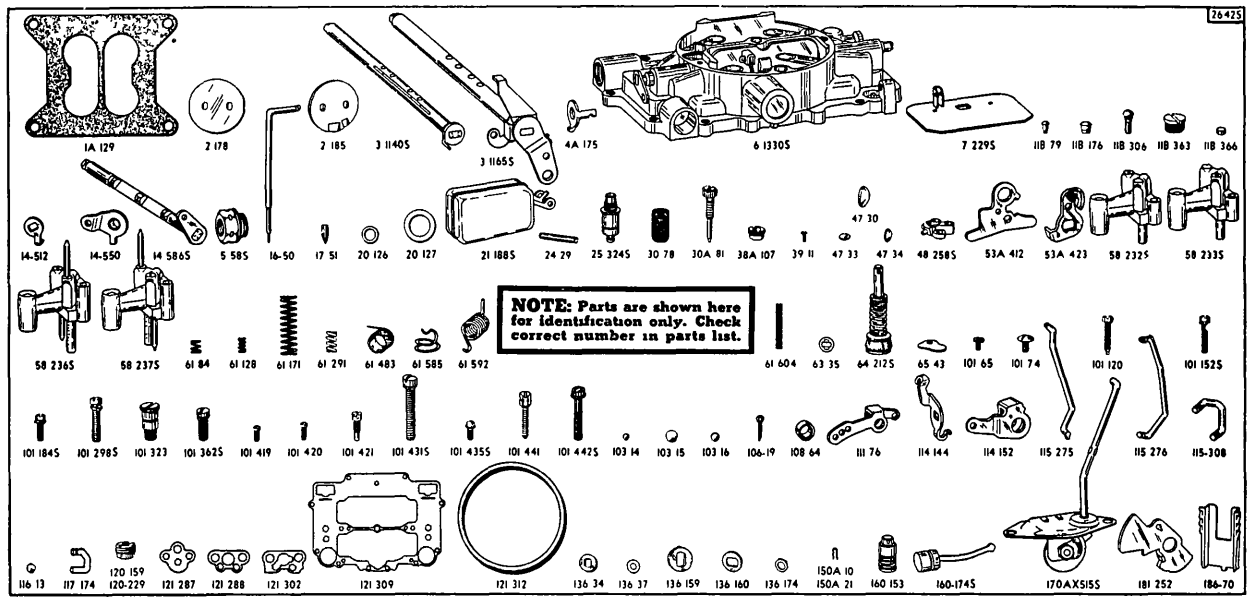
CHOKE ADJUSTMENT (CROSS OVER TYPE) SEE FORM 3661: 1. Loosen mounting post lock nut and turn mounting post with screw driver until index mark on disk is positioned as listed on carbureter specification page. Hold in this position with screw driver and tighten lock nut. NOTE: Screw driver may be held in vise so that one hand may be used to support housing while tightening nut. 2. After adjustment is completed and coil housing and rod assembly and carbureter is installed on engine lift cover disk and open and close choke valve manually to see if connector rod clears sides of hole in housing cover. If rod does not clear hole in housing cover without binding replace with a new unit since connector rod cannot be bent without affecting calibration.

TOOLS REQUIRED FOR SERVICING CARBURETERS:

T109-29	.020" Wire gauge	T109-106	7/32" Float gauge (late)
T109-31	1/4" Unloader gauge	T109-107	5/16" Float gauge (early)
T109-41	Bending tool	T109-200	.012" Wire gauge

T109-213 Bending tool

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Dodge — 1958 — Carbureter No. 2642S

WHEN SERVICING, USE GASKET ASSORTMENT No 317; RE-CARBURETION KIT No 1915N

PART NAMES IN CAPITAL LETTERS LISTED BELOW INDICATE CONTENTS OF RE-CARBURETION KIT

Part No	PART NAME	
1A-129	—FLANGE GASKET	
2-178	Secondary throttle valve	(2)
2-185	Primary throttle valve	(2)
3-1140S	Secondary throttle shaft and dog assembly	
3-1165S	—Primary throttle shaft and lever assembly	
4A-175	Primary throttle shaft dog	
6-1330S	—Air horn assembly	
7-229S	—Choke valve and bracket assembly	
11B-69	Rivet plug (late prod)	(2)
11B-79	Rivet plug	(2)
11B-176	Idle port rivet plug	(2)
11B-306	Fuel passage rivet plug (early prod)	
11B-363	Pump intake screw plug	
11B-366	Nozzle well lead plug	(4)
14-512	Outside choke shaft lever	
14-550	Inside choke shaft lever	
14-586S	Choke lever and shaft assembly (Sup by 14 616S)	
14-616S	—Choke lever and shaft assembly	
15-58S	Fuel inlet assembly	
16-35	Step up rod 064" x 058" 1 size lean	(2)
16-39	Step up rod 066" x 061" 2 sizes lean	(2)
16-45	—STEP UP ROD 0635" x 055"	(2)
16-50	—Step up rod—standard 0645" x 055" (Sup by 16 45)	(2)
17-51	Pump discharge check needle	
20-126	Needle seat gasket	(2)
20-127	Fuel inlet gasket	
21-179S	Float and lever assembly	(2)
21-188S	Float and lever assembly (Sup by 21 179S)	(2)

Part No	PART NAME	
24-29	Float lever pin	(2)
25-324S	Needle and seat assembly (1015") (Sup by 25-343S)	(2)
25-343S	—NEEDLE AND SEAT ASSEMBLY (0935")	(2)
30-78	Fuel inlet strainer	
30A-81	—Idle adjustment screw	(2)
38A-107	Pump intake check ball seat	
39-11	Choke valve attaching screw	(2)
47-30	Choke piston welsh plug	
47-33	Venturi welsh plug	(4)
47-34	Spark port welsh plug	
48-258S	Pump jet and housing assembly	
53A-412	Lockout dog	
53A-423	—Secondary throttle operating lever	
58-232S	—Secondary venturi assembly (opposite pump)	
58-233S	—Secondary venturi assembly (pump side)	
58-236S	—Primary venturi assembly (choke side) (Sup by 58 256S)	
58-237S	—Primary venturi assembly (pump side) (Sup by 58-257S)	
58-256S	—Primary venturi assembly (opposite pump)	
58-257S	—Primary venturi assembly (pump side)	
61-84	Idle adjusting screw spring	(2)
61-128	Throttle connector rod spring	
61-171	Pump spring (lower)	
61-291	Throttle lever adjusting screw spring	
61-483	Secondary throttle return spring	
61-585	Step up rod retaining spring	(2)
61-592	Throttle flex spring	
61-604	—VACUUM PISTON SPRING	(2)

Part No	PART NAME	
63-35	Throttle connector rod retainer	
64 212S	—PUMP PLUNGER ROD AND SPRING ASSEMBLY	
65-43	Step up piston cover plate	(2)
101-65	Choke shaft lever attaching screw	
101-74	Throttle shaft lever attaching screw	(2)
101-120	Fast idle adjustment screw	
101-152S	Air horn attaching screw and washer assembly	
101-184S	Pump jet housing attaching screw and washer assembly	(2)
101-298S	Secondary venturi attaching screw and washer assembly	(4)
101-323	Fast idle cam attaching screw	
101-362S	Air horn attaching screw and washer assembly	(8)
101-419	Secondary throttle valve attaching screw	(4)
101-420	Primary throttle valve attaching screw	(4)
101-421	Pump arm attaching screw	
101-431S	Air horn attaching screw and washer assembly	
101-435S	Step up piston cover plate attaching screw and washer assembly	(2)
101-441	Throttle lever adjusting screw	
101 442S	Primary venturi attaching screw and washer assembly	(4)
103-12	—Lead shot	(2)
103 14	Lead shot (early prod)	
103-15	Lead shot (late prod)	
103 16	Lead shot	
106-19	Cotter pin	
108-64	Fast idle cam spacer (Sup by 181 251S)	
111-76	Pump arm	
114-144	Primary throttle shaft arm (outer)	
114-152	—Primary throttle shaft arm (inner)	
115-275	Choke connector rod	
115-276	Throttle connector rod	
115-308	—Throttle operating rod	
116-13	Pump intake check ball	
117-174	Pump connector link	
120-159	PRIMARY METERING JET (089")	(2)
120-186	Secondary metering jet (061")	(2)
120-226	Secondary metering jet (065") (Sup by 120 186)	(2)
121-287	PUMP JET HOUSING GASKET	
121-288	SECONDARY VENTURI CLUSTER GASKET	(2)
121-302	PRIMARY VENTURI CLUSTER GASKET	(2)
121-309	—AIR HORN GASKET	
121-312	—Air Cleaner gasket	
136-34	Choke shaft washer	
136-37	Throttle operating rod washer	
136-159	Primary throttle shaft washer	
136-160	Secondary throttle shaft washer	
136-174	Throttle lever adjusting screw washer	
150A-10	Pin spring	(4)
150A-21	Pin spring	
160-153	Step up piston	(2)
160-174S	—Choke piston and link assembly	
170AX-515S	—Thermostatic coil housing and rod assembly	
181-251S	—Fast idle cam and collar assembly	
181-252	Fast idle cam (Sup by 181 251S)	
186-70	Fuel bowl baffle	(2)

—Parts so marked are new and listed for the first time

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

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CARTER MODEL AFB CARBURETER FOR DODGE (SERVICE ADJUSTMENT PROCEDURE)

NOTE: The parts and specification pages referred to are catalog pages. These pages can be obtained from Carter Carburetor, Catalog Department, St. Louis (7), Missouri. Specify the carbureter number found on the base of the carbureter, when requesting specification pages.

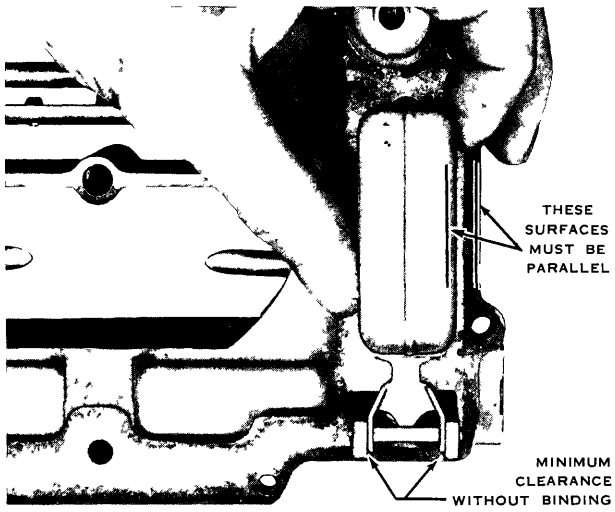


Figure 1

FLOAT ALIGNMENT ADJUSTMENT (Fig. 1):

1. Sight down the side of the float shell to determine if the side of the float is parallel to the outer edge of the air horn casting. TO ADJUST: Bend float lever by applying pressure to the end of the float shell with the fingers while supporting the float lever with the thumb.

   CAUTION: To avoid damaging the float, apply only enough pressure to bend float lever.

2. After aligning float, remove as much clearance as possible between arms of float lever and lugs on air horn by bending the float lever. Arms of float lever should be as parallel to the inner surfaces of lugs on air horn as possible.

   Floats must operate freely without excess clearance on its hinge pin.

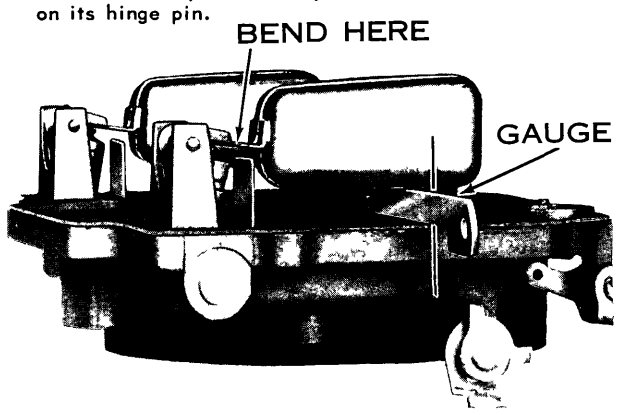


Figure 2

FLOAT LEVEL ADJUSTMENT (Fig. 2):

With air horn inverted, bowl cover gasket in place and needle seated, the clearance between top of float (at outer end) and air horn gasket should be as listed on carbureter specification page. To adjust, bend float arm. Adjust both floats. Recheck float alignment.

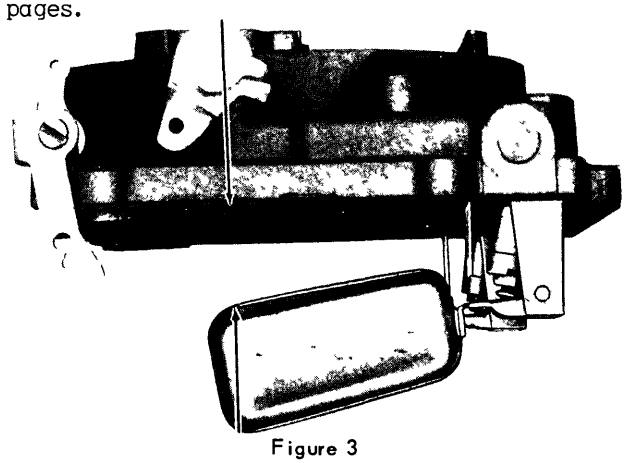


Figure 3

FLOAT DROP ADJUSTMENT (Fig. 3):

With bowl cover held in upright position and measuring from outer end of each float, the distance between top of floats and bowl cover gasket should be as listed on carbureter specification page. To adjust, bend stop tabs on float brackets.

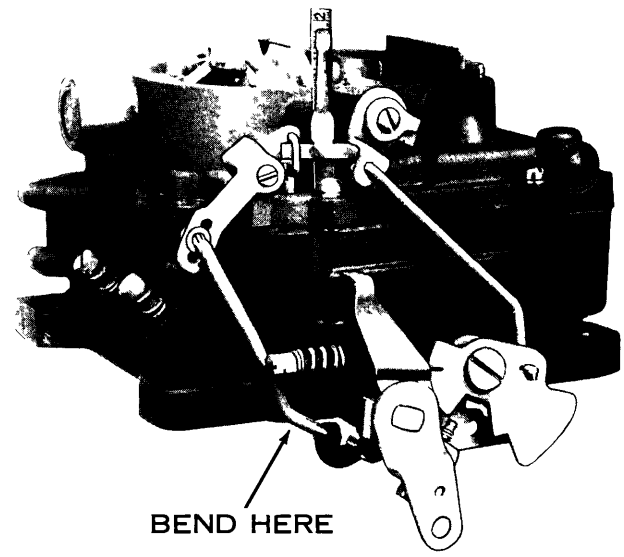


Figure 4

PUMP ADJUSTMENT (Fig. 4):

1. Back out idle speed screw until throttle valves seat in bores of carbureter. NOTE: Be sure fast idle adjusting screw does not contact fast idle cam and hold throttle valves open.
2. With throttle connector rod in center hole (medium stroke) of pump arm, the distance from the top of the bowl cover to the top of the plunger shaft should be as listed on carbureter specification page.
3. Adjust by bending throttle connector rod at lower angle (use tool T109-213).

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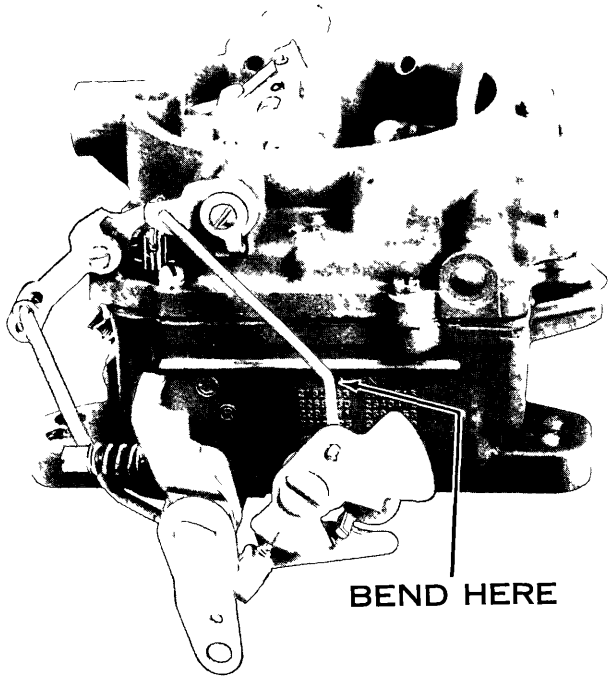


Figure 5

FAST IDLE LINKAGE ADJUSTMENT (Fig. 5):

With choke valve tightly closed and lug on outer choke shaft l ver contacting stop on inner choke shaft lever align center f fast idle screw with index mark on cam. T adjust, bend fast idle connector rod. (Use tool T109-213.)

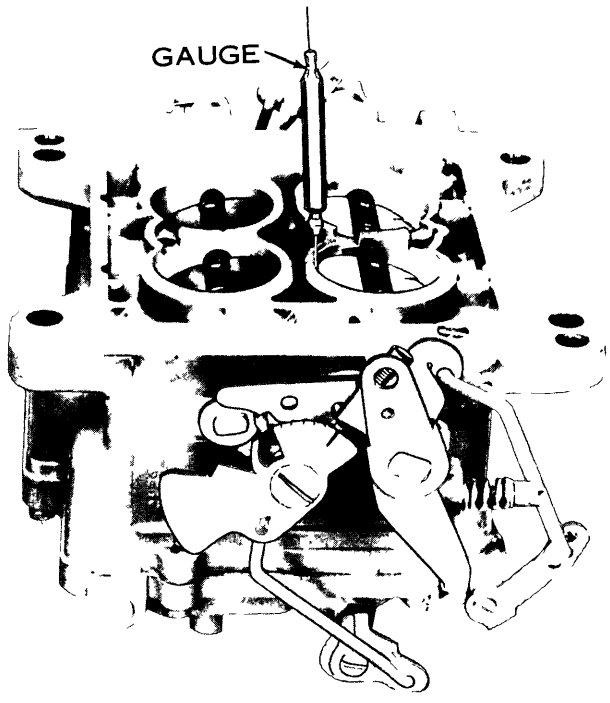


Figure 6

FAST IDLE THROTTLE VALVE CLEARANCE ADJUSTMENT (Fig. 6):

With choke valve tightly closed, tighten fast idle adjusting screw (on index mark of cam) until the clearance between throttle valve and bore of carbureter, side opposite idle port, is as listed on carbureter specification page.

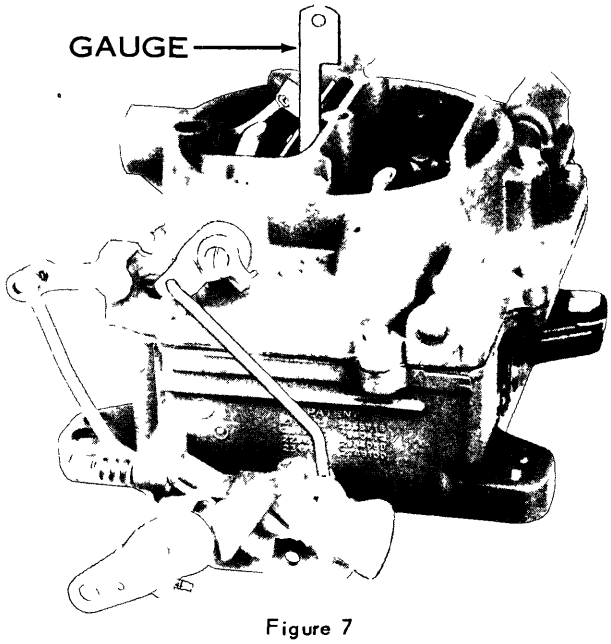


Figure 7

UNLOADER ADJUSTMENT (Fig. 7):

With throttle wide open, th clearance between upper edge of choke valve and inner wall f air horn sh uld be as listed on carbureter specification page. To adjust, bend unloader lip on throttle shaft lever. (Use tool T109-41.)

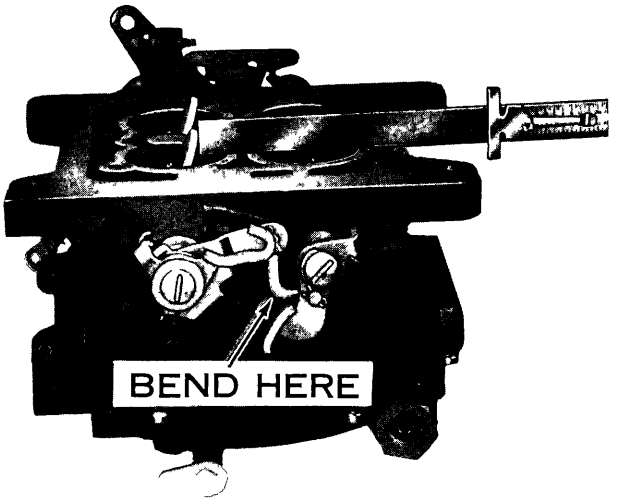


Figure 8A

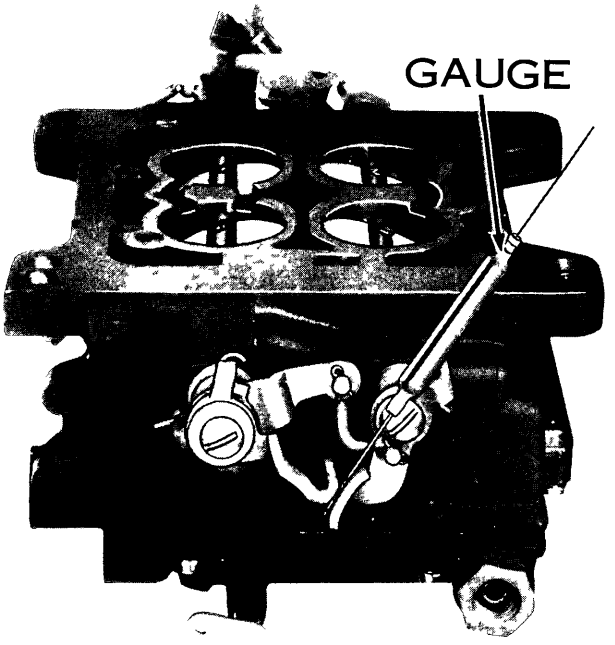


Figure 8B

SECONDARY THROTTLE LEVER ADJUSTMENT (Figs. 8A & 8B):

1. Block choke valve wide open
2. Secondary throttle valves should just start to open when primary throttle valves are opened to the clearance as listed on specification page between lower edge of valve and bore (opposite idle port). To adjust, bend throttle operating rod. (Use bending tool T109-213). (See Fig. 8A) NOTE: Primary and secondary throttle valves should reach wide open position, full vertical, at th same time.
3. With primary and secondary throttle valves in tightly closed position, there should be the clearance as listed on specification page between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on secondary lever. (Se Fig. 8B)

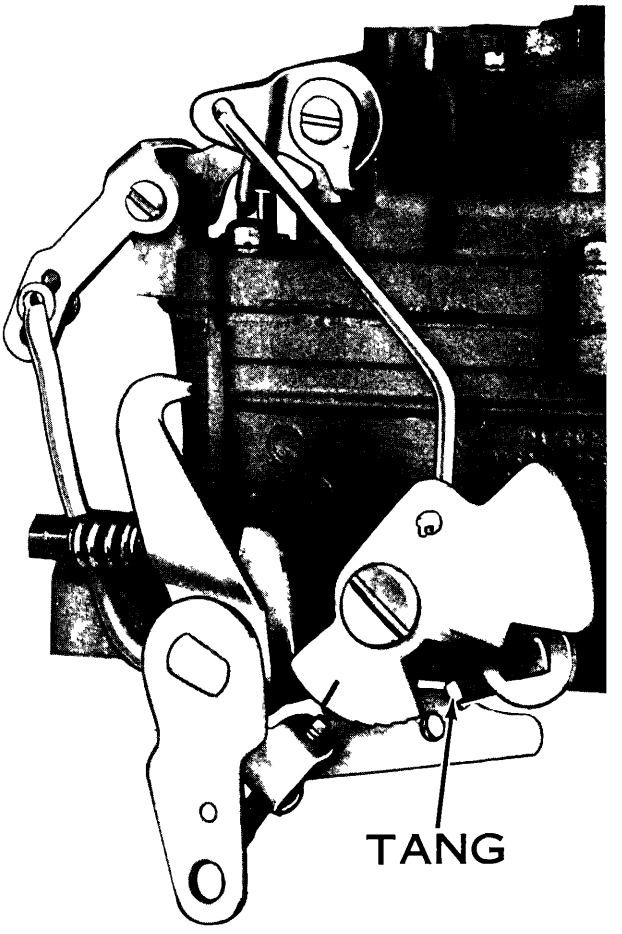


Figure 9

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT (Fig. 9):

Crack throttle valves and manually open and close the choke valve. Tang on secondary throttle l ver should freely engage in notch of lock-out dog. If necessary to adjust, bend tang on secondary throttle lever.

NOTE: See last page for pertinent service information.

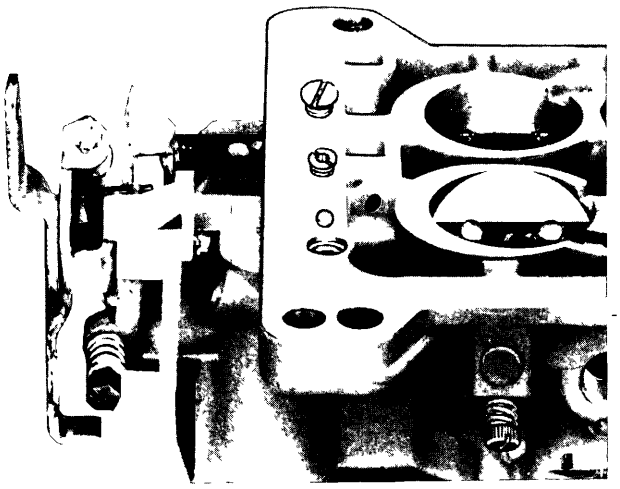


Figure 10

(Fig. 10):

Pump intake check ball, seat and screw plug are removed by inverting carbureter and removing from lower side of flange.

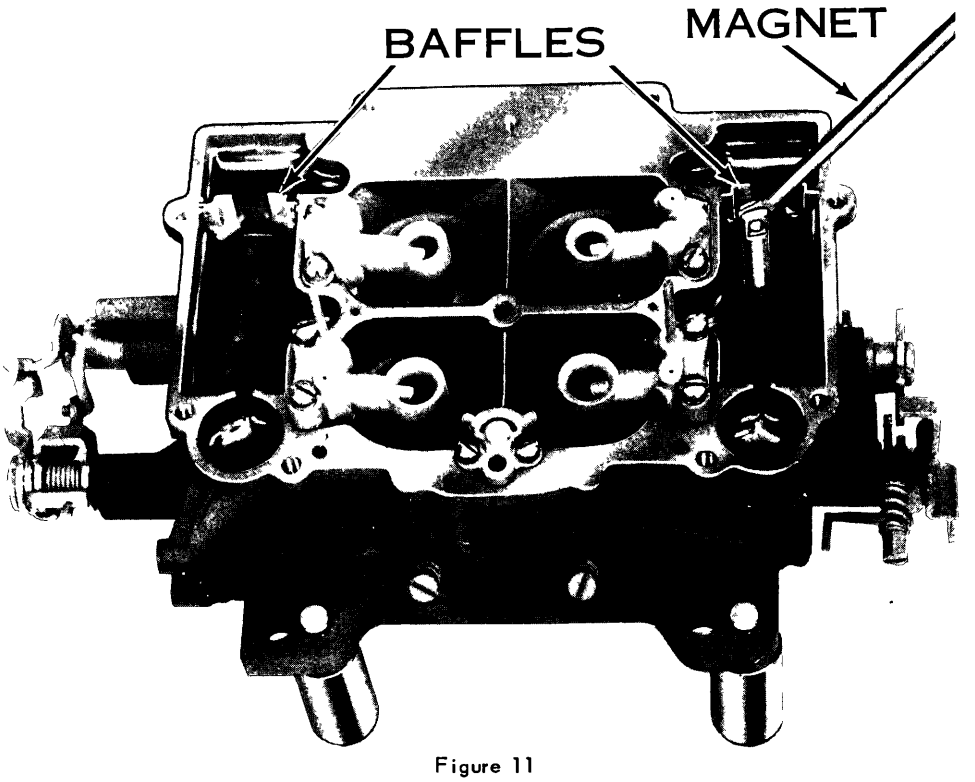


Figure 11

(Fig. 11):

Flooding, stumble on acceleration and other performance complaints are, in many instances, caused by the presence of dirt, water or other foreign matter in the carbureter. To aid in diagnosing the cause of the complaint, the carbureter should be carefully removed from the engine without draining the fuel from the bowl. The contents of the fuel bowl may then be examined for contamination as the carbureter is disassembled.

Check the fuel in the bowl for contamination by dirt, water, gum or other foreign matter. A magnet moved through the fuel in the bowl will pick up and identify any iron oxide dust that may have caused intake needle and seat leakage.

Inspect gasketed surfaces between body and air horn. Small nicks or burrs should be smoothed down to eliminate air or fuel leakage. Be especially particular when inspecting the top surface of the inner wall of the bowl around the vacuum piston passage. A poor seal at this location may contribute to a "cutting-out" on turns complaint.

Install fuel baffles as shown (Fig. 11) to prevent damage to floats. Use caution when installing air horn assembly. Baffles on air horn assembly must fit inside of fuel bowl baffles toward primary side of carbureter.

Fill the carbureter bowl with clean fuel before installing on the manifold. This will help prevent dirt trapped in the fuel system from being dislodged by the free flow of fuel as the carbureter is primed. The operation of the floats and intake needle and seats may be checked under pressure if a fuel pump is used at the bench to fill the carbureter bowl. Operate the throttle several times and visually check the discharge from the pump jets.

Before installing the carbureter, hold choke valve open and turn the idle speed screw until it just contacts the throttle lever, then 1/2 a turn more to open the throttle valves enough to keep the engine running until the idle mixture and final R.P.M. adjustment can be made.

DODGE "V-8"

MODEL LD2-M

POWER PACKAGE

1958

WCFB Four-Bore Down-Draft Climatic® Control Carbureter No. 2660S

CARBURETER SPECIFICATIONS

For Dodge 8 Cylinder 325 Cu. In. Engine: Vacuum at Idle 19.5 Inches

Dimensions: Flange size 1¼ inch Four Bore—4 bolt type
Primary venturi size 11/32 inch I D
Main venturi size 1-3/16 inch I D

Vents: Inside (5)

Low Speed Circuit: Jet size No 67 (.032 inch) drill By pass tube in body size (.057 inch) diameter Economizer, plug in body size No 56 (.0465 inch) drill Idle bleed in body, size No 46 (.081 inch) drill Idle port, slot type primary length 140 inch width 030 inch Secondary length 103 inch width 030 inch

Idle Port Opening: Primary 092 to 098 inch secondary 065 to 071 inch above top edge of valve with valve tightly closed

Lower Port: Primary (for idle adjustment screw), size No 53 (.0595 inch) drill Secondary (no idle adjustment screw) size No 57 (.043 inch) drill

Set Idle Adjustment Screw: ½ to 1½ turns open For richer mixture turn screw out Do not idle engine below 500 R P M in neutral

Main Nozzle: Installed permanently DO NOT REMOVE Anti percolating jet (4) size No 70 (.028 inch) drill

Accelerating Pump: Discharge jet (twin) primary side only size No 70 (.028 inch) drill Intake ball check seat size 115 to 120 inch diameter Discharge needle seat size No 50 (.070 inch) drill Relief passage (vent) to fuel chamber size No 42 (.0935 inch) drill

Choke: Carter Climatic® Control Cross Over Type set on index Butterfly type offset choke valve primary side only Choke heat suction hole restriction in piston housing size No 40 (.098 inch) drill

Vacuum Spark Port: Horizontal slot (round end) .045 x .110 inch Top of port .022 to .032 inch above top edge of valve with valve tightly closed

Motor Tune-Up — Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .017"	Ignition Timing Breaker Points to Open 6° B T C At Vibration Damper	Float Setting Primary 7/32 Inch (Gauge T109-283) Secondary 9/32 Inch (Gauge T109-284)	Idle Adjustment Screw Setting ½ to 1½ Turns Open Idle engine at 500 R P. M in neutral

NOTE: These cars are equipped with Hydraulic Valve Lifters — NO ADJUSTMENT.

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CARBURETER
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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: Two separate float adjustments must be made—lateral and vertical **LATERAL ADJUSTMENT:** With bowl cover assembly inverted, bowl cover gasket removed and float resting on seated needle place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting Side of floats should just clear the vertical uprights of float gauge Adjustment should be made by bending arms of floats **VERTICAL ADJUSTMENT:** With float gauge in same position floats should just clear the horizontal portion of gauge Vertical distance between top of float and machined surface of casting must be 7/32" (gauge T109-283) for primary floats and 9/32 (gauge T109-284) for secondary floats Adjust by bending float arms

FLOAT DROP ADJUSTMENT: With bowl cover held in upright position and measuring from center of floats, the distance between top of floats and bowl cover should be 23/32 for primary floats and 25/32 for secondary floats Adjust by bending stop tabs on float bracket

PUMP ADJUSTMENT: Install pump connector link in center hole (medium stroke) of pump arm, with ends extending toward countershaft arm Back out throttle lever set screw until throttle valves seat in bores of carbureter Hold sraight edge across top of dust cover boss at pump arm The flat on top of pump arm should be parallel to straight edge Adjust by bend ing throttle connector rod at lower angle (Use tool T109 213)

METERING ROD ADJUSTMENT: Metering rod adjustment is important and must be made after completing the pump adjustment No metering rod gauges are necessary Procedure is as follows 1 Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw 2 With metering rods in place, press down on vacumeter link until metering rods bottom in carbureter body casting 3 Holding rods in downward position and throttle valves seated revolve metering rod arm until finger on arm contacts lip of vacumeter link Hold in place and carefully tighten clamp screw

BOWL VAPOR VENT ADJUSTMENT: This adjustment should be made after completing pump and metering rod adjustments Install dust cover and dust cover gasket Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter There should be 1/16 inch (gauge T109-197) between lower edge of bowl vapor vent valve and dust cover To adjust remove dust cover and bend vapor vent arm

FAST IDLE ADJUSTMENT: (a) Loosen choke lever clamp screw on choke shaft Insert 020 ' feeler gauge (T109-29) between lip of fast idle cam and boss of flange casting Hold choke valve tightly closed and take slack out of linkage by pressing lever towards closed position—hold in place and tighten clamp screw (b) With choke valve tightly closed, tighten fast idle adjusting screw until there is 010 (gauge T109-200) opening between throttle valve and bore of carbureter (side opposite idle port) Be sure fast idle adjusting screw is on high step of cam while making this adjustment

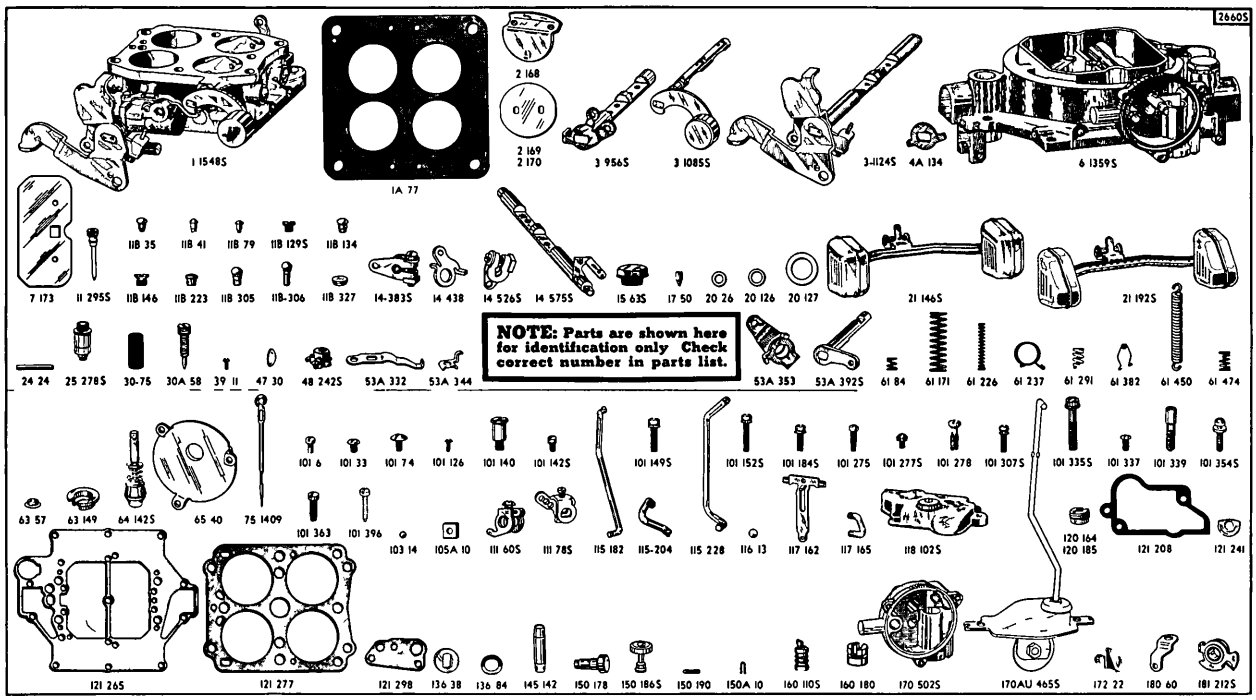
FAST IDLE ON CAR: 1400 R P M , with fast idle screw on high step of cam

UNLOADER ADJUSTMENT: With throttle wide open there should be 11/64 clearance between upper edge of choke valve and inner wall of air horn (gauge T109-166) Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41)

SECONDARY THROTTLE LEVER ADJUSTMENT: The stop lug on both primary and secondary throttle levers should contact boss on flange at the same time To adjust bend secondary throttle operating rod at angle (use bending tool T109-213)

AUXILIARY THROTTLE LOCK-OUT ADJUSTMENT: This adjustment should be made after completing fast idle adjustment 1 With choke valve closed, edge of hook on lockout arm should contact auxiliary throttle lever making maximum contact of locking step on lever 2 Open choke valve Auxiliary throttle valve should become unlocked a few degrees before the choke reaches wide open position Adjust by bending lockout arm

CHOKE ADJUSTMENT (CROSS OVER TYPE) See Form 3661: 1 Loosen mounting post lock nut and turn mounting post with screw driver until index mark on disk is positioned as listed on carbureter specification page Hold in this position with screw driver and tighten lock nut NOTE screw driver may be held in vise so that one hand may be used to support housing while tightening nut 2 After adjustment is completed and coil housing and rod assembly and carbureter is installed on engine lift cover disk and open and close choke valve manually to see if connector rod clears sides of hole in housing cover If rod does not clear hole in housing cover without binding replace with a new unit since connector rod cannot be bent without affecting calibration



Dodge "V-8"—1958—Carbureter No. 2660S

WHEN SERVICING, USE GASKET ASSORTMENT No. 299; RE-CARBURETION KIT No 1916N

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF RE-CARBURETION KIT

Part No.	PART NAME	
1-1548S	—Body flange assembly	
1A-77	FLANGE GASKET	
2-168	Auxiliary throttle valve	(2)
2-169	Secondary throttle valve	(2)
2-170	Primary throttle valve	(2)
3-956S	Secondary throttle shaft and operating lever assembly	
3-1085S	Auxiliary throttle shaft, lever and weight assembly	
3-1124S	Primary throttle shaft and lever assembly	
4A-134	Primary throttle shaft dog	
6-1359S	—Air horn assembly	
7-173	Choke valve	
11-295S	Low speed jet assembly (.032")	(4)
11B-35	Rivet plug	(6)
11B-41	Rivet plug	
11B-79	Rivet plug	
11B-129S	Pump discharge passage plug assembly	
11B-134	Rivet plug	
11B-146	Level sight plug	(2)
11B-223	Nozzle passage and idle port rivet plug	(8)
11B-305	Rivet plug	(2)
11B-306	Rivet plug	
11B-327	Secondary throttle shaft rivet plug	
14-383S	Choke lever and screw assembly	
14-438	Cam trip lever	
14-526S	Choke lever assembly	

Part No	PART NAME	
14-575S	Choke piston lever link and shaft assembly	
15-63S	Strainer nut assembly	
17-50	Pump check needle	
20-26	Relief valve gasket	
20-126	Needle seat gasket	(2)
20-127	Bowl strainer gasket	
21-146S	Secondary float and lever assembly	
21-192S	Primary float and lever assembly	
24-24	Float lever pin	(2)
25-278S	PRIMARY NEEDLE AND SEAT ASSEMBLY (.0935")	(2)
30-75	Bowl strainer	
30A-58	Idle adjustment screw	(2)
39-11	Choke and primary throttle valve attaching screw	(6)
47-30	Welsh plug	
48-242S	Pump jet and housing assembly	
53A-332	Lockout arm	
53A-344	Vent arm	
53A-353	Primary operating lever	
53A-392S	Pump operating lever and countershaft assembly	
61-84	Idle adjustment screw spring	(2)
61-171	Pump spring (lower)	
61-226	VACUUM PISTON SPRING	
61-237	Fast idle cam spring	
61-291	Throttle lever adjusting screw spring	
61-382	Metering rod spring	

Part No.	PART NAME	
61-450	Secondary throttle return spring	
61-474	Bowl vent spring	
63-57	Intake check ball retainer	
63-149	Bowl vent spring retainer	
64-142S	—PUMP PLUNGER ROD AND SPRING ASSEMBLY	
65-40	Piston housing cover plate	
75-1280	Metering rod 074" x 070" x 056" 1 size lean	(2)
75-1281	Metering rod 075" x 072" x 060" 2 sizes lean	(2)
75-1409	—METERING ROD—STANDARD 071" x 068" x 054"	(2)
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	
101-126	Auxiliary throttle valve attaching screw	(4)
101-140	Fast idle cam screw	
101-142S	Piston housing cover plate attaching screw and washer assembly	(3)
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-275	Piston housing attaching screw	
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet housing attaching screw	
101-307S	Air horn and bracket attaching screw and washer assembly	(8)
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-339	Throttle lever adjusting screw	
101-354S	Choke lever clamp screw assembly	(2)
101-363	Piston housing attaching screw	(2)
101-396	Fast idle adjustment screw	
103-14	Lead shot	(3)

Part No.	PART NAME	
105A-10	Choke lever clamp screw nut	(2)
111-60S	Metering rod arm and screw assembly	
111-78S	Pump arm and screw assembly	
115-182	Choke connector rod	
115-204	Throttle operating rod	
115-228	Throttle connector rod	
116-13	Pump intake check ball	
117 162	Vacumeter piston link	
117-165	Pump connector link	
118-102S	Dust cover assembly	
120-164	PRIMARY METERING ROD JET (0945")	(2)
120-185	Secondary metering rod jet (067")	(2)
121-208	DUST COVER GASKET	
121-241	PUMP JET HOUSING GASKET	
121-265	AIR HORN GASKET	
121-277	BODY FLANGE GASKET	
121-298	Piston housing gasket	
136-38	Throttle shaft washer	
136-84	Spring washer	
145-142	Choke vacuum passage standpipe	
150-178	Auxiliary valve lockout arm pin	
150-186S	Pin and valve cap assembly	
150-190	Choke piston pin	
150A-10	Pin spring	(5)
160-110S	Vacuum piston and pin assembly	
160-180	— Choke piston	
170-502S	Piston housing and plug assembly	
170AU-465S	Thermostatic coil housing and rod assembly	
172-22	Throttle connector rod retainer	
180-60	Lever return spring bracket	
181-212S	Fast idle cam assembly	

—Parts so marked are new and listed for the first time

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

Form 5278 A

CARTER CARBURETOR
DIVISION OF ACF INDUSTRIES INCORPORATED
ST LOUIS, MO, U S A

DODGE 2698S
April, 1957
Revised July, 1957

DODGE "V-8"

MODEL D-500 SPECIAL

(POLICE CAR)

1957

WCFB Four-Bore Down-Draft Climatic® Control **Carbureter No. 2698S**

CARBURETER SPECIFICATIONS

For Dodge 8 Cylinder Engine 3.69 Inch Bore, 3.80 Inch Stroke • Vacuum at Idle 19.5 Inches

Dimensions: Flange size 1¼ inch Four Bore – 4 bolt type
Primary venturi size, 11/32 inch I. D.
Main venturi size, 1-3/16 inch I. D.

Vents: Inside, (5).

Gasoline Intake, Size No. 42 (.0935 inch) drill, in needle seat.

Low Speed Jet Tube: Jet, size (.035 inch) diameter. By-pass, tube in body, size (.057 inch) diameter. Economizer plug in body, size (.0465 inch) diameter. Idle bleed, in body, size No. 46 (.081 inch) drill.

Idle Port: Upper, slot type, primary, length .150 inch, width .030 inch. Secondary, length .103 inch, width .030 inch.

Idle Port Opening: Primary .082 to .088 inch, secondary .065 to .071 inch above top edge of valve with valve tightly closed.

Lower Port: Primary (for idle adjustment screw), size No. 53 (.0595 inch) drill. Secondary (no idle adjustment screw), size No. 57 (.043 inch) drill.

Set Idle Adjustment Screw: ¼ to 1¼ turns open. For richer mixture turn screw out. Do not idle engine below 500-600 R.P.M. in neutral.

Main Nozzle: Installed permanently. DO NOT REMOVE. Anti-percolating jet (4) size No. 70 (.028 inch) drill.

Metering Rod: *(Vacumeter type) see parts list for size.*

Metering Rod Jet: Primary Size .098 inch diameter. Secondary Size .082 inch diameter.

Accelerating Pump Discharge jet (twin) primary side only, size No. 74 (.0225 inch) drill. Intake ball check seat, size .115 to .120 inch diameter. Discharge needle seat, size No. 50 (.070 inch) drill. Relief passage (vent) to fuel chamber, size No. 42 (.0935 inch) drill.

Choke: Carter Climatic® Control Cross Over Type set on index. Butterfly type offset choke valve, primary side only. Choke heat suction hole, restriction in piston housing, size No. 40 (.098 inch) drill.

Vacuum Spark Port: Horizontal slot (round end) .045 x .110 inch. Top of port .022 to .032 inch above top edge of valve with valve tightly closed

Motor Tune-Up – Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carburet r.

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open	Float Setting	Idle Adjustment Screw Setting
.035"	.017"	6° B. T. D. C. At Vibration Damper	Primary 7/32 Inch (Gauge T109-283) Secondary 9/32 Inch (Gauge T109-284)	¼ to 1¼ Turns Op n Idl ngine at 500-600 R.P.M. in neutral

NOTE: Th s cars are equipped with Hydraulic Valve Lifters – NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: Two separate float adjustments must be made–lateral and vertical. **LATERAL ADJUSTMENT:** With bowl cover assembly inverted bowl cover gasket removed and float resting on seated needle, place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting. Side of floats should just clear the vertical uprights of float gauge. Adjustment should be made by bending arms of floats. **VERTICAL ADJUSTMENT:** With float gauge in same position, floats should just clear the horizontal portion of gauge. Vertical distance between top of float and machined surface of casting must by 7/32" (gauge T109-283) for primary floats; and 9/32" (gauge T109-284) for secondary floats. Adjust by bending float arms.

FLOAT DROP ADJUSTMENT: With bowl cover held in upright position and measuring from center of floats, th distance between top of floats and bowl cover should be 23/32" for primary floats and 25/32" for secondary floats. Adjust by bending stop tabs on float bracket.

PUMP ADJUSTMENT: Install pump connector link in center hole (medium stroke) of pump arm, with ends extending toward countershaft arm. Back out throttle lever set screw until throttle valves seat in bores of carbureter. Hold straight edge across top of dust cover boss at pump arm. The flat on top of pump arm should be parallel to straight edge. Adjust by bending throttle connector rod at lower angle. (Use tool T109-213.)

METERING ROD ADJUSTMENT: Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows: 1. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw. 2. With metering rods in place, press down on vacumeter link until metering rods bottom in carbureter body casting. 3. Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link. Hold in place and carefully tighten clamp screw.

BOWL VAPOR VENT ADJUSTMENT: This adjustment should be made after completing pump and metering rod adjustments. Install dust cover and dust cover gasket. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter. There should be 1/16 inch (gauge T109-197) between lower edge of bowl vapor vent valve and dust cover. To adjust, remove dust cover and bend vapor vent arm.

FAST IDLE ADJUSTMENT: (a) Loosen choke lever clamp screw on choke shaft. Insert .020" feeler gauge (T109-29) between lip of fast idle cam and boss of flange casting. Hold choke valve tightly closed and take slack out of linkage by pressing lever towards closed position – hold in place and tighten clamp screw. (b) With choke valve tightly closed, tighten fast idle adjusting screw until there is .010" (gauge T109-200) opening between throttle valve and bore of carbureter (side opposite idle port). Be sure fast idle adjusting screw is on high step of cam while making this adjustment.

FAST IDLE ON CAR: 1350 to 1400 R.P.M.

UNLOADER ADJUSTMENT: With throttle wide open there should be 15/64" clearance between upper edge of choke valve and inner wall of air horn (gauge T109-32). Adjust be bending unloader lip on throttle shaft lever (use bending tool T109-41).

SECONDARY THROTTLE LEVER ADJUSTMENT: The stop lug on both primary and secondary throttle levers should contact boss on flange at the same time. To adjust bend secondary throttle operating rod at angle (use bending tool T109-213).

AUXILIARY THROTTLE LOCK-OUT ADJUSTMENT: This adjustment should be made after completing fast idle adjustment. 1. With choke valve closed, edge of hook on lockout arm should contact auxiliary throttle lever, making maximum contact of locking step on lever. 2. Open choke valve. Auxiliary throttle valve should become unlocked a few degrees before the choke reaches wide open position. Adjust by bending lockout arm.

CHOKE ADJUSTMENT (CROSS OVER TYPE) See Form 3661: 1. Loosen mounting post lock nut and turn mounting post with screw driver until index mark on disk is positioned as listed on carbureter specification page. Hold in this position with screw driver and tighten lock nut. NOTE: Screw driver may be held in vise so that one hand may be used to support housing while tightening nut. 2. After adjustment is completed and coil housing and rod assembly and carbureter is installed on engine lift cover disk and open and close choke valve manually to see if connector rod clears sides of hole in housing cover. If rod does not clear hole in housing cover without binding replace with a new unit since connector rod cannot be bent without affecting calibration.

Dodge "V-8" – 1957 – Carbureter No. 2698S

WHEN SERVICING, USE GASKET ASSORTMENT No. 299

Part N.	Part Name
1-1500S	Body flange assembly
1A-77	Flange gasket
2-168	Auxiliary throttle valve (2)
2-169	Secondary throttle valve (2)
2-170	Primary throttle valve (2)
3-956S	Secondary throttle shaft and operating lever assembly
3-1085S	Auxiliary throttle shaft, lever and weight assembly
3-1124S	Primary throttle shaft and lever assembly
4A-134	Primary throttle shaft dog
6-1286S	Air horn assembly
7-173	Choke valve
11-278S	Low speed jet assembly (4)
11B-35	Rivet plug 6)
11B-41	Rivet plug
11B-79	Rivet plug
11B-129S	Pump discharge passage plug assembly
11B-134	Rivet plug
11B-146	Level sight plug (2)
11B-223	Nozzle passage and idle port rivet plug (8)
11B-305	Rivet plug (2)
11B-306	Rivet plug
11B-327	Secondary throttle shaft rivet plug
14-383S	Choke lever and screw assembly
14-438	Cam trip lever
14-526S	Choke lever assembly
14-575S	Choke piston lever, link and shaft assembly
15-63S	Strainer nut assembly (2)
17-50	Pump check needle
20-26	Relief valve gasket
20-126	Needle seat gasket (2)
20-127	Bowl strainer gasket (2)
21-146S	Secondary float and lever assembly
21-192S	Primary float and lever assembly
24-24	Float lever pin (2)
25-278S	Primary needle and seat assembly
25-279S	Secondary needle and seat assembly
30-73	Primary needle seat strainer
30-74	Secondary fuel inlet strainer
30-75	Bowl strainer
30A-58	Idle adjustment screw (2)
39-11	Primary throttle and chok valve attaching screw (6)
47-30	Welsh plug
48-174S	Pump jet and housing assembly
53A-332	Lockout arm

Part No.	Part Name
53A-344	Vent arm
53A-353	Primary operating lever
53A-392S	Pump operating lever and countershaft assembly
61-84	Idle adjustment screw spring (2)
61-226	Vacuum piston spring
61-237	Fast idle cam spring
61-291	Throttle lever adjusting screw spring
61-382	Metering rod spring
61-413	Upper pump spring
61-450	Secondary throttle return spring
61-474	Bowl vent spring
63-57	Intake check ball retainer
63-149	Bowl vent spring retainer
63-176	Pump spring retainer
64-145S	Pump plunger and rod assembly
65-40	Piston housing cover plate
75-1373	Metering rod-standard - .073" x .053" (2)
101-6	Pump arm clamp screw
101-33	Metering rod arm clamp screw
101-74	Throttle shaft screw
101-126	Auxiliary throttle valve attaching screw (4)
101-140	Fast idle cam screw
101-1[illegible]S	Piston housing cover plate attaching screw and washer assembly (3)
101-149S	Body flange attaching screw and washer assembly (4)
101-152S	Air horn attaching screw and washer assembly
101-184S	Dust cover attaching screw and washer assembly (2)
101-275	Piston housing attaching scr w
101-277S	Vent arm attaching screw and washer assembly
101-278	Pump jet housing attaching screw
101-307S	Air horn and bracket attaching screw and washer assembly (8)
101-335S	Air horn attaching screw and washer assembly (7)
101-337	Secondary throttle valve attaching screw (4)
101-339	Throttle lever adjusting screw
101-354S	Choke lever clamp screw assembly (2)
101-363	Piston housing attaching screw (2)
101-396	Fast idle adjustment scr w
103-14	Lead shot (3)
105A-10	Choke lever clamp screw nut (2)
111-60S	Metering rod arm and screw assembly
111-78S	Pump arm and screw assembly

Part No.	Part Nam	
115-182	Chok conn ctor rod	
115-204	Throttle operating rod	
115-228	Throttle connector rod	
116-13	Pump intake check ball	
117-162	Vacumeter piston link	
117-165	Pump connector link	
118-102S	Dust cover assembly	
120-158	S condary metering jet	(2)
120-163	Primary metering rod jet	(2)
121-208	Dust cover gasket	
121-241	Pump jet housing gasket	
121-265	Air horn gasket	
121-277	Body flange gasket	
121-298	Piston housing gasket	

Part No.	Part Nam	
136-38	Throttl shaft washer	
136-84	Throttle shaft spring washer	
145-142	Choke vacuum passage stand pipe	
150-178	Auxiliary valve lockout arm pin	
150-186S	Pin and valve cap assembly	
150-190	Choke piston pin	
150A-10	Pin spring	(5)
160-110S	Vacuum piston and pin assembly	
160-129	Choke piston	
170-502S	Piston housing and plug assembly	
170AU-465S	Thermostatic coil housing and rod assembly	
172-22	Throttle connector rod retainer	
180-60	Lever return spring bracket	
181-212S	Fast idle cam assembly	

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

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DODGE TRUCK

2658S
Standard Transmission

2659S
Automatic Transmission

1957-1958

Use 2604S with 156-29 to replace 2658S

Use 2604S with 156-29 and 202-80U to replace 2659S

MODELS

2658S—K6-P300, P400, L6-P300, P400

2659S—K6-D100, D200, L6-D100, D200, D300, P300, P400

BBS Down-Draft Climatic® Control **Carbureters Nos. 2658S-2659S**

CARBURETER SPECIFICATIONS

For Dodge Six Cylinder 230 Cu. In. Engine Vacuum at Idle 17 Inches

Dimensions: Flange size 1½ inch, S A E
Throttle bore 1 11/16 inch
Main venturi 1 11/32 inch I D

Vents: Outside none Inside balance vent tube

Low Speed Circuit: Jet, size 0315 inch diameter Idle passage air bleed in body, size 061 inch diameter Restriction in body size 057 inch diameter Idle port slot type, length 195 inch, width 030 inch

Idle Port Opening: Top of port located 140 to 144 inch above top edge of valve, with valve tightly closed

Lower Port (For Idle Adjustment Screw): Size 053 to 057 inch diameter

Set Idle Adjustment Screw: ½ to 1½ turns open For richer mixture turn screw out Idle engine at 500 r p m in neutral

Main Vent Tube: Side holes 6—0354 inch diameter Bleed in top of tube 0236 inch diameter

Accelerating Pump: Pump intake passage ball check seat, size 110 to 120 inch diameter Pump discharge passage ball check seat 110 to 120 inch diameter in body Pump (discharge) jet, size 0275 inch drill Bleed hole in pump plunger plate size 020 inch diameter

Choke: Carter Climatic® Control, set on index Choke heat suction hole, in body size No 38 (1015 inch) drill NOTE Thermostatic coil should not be removed from delayer mounting post If defective replace with complete thermostatic coil and housing assembly

Vacuum Spark Port: Slot (round end) type Size 030 by 110 inch Top of port 044 to 050 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION· Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .020"	Ignition Timing Breaker Points to Open· 2° B. T. D. C. At Vibration Damper	Valve Setting (Hot) Intake .010" Exhaust .014"	Float Setting 7/32 Inch (Use Gauge T109-239)	Idle Adjustment Screw Setting ½ to 1½ Turns Open Idle Engine at 500 R.P.M. In Neutral

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: This adjustment must be made with the bowl cover gasket and float pin retainer removed Hold the lip on float arm against the seated intake needle, making sure the float pin is at the bottom of its guide slots The distance from the top surface of the body casting to the top of each float should be 7/32 inch (gauge T109-239) If one float is lower than the other, equalize by bending the float arm If both floats require the same correction, adjust by bending lip on float arm The floats must not rub anywhere against the inner walls of the bowl If necessary bend float arms slightly to provide clearance on all sides of floats

PUMP ADJUSTMENT Back out throttle adjusting screw and open choke valve so that throttle valve seats in bore of carbureter Install throttle connector rod in center hole of throttle lever The distance from the top of the bowl cover to the top of plunger shaft (not pump arm) should be 54/64 inch Adjust by bending throttle connector rod at lower angle (use Tool T109-213)

FAST IDLE ADJUSTMENT· Remove thermostatic coil housing assembly, gasket and baffle plate With throttle adjusting screw backed out, crack throttle valves and hold

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choke valve in fully closed position Then close throttle This will allow fast idle cam to revolve to fast idle position There should now be 016- 020 inch clearance (use gauge T109-44) between throttle valve and bore of carbureter (side opposite idle port) Adjust by bending the choke connector rod at lower angle (use Tool T109-213)

CAUTION: Be sure cam trip lever is all the way in piston housing with lug contacting cam

FAST IDLE ON CAR 1600 to 1700 R P M hot engine, with choke trip lever on high step of cam

UNLOADER ADJUSTMENT This adjustment must be made after the fast idle adjustment Hold throttle valve wide open and close choke valve as far as possible without forcing There should now be 9/64 inch clearance (use gauge T109-34) between upper edge of choke valve and inner wall of air horn Adjust by bending arm on choke trip lever (use tool T109-214) When fast idle and unloader adjustments have been made assemble baffle plate, coil housing gasket and thermostatic coil housing assembly on air horn Set Climatic® Control as specified making sure that hook on coil has picked up coil shaft lever

DASHPOT (SLOW CLOSING THROTTLE ADJUSTMENT). (2659S only) The purpose of the dashpot is to prevent the car from stalling when the throttle is released rapidly Maximum dashpot action is obtained by loosening lock nut and adjusting the dashpot unit so that the dashpot plunger shaft can be moved inward approximately 3/32 inch with the throttle valve tightly closed Then tighten lock nut

Dodge Truck—1957-1958—Carbureters Nos. 2658S-2659S

WHEN SERVICING, USE GASKET ASSORTMENT No. 252

Part No.	PART NAME	
1-1376S	Body flange assembly (2658S)	
1-1378S	Body flange assembly (2659S)	
1A-90	Flange gasket—for use without governor	
2-87	Throttle valve	
3-1047S	Throttle shaft and lever assembly (2659S)	
3-1048S	Throttle shaft and lever assembly (2658S)	
6-1023S	Air horn assembly (2659S)	
6-1249S	Air horn assembly (2658S)	
7-199	Choke valve	
11B-35	Rivet plug	
11B-79	Rivet plug	(6)
11B-220	High speed passage rivet plug	
11B-296	Pump jet rivet plug	
11B-303	Rivet plug	
14-446S	Choke trip lever and pin assembly	
14-502S	Choke piston lever and shaft assembly (2659S)	
14-576S	Choke piston lever and shaft assembly (2658S)	
20-31	Needle seat gasket	
20-52	Step up piston gasket	
20-116	Main metering jet gasket	
21-144S	Float and lever assembly	
24-23	Float lever pin	
25-102S	Needle and seat assembly (086")	
30A-44	Idle adjustment screw	
39-11	Choke and throttle valve screw	(4)
47-30	Welsh plug	
48-194	Pump jet	
53A-372	Pump arm	
61-291	Throttle lever adjusting screw spring	
61-298	Fast idle cam spring	
61-467	Idle adjustment screw spring	
61-476	Pump spring (2658S)	
61-484	Step up piston spring	
61-528	Pump spring (2659S)	
63-57	Intake check ball retainer	
63-144	Delayer plate retainer ring	
63-169	Float lever pin retainer	

Part No.	PART NAME	
63-190	Coil housing retainer	
64-163S	Pump plunger and rod assembly	
75-943	Step up rod (024") (2659S)	
75-1225	Step up rod (022") (2658S)	
100-16	Throttle adjusting screw	
101-148S	Bowl cover attaching screw and washer assembly	(2)
101-318	Pump arm screw	
101-359S	Air horn attaching screw and washer assembly	(4)
101-361	Coil housing attaching screw	(3)
101-374	Step up piston plate guide screw	
105A-52	Dash pot lock nut (2659S)	
114-125	Dash pot lever (2659S)	
115-234	Throttle connector rod	
115-273	Choke connector rod	
116-13	Pump intake and discharge check ball	(2)
117-113	Fast idle link	
120-206S	Main metering jet assembly—standard (402 to 410 cc)	
120-214S	Main metering jet assembly—2 sizes lean (356 to 364 cc)	
120-215S	Main metering jet assembly—1 size lean (378 to 386 cc)	
121-78	Coil housing gasket	
121-225	Body gasket	
121-247	Body flange gasket	
123-74S	Idle orifice tube and plug assembly	
136-179	Pump spring retainer washer	
145-136	Main vent tube	
150A-13	Pin spring	
160-124S	Step up piston and plate assembly	
170N-312S	Thermostatic coil and housing assembly (2658S)	
170X-312S	Thermostatic coil and housing assembly (2659S)	
172-28	Choke connector rod retainer	
180-65	Dash pot bracket (2659S)	
181-171S	Fast idle cam assembly	
186-39	Choke baffle plate	
202-35S	Dash pot assembly (2659S)	

NOTE **Figures in parentheses indicate number of pieces used in ne carbureter. Where no figure is shown, only one is used.**

DODGE TRUCK
MODELS
K6-D100, D200, D300
K6-W100, W200
1957

BBR2 DOWN-DRAFT CARBURETER No. 2681S

CARBURETER SPECIFICATIONS

For Dodge Truck 6 Cylinder Engine: 3.25 Inch Bore, 4.63 Inch Stroke

Dimensions: Flange size 1½ inch Throttle bore 1 11/16 inch Main venturi, 1-11/32 inch I D

Float Setting: See adjustments
Vents: Outside none Inside balance vent tube 218 inch diameter

Gasoline Intake Needle: Triangular horizontal No 44 (086 inch) drill in needle seat

Idle Orifice Tube: Jet size 0276 inch drill Idle passage air bleed in air horn size 053 inch diameter Restriction in body size 0452 inch diameter

Idle Ports: Upper port Slot type length 149 inch width 030 inch Top of port located 118 to 122 inch above top edge of valve Lower port size 053 to 057 inch drill (For idle adjustment screw)

Set Idle Adjustment Screw: 1 to 2 turns open For richer mixture turn screw out Idle engine between 450 500 r p m

Main Metering Jet: Calibrated to flow 315 to 319 cc per minute (Do not gauge for size If in doubt replace with new part)

Main Vent: Through diffuser (air bleed inside bowl) Size 0315 inch drill

Main Vent Tube: Side holes 4—0354 inch diameter

Step-Up Jet: Power orifice 0315 inch drill

Accelerating Pump: Type—delayed action seasonal adjustment Stroke—Summer setting (inner hole, short stroke) Intermedi ate setting (center hole) Winter setting (outer hole long stroke) Pump intake passage ball check seat size 115 to 120 inch diameter in body Pump discharge passage Restriction (under ball check) size 062 to 065 inch diameter in body Pump (discharge) jet size 0374 inch drill

Pump Adjustment: 26/64 inch plunger travel—full throttle posi tion medium stroke Use gauge T109-117S

Choke: Offset butterfly type (with poppet valve)

Vacuum Spark Port: Slot (round end) type size 040 by 110 inch Top of port 052 to 058 inch above top edge of valve

Motor Tune-Up — Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .020"	Ignition Timing Breaker Points to Open T. D. C. At Vibration Damper	Valve Setting (Hot) Intake .010" Exhaust 014"	Float Setting 5/64 Inch (Use Gauge T109 50)	Idle Adjustment Screw Setting 1 t 2 Turns Open Idle engine at 450 to 500 R.P.M. In Neutral

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: This adjustment must be made with the bowl cover gasket and float pin retainer removed Place a 050 inch feeler gauge (T109-226) between lip of float and intake pin Hold the lip on float arm against the seated intake needle fully compressing the intake needle spring The distance from the top surface of the body casting to the top of the float should be 5/64 inch (gauge T109 50) To adjust bend lip on float arm

PUMP ADJUSTMENT: Remove air horn assembly back out throttle adjustment screw and be sure pump operating link is in center of throttle shaft arm Place Universal pump travel gauge T109 117S on edge of bowl cover so that lip of gauge extends over top of plunger shaft With throttle valve seated turn knurled nut of gauge until lip contacts top of plunger shaft Take reading indi cated on gauge Repeat with throttle valve wide open and plung er pushed to bottom of cylinder The difference in reading obtained should be '26' (26/64 inch) Adjust by bending hori zontal portion of pump lifter link
Pump stroke adjustable for high or low temperatures Set to long est stroke for cold weather shorter stroke for hot weather driving

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EXCESSIVE RICHNESS above 50 miles per hour may be caused by a clogged main vent tube After removal of rivet plug beneath float bowl with tool No T109-210 main vent tube can be removed and a new tube inserted with tool No T109 195 Care must e exercised in inserting new tube which must seat tightly Use new rivet to complete the installation

MAXIMUM ECONOMY and performance are secured only when breaker points spark plugs valves and motor timing are set to manufacturer s specifications After motor is properly tuned the following should also be done to insure satisfactory performance and economy

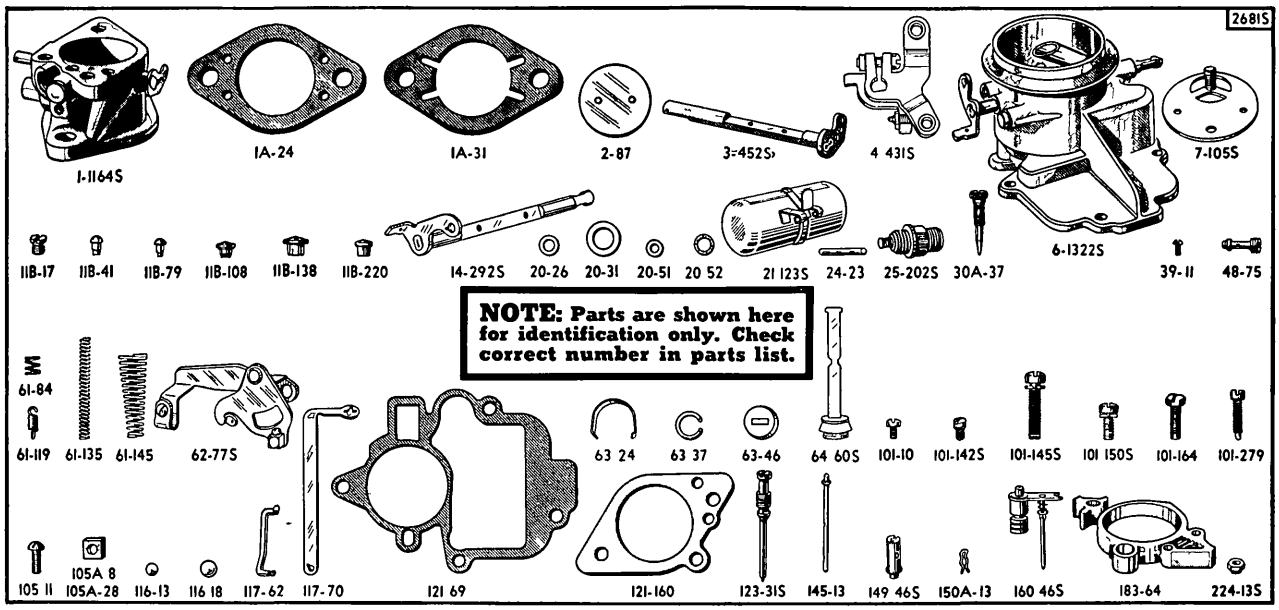
(a) Float level must be set as above

(b) Step up rod in step up jet must seat and move freely When reassembling jet must be screwed in tight against seat

(c) Step up piston in body casting should not bind and must be free of dirt

(d) Main metering jet can be replaced with leaner than stand ard metering jets for altitude

CAUTION: Do not attempt to gauge metering jets with drills These jets have been flow tested to insure correct fuel flow



Dodge Truck—1957—Carbureter No. 2681S

WHEN SERVICING, USE GASKET ASSORTMENT No. 137A; REPAIR PACKAGE No. 1534B

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1164S	Body flange assembly	
1A-24	Flange gasket—for use with governor	
1A-31	FLANGE GASKET—FOR USE WITHOUT GOVERNOR	
2-87	Throttle valve	
3-452S	Throttle shaft and arm assembly	
4-431S	Throttle lever assembly	
6-1322S	—Air horn assembly	
7-105S	Choke valve assembly	
11B-17	Pump discharge passage plug	
11B-41	Rivet plug	
11B-79	Rivet plug	(2)
11B-108	Idle port rivet plug	
11B-138	Pump jet rivet plug	
11B-220	HIGH SPEED PASSAGE PLUG	
14-292S	Choke control lever and shaft assembly	
20-26	Gasket	
20-31	Needle seat gasket	
20-51	Step-up jet gasket	
20-52	STEP-UP PISTON GASKET	
21-123S	Float and lever assembly	
24-23	Float lever pin	
25-202S	NEEDLE PIN SPRING AND SEAT ASSEMBLY	
30A-37	Idle adjustment screw	
39-11	Valve attaching screw	(4)
48-75	Pump jet	
61-84	Idle adjustment screw spring	
61-119	Choke pull back spring	
61-135	STEP-UP PISTON SPRING	
61-145	Pump spring	
62-77S	Choke tube bracket assembly	
63-24	Float lever pin retainer	
63-37	Pump ball retainer ring	
63-46	Pump spring retainer	
64-60S	PLUNGER AND ROD ASSEMBLY Identify by shaft No 49-120)	
101-10	Wire clamp screw	
101-142S	Choke bracket attaching screw and washer assembly	
101-145S	Flange attaching screw and washer assembly	(3)
101-150S	Bowl cover attaching screw and washer assembly	(4)
101-164	Throttle lever clamp screw	
101-279	Throttle lever adjusting screw	
105-11	Choke tube clamp screw	
105A-8	Choke tube clamp nut	
105A-28	Throttle lever clamp nut	
116-13	Pump intake check ball	
116-18	Pump discharge check ball	
117-62	Pump link	
117-70	Pump lifter link	
121-69	BODY GASKET	
121-160	BODY FLANGE GASKET	(2)
123-31S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
145-13	MAIN VENT TUBE	
149-46S	Step-up jet assembly	
150A-13	Pin spring	
160-46S	Step up piston plate and rod assembly	
183-64	Insulator	
224-12S	Main metering jet assembly—3 sizes lean	
224-13S	MAIN METERING JET ASSEMBLY—STANDARD	
224-14S	Main metering jet assembly—1 size lean	
224-15S	Main metering jet assembly—2 sizes lean	
224-28U	Unitized package (For high altitude) (consists of 1—224-12S and 1—61-134)	

—Parts so marked are new and listed for the first time

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

DODGE TRUCK

Domestic Models:
K8-C700, L8-C700,
L8-D800, L8-T800

"V-8"

Canadian Models:
K8-D700, L8-D700

1957-1958

BBD DUAL DOWN-DRAFT CARBURETERS Nos. 2620S-2620SA

CARBURETER SPECIFICATIONS

For Dodge Truck 8 Cylinder Engine: 3.94 Inch Bore, 3.63 Inch Stroke

Dimensions: Flange size, 1 1/4 inch dual, 4 bolt type. Throttle bore, 1-7/16 inch I. D. Primary venturi, 3/8 inch I. D. Main venturi, 1-3/16 inch I. D.

Vent: Inside, balance vent tube to bowl, in air horn above choke valve.

Gasoline Intake: Size No. 38 (.1015 inch) drill hole in needle seat.

Idle Tube: Jet, in venturi assembly, size .0255 inch diameter. Idle bleed (in venturi cluster screw), size .051 inch diameter. Idle restriction (in venturi cluster screw), size .055 inch diameter.
Venturi idle bleed, in body, size .0472 inch diameter.

Models S have idle passage through top of venturi cluster; Models SA have diagonal passage to screw hole.

Idle Port: Upper, slot type, length .195 inch; width, .030 inch.

Idle Port Opening: .140 to .144 inch above upper edge of valve with valve tightly closed.

Lower Port (For Idle Adjustment Screw): Size .053 to .057 inch diameter.

Set Idle Adjustment Screw: 1/4 to 1 1/4 turns open. For richer mixture, turn screw out. With gear shift lever in neutral position, idle engine at 450 to 500 R.P.M.

Main Nozzle: Nozzle is installed permanently. DO NOT REMOVE.

Main Vent Tube: Side holes 10—size .0433 inch, 1—size .0393 inch diameter.
Main vent in bottom of tube, size .0393 inch diameter.

Step-Up Rod: (Vacuum operated) .024 inch diameter.

Metering Jet: Calibrated to flow 337 to 343 cc per minute. (Do not gauge for size, if in doubt, replace with new part.)

Accelerating Pump: Pump discharge jets (2—in venturi cluster), size .0275 inch diameter. Intake ball check seat, size .130 to .140 inch diameter. Discharge ball check seat, size .110 to .120 inch diameter.

Choke: Manual, offset butterfly type, with poppet valve.

Vacuum Spark Port: None.

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .017"	Ignition Timing Breaker Points to Open: 4° B. T. D. C. At Vibration Damper	Float Setting 9/32 Inch (Use Gauge T109-239)	Idle Adjustment Screw Setting 1/4 to 1 1/4 Turns Open Idle engine at 450 to 500 R.P.M. In Neutral

NOTE: These trucks equipped with Hydraulic Valve Lifters. NO ADJUSTMENT.

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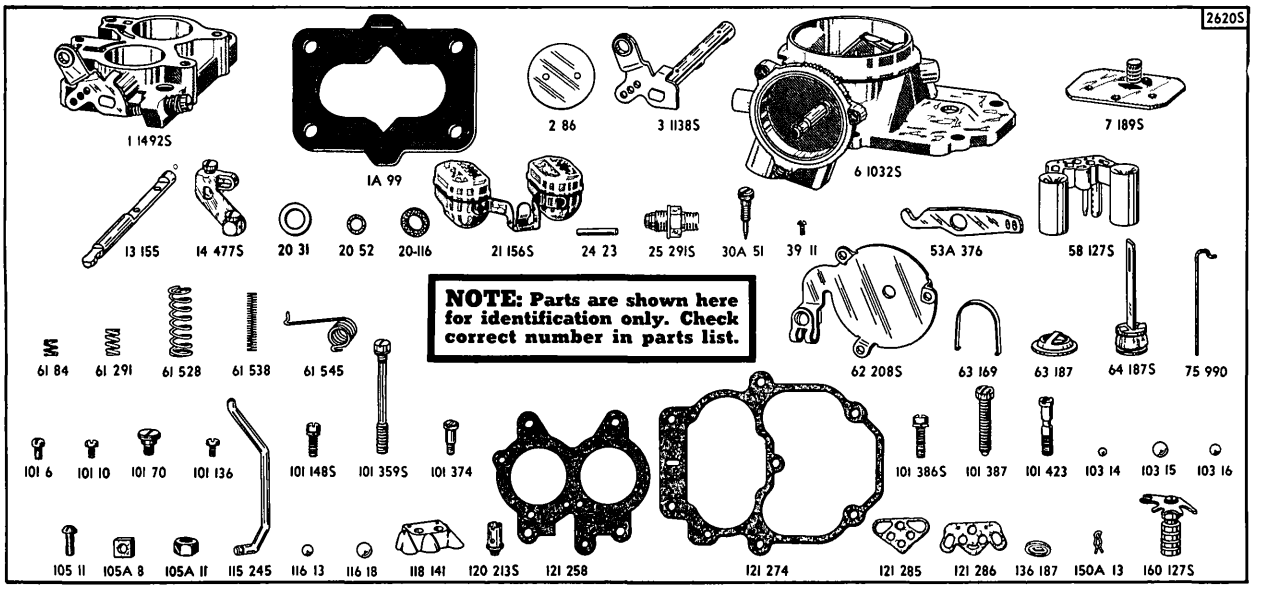
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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT This adjustment must be made with float pin retainer removed Hold the lip on float arm against the seated intake needle making sure the float pin is at the bottom of its guide slots The distance from the top surface of the body casting to the top of each float ridge (at center of float) should be 9/32 inch (gauge T109 239) If one float is lower than the other equalize by bending the float arm If both floats require the same correction adjust by bending lip on float arm The floats must not rub anywhere against the inner walls of the bowl If necessary bend float arms slightly to provide clearance on all sides of floats

PUMP ADJUSTMENT Back out throttle adjusting screw so that throttle valves seat in bores of carbureter Install pump connector rod in middle hole of throttle lever and inner hole of pump arm The distance from the top of the bowl cover to the top of plunger shaft (not pump arm) should be 1 inch Adjust by bending pump connector rod at lower angle (use Tool T109 213)



Dodge Truck—1957-1958—Carbureters Nos. 2620S-2620SA

WHEN SERVICING, USE GASKET ASSORTMENT No 311

Part No	PART NAME	
1-1492S	Body flange assembly (Sup by 1 1564S)	
1-1564	Body flange assembly	
1A-99	Flange gasket	
2-86	Throttle valve	(2)
3-1138S	Throttle shaft and lever assembly	
6-1032S	Air horn assembly	
7-189S	Choke valve assembly	
11B-194	1/8" pipe plug (use with 1 1564S)	
13-155	Choke shaft	
14-477S	Choke lever assembly	
20-31	Needle seat gasket	
20-52	Step up piston gasket	
20-116	Main metering jet gasket	(2)
21-156S	Float and lever assembly	
24-23	Float lever pin	
25-291S	Needle and seat assembly	
30A-51	Idle adjustment screw	(2)
39-11	Choke and throttle valve attaching screw	(6)
53A-376	Pump arm	
58-127S	Venturi cluster and nozzle assembly	
61-84	Idle adjustment screw spring	(2)
61-291	Throttle adjustment screw spring	
61-528	Pump spring	
61-538	Step up piston spring	
61-545	Choke spring	
62-208S	Choke tube bracket assembly	
63-169	Float lever pin retainer	
63-187	Intake check ball retainer	
64-187S	Pump plunger and rod assembly	
75-990	Step up rod	(2)
101-6	Choke tube bracket screw	

Part No	PART NAME	
101-10	Choke wire clamp screw	
101-70	Pump arm screw	
101-136	Choke tube bracket attaching screw	(3)
101-148S	Air horn attaching screw and washer assembly	(4)
101-359S	Body attaching screw and washer assembly	(2)
101-374	Step up piston plate screw	
101-386S	Body flange attaching screw and washer assembly	(2)
101-387	Throttle adjusting screw	
101-423	Venturi cluster screw	(2)
103-14	Lead shot	
103-15	Lead shot	(2)
103-16	Lead shot	(2)
105 11	Choke cable clamp screw	
105A 8	Choke cable clamp nut	
105A-11	Flange stud nut	(4)
115-245	Throttle connector rod	
116-13	Discharge check ball	
116-18	Intake check ball	
118-141	Venturi cover	
120-209S	Main metering jet assembly—2 sizes lean	(2)
120 212S	Main metering jet assembly—1 size lean	(2)
120-213S	Main metering jet assembly—standard	(2)
121-258	Body flange gasket	
121-274	Body gasket	
121-285	Venturi housing gasket	
121 286	Venturi cover gasket	
136-187	Pump spring retainer washer	
150A-13	Pin spring	(2)
160-127S	Step up piston rod and plate assembly	

NOTE **Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used**

DODGE TRUCK "V-8"

MODELS

K8-D700, D800, S700, T700, T800

L8-D700, S700, T700

1957-1958

BBD Dual Down-Draft **Carbureters Nos. 2550S-2550SA**

CARBURETER SPECIFICATIONS

For Dodge 8 Cylinder Engine: 3.94 Inch Bore, 3.63 Inch Stroke

Dimensions: Flange size, 1¼ inch dual, 4 bolt type. Throttle bore, 1-7/16 inch I. D. Primary venturi, ⅜ inch I. D. Main venturi, 1-3/16 inch I. D.

Vent: Inside, balance vent tube to bowl, in air horn above choke valve.

Gasoline Intake: Size No. 38 (.1015 inch) drill hole in needle seat.

Idle Tube: Jet, in venturi assembly, size .0255 inch diameter. Idle bleed (in venturi cluster screw), size .051 inch diameter. Idle restriction (in venturi cluster screw), size .055 inch diameter. Venturi idle bleed, in body, size .0472 inch diameter. Models S have idle passage through top of venturi cluster; models SA have diagonal passage to screw hole.

Idle Port: Upper, slot type, length .195 inch; width, .030 inch.

Idle Port Opening: .140 to .144 inch above upper edge of valve with valve tightly closed.

Lower Port (For Idle Adjustment Screw): Size .053 to .057 inch diameter.

Set Idle Adjustment Screw: ¼ to 1¼ turns open. For richer mixture, turn screw out. With gear shift lever in neutral position, idle engine at 500 R.P.M.

Main Nozzle: Nozzle is installed permanently. DO NOT REMOVE.

Main Vent Tube: Side holes 10—size .0433 inch, 1—size .0393 inch diameter. Main vent in bottom of tube, size .0393 inch diameter.

Step-Up Rod: (Vacuum operated) .019 inch diameter.

Metering Jet: Calibrated to flow 317 to 323 cc per minute. (Do not gauge for size, if in doubt, replace with new part.)

Accelerating Pump: Pump discharge jets (2—in venturi cluster), size .0275 inch diameter. Intake ball check seat, size .130 to .140 inch diameter. Discharge ball check seat, size .110 to .120 inch diameter.

Choke: Manual, offset butterfly type, with poppet valve.

Vacuum Spark Port: None.

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .017"	Ignition Timing Breaker Points to Open: 4° B. T. C. At Vibration Damper	Float Setting 9/32 Inch (Use Gauge T109-239)	Idle Adjustment Screw Setting ¼ to 1¼ Turns Open Idle Engine at 500 R.P.M.

NOTE: These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT.

CARBURETER ADJUSTMENTS

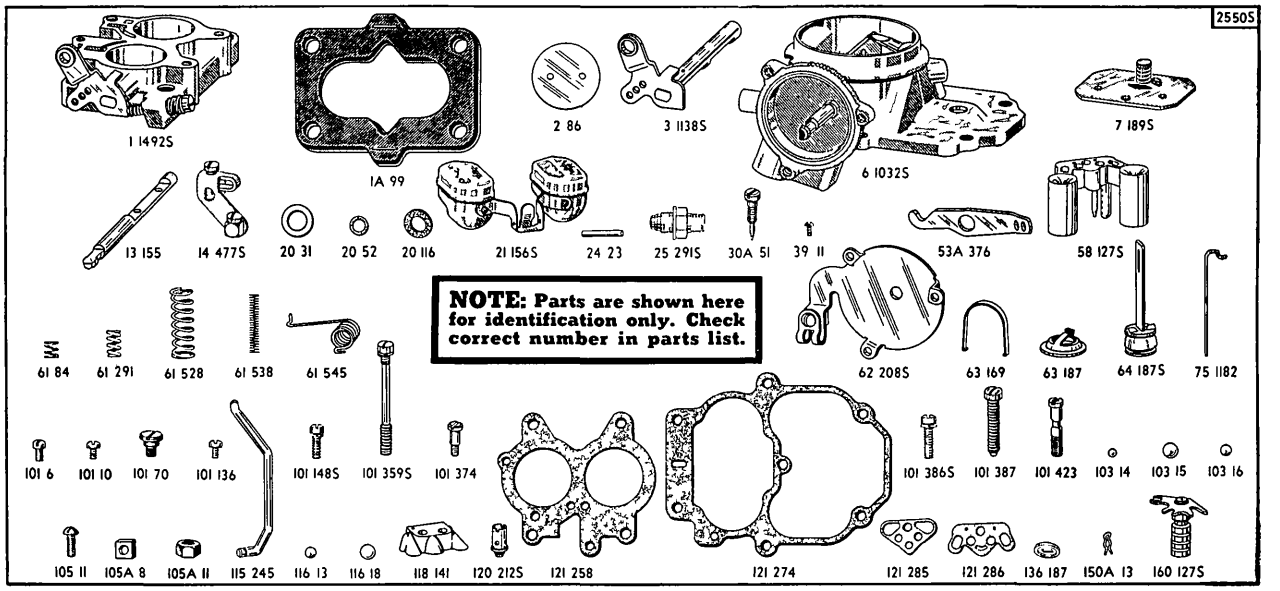
Float Adjustment: This adjustment must be made with float pin retainer removed. Hold the lip on float arm against the seated intake needle, making sure the float pin is at the bottom of its guide slots. The distance from the top surface of the body casting to the top of each float ridge (at center of float) should be 9/32 inch (gauge T109-239). If one float is lower than the other, equalize by bending the float arm. If both floats require the same correction, adjust by bending lip on float arm. The floats must not rub anywhere against the inner walls of the bowl. If necessary, bend float arms slightly to provide clearance on all sides of floats.

Pump Adjustment: Back out throttle adjusting screw so that throttle valves seat in bores of carbureter. Install pump connector rod in middle hole of throttle lever and inner hole of pump arm. The distance from the top of the bowl cover to the top of plunger shaft (not pump arm) should be 1 inch. Adjust by bending pump connector rod at lower angle (use Tool T109-213).

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Dodge Truck "V-8"—1957-1958—Carbureters Nos. 2550S-2550SA

WHEN SERVICING USE GASKET ASSORTMENT No 311

Part No.	PART NAME	
1-1492S	Body flange assembly (Sup by 1 1564S)	
1-1564S	Body flange assembly	
1A-99	Flange gasket	
2-86	Throttle valve	(2)
3-1138S	Throttle shaft and lever assembly	
6-1032S	Air horn assembly	
7-189S	Choke valve assembly	
11B-194	Pipe plug (1/8") (use with 1 1564S)	
13-155	Choke shaft	
14-477S	Choke lever assembly	
20-31	Needle seat gasket	
20-52	Step up piston gasket	
20-116	Main metering jet gasket	(2)
21-156S	Float and lever assembly	
24-23	Float lever pin	
25-291S	Needle and seat assembly	
30A-51	Idle adjustment screw	(2)
39-11	Choke and throttle valve attaching screw	(6)
53A-376	Pump arm	
58-127S	Venturi cluster and nozzle assembly	
61-84	Idle adjustment screw spring	(2)
61-291	Throttle adjustment screw spring	
61-528	Pump spring	
61-538	Step up piston spring	
61-545	Choke spring	
62-208S	Choke tube bracket assembly	
63-169	Float lever pin retainer	
63-187	Intake check ball retainer	
64-187S	Pump plunger and rod assembly	
75-1182	Step up rod	(2)
101 6	Choke tube bracket screw	

Part No.	PART NAME	
101-10	Choke wire clamp screw	
101-70	Pump arm screw	
101-136	Choke tube bracket attaching screw	(3)
101-148S	Air horn attaching screw and washer assembly	(4)
101-359S	Body attaching screw and washer assembly	(2)
101-374	Step up piston plate screw	
101-386S	Body flange attaching screw and washer assembly	(2)
101-387	Throttle adjusting screw	
101-423	Venturi cluster screw	(2)
103-14	Lead shot	
103-15	Lead shot	(2)
103-16	Lead shot	(2)
105-11	Choke cable clamp screw	
105A-8	Choke cable clamp nut	
105A-11	Flange stud nut	(4)
115-245	Throttle connector rod	
116-13	Discharge check ball	
116-18	Intake check ball	
118-141	Venturi cover	
120-209S	Main metering jet assembly—1 size lean	
120-211S	Main metering jet assembly—2 sizes lean	
120-212S	Main metering jet assembly—standard	
121-258	Body flange gasket	
121-274	Body gasket	
121-285	Venturi housing gasket	
121-286	Venturi cover gasket	
136-187	Pump spring retainer washer	
150A 13	Pin spring	(2)
160-127S	Step up piston rod and plate assembly	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

DODGE "V-8"

MODEL D-500

1957

WCFB Four-Bore Down-Draft Climatic® Control **Carbureters Nos. 2622S-2622SA**

CARBURETER SPECIFICATIONS

For Dodge 8 Cylinder Engine: 3.69 Inch Bore, 3.80 Inch Stroke

Dimensions Flange size 1¼ inch Four Bore—4 bolt type
Primary venturi size 11/32 inch I D
Main venturi size, 1 3/16 inch I D

Vents Inside, (5)

Gasoline Intake. Size No 42 (0935 inch) drill, in needle seat

Low Speed Jet Tube Jet size (2622S) (032 inch) diameter, (2622SA) (035 inch) diameter By pass tube in body, size (057 inch) diameter Economizer plug in body size (0465 inch) diameter Idle bleed in body size No 46 (081 inch) drill

Idle Port Upper slot type, primary length 150 inch, width 030 inch Secondary length 103 inch, width 030 inch

Idle Port Opening Primary 082 to 088 inch secondary 065 to 071 inch above top edge of valve with valve tightly closed

Lower Port Primary (for idle adjustment screw), size No 53 (0595 inch) drill Secondary (no idle adjustment screw), size No 57 (043 inch) drill.

Set Idle Adjustment Screw ¾ to 1¾ turns open For richer mixture turn screw out Do not idle engine below 650 R P M in neutral.

Main Nozzle: Installed permanently DO NOT REMOVE Anti percolating jet (4) size No 70 (028 inch) drill

Metering Rod: (Vacumeter type) see parts list for size

Metering Rod Jet. Primary Size 0945 inch diameter Sec ondary Size 067 inch diameter

Accelerating Pump Discharge jet (twin) primary side only size No 74 (0225 inch) drill Intake ball check seat, size 115 to 120 inch diameter Discharge needle seat, size No 50 (070 inch) drill Relief passage (vent) to fuel chamber size No 42 (0935 inch) drill

Choke: Carter Climatic® Control Cross Over Type set on index Butterfly type offset choke valve, primary side only Choke heat suction hole, restriction in piston housing size No 40 (098 inch) drill

Vacuum Spark Port. Horizontal slot (round end) 045 x 110 inch Top of port 022 to 032 inch above top edge of valve with valve tightly closed

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Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .017"	Ignition Timing Breaker Points to Open 6° B. T. D. C. At Vibration Damper	Valve Setting (Hot) Intake .012" Exhaust .022"	Float Setting Primary 7/32 Inch (Gauge T109-283) Secondary 9/32 Inch (Gauge T109-284)	Idle Adjustment Screw Setting ¾ to 1¾ Turns Open Idle engine at 650 R.P.M. in neutral

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: Two separate float adjustments must be made—lateral and vertical. **LATERAL ADJUSTMENT:** With bowl cover assembly inverted, bowl cover gasket removed and float resting on seated needle, place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting. Side of floats should just clear the vertical uprights of float gauge. Adjustment should be made by bending arms of floats. **VERTICAL ADJUSTMENT:** With float gauge in same position, floats should just clear the horizontal portion of gauge. Vertical distance between top of float and machined surface of casting must be 7/32" (gauge T109-283) for primary floats; and 9/32" (gauge T109-284) for secondary floats. Adjust by bending float arms.

FLOAT DROP ADJUSTMENT: With bowl cover held in upright position and measuring from center of floats, the distance between top of floats and bowl cover should be 23/32" for primary floats and 25/32" for secondary floats. Adjust by bending stop tabs on float bracket.

PUMP ADJUSTMENT: Install pump connector link in center hole (medium stroke) of pump arm, with ends extending toward countershaft arm. Back out throttle lever set screw until throttle valves seat in bores of carbureter. Hold straight edge across top of dust cover boss at pump arm. The flat on top of pump arm should be parallel to straight edge. Adjust by bending throttle connector rod at lower angle. (Use tool T109-213.)

METERING ROD ADJUSTMENT: Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows: 1. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw. 2. With metering rods in place, press down on vacumeter link until metering rods bottom in carbureter body casting. 3. Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link. Hold in place and carefully tighten clamp screw.

BOWL VAPOR VENT ADJUSTMENT: This adjustment should be made after completing pump and metering rod adjustments. Install dust cover and dust cover gasket. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter. There should be 1/16 inch (gauge T109-197) between lower edge of bowl vapor vent valve and dust cover. To adjust, remove dust cover and bend vapor vent arm.

FAST IDLE ADJUSTMENT: (a) Loosen choke lever clamp screw on choke shaft. Insert .020" feeler gauge (T109-29) between lip of fast idle cam and boss of flange casting. Hold choke valve tightly closed and take slack out of linkage by pressing lever towards closed position — hold in place and tighten clamp screw. (b) With choke valve tightly closed, tighten fast idle adjusting screw until there is .010" (gauge T109-200) opening between throttle valve and bore of carbureter (side opposite idle port). Be sure fast idle adjusting screw is on high step of cam while making this adjustment.

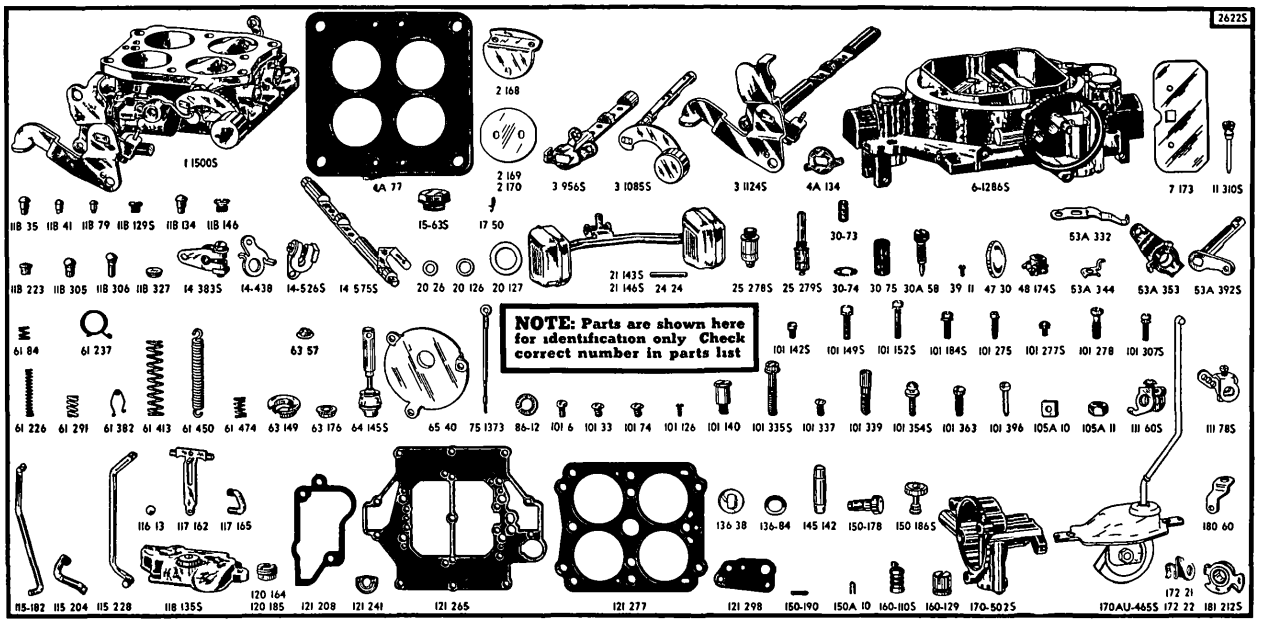
FAST IDLE ON CAR: 1350 to 1400 R.P.M.

UNLOADER ADJUSTMENT: With throttle wide open there should be 15/64" clearance between upper edge of choke valve and inner wall of air horn (gauge T109-32). Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41).

SECONDARY THROTTLE LEVER ADJUSTMENT: The stop lug on both primary and secondary throttle levers should contact boss on flange at the same time. To adjust bend secondary throttle operating rod at angle (use bending tool T109-213).

AUXILIARY THROTTLE LOCK-OUT ADJUSTMENT: This adjustment should be made after completing fast idle adjustment. 1. With choke valve closed, edge of hook on lockout arm should contact auxiliary throttle lever, making maximum contact of locking step on lever. 2. Open choke valve. Auxiliary throttle valve should become unlocked a few degrees before the choke reaches wide open position. Adjust by bending lockout arm.

CHOKE ADJUSTMENT (CROSS OVER TYPE) See Form 3661: 1. Loosen mounting post lock nut and turn mounting post with screw driver until index mark on disk is positioned as listed on carbureter specfication page. Hold in this position with screw driver and tighten lock nut. NOTE: Screw driver may be held in vise so that one hand may be used to support housing while tightening nut. 2. After adjustment is completed and coil housing and rod assembly and carbureter is installed on engine lift cover disk and open and close choke valve manually to see if connector rod clears sides of hole in housing cover. If rod does not clear hole in housing cover without binding replace with a new unit since connector rod cannot be bent without affecting calibration.



Dodge "V-8"—1957—Carbureters Nos. 2622S-2622SA

WHEN SERVICING, USE GASKET ASSORTMENT No. 299

Part No.	PART NAME	
1-1500S	Body flange assembly	
1A-77	Flange gasket	
2-168	Auxiliary throttle valve	(2)
2-169	Secondary throttle valve	(2)
2-170	Primary throttle valve	(2)
3-956S	Secondary throttle shaft and operating lever assembly	
3-1085S	Auxiliary throttle shaft lever and weight assembly	
3-1124S	Primary throttle shaft and lever assembly	
4A-134	Primary throttle shaft dog	
6-1286S	Air horn assembly	
7-173	Choke valve	
11-278S	Low speed jet assembly	(4)
11-295S	Low speed jet assembly (2622S) (Sup by 11 278S)	(4)
11-310S	Low speed jet assembly (2622S) (Sup by 11 295S)	(4)
11B-35	Rivet plug	(6)
11B-41	Rivet plug	
11B-79	Rivet plug (early prod (4) (late prod (1)	
11B-129S	Pump discharge passage plug assembly	
11B-134	Rivet plug	
11B-146	Level sight plug	(2)
11B-223	Nozzle passage and idle port rivet plug	(8)
11B-305	Rivet plug	(2)
11B-306	Rivet plug	
11B-327	Secondary throttle shaft rivet plug	
14-383S	Choke lever and screw assembly	
14-438	Cam trip lever	
14-526S	Choke lever assembly	
14-575S	Choke piston lever link and shaft assembly	
15-63S	Strainer nut assembly	(2)

Part No.	PART NAME	
17-50	Pump check needle	
20-26	Relief valve gasket	
20-126	Needle seat gasket	(2)
20-127	Bowl strainer gasket	(2)
21-143S	Primary float and lever assembly (Sup by 21 192S)	
21-192S	Primary float and lever assembly	
21 146S	Secondary float and lever assembly	
24-24	Float lever pin	(2)
25-278S	Primary needle and seat assembly	
25 279S	Secondary needle and seat assembly	
30-73	Primary needle seat strainer	
30-74	Secondary fuel inlet strainer	
30-75	Bowl strainer	
30A-58	Idle adjustment screw	(2)
39-11	Primary throttle and choke valve attaching screw	(6)
47-30	Welsh plug	
48-174S	Pump jet and housing assembly	
53A-332	Lockout arm	
53A-344	Vent arm	
53A-353	Primary operating lever	
53A-392S	Pump operating lever and countershaft assembly	
61-84	Idle adjustment screw spring	(2)
61-226	Vacuum piston spring	
61-237	Fast idle cam spring	
61-291	Throttle lever adjusting screw spring	
61-382	Metering rod spring	
61-413	Upper pump spring	
61-450	Secondary throttle return spring	
61 474	Bowl vent spring	
63-57	Intake check ball retainer	
63-149	Bowl vent spring retainer	

Part No.	PART NAME	
63-176	Pump spring retainer	
64-145S	Pump plunger and rod assembly	
65 40	Piston housing cover plate	
75-1251	Metering rod—standard 073" x 068" x 052"	(2)
75 1328	Metering rod—1 size lean—075" x 056"	(2)
75-1373	Metering rod—standard (2622S) (Sup by 75 1251)	(2)
86-12	Flange stud lock washer	(4)
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	
101-126	Auxiliary throttle valve attaching screw	(4)
101-140	Fast idle cam screw	
101-142S	Piston housing cover plate attaching screw and washer assembly	(3)
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-275	Piston housing attaching screw	
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet housing attaching screw	
101-307S	Air horn and bracket attaching screw and washer assembly	(8)
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-339	Throttle lever adjusting screw	
101-354S	Choke lever clamp screw assembly	(2)
101-363	Piston housing attaching screw	(2)
101-396	Fast idle adjustment screw	
103-14	Lead shot (late prod (3)	
105A-10	Choke lever clamp screw nut	(2)
105A-11	Flange stud nut	(4)

Part No.	PART NAME	
111-60S	Metering rod arm and screw assembly	
111-78S	Pump arm and screw assembly	
115-182	Choke connector rod	
115-204	Throttle operating rod	
115-228	Throttle connector rod	
116-13	Pump intake check ball	
117-162	Vacumeter piston link	
117-165	Pump connector link	
118-102S	Dust cover assembly	
118-135S	Dust cover assembly (Sup by 118 102S)	
120-164	Primary metering rod jet	(2)
120-185	Secondary metering jet	(2)
121-208	Dust cover gasket	
121-241	Pump jet housing gasket	
121-265	Air horn gasket	
121-277	Body flange gasket	
121-298	Piston housing gasket	
136 38	Throttle shaft washer	
136-84	Throttle shaft spring washer	
145-142	Choke vacuum passage stand pipe	
150-178	Auxiliary valve lockout arm pin	
150-186S	Pin and valve cap assembly	
150-190	Choke piston pin	
150A-10	Pin spring	(5)
160-110S	Vacuum piston and pin assembly	
160-129	Choke piston	
170-502S	Piston housing and plug assembly	
170AU-465S	Thermostatic coil housing and rod assembly	
172-22	Throttle connector rod retainer	
180-60	Lever return spring bracket	
181-212S	Fast idle cam assembly	

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used

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DODGE "V-8"

MODEL

D67 POWER PACKAGE

1957

(All Transmissions)

WCFB Four-Bore Down-Draft Climatic® Control **Carbureter No. 2532S**

CARBURETER SPECIFICATIONS

For Dodge 8 Cylinder Engine 3 6875 Inch Bore, 3 8 Inch Stroke

Dimensions Flange size 1¼ inch Four Bore—4 bolt type
Primary venturi size 11/32 inch I D
Main venturi size 1 3/16 inch I D

Vents Inside (5)

Gasoline Intake Size No 42 (0935 inch) drill in needle seat

Low Speed Jet Tube Jet size (035 inch) diameter By pass tube in body size (057 inch) diameter Economizer plug in body size (0492 inch) diameter Idle bleed in body size No 46 (081 inch) drill

Idle Port Upper slot type primary length 140 inch width 030 inch Secondary length 103 inch width 030 inch

Idle Port Opening Primary 092 to 098 inch secondary 065 to 071 inch above top edge of valve with valve tightly closed

Lower Port Primary (for idle adjustment screw) size No 53 (0595 inch) drill Secondary (no idle adjustment screw) size No 57 (043 inch) drill

Set Idle Adjustment Screw ½ to 1½ turns open For richer mixture turn screw out Do not idle engine below 500 R P M in neutral

Main Nozzle Installed permanently DO NOT REMOVE Anti percolating jet (4) size No 70 (028 inch) drill

Metering Rod (Vacumeter type) see parts list for size

Metering Rod Jet Primary Size 0945 inch diameter Secondary Size 067 inch diameter

Accelerating Pump Discharge jet (twin) primary side only size No 74 (0225 inch) drill Intake ball check seat size 115 to 120 inch diameter Discharge needle seat size No 50 (070 inch) drill Relief passage (vent) to fuel chamber size No 42 (0935 inch) drill

Choke Carter Climatic® Control Cross Over Type set on index Butterfly type offset choke valve primary side only Choke heat suction hole restriction in piston housing size No 40 (098 inch) drill

Vacuum Spark Port Horizontal slot (round end) 045 x 110 inch Top of port 022 to 032 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter

Spark Plug Gap 035'	Breaker Point Setting 017"	Ignition Timing Breaker Points to Open 6° B T D C At Vibration Damper	Float Setting See Adjustments	Idle Adjustment Screw Setting ½ to 1½ Turns Open Idle engine at 500 R P M in neutral

NOTE These cars are equipped with Hydraulic Valve Lifters—No Adjustment

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: Two separate float adjustments must be made—lateral and vertical. **LATERAL ADJUSTMENT:** With bowl cover assembly inverted, bowl cover gasket removed and float resting on seated needle, place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting. Side of floats should just clear the vertical uprights of float gauge. Adjustment should be made by bending arms of floats. **VERTICAL ADJUSTMENT:** With float gauge in same position, floats should just clear the horizontal portion of gauge. Vertical distance between top of float and machined surface of casting must be 7/32" (gauge T109-283) for primary floats; and 9/32" (gauge T109-284) for secondary floats. Adjust by bending float arms.

FLOAT DROP ADJUSTMENT: With bowl cover held in upright position and measuring from center of floats, the distance between top of floats and bowl cover should be 23/32" for primary floats and 25/32" for secondary floats. Adjust by bending stop tabs on float bracket.

PUMP ADJUSTMENT: Install pump connector link in outer hole (long stroke) of pump arm, with ends extending toward countershaft arm. Back out throttle lever set screw until throttle valves seat in bores of carbureter. Hold straight edge across top of dust cover boss at pump arm. The flat on top of pump arm should be parallel to straight edge. Adjust by bending throttle connector rod at lower angle. (Use tool T109-213.)

METERING ROD ADJUSTMENT: Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows: 1. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw. 2. With metering rods in place, press down on vacumeter link until metering rods bottom in carbureter body casting. 3. Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link. Hold in place and carefully tighten clamp screw.

BOWL VAPOR VENT ADJUSTMENT: This adjustment should be made after completing pump and metering rod adjustments. Install dust cover and dust cover gasket. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter. There should be 1/16 inch (gauge T109-197) between lower edge of bowl vapor vent valve and dust cover. To adjust, remove dust cover and bend vapor vent arm.

FAST IDLE ADJUSTMENT: (a) Loosen choke lever clamp screw on choke shaft. Insert .020" feeler gauge (T109-29) between lip of fast idle cam and boss of flange casting. Hold choke valve tightly closed and take slack out of linkage by pressing lever towards closed position — hold in place and tighten clamp screw. (b) With choke valve tightly closed, tighten fast idle adjusting screw until there is .010" (gauge T109-200) opening between throttle valve and bore of carbureter (side opposite idle port). Be sure fast idle adjusting screw is on high step of cam while making this adjustment.

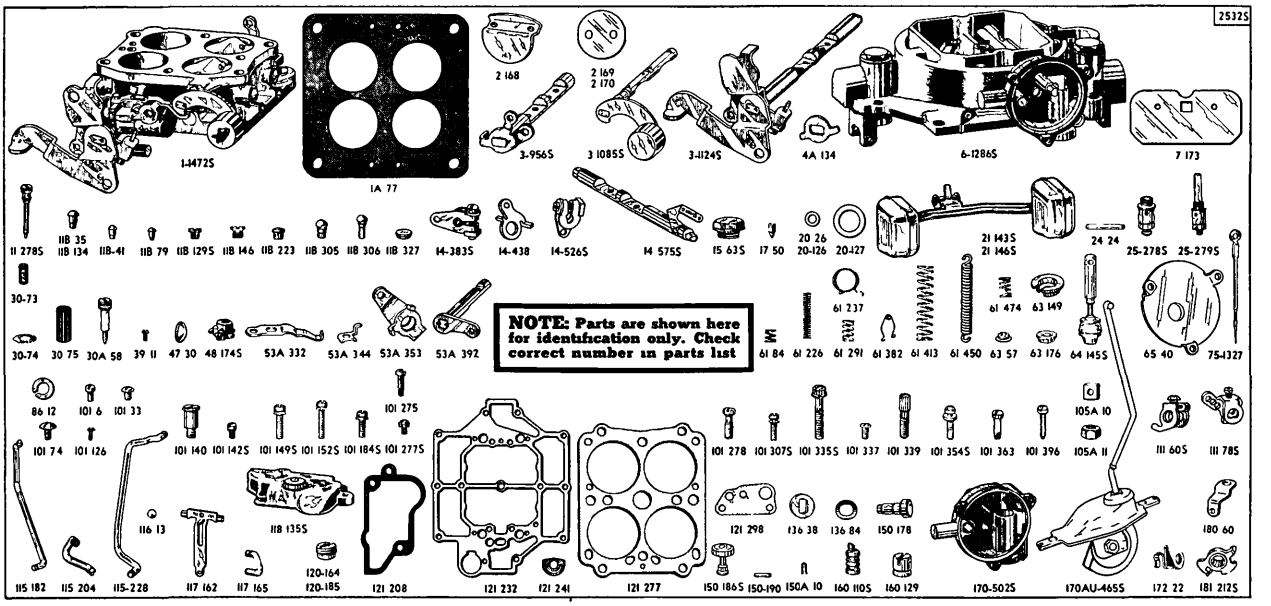
FAST IDLE ON CAR: 1350 to 1400 R.P.M.

UNLOADER ADJUSTMENT: With throttle wide open there should be 15/64" clearance between upper edge of choke valve and inner wall of air horn (gauge T109-32). Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41).

SECONDARY THROTTLE LEVER ADJUSTMENT: The stop lug on both primary and secondary throttle levers should contact boss on flange at the same time. To adjust bend secondary throttle operating rod at angle (use bending tool T109-213).

AUXILIARY THROTTLE LOCK-OUT ADJUSTMENT: This adjustment should be made after completing fast idle adjustment. 1. With choke valve closed, edge of hook on lockout arm should contact auxiliary throttle lever, making maximum contact of locking step on lever. 2. Open choke valve. Auxiliary throttle valve should become unlocked a few degrees before the choke reaches wide open position. Adjust by bending lockout arm.

CHOKE ADJUSTMENT (CROSS OVER TYPE) See Form 3661: 1. Loosen mounting post lock nut and turn mounting post with screw driver until index mark on disk is positioned as listed on carbureter specification page. Hold in this position with screw driver and tighten lock nut. NOTE: Screw driver may be held in vise so that one hand may be used to support housing while tightening nut. 2. After adjustment is completed and coil housing and rod assembly and carbureter is installed on engine lift cover disk and open and close choke valve manually to see if connector rod clears sides of hole in housing cover. If rod does not clear hole in housing cover without binding replace with a new unit since connector rod cannot be bent without affecting calibration.



Dodge "V-8"—1957—Carbureter No. 2532S

WHEN SERVICING, USE GASKET ASSORTMENT No. 299; REPAIR PACKAGE No. 1859

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-1472S	—Body flange assembly	
1A-77	FLANGE GASKET	
2-168	Auxiliary throttle valve	(2)
2-169	Secondary throttle valve	(2)
2-170	Primary throttle valve	(2)
3-956S	Secondary throttle shaft and operating lever assembly	
3-1085S	Auxiliary throttle shaft lever and weight assembly	
3-1124S	—Primary throttle shaft and lever assembly	
4A-134	Primary throttle shaft dog	
6-1286S	—Air horn assembly	
7-173	Choke valve	
11-278S	LOW SPEED JET ASSEMBLY	(4)
11B-35	Rivet plug	(6)
11B-41	Rivet plug	
11B-79	Rivet plug (early prod (4) (late prod (1)	
11B 129S	Pump discharge passage plug assembly	
11B-134	Rivet plug	
11B-146	Level sight plug	(2)
11B-223	Nozzle passage and idle port rivet plug	(8)
11B-305	Rivet plug	(2)
11B-306	Rivet plug	
11B-327	Secondary throttle shaft rivet plug	
14-383S	Choke lever and screw assembly	
14-438	Cam trip lever	
14-526S	Choke lever assembly	
14-575S	—Choke piston lever link and shaft assembly	
15-63S	—Strainer nut assembly	(2)
17 50	PUMP CHECK NEEDLE	

Part No.	PART NAME	
20-26	RELIEF VALVE GASKET	
20-126	—Needle seat gasket	(2)
20-127	—BOWL STRAINER GASKET	(2)
21-143S	Primary float and lever assembly (Sup by 21 192S)	
21-146S	Secondary float and lever assembly	
21-192S	—Primary float and lever assembly	
24-24	Float lever pin	(2)
25-278S	PRIMARY NEEDLE AND SEAT ASSEMBLY	
25-279S	SECONDARY NEEDLE AND SEAT ASSEMBLY	
30-73	PRIMARY NEEDLE SEAT STRAINER	
30-74	SECONDARY FUEL INLET STRAINER	
30-75	BOWL STRAINER	
30A-58	Idle adjustment screw	(2)
39-11	Choke and primary throttle valve attaching screw	(6)
47-30	Welsh plug	
48-174S	Pump jet and housing assembly	
53A-332	Lockout arm	
53A-344	VENT ARM	
53A-353	Primary operating lever	
53A-392S	Pump operating lever and countershaft assembly	
61-84	Idle adjustment screw spring	(2)
61-226	VACUUM PISTON SPRING	
61-237	Fast idle cam spring	
61-291	Throttle lever adjusting screw spring	
61-382	METERING ROD SPRING	
61-413	Upper pump spring	
61-450	SECONDARY THROTTLE RETURN SPRING	
61-474	Bowl vent spring	
63-57	INTAKE CHECK BALL RETAINER	

Part No.	PART NAME	
63-149	Bowl vent spring retainer	
63-176	Pump spring retainer	
64-145S	PUMP PLUNGER AND ROD ASSEMBLY	
65-40	Piston housing cover plate	
75-1327	—METERING ROD—STANDARD 075" x 072" x 054"	(2)
75-1328	Metering rod—1 size lean 075" x 056"	(2)
75-1410	—Metering rod—2 sizes lean 076" x 059"	(2)
86-12	Flange stud lock washer	(4)
101-6	Pump arm clamp screw	
101-33 101-74	Metering rod arm clamp screw Throttle shaft screw	
101-126	Auxiliary throttle valve attaching screw	(4)
101-140	Fast idle cam screw	
101-142S	Piston housing cover plate attaching screw and washer assembly	(3)
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-275	Piston housing attaching screw	
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet housing attaching screw	
101-307S	Air horn and bracket attaching screw and washer assembly	(8)
101-335S	Air horn attaching screw and washer assembly	(7)
101 337	Secondary throttle valve attaching screw	(4)
101-339	Throttle lever adjusting screw	
101-354S	Choke lever clamp screw assembly	(2)
101-363	Piston housing attaching screw	(2)
101-396	Fast idle adjustment screw	
103-14	Lead shot (late prod)	(3)

Part No.	PART NAME	
105A-10	Choke lever clamp screw nut	(2)
105A-11	Flange stud nut	(4)
111-60S	Metering rod arm and screw assembly	
111-78S	—Pump arm and screw assembly	
115-182	Choke connector rod	
115-204	Throttle operating rod	
115-228	THROTTLE CONNECTOR ROD	
116-13	PUMP INTAKE CHECK BALL	
117-162	Vacumeter piston link	
117-165	Pump connector link	
118-102S	Dust cover assembly	
118-135S	—Dust cover assembly (Sup by 118 102S)	
120-164	PRIMARY METERING ROD JET	(2)
120-185	SECONDARY METERING ROD JET	(2)
121-208	DUST COVER GASKET	
121-241	PUMP JET HOUSING GASKET	
121-265	AIR HORN GASKET	
121-277	BODY FLANGE GASKET	
121-298	—PISTON HOUSING GASKET	
136-38	Throttle shaft washer	
136-84	Spring washer	
150-178	Auxiliary valve lockout arm pin	
150-186S	Pin and valve cap assembly	
150-190	Choke piston pin	
150A-10	PIN SPRING	(5)
160-110S	Vacuum piston and pin assembly	
160-129	Choke piston	
170-502S	—Piston housing and plug assembly	
170AU-465S	—Thermostatic coil housing and rod assembly	
172-22	Throttle connector rod retainer	
180-60	Lever return spring bracket	
181-212S	Fast idle cam assembly	

—Parts so marked are new and listed for the first time

NOTE **Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used**

CARBURETER
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CARTER CLIMATIC® CONTROL CROSS OVER CHOKE TYPE
(SERVICE INFORMATION AND ADJUSTMENT PROCEDURE)

NOTE: Coil housing and rod assembly may be cleaned in carbureter parts cleaner without disassembling. After cleaning rinse in solvent and blow out inside of housing with compressed air. After rinsing make sure housing revolves freely on mounting post. If disassembly is necessary for thorough cleaning, follow steps under "reassembly" to be sure coil is installed properly.



Figure A

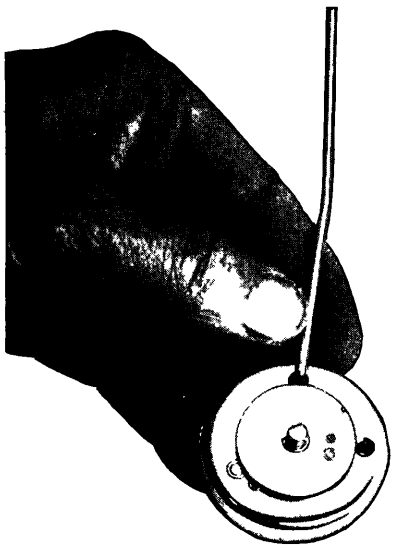


Figure B

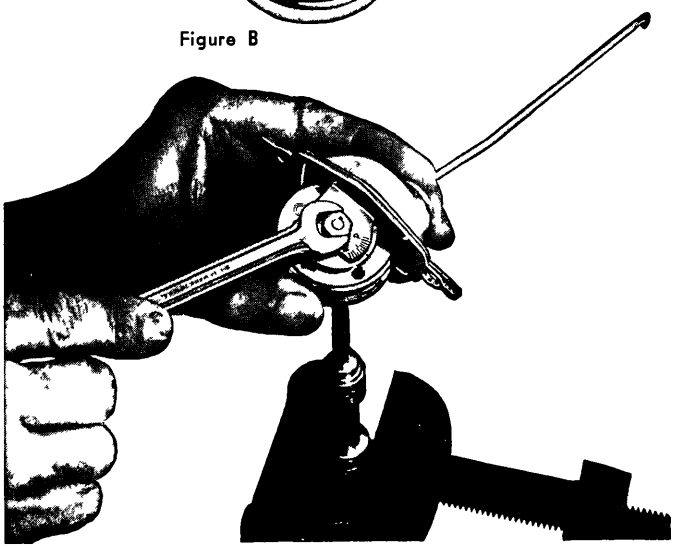


Figure C

TWO PIECE CLOSED HOUSING

REASSEMBLY:

1. Place coil mounting post in either half of coil housing.
2. Insert thermostatic coil on mounting post with hook facing clockwise. (See Fig. A.)
3. Assemble second half of housing and secure on mounting post with washer and hair pin. Be sure holes in both housings are in alignment.
4. Install connector rod with hair pin end extending through either hole toward split end of mounting post. Secure with washer and hair pin. (Eye of hair pin extending outward.)
5. Place index disk on mounting post with flat on disk aligning with flat on post and turn disk and post counter-clockwise until hook on coil engages connector rod. Index mark on disk should be just to the right (approximately 2 o'clock position) of connector rod when holding housing with rod pointing to 12 o'clock position. (See Fig. B.) If incorrectly installed turn index disk over.
6. Assemble housing cover to mounting post and install lock washer and nut.
7. Install cover disk on connector rod.

ADJUSTMENT:

1. Loosen mounting post lock nut and turn mounting post with screw driver until index mark on disk is positioned as listed on carbureter specification page. Hold in this position with screw driver and tighten lock nut. (See Fig. C.)

   NOTE: Screw driver may be held in vise so that one hand may be used to support housing while tightening nut.
2. After adjustment is completed and coil housing and rod assembly and carbureter is installed on engine lift cover disk and open and close choke valve manually to see if connector rod clears sides of hole in housing cover. If rod does not clear hole in housing cover without binding replace with a new unit since connector rod cannot be bent without effecting calibration.

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ONE PIECE OPEN HOUSING

REASSEMBLY:

1. Place housing with circular edge downward and center web at 3 o'clock position. (See Fig. D.)
2. Insert thermostatic coil into housing with hook on coil in 4 o'clock position and pointing toward web of housing.
3. Insert mounting post through housing and coil with index mark toward hook on coil. (See Fig. E.)
4. Secure mounting post to housing with washer and pin spring.
5. Install cover disk on connector rod.
6. Install connector rod through housing cover into housing toward split end of mounting post. Secure with washer and pin spring. (Eye of pin spring extending outward.)
7. Assemble housing cover to mounting post with lock washer and nut. Rotate mounting post counterclockwise until hook on coil picks up connector rod and tighten nut.
8. Check positive spring action by pushing connector rod downward through housing cover.

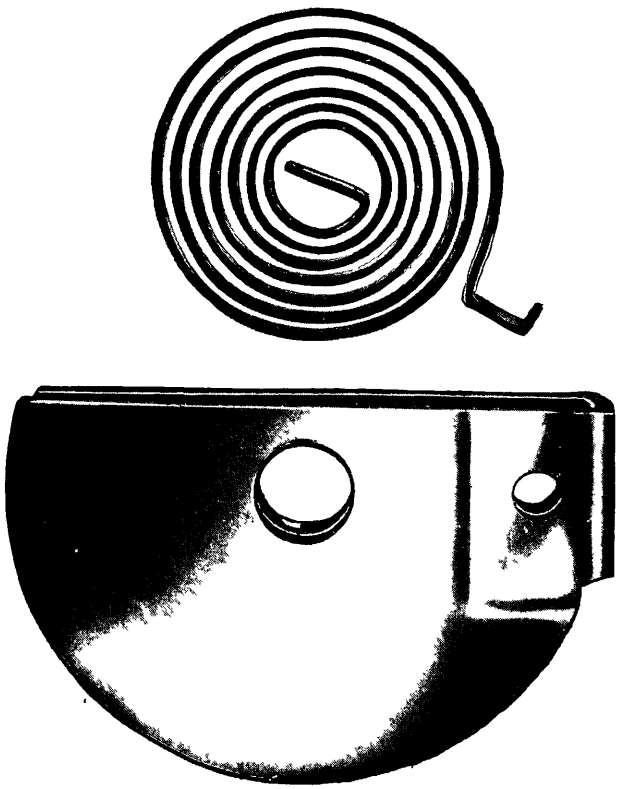


Figure D

ADJUSTMENT:

Same as two piece housing. (See Fig. C.)

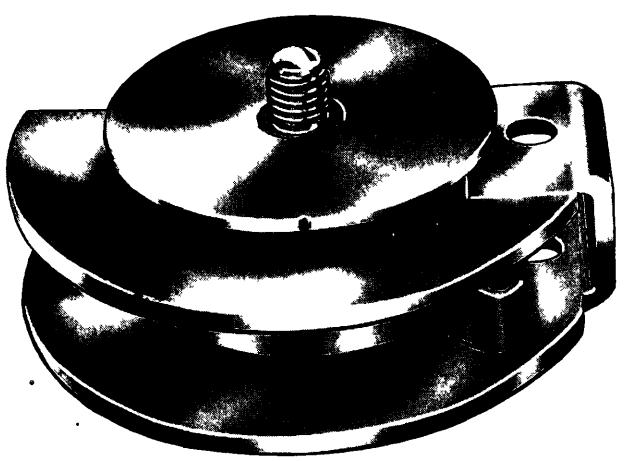


Figure E

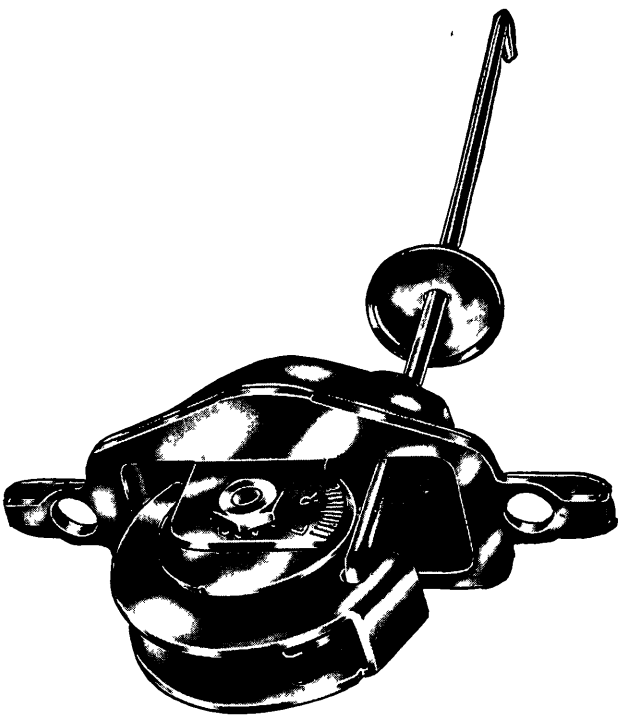


Figure F

DODGE TRUCK

Forward Control

MODELS
C-4-DN6, C-4-FN6, K-6-D300, P300, P400
1956-1957

(Automatic Transmission)

BBS Down-Draft Climatic® Control **Carbureter No. 2416S**

CARBURETER SPECIFICATIONS

For Dodge Six Cylinder Engine· 3.25 Inch Bore, 4.625 Inch Stroke

Dimensions: Flange size, 1½ inch S A E Throttle bore 1-11/16 inch Main venturi 1-11/32 inch I D

Float Setting: See adjustments

Vents· Outside, none Inside, balance vent tube

Gasoline Intake. Size No 44 (086 inch) drill in needle seat

Idle Tube Jet, size 0315 inch diameter Idle passage air bleed in body, size 061 inch diameter Restriction in body size 057 inch diameter

Idle Port Upper, slot type, length 195 inch; width, 030 inch

Idle Port Opening: Top of port located 140 to .144 inch above top edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw): Size 053 to 057 inch diameter

Set Idle Adjustment Screw: ½ to 1¾ turns open For richer mixture turn screw out Idle engine between 450 500 r p m gear shift lever in neutral

Main Metering Jet: Calibrated to flow 406 cc per minute (Do not gauge for size, if in doubt replace with new part)

Main Vent Tube Side holes 6— 0354 inch diameter Bleed in top of tube 0236 inch diameter

Step-Up Rod· (Vacuum operated) (75 1225) size 022 inch diameter

Accelerating Pump· Pump intake passage ball check seat size 110 to 120 inch diameter Pump discharge passage ball check seat 110 to 120 inch diameter in body Pump (discharge) jet size 0276 inch drill Bleed hole in pump plunger plate size 020 inch diameter

Pump Adjustment. See adjustments

Choke Carter Climatic® Control set on index Choke heat suction hole in body size No 38 (1015 inch) drill NOTE Thermostatic coil should not be removed from delayer mounting post If defective replace with complete thermostatic coil and housing assembly

Vacuum Spark Port. Slot (round end) type Size 030 by 110 inch Top of port 044 to 050 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION: **Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.**

Spark Plug Gap .035"	Breaker Point Setting .020"	Ignition Timing Breaker Points toOpen: 1956 2° B. T. D. C. 6° B. T. D. C. (Export) 1957 T. D. C. At Vibration Damper	Valve Setting (Hot) Intake .010" Exhaust .014"	Float Setting See Adjustments	Idle Adjustment Screw Setting ½ to 1¾ Turns Open Idle Engine at 450 to 500 R.P.M. In Neutral

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: This adjustment must be made with the bowl cover gasket and float pin retainer removed Hold the lip on float arm against the seated intake needle making sure the float pin is at the bottom of its guide slots The distance from the top surface of the body casting to the top of each float should be 7/32 inch (gauge T109 239) If one float is lower than the other, equalize by bending the float arm If both floats require the same correction adjust by bending lip on float arm The floats must not rub anywhere against the inner walls of the bowl It necessary bend float arms slightly to provide clearance on all sides of floats

PUMP ADJUSTMENT· Back out throttle adjusting screw and open choke valve so that throttle valve seats in bore of carbureter Install throttle connector rod in center hole of throttle lever The distance from the top of the bowl cover to the top of plunger shaft (not pump arm) should be 54/64 inch Adjust by bending throttle connector rod at lower angle (use Tool T109-213)

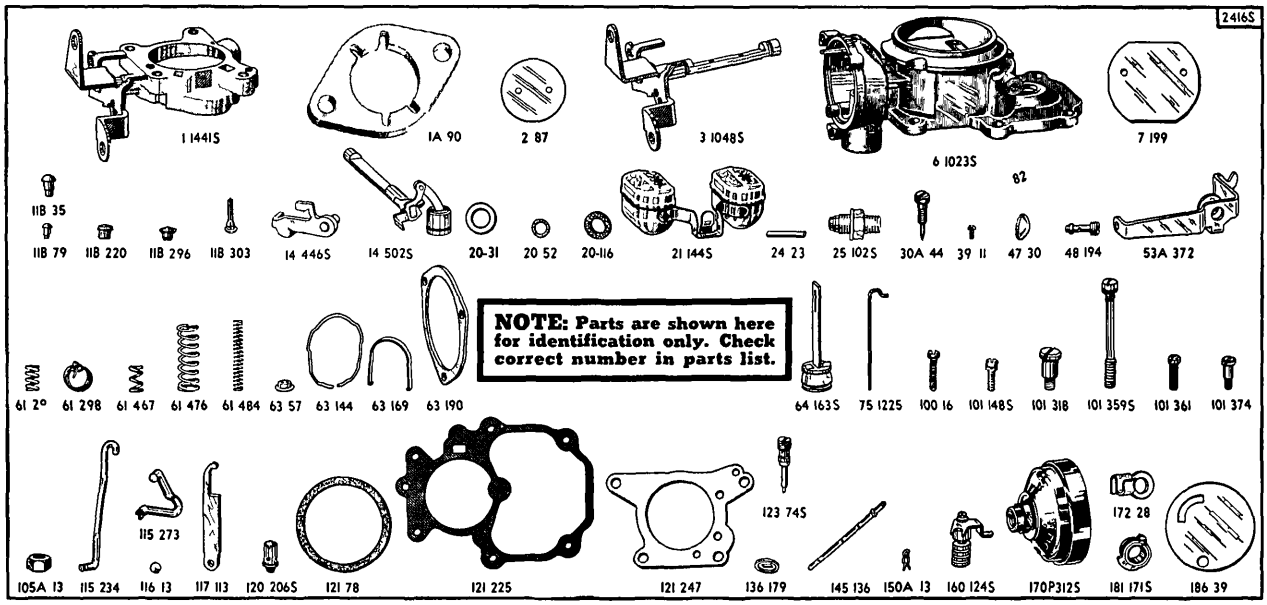
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FAST IDLE ADJUSTMENT Remove thermostatic coil housing assembly gasket and baffle plate With throttle adjusting screw backed out crack throttle valve and hold choke valve in fully closed position Then close throttle This will allow fast idle cam to revolve to fast idle position There should now be 016 020 inch clearance (use gauge T109 44) between throttle valve and bore of carbureter (side opposite idle port) Adjust by bending the choke connector rod at lower angle (use Tool T109 213)

Caution Be sure cam trip lever is all the way in piston housing with lug contacting cam

UNLOADER ADJUSTMENT This adjustment must be made after the fast idle adjustment Hold throttle valve wide open and close choke valve as far as possible without forcing There should now be 9/64 inch clearance (use gauge T109 34) between upper edge of choke valve and inner wall of air horn Adjust by bending arm on choke trip lever (use tool T109 214) When fast idle and unloader adjustments have been made assemble baffle plate coil housing gasket and thermostatic coil housing assembly on air horn Set Climatic® Control as specified making sure that hook on coil has picked up coil shaft lever



Dodge Truck—1956-1957—Carbureter No. 2461S

WHEN SERVICING, USE GASKET ASSORTMENT No 252

Part No.	PART NAME	
1-1441S	—Body flange assembly	
1A-90	*Flange gasket—for use without governor*	
2 87	Throttle valve	
3-1048S	Throttle shaft and lever assembly	
6-1023S	*Air horn assembly*	
7-199	Choke valve	
11B-35	Rivet plug	
11B-79	Rivet plug	(6)
11B-220	High speed passage rivet plug	
11B-296	Pump jet rivet plug	
11B 303	Rivet plug	
14-446S	Choke trip lever and pin assembly	
14-502S	Choke piston lever and shaft assembly	
20-31	Needle seat gasket	
20 52	Step up piston gasket	
20-116	Main metering jet gasket	
21-144S	Float and lever assembly	
24-23	Float lever pin	
25-82S	Needle and seat assembly (Sup by 25 102S)	
25-102S	Needle and seat assembly	
30A-44	Idle adjustment screw	
39-11	Choke and throttle valve screw	(4)
47-30	Welsh plug	
48-194	Pump jet	
53A-372	Pump arm	
61-291	Throttle lever adjusting screw spring	
61-298	Fast idle cam spring	
61 467	Idle adjustment screw spring	
61 476	Pump spring	
61-484	Step up piston spring	
63-57	Intake check ball retainer	

Part No.	PART NAME	
63-144	Delayer plate retainer ring	
63-169	*Float lever pin retainer*	
63-190	Coil housing retainer	
64-163S	Pump plunger and rod assembly	
75-1225	*Step up rod*	
100-16	Throttle adjusting screw	
101-148S	Bowl cover attaching screw and washer assembly	(2)
101 318	Pump arm screw	
101 359S	Air horn attaching screw and washer assembly	(4)
101-361	Coil housing attaching screw	(3)
101 374	Step up piston plate guide screw	
105A-13	Flange stud nut	(2)
115-234	Throttle connector rod	
115 273	Choke connector rod	
116-13	Pump intake and discharge check ball	(2)
117-113	Fast idle link	
120-206S	Main metering jet assembly—standard	
120-214S	Main metering jet assembly—2 sizes lean	
120-215S	Main metering jet assembly—1 size lean	
121-78	Coil housing gasket	
121-225	Body gasket	
121-247	Body flange gasket	
123-74S	Idle orifice tube and plug assembly	
136-179	Pump spring retainer washer	
145-136	Main vent tube	
150A-13	Pin spring	
160-124S	Step up piston and plate assembly	
170P312S	Thermostatic coil and housing assembly	
172-28	Choke connector rod retainer	
181 171S	Fast idle cam assembly	
186-39	Choke baffle plate	

—Parts so marked are new and listed for the first time

NOTE **Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.**

DODGE TRUCK "V-8"

MODELS

C-4-T8, C-4-TX8, C-4-Y8, C-4-YX8,

K8-L8-D900, T900

1956-1958

(Two Carbureters Per Engine)

BBS Down-Draft **Carbureters Nos. 2421S-2421SA**

CARBURETER SPECIFICATIONS

For Dodge Eight Cylinder Engine: 3.81 Inch Bore, 3.63 Inch Stroke (C-4-T8, C-4-TX8)

For Dodge Eight Cylinder Engine: 3.94 Inch Bore, 3.63 Inch Stroke (C-4-Y8, C-4-YX8, K8-L8-900, T900)

Dimensions Flange size 1½ inch S A E
Throttle bore 1-11/16 inch I D
Main venturi, 1-11/32 inch I D.

Float Setting: See adjustments

Vents: Outside none Inside, balance vent tube.

Gasoline Intake: Size No 44 (.086 inch) drill in needle seat.

Idle Tube Jet size (2421S) 0314 inch (2421SA) 0256 inch diameter Idle passage air bleed in body size No 68 (.031 inch) drill Restriction in body 0394 inch diameter

Idle Port: Upper slot type, length 143 inch; width, 030 inch.

Idle Port Opening: Top of port located .111 to .115 inch above top edge of valve, with valve tightly closed

Lower Port (For Idle Adjustment Screw): Size, 053 to 057 inch diameter

Set Idle Adjustment Screw: ¼ to 1 turn open For richer mixture turn screw out Idle engine between 450-500 r p m

Main Metering Jet: Calibrated to flow 406 cc per minute (Do not gauge for size, if in doubt, replace with new part)

Main Vent Tube: Side holes, 6—0354 inch diameter Bleed in top of tube 0315 inch diameter.

Step-Up Rod: (Vacuum operated) See parts list for size

Accelerating Pump: Pump intake passage, ball check seat, size 110 to 120 inch diameter
Pump discharge passage, restriction (under ball check), size 110 to 120 inch diameter in body
Pump (discharge) jet, size 0393 inch drill

Pump Adjustment: See adjustments

Choke: Manual—butterfly type with poppet valve

Vacuum Spark Port: None

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .017"	Ignition Timing Breaker Points to Open: 4° B.T.D.C. At Vibration Damper	Float Setting (See Adjustments)	Idle Adjustment Screw Setting ¼ t 1 Turn Open Idle engine at 450 to 500 R.P.M.

NOTE: These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT.

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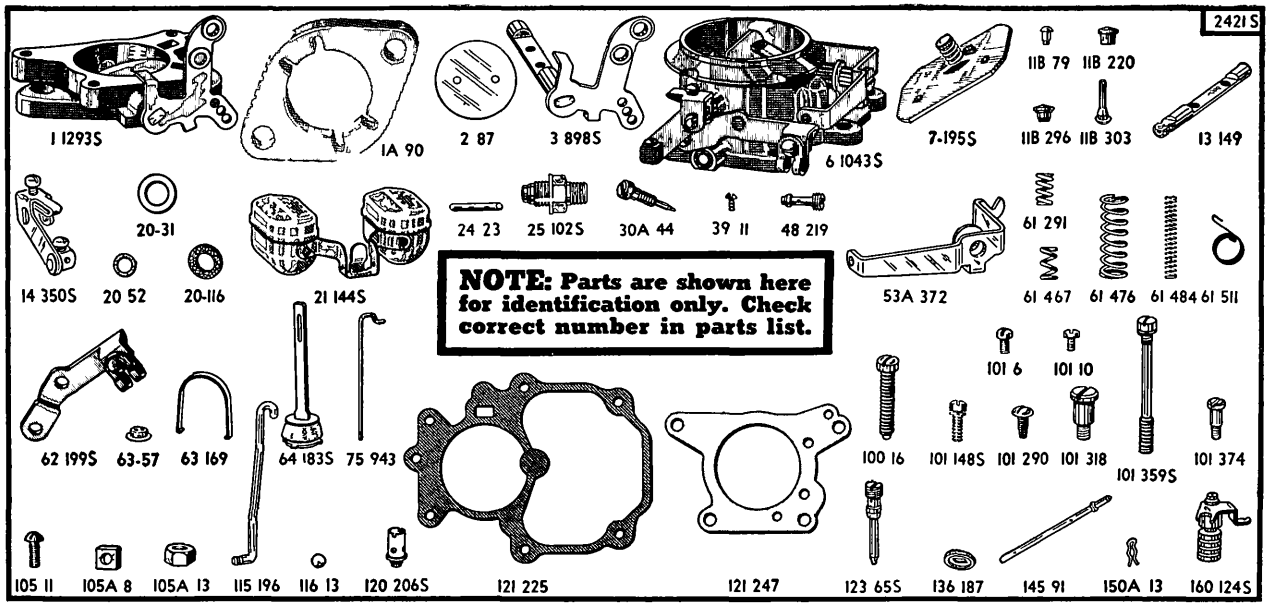
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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT This adjustment must be made with the bowl cover gasket and float pin retainer removed Hold the lip on float arm against the seated intake needle making sure the float pin is at the bottom of its guide slots The distance from the top surface of the body casting to the top of each float should be 9/32 inch (gauge T109-239) If one float is lower than the other equalize by bending the float arm If both floats require the same correction, adjust by bending lip on float arm The float must not rub any where against the inner walls of the bowl If necessary bend float arms slightly to provide clearance on all sides of floats

PUMP ADJUSTMENT Back out throttle adjusting screw and open choke valve so that throttle valve seats in bore of carbureter Install throttle connector rod in center hole (medium stroke) of throttle lever The distance from the top of the bowl cover to the top of plunger shaft (not pump arm) should be 55/64 inch Adjust by bending pump connector rod at lower angle (use tool T109-213)



Dodge Truck "V8"—1956-1958—Carbureters Nos. 2421S-2421SA

WHEN SERVICING, USE GASKET ASSORTMENT No 252

Part No	PART NAME	
1-1293S	Body flange assembly	
1A-90	Flange gasket—for use without governor	
2-87	Throttle valve	
3-898S	Throttle shaft and lever assembly	
6-1043S	Air horn assembly	
7-195S	Choke valve assembly	
11B-79	Rivet plug	(6)
11B-220	Rivet plug	
11B 296	Pump jet rivet plug	
11B-303	Rivet plug	
13 149	Choke shaft	
14-350S	Choke lever assembly	
20-31	Needle seat gasket	
20-52	Step up piston gasket	
20-116	Main metering jet gasket	
21-144S	Float and lever assembly	
24-23	Float lever pin	
25-102S	Needle and seat assembly	
30A-44	Idle adjustment screw	
39-11	Choke and throttle valve attaching screw	(4)
48 219	Pump jet	
53A-372	Pump arm	
61-291	Fast idle screw spring	
61-467	Idle adjustment screw spring	
61-476	Pump spring	
61-484	Step up piston spring	
61-511	Choke spring	
62-199S	Choke tube bracket assembly	
63-57	Intake check ball retainer	

Part No	PART NAME	
63-169	Float lever pin retainer	
64-183S	Pump plunger and rod assembly	
75-943	Step up rod (.024") (2421S) (Sup by 75 991)	
75 991	Step up rod (.026")	
100-16	Throttle adjusting screw	
101-6	Screw	
101-10	Wire clamp screw	
101-148S	Bowl cover attaching screw and washer assembly	(2)
101-290	Choke tube bracket attaching screw	
101-318	Pump arm screw	
101-359S	Air horn attaching screw and washer assembly	(4)
101-374	Step up piston plate guide screw	
105-11	Choke tube bracket clamp screw	
105A-8	Choke tube bracket clamp nut	
105A-13	Flange nut	(2)
115-196	Throttle connector rod	
116-13	Pump intake and discharge check ball	(2)
120-206S	Main metering jet assembly—standard	
120-214S	Main metering jet assembly—2 sizes lean	
120-215S	Main metering jet assembly—1 size lean	
121 225	Body gasket	
121-247	Body flange gasket	
123 65S	Idle orifice tube and plug assembly (.0314") (2421S) (Sup by 123 81S)	
123-81S	Idle orifice tube and plug assembly (.0256")	
136-187	Pump spring retainer washer	
145-91	Main vent tube	
150A-13	Pin spring	
160 124S	Step up piston and plate assembly	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

DODGE TRUCK – 1955-1957

¾, 1 and 1½ TON

MODELS

C-3-CN6, C-3-DN6, C-3-FN6, C-4-DN6, C-4-FN6, K6-P300, P400

BBS Down-Draft Climatic® Control **Carbureter No. 2288S**

CARBURETER SPECIFICATIONS

For Dodge Six Cylinder Engine. 3.25 Inch Bore, 4.63 Inch Stroke

Dimensions: Flange size, 1½ inch S A E
Throttle bore, 1-11/16 inch
Main venturi, 1-11/32 inch I D

Float Setting: See adjustments

Vents: Outside none Inside, balance vent tube

Gasoline Intake: Size No 44 (.086 inch) drill in needle seat

Idle Tube: Jet, size 0354 inch diameter Idle passage air bleed in body, size 061 inch drill Restriction in body size 057 inch diameter

Idle Port. Upper, slot type, length 195 inch, width, 030 inch

Idle Port Opening: Top of port located 140 to 144 inch above top edge of valve, with valve tightly closed

Lower Port (For Idle Adjustment Screw): Size, 053 to 057 inch diameter

Set Idle Adjustment Screw: ½ to 1½ turns open For richer mixture turn screw out Idle engine between 450-500 r.p.m. gear shift lever in neutral

Main Metering Jet: Calibrated to flow 453 cc per minute. (Do not gauge for size, if in doubt, replace with new part.)

Main Vent Tube: Side holes 6—0354 inch diameter Bleed in top of tube 0315 inch diameter REMOVE WITH T109-195 INSTALL NEW VENT TUBE WITH T109-272 OR T109 151

Step-Up Rod. (Vacuum operated) size, 027 inch diameter

Accelerating Pump: Pump intake passage, ball check seat, size 110 to .120 inch diameter

Pump discharge passage ball check seat, 110 to 120 inch diameter in body

Pump (discharge) jet, size 0276 inch drill

Bleed hole in pump plunger size 063 inch diameter

Pump Adjustment See adjustments

Choke Carter Climatic® Control, set on index Choke heat suction hole in body size No 38 (.1015 inch) drill NOTE Thermostatic coil should not be removed from delayer mounting post If defective replace with complete thermostatic coil and housing assembly

Vacuum Spark Port: Slot (round end) type Size 030 by 110 inch Top of port, 044 to 050 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION *Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.*

Spark Plug Gap .035"	Breaker Point Setting .020"	Ignition Timing Breaker Points to Open. 1955-56 2° B. T. D. C. 6° B. T. D. C. (Export) 1957 T. D. C. At Vibration Damper	Valve Setting (Hot) Intake .010" Exhaust .014"	Float Setting (See Adjustments)	Idle Adjustment Screw Setting ½ to 1½ Turns Open Idle engine at 450 to 500 R.P.M.

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: This adjustment must be made with the bowl cover gasket and float pin retainer removed Hold the lip on float arm against the seated intake needle, making sure the float pin is at the bottom of its guide slots The distance from the top surface of the body casting to the top of each float should be 7/32 inch (gauge T109-239) If one float is lower than the other, equalize by bending the float arm If both floats require the same correction, adjust by bending lip on float arm. The floats must not rub anywhere against the inner walls of the bowl If necessary, bend float arms slightly to provide clearance on all sides of floats

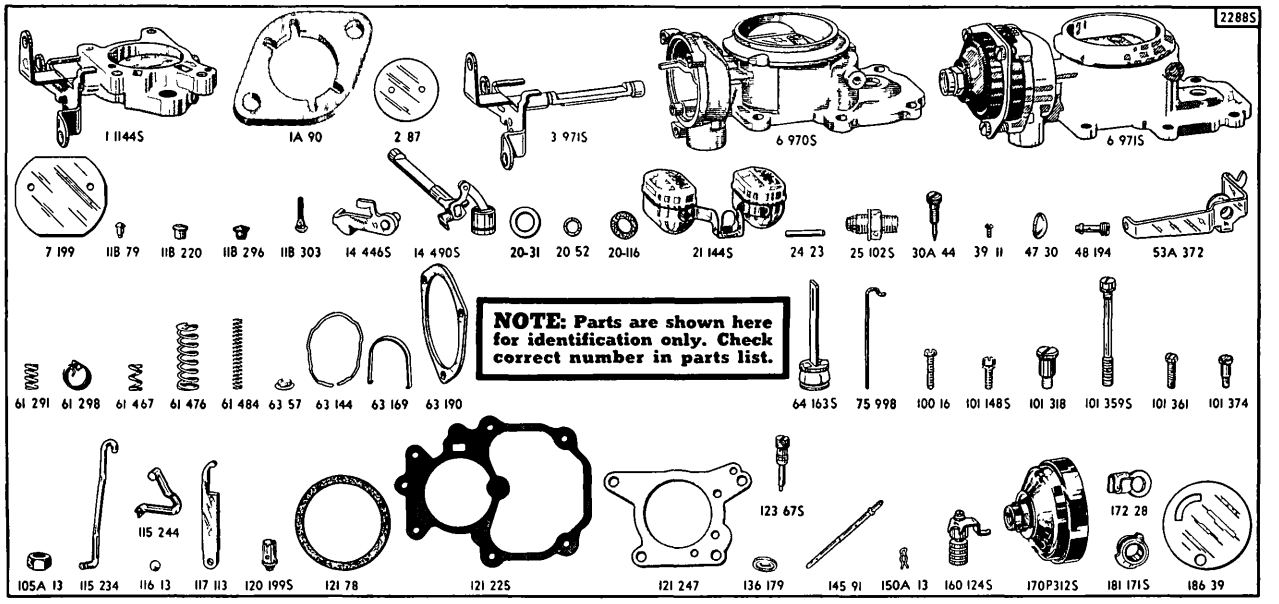
PUMP ADJUSTMENT Back out throttle adjusting screw and open choke valve so that throttle valve seats in bore of carbureter Install throttle connector rod in center hole of throttle lever The distance from the top of the bowl cover to the top of plunger shaft (not pump arm) should be 54/64 inch Adjust by bending throttle connector rod at lower angle (use tool T109-213).

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FAST IDLE ADJUSTMENT. Remove thermostatic coil housing assembly, gasket and baffle plate With throttle adjusting screw backed out, crack throttle valve and hold choke valve in fully closed position Then close throttle This will allow fast idle cam to revolve to fast idle position There should now be 022- 026 inch clearance (use gauge T109-189) between throttle valve and bore of carbureter (side opposite idle port) Adjust by bending the choke connector rod at lower angle (use tool T109-213)

UNLOADER ADJUSTMENT This adjustment must be made after the fast idle adjustment Hold throttle valve wide open and close choke valve as far as possible without forcing There should now be 9/64 inch clearance (use gauge T109-34) between upper edge of choke valve and inner wall of air horn Adjust by bending arm on choke trip lever (use tool T109-214) When fast idle and unloader adjustments have been made, assemble baffle plate, coil housing gasket and thermostatic coil housing assembly on air horn Set Climatic® Control as specified making sure that hook on coil has picked up coil shaft lever



Dodge Truck—1955-1957—Carbureter No. 2288S

WHEN SERVICING, USE GASKET ASSORTMENT No. 252, REPAIR PKG. No. 1766 (WITH 156-29)

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1144S	Body flange assembly (Sup by 1 1146S)	
1-1146S	Body flange assembly	
1A-90	FLANGE GASKET—FOR USE WITHOUT GOVERNOR	
2-87	Throttle valve	
3-971S	Throttle shaft and lever assembly	
6-970S	—Air horn assembly	
6-971S	Air horn and Climatic® control assembly	
7-199	Choke valve	
11B-79	Rivet plug	(6)
11B-220	HIGH SPEED PASSAGE RIVET PLUG	
11B-296	PUMP JET RIVET PLUG	
11B-303	Rivet plug	
14-446S	Choke trip lever and pin assembly	
14-490S	Choke piston lever and shaft assembly	
20-31	Needle seat gasket	
20-52	STEP UP PISTON GASKET	
20-116	Main metering jet gasket	
21-144S	Float and lever assembly	
24-23	Float lever pin	
25-102S	Needle and seat assembly	
30A-44	Idle adjustment screw	
39-11	Choke and throttle valve screw	(4)
47-30	Welsh plug	
48-194	PUMP JET	
53A-372	Pump arm	
61-291	Throttle lever adjusting screw spring	
61-298	Fast idle cam spring	
61-467	Idle adjustment screw spring	
61-476	Pump spring	
61-484	STEP UP PISTON SPRING	
63-57	INTAKE CHECK BALL RETAINER	
63-144	Delayer plate retainer ring	
63-169	FLOAT LEVER PIN RETAINER	
63-190	Coil housing retainer	
64-163S	PUMP PLUNGER AND ROD ASSEMBLY	
75-998	Step up rod	
100-16	Throttle adjusting screw	
101-148S	Bowl cover attaching screw and washer assembly	(2)
101-318	Pump arm screw	
101-359S	Air horn attaching screw and washer assembly	(4)
101-361	Coil housing attaching screw	(3)
101-374	Step up piston plate guide screw	
105A-13	Flange stud nut	(2)
115-234	Throttle connector rod	
115-244	Choke connector rod	
116-13	PUMP INTAKE AND DISCHARGE CHECK BALL	(2)
117-113	Fast idle link	
120-199S	MAIN METERING JET ASSEMBLY—STANDARD	
120-205S	Main metering jet assembly—1 size lean	
120-206S	Main metering jet assembly—2 sizes lean	
121-78	COIL HOUSING GASKET	
121-225	BODY GASKET	
121-247	BODY FLANGE GASKET	
123-67S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
136-179	PUMP SPRING RETAINER WASHER	
145-91	MAIN VENT TUBE	
150A-13	PIN SPRING	
160-124S	STEP-UP PISTON AND PLATE ASSEMBLY	
170P312S	Thermostatic coil and housing assembly	
172-28	Choke connector rod retainer	
181-171S	Fast idle cam assembly	
186-39	Choke baffle plate	

—Parts so marked are new and listed for the first time

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

DODGE TRUCK

1955-1957

(Power Flite Transmission)

¾, 1 and 1½ TON

MODELS

C-3-CN6, C-3-DN6, C-3-FN6, C-4-DN6, C-4-FN6, K-6-D100, D200

(Use 2380S with unitized package 202-80U and 156-29 fitting to replace 2226S.)

BBS Down-Draft Climatic® Control **Carbureter No. 2226S**

CARBURETER SPECIFICATIONS

For Dodge Six Cylinder Engine: 3.25 Inch Bore, 4.63 Inch Stroke

Dimensions Flange size, 1½ inch S A E
Throttle bore, 1-11/16 inch
Main venturi, 1-11/32 inch I D

Float Setting: See adjustments

Vents: Outside none Inside balance vent tube

Gasoline Intake: Size No 44 (.086 inch) drill in needle seat

Idle Tube: Jet size .0354 inch diameter Idle passage air bleed in body size .061 inch drill Restriction in body size .057 inch diameter

Idle Port: Upper, slot type, length .195 inch, width, .030 inch

Idle Port Opening: Top of port located .140 to .144 inch above top edge of valve, with valve tightly closed

Lower Port (For Idle Adjustment Screw): Size, .053 to .057 inch diameter

Set Idle Adjustment Screw: ½ to 1½ turns open For richer mixture turn screw out Idle engine between 450-500 r p m gear shift lever in neutral

Main Metering Jet: Calibrated to flow 453 cc per minute (Do not gauge for size, if in doubt, replace with new part)

Main Vent Tube: Side holes 6—.0354 inch diameter Bleed in top of tube .0315 inch diameter REMOVE WITH T109-195 INSTALL NEW VENT TUBE WITH T109 272 OR T109-151

Step-Up Rod: (Vacuum operated) size, .029 inch

Accelerating Pump: Pump intake passage, ball check seat, size .110 to .120 inch diameter

Pump discharge passage ball check seat, .110 to .120 inch diameter in body

Pump (discharge) jet, size .0276 inch drill

Bleed hole in pump plunger, size .063 inch diameter

Pump Adjustment: See adjustments

Choke: Carter Climatic® Control set on index Choke heat suction hole, in body, size No 38 (.1015 inch) drill NOTE Thermostatic coil should not be removed from delayer mounting post If defective replace with complete thermostatic coil and housing assembly

Vacuum Spark Port: Slot (round end) type Size .030 by .110 inch Top of port, .044 to .050 inch above top edge of valve, with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker P ints to Open: T.D.C. At Vibration Damper	Valve Setting (Hot)	Float Setting (See Adjustments)	Idle Adjustment Screw Setting ½ to 1½ Turns Open Idle engine at 450 to 500 R.P.M. in neutral
.035"	.020"		Intake .010" Exhaust .014"		

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT This adjustment must be made with the bowl cover gasket and float pin retainer removed Hold the lip on float arm against the seated intake needle making sure the float pin is at the bottom of its guide slots The distance from the top surface of the body casting to the top of each float should be 7/32 inch (gauge T109 239) If one float is lower than the other equalize by bending the float arm If both floats require the same correction adjust by bending lip on float arm The floats must not rub anywhere against the inner walls of the bowl If necessary bend float arms slightly to provide clearance on all sides of floats

PUMP ADJUSTMENT Back out throttle adjusting screw and open choke valve so that throttle valve seats in bore of carbureter Install throttle connector rod in center hole of throttle lever The distance from the top of the bowl cover to the top of plunger shaft (not pump arm) should be 54/64 inch Adjust by bending throttle connector rod at lower angle (use tool T109 213)

FAST IDLE ADJUSTMENT Remove thermostatic coil housing assembly, gasket and baffle plate With throttle adjusting screw backed out crack throttle valve and hold choke valve in fully closed position Then close throttle This will allow fast idle cam to revolve to fast idle position There should now be 022- 026 inch clearance (use gauge T109-29) between throttle valve and bore of carbureter (side opposite idle port) Adjust by bending the choke connector rod at lower angle (use tool T109-213)

UNLOADER ADJUSTMENT This adjustment must be made after the fast idle adjustment Hold throttle valve wide open and close choke valve as far as possible without forcing There should now be 9/64 inch clearance (use gauge T109-34) between upper edge of choke valve and inner wall of air horn Adjust by bending arm on choke trip lever (use tool T109-214) When fast idle and unloader adjustments have been made, assemble baffle plate, coil housing gasket and thermostatic coil housing assembly on air horn Set Climatic® Control as specified making sure that hook on coil has picked up coil shaft lever

DASHPOT (SLOW CLOSING THROTTLE) ADJUSTMENT The purpose of the dashpot is to prevent the car from stalling when the throttle is released rapidly Maximum dashpot action is obtained by loosening lock nut and adjusting the dashpot unit so that the dashpot plunger shaft can be moved inward approximately 3/32 inch with the throttle valve tightly closed Then tighten lock nut

Dodge Truck—1955-1957—Carbureter No. 2226S

WHEN SERVICING, USE GASKET ASSORTMENT No 252, REPAIR PKG. No 1766 (WITH 156-29)

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-1247S	Body flange assembly (Sup by 1 1146S)	
1-1146S	Body flange assembly	
1A-90	FLANGE GASKET—FOR USE WITHOUT GOVERNOR	
2-87	Throttle valve	
3 971S	Throttle shaft and lever assembly	
6-1025S	Air horn assembly	
7-199	Choke valve	
11B-79	Rivet plug	(6)
11B-220	RIVET PLUG	
11B-296	PUMP JET RIVET PLUG	
11B-303	Rivet plug	
14-446S	Choke trip lever and pin assembly	
14-491S	Choke piston lever and shaft assembly	
20-31	Needle seat gasket	
20-52	STEP UP PISTON GASKET	
20-116	Main metering jet gasket	
21-144S	Float and lever assembly	
24-23	Float lever pin	
25-102S	Needle and seat assembly	
30A-44	Idle adjustment screw	
39-11	Choke and throttle valve attaching screw	(4)
47-30	Welsh plug	
48-194	PUMP JET	
53A-372	Pump arm	
61-291	Fast idle adjustment screw spring	
61-298	Fast idle cam spring	
61-467	Idle adjustment screw spring	
61-484	STEP UP PISTON SPRING	
61-528	Pump spring	
63 57	INTAKE CHECK BALL RETAINER	
63-144	Delayer plate retainer ring	
63-169	FLOAT LEVER PIN RETAINER	
63-190	Coil housing retainer	
64-163S	PUMP PLUNGER AND ROD ASSEMBLY	
75-999	Step up rod	
100-16	Throttle adjusting screw	
101-148S	Bowl cover attaching screw and washer assembly	(2)
101-318	Pump arm screw	
101-359S	Air horn attaching screw and washer assembly	(4)
101-361	Coil housing attaching screw	(3)
101-374	Step up piston plate guide screw	
105A-13	Flange nut	(2)
105A-52	Dash pot lock nut	
114-125	Dash pot lever	
115-234	Throttle connector rod	
115-244	Choke connector rod	
116-13	PUMP INTAKE AND DISCHARGE CHECK BALL	(2)
117-113	Fast idle link	
120-199S	MAIN METERING JET ASSEMBLY	
120-205S	Main metering jet assembly—1 size lean	
120-206S	Main metering jet assembly—2 sizes lean	
121-78	COIL HOUSING GASKET	
121-225	BODY GASKET	
121-247	BODY FLANGE GASKET	
123-67S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
136-179	PUMP SPRING RETAINER WASHER	
145-91	MAIN VENT TUBE	
150A-13	PIN SPRING	
160-124S	STEP UP PISTON AND PLATE ASSEMBLY	
170N312S	Thermostatic coil and housing assembly	
172-28	Choke connector rod retainer	
180-65	Dash pot bracket	
181-171S	Fast idle cam assembly	
186-39	Choke baffle plate	
202-35S	Dash pot assembly	

NOTE Figures in parentheses indicate number f pieces used in one carbureter Where no figure is shown, only one is used

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DODGE TRUCK

MODELS
1950—B-2-H, HA, HH, HHA, J, JA, R, RA, T, TA, V, VA

1951-52—B-3-F, FA, H, HA, HH, HHA, J, JA

1953—B-4-PW, D, F, FS, G, RS, J, JS, H, HS

1/2, 3/4, 1, 1 1/2, 2, 2 1/2, 2 3/4 and 3 TON

1950-1958

MODELS
1954—C-1-B6, C6, D6, F6, FS6, G6, H6, HS6, J6, JS6, KX6, PW6

1955—C-3-B6, C6, D6, F6, FS6, G6, H6, HS6, J6, JS6, HH6, PW6

1956—C-4-B6, C6, D6, G6, GS6, H6, HS6, HW6, PW6

1957—K6-D100, 200, 300, 400, 500, S400, 500, W300, 500

1958—L6-D400, 500, 600, S400, 500, 600, W300, 300M, 500

B-B DOWN-DRAFT CARBURETER—**MODELS E7T1-E7T2**

CARBURETER SPECIFICATIONS

Dimensions: Flange size, 1 1/2 inch.
Throttle bore, 1-11/16 inch.
Main venturi, 1-11/32 inch I. D

Float Setting: When using a solid needle, the distance from the top of float should be 5/64 inch (gauge T109-50), plus or minus 1/64 inch, below top surface of carbureter body casting Float setting for spring loaded needle and seat assembly See footnote * on page two

Vents: Outside none Inside balance vent tube 218 inch diameter

Gasoline Intake Needle: Triangular, horizontal No. 44 (086 inch) drill in needle seat

Idle Orifice Tube: Jet size 0276 inch drill. Idle passage air bleed in air horn, size 0465 inch diameter Restriction in body, size 0452 inch diameter.

Idle Ports: Upper port Slot type length 149 inch, width 030 inch Top of port located 118 to .122 inch above top edge of valve Lower port size 053 to 057 inch drill (For idle adjustment screw)

Set Idle Adjustment Screw: 1/2 to 1 1/2 turns open. For richer mixture turn screw out Idle engine between 450-500 r p m

Main Metering Jet: Calibrated to flow 315 to 319 cc per minute (Do not gauge for size If in doubt replace with new part)

Main Vent: Through diffuser (air bleed inside bowl). Size 0315 inch drill.

Main Vent Tube: Side Holes 4—0354 inch diameter.

Step-Up Jet: Power orifice 0413 inch drill

Accelerating Pump: Type—delayed action, seasonal adustment Stroke—Summer setting (inner hole, short stroke). Intermediate setting (center hole) Winter setting (outer hole, long stroke) Pump intake passage ball check seat, size .115 to 120 inch diameter in body Pump discharge passage· Restriction (under ball check) size 062 to 065 inch diameter in body Pump (discharge) jet size, 0374 inch drill.

Pump Adjustment: 26/64 inch plunger travel—full throttle position medium stroke Use gauge T109-117S.

Choke: Offset butterfly type (with poppet valve)

Vacuum Spark Port: Slot (round end) type; size 040 by 110 inch Top of port 052 to 058 inch above top edge of valve

Motor Tune-Up—Be Accurate!

CAUTION· Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjustiag carbureter.

Spark Plug Gap	Breaker Point Setting	Float Setting	Idle Adjustment Screw Setting
B-2-J, JA, R, RA, T, TA, H, HA, HH, HHA 036" to .040" All Others 035"	.020"	(Use Gauge T109-50) Solid Needle—5/64 Inch Spring Loaded Needle See Footnote (*) on Page 2	1/2 to 1 1/2 Turns Open

Ignition Timing — Breaker Points to Open:

B-2-T, TA, H, HA, HH, HHA, V, VA; B-3-F, FA, G, GA, H, HA, HH, HHA, B-4-D, PW, K6-D100, 200, 300, W300
T D. C.

B-2-J, JA; B-3-J, JA;
B-4-F, FS, G, J, JS, H, HS
2° A T. D C

B-2-R, RA 3° A. T. D. C

B-4-RS· 1° A. T. D. C.

C-1-G6, H6, HS6, JS6, KX6;
C-3-G6, H6, HH6, HS6, J6, JS6
1° B. T. D. C.

C-1-B6, C6, D6, F6, FS6, PW6;
C-3-B6, C6, D6, F6, FS6, PW6,
C-4-B6, C6, D6, G6, GS6,
H6, HS6, HW6, PW6,
K6-D400, 500, S400, 500, W500
L6-D400, 500, 600, S400, 500, 600
W300, 300M, 500
2° B T. D C

Valve Setting (Hot)

B 2 H, HA, HH, HHA, B-4-PW, D; C-1-B6, C6, D6, F6, G6, FS6, H6, HS6, PW6; C-3-B6, C6, D6, F6, FS6, G6, H6, HH6, HS6, PW6, C-4-B6, C6, D6, G6, GS6, PW6; K6-D100, 200, 300, 400, 500, S400, 500, W300
L6-D400, 500, S400, 500, W300, 300M

Intake	Exhaust
.010"	.014"

B-2-J, JA, R, RA, T, TA, V, VA, K, KA, B-3-J, JA, K, KA; B-4-J, JS, H, HS, F, FS, G, RS; C-1-J6, JS6, KX6; C-3-J6, JS6
C-4-H6, HS6, HW6;
K6-W500
L6-D600, S600, W500

Intake	Exhaust
010"	018"

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CARBURETER ADJUSTMENTS

If carbureter loads up after considerable service, check float level Wear on lip of float lever will raise float level Before adjusting float, be sure float lever pin is firmly seated Reset float level by bending lip of float lever away from needle to raise level, or bend lip toward needle to lower float level Bend vertical lip of float only

If motor stalls while idling, set throttle lever adjusting screw so motor runs between 450-500 r p m Then set idle adjustment screw to specifications If these adjustments do not correct the trouble, remove idle orifice tube and plug assembly Clean tube passages with compressed air

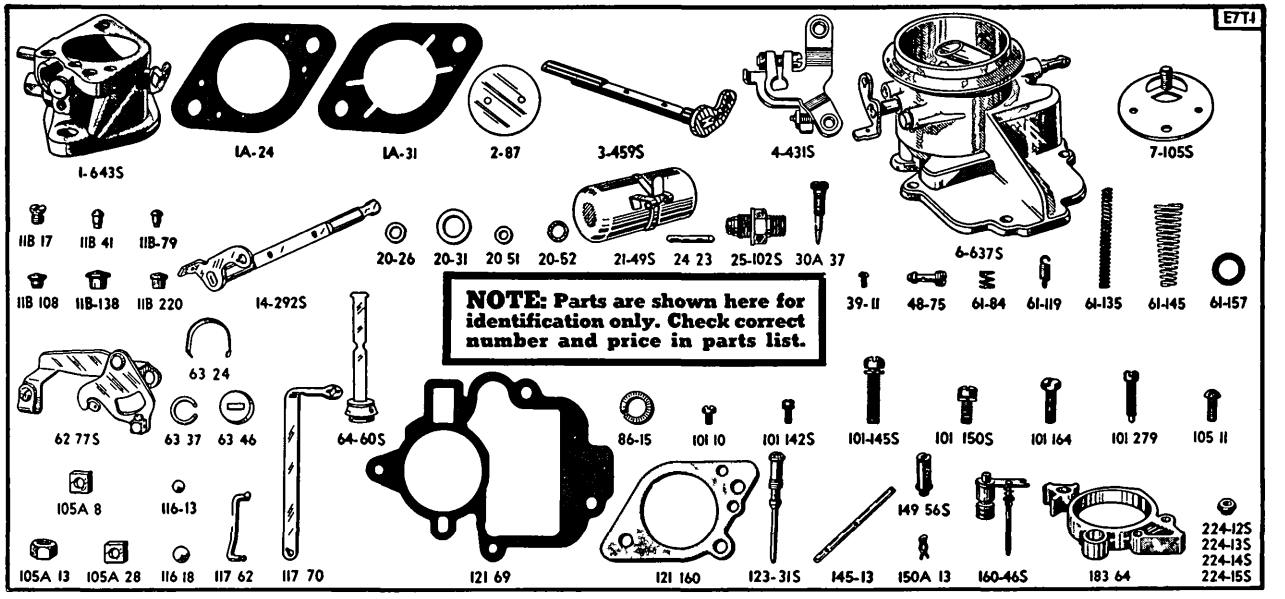
If acceleration is not satisfactory, remove pump jet and clean with compressed air However, it is usually advisable to replace the pump jet, as its cost is nominal All jets must be seated gasoline tight Poor acceleration may be due to damaged or worn plunger leather in accelerating pump, sediment in pump cylinder or clogged intake ball check at bottom of pump cylinder and discharge ball check in discharge passage If plunger is removed from cylinder, use care in installing to avoid damage to plunger leather

Correct air fuel ratio is provided by a "balance tube" in the air horn The balance tube should be checked each time the carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type, size or condition of air cleaner Should the cleaner become clogged, the capacity will be reduced but the air-fuel mixture ratio will not be changed

Excessive richness above 50 miles per hour may be caused by a clogged main vent tube After removal of rivet plug beneath float bowl with tool No T109-43 main vent tube can be removed and a new tube inserted with tool No T109-195 Care must be exercised in inserting new tube which must seat tightly Use new rivet to complete the installation

Pump Adjustment Remove air horn assembly, back out throttle adjustment screw, and place pump operating link in center hole of throttle shaft arm Place gauge T109-117S on edge of bowl cover so that lip of gauge extends over top of plunger shaft Turn knurled nut of gauge until lip contacts plunger shaft at closed and wide open throttle positions Difference in readings obtained at closed and wide open throttle positions should be ' 26 (26/64") plunger travel Adjustments can be made by bending horizontal portion of pump lifter link

Pump stroke adjustable for high or low temperature Set to long stroke for cold weather, short stroke for hot weather driving



Dodge Truck—1950-1958—Nos. E7T1-E7T2

WHEN SERVICING, USE GASKET ASSORTMENT No 137A, RE-CARBURETION KIT No 1534N

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF RE CARBURETION KIT

Part No.	PART NAME
1-643S	Body flange assembly (Sup by 1-1164S)
1-1164S	Body flange assembly
1A 24	Flange gasket—for use with governor
1A 31	FLANGE GASKET—FOR USE WITHOUT GOVERNOR
2-87	Throttle valve
3-452S	Throttle shaft and arm assembly
3 459S	Throttle shaft and arm assembly (Sup by 3 452S)
4 431S	Throttle lever assembly
6-637S	Air horn assembly
7-105S	Choke valve assembly
11B-17	Pump discharge passage plug
11B 41	Rivet plug
11B-79	Rivet plug (2)
11B-108	Idle port rivet plug
11B-138	Pump jet rivet plug
11B-220	HIGH SPEED PASSAGE PLUG
14-292S	Choke control lever and shaft assembly
20-26	Gasket
20-31	Needle seat gasket
20 51	Step-up jet gasket
20 52	STEP-UP PISTON GASKET
21 49S	Float and lever assembly (Sup by 21-123S)
21-123S	Float and lever assembly
24-23	Float lever pin
25-102S	Needle and seat assembly (Sup by 25-202S)
25 202S	*NEEDLE, PIN, SPRING AND SEAT ASSEMBLY
30A-37	Idle adjustment screw
39 11	Valve attaching screw (4)
48-75	Pump jet
61 84	Idle adjustment screw spring
61-119	Choke pull-back spring
61-135	STEP-UP PISTON SPRING
61-145	Pump spring
61-157	Plunger spring
61 207	Intake needle spring
62-77S	Choke tube bracket assembly
63-24	Float lever pin retainer

Part No.	PART NAME
63-37	Pump ball retainer ring
63-46	Pump spring retainer
64-60S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49-120)
86-15	Flange stud lock washer (2)
101-10	Wire clamp screw
101-142S	Choke bracket attaching screw and washer assembly
101-145S	Flange attaching screw and washer assembly (3)
101-150S	Bowl cover attaching screw and washer assembly (4)
101-164	Throttle lever clamp screw
101-279	Throttle lever adjusting screw
105-11	Choke tube clamp screw
105A-8	Choke tube clamp nut
105A-13	Flange nut (2)
105A-28	Throttle lever clamp nut
116-13	Pump intake check ball
116-18	Pump discharge check ball
117-62	Pump link
117-70	Pump lifter link
121-69	BODY GASKET
121-160	BODY FLANGE GASKET (2)
123-31S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY
145-13	MAIN VENT TUBE
149 56S	Step up jet assembly
150 98	Intake needle pin
150A-13	Pin spring
160-46S	Step-up piston, plate and rod assembly
183-64	Insulator
224-12S	Main metering jet assembly—3 sizes lean
224-13S	MAIN METERING JET ASSEMBLY—STANDARD
224-14S	Main metering jet assembly—1 size lean
224-15S	Main metering jet assembly—2 sizes lean
224-28U	Unitized package (For high altitude) (consists of 1—224-12S and 1—61-134)

*When using a spring loaded needle and seat, place a 050" feeler gauge between lip of float and intake needle pin With intake needle spring fully compressed, top of float should be 5/64 inch (1 98 mm) (Gauge T109-50) below top surface of carbureter body casting Adjust by bending lip on float

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.

DODGE TRUCK 1949-1957
1 TON
MODELS
B-2-PW 1949-50, B-3-PW 1951-52
B-4-PW 1953, C-1-PW6 1954, C-3-PW6 1955
C-4-PW6 1956, K-6-W300 1957

BB DOWN-DRAFT CARBURETER WITH GOVERNOR—**E7S1**

CARBURETER SPECIFICATIONS

Six Cylinder Engine: 3¼ Inch Bore, 4⅝ Inch Stroke

Dimensions: Flange size, 1½ inch S. A. E.
Throttle bore, 1-11/16 inch (42.86 mm).
Main venturi, 1-11/32 inch (3.413 mm).

Float Setting: Top of float 5/64 inch (1.98 mm) plus or minus 1/64 inch (.397 mm) below top surface of carbureter body casting.

Vents: Outside: none. Inside: balance vent tube .218 inch (5.56 mm) inside diameter.

Gasoline Intake Needle: Triangular, horizontal, needle seat size No. 44 (2.18 mm) drill.

Idle Orifice Tube: Jet size .0276 inch (.70 mm).
Idle passage air bleed (in air horn), size .059 inch (1.50 mm).
Idle restriction in body, size .055 inch (1.397 mm).

Idle Ports: Upper port: slot type. Length, .128 inch (3.251 mm). Width, .027 inch (.686 mm).
Top of port .104 inch (2.642 mm) to .110 inch (2.794 mm) above top edge of valve, in slot (early production); .096 inch (2.388 mm) to .100 inch (2.540 mm) above top edge of valve, in slot (late production).
Lower port size: .053 to .057 inch (1.35 to 1.45 mm) diameter (For idle adjustment screw).

Set Idle Adjustment: ½ to 1½ turns open. For richer mixture turn screw out. Do not idle engine below 450 to 500 r.p.m. motor speed.

Vacuum Spark Port: None.

Main Metering Jet: Calibrated to flow 328 to 332 cc per minute. Do not gauge for size. If in doubt, replace with new part.

Main Vent: Fuel chamber to vent tube well (in air horn), size .063 inch (1.60 mm) diameter. In vent tube plug, size .0433 (1.10 mm) diameter.

Main Vent Tube: Side holes: 1—.0354 (.90 mm) diameter, 3/32 inch (2.381 mm) from end.
1—.0354 inch (.90 mm) diameter, ⅛ inch (3.175 mm) from end.
1—.0236 inch (.60 mm) diameter, ½ inch (12.70 mm) from end.
1—.0236 inch (.60 mm) diameter, 17/32 inch (13.49 mm) from end.
1—.0157 inch (.40 mm) diameter, 1-15/32 inch (37.31 mm) from end.

Step-Up Jet: Size, .0492 inch (1.25 mm) diameter.

Accelerating Pump: Type, vacuum operated. Stroke, non-adjustable. Pump intake passage ball check seat, size .107 to .112 inch (2.72 to 2.845 mm) diameter.
Pump discharge passage, ball check restriction size, .062 to .065 inch (1.58 to 1.65 mm) diameter.
Pump discharge jet, size .0315 inch (.80 mm) diameter.

Choke: Offset butterfly type, with poppet valve.

FOR GOVERNOR INSTRUCTIONS, SEE FORM 4718F

MOTOR TUNE-UP

Spark Plug Gap	Breaker Point Setting	Ignition Timing	Set Valves (Hot)	Float Setting	Idle Adjustment Screw Setting
.035"	.020"	Breaker Points to Open: B-2-PW, 2° A.T.D.C. B-3-PW, C-1-PW6, C-3-PW6, C-4-PW6 2° B.T.D.C. B-4-PW, K6-W300, T.D.C.	Intake .010" Exhaust .014"	5/64 Inch	½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

Correct float adjustment is important and should be made in the following way:

Place float gauge (No. T109-50) across the carbureter body. Press float lever down to hold float pin against the bottom of the slot in the body casting. Floats should just clear the projections on the gauge. If adjustment is necessary, bend lip on float lever toward intake needle to lower level or away from the needle to raise the float level.

If motor stalls while idling, set throttle lever adjusting screw so motor runs between 450 and 500 R.P.M. Then set idle adjustment screw ½ to 1½ turns open from closed position. If a vacuum gauge is available, adjust to highest steady gauge reading.

Accelerating pump is actuated by the intake manifold vacuum and no adjustment is necessary. However, be sure the bowl cover gasket and flange gasket seal to prevent any air leaks to the pump vacuum passages.

If engine misses when load is suddenly increased, remove pump jet and clean with compressed air. However, it is usually advisable to replace the pump jet, as its cost is nominal. (All jets must be seated gasoline tight). This condition may also be due to damaged or worn plunger leather in accelerating pump cylinder or discharge check in discharge passage. If plunger is removed from cylinder, use care when installing to avoid damage to plunger leather.

Correct air fuel ratio is provided by a "balance tube" in the air horn. The balance tube should be checked each time the carbureter is serviced to see that the passage is open. The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type, size or condition of air cleaner. Should the cleaner become clogged, the capacity will be reduced but the air-fuel mixture ratio will not be changed.

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Dodge Truck—1949-1957—Carbureter E7S1

WHEN SERVICING, USE GASKET ASSORTMENT No 205; REPAIR PACKAGE No. 1503

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-657S	Body flange and governor assembly	
1A-31	FLANGE GASKET	
3-585S	Throttle lever shaft and arm assembly	
4-506S	Throttle lever assembly	
4A-96	Throttle shaft dog	
4A-103S	Throttle shaft dog assembly	
6-582S	Air horn assembly	
7-105S	Choke valve assembly	
11B-17	PUMP DISCHARGE PASSAGE PLUG	
11B-41	Rivet plug	(4)
11B 69	Rivet plug	
11B-79	Rivet plug	
11B-108	Idle port rivet plug	
11B-138	PUMP JET RIVET PLUG	
11B-186S	Governor primary adjusting screw plug assembly	
11B-194	Bowl drain plug	
11B-201S	Governor secondary adjusting screw plug assembly	
11B 220	HIGH SPEED PASSAGE PLUG	
14 357S	Choke shaft and lever assembly	
20-26	Main metering jet gasket	
20-31	NEEDLE SEAT GASKET	
20 35	Governor primary adjusting screw plug gasket	
20-36	Governor secondary adjusting screw plug gasket	
20 51	Step up jet gasket	
20 52	STEP UP PISTON GASKET	
21-91S	Float and lever assembly	
24-23	FLOAT LEVER PIN	
25-102S	NEEDLE AND SEAT ASSEMBLY	
30A-37	Idle adjustment screw	
38A-57S	Adjusting nut assembly (Stamped No 27)	
39-10	Choke valve attaching screw	(2)
48-73	PUMP JET	
61-84	Idle adjustment screw spring	
61-135	STEP UP PISTON SPRING	
61-144	Pump spring	
61-157	Plunger spring	
61-299	Choke spring	
61-302	Secondary friction spring	
61-314S	Secondary spring assembly	
61-366	Governor primary spring (Cadmium plate .041" wire dia.)	
61-373	Pump spring (Altitude operation only)	
62-151S	Choke tube bracket assembly	
63-24	Float lever pin retainer	
63-37	Pump retainer ring	
63-85	Secondary adjusting screw retainer	
63-104	Throttle shaft retaining ring (Sup by 136 55)	
64-117S	PLUNGER, ROD SPRING AND PISTON ASSEMBLY	
64-118S	Plunger rod spring and piston assembly (Altitude operation only)	
86 9	Lock washer	
86-10	Lock washer	
86 15	Flange stud lock washer	(2)
86-17	Throttle stop screw lock washer	
86-51	Throttle shaft dog lock washer	
86-54	Throttle valve screw lock washer	(2)
101-10	Wire clamp screw	
101-12	Choke bracket clamp screw	
101-38	Screw	
101-142S	Choke tube bracket attaching screw and washer assembly	
101-145S	Body flange attaching screw and washer assembly	(2)
101-149S	Throttle shaft housing attaching screw and washer assembly	(3)
101-150S	Air horn attaching screw and washer assembly	(3)
101-160S	Cover to governor housing attaching screw and washer assembly	(6)
101-164	Throttle lever clamp screw	
101-199S	Air horn attaching screw and washer assembly	(2)
101-215	Secondary adjusting screw	
101-220	Primary adjusting screw (Stamped No. 27 1 19/32" long)	
101-231	Throttle shaft dog attaching screw	
101-232	Throttle valve screw	(2)
101-234S	Body flange attaching screw and washer assembly	
101-246	Throttle adjusting screw	
101-248	Throttle lever set screw	
101-249	Clamp screw	
101-257	Throttle stop screw	
103-11	Lead shot	(2)
105A-10	Choke tube clamp nut	
105A-13	Flange nut	
105A-28	Throttle lever clamp nut	
116-13	PUMP INTAKE CHECK BALL	
116-18	PUMP DISCHARGE CHECK BALL	
118-58	Governor housing cover	
118-60S	Governor housing cover assembly (Sup by 118-58)	
121-104	MAIN BODY GASKET	
121-114	BODY FLANGE GASKET	
121-123	Governor housing cover gasket	
121-141	THROTTLE SHAFT HOUSING GASKET	
123-47S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
136-55	SPRING WASHER (BETWEEN THROTTLE LEVER AND FLANGE)	
136-82	MAIN VENT PLUG GASKET	
145-51S	MAIN VENT TUBE AND PLUG ASSEMBLY	
149-99S	STEP UP JET ASSEMBLY	
159-63S	Main metering jet assembly—3 sizes lean	
159-87S	Main metering jet assembly—2 sizes lean	
159-89S	Main metering jet assembly—1 size lean	
159-93S	MAIN METERING JET ASSEMBLY—STANDARD	
160-78S	STEP UP PISTON PLATE AND ROD ASSEMBLY	
163-37	Car seal	(2)
170-143S	Shaft housing assembly	---

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

DODGE "V-8"

MODEL D63-3

1956

(2432S) Power Flite Transmission

(2474S) Standard and Overdrive Transmission

(2303SB can also be used)

WCFB Four-Bore Down-Draft Climatic® Control Carbureters **Nos. 2432S-2474S**

CARBURETER SPECIFICATIONS

For Dodge 8 Cylinder Engine: 3.63 Inch Bore, 3.80 Inch Stroke

Dimensions. Flange size 1⅛ inch Four Bore—4 bolt type Primary venturi size 11/32 inch I D Main venturi size, 1 1/16 inch I D

Vents. Combination inside and outside (6)

Gasoline Intake Size No 42 (0935 inch) drill, in needle seat

Low Speed Jet Tube: Jet primary and secondary size No 69 (0293 inch) drill By pass in body size (2432S) primary and secondary (057 inch) diameter (2474S) Primary No 52 (0635 inch) drill, secondary (057 inch) diameter Economizer in body size (0453 inch) diameter Idle Bleed in body size (2432S) primary and secondary No 44 (086 inch) drill (2474S) Primary (059 inch) diameter secondary No 44 (086 inch) drill

Idle Port: Upper slot type primary length (2432S) 110 inch (2474S) 175 inch, width 030 inch Secondary, length 103 inch width 030 inch

Idle Port Opening: Primary (2432S) 049 to 055 inch, (2474S) 116 to 122 inch secondary 059 to 065 inch above top edge of valve with valve tightly closed

Lower Port Primary (for idle adjustment screw), size No 55 (052 inch) drill Secondary (no idle adjustment screw) size No 57 (043 inch) drill

Set Idle Adjustment Screw· ½ to 1½ turns open For richer mixture turn screw out Do not idle engine below 500 R P M in neutral

Main Nozzle· Installed permanently DO NOT REMOVE Anti-percolating jet (4) size No 70 (028 inch) drill

Metering Rod: (Vacuum operated) see parts list for size

Metering Rod Jet: Primary Size 0935 inch diameter Secondary Size 057 inch diameter

Accelerating Pump: Discharge jet (twin) primary side only, size (2432S) No 70 (028 inch) (2474S) No 74 (0225 inch) drill. Intake ball check seat, size 115 to 120 inch diameter Discharge needle seat, size No 50 (070 inch) drill Relief passage (vent) to fuel chamber, size No 42 (0935 inch) drill. Discharge relief plug, size No 74 (022 inch) drill

Choke· Carter Climatic® Control set on index Butterfly type offset choke valve, primary side only Choke heat suction hole restriction in piston housing size No 42 (0935 inch) drill

Vacuum Spark Port: Horizontal slot (round end) 045 x 110 inch Top of port 035 to 045 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION. Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .017"	Ignition Timing Breaker Points to Open: 6° B. T. D. C. At Vibration Damper	Float Setting See Adjustments	Idle Adjustment Screw Setting ½ to 1½ Turns Open Idle engine at 500 R.P.M. in neutral

NOTE: These cars are equipped with Hydraulic Valve Lifters—No Adjustment.

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: Two separate float adjustments must be made—lateral and vertical. LATERAL ADJUSTMENT: With bowl cover assembly inverted, bowl cover gasket removed and float resting on seated needle, place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting. Side of floats should just clear the vertical uprights of float gauge. Adjustment should be made by bending arms of floats. VERTICAL ADJUSTMENT: With float gauge in same position, floats should just clear the horizontal portion of gauge. Vertical distance between top of float and machined surface of casting must be 1/8" (gauge T109-232) for primary floats; and 3/16" (gauge T109-222) for secondary floats. Adjust by bending float arms.

FLOAT DROP ADJUSTMENT: With bowl cover held in upright position and measuring from center of floats, the distance between top of floats and bowl cover should be 5/8" for primary floats and 11/16" for secondary floats. Adjust by bending stop tabs on float bracket.

PUMP ADJUSTMENT: Install pump connector link in outer hole (long stroke) of pump arm, with ends extending toward countershaft arm. Back out throttle lever set screw until throttle valves seat in bores of carbureter. Hold straight edge across top of dust cover boss at pump arm. The flat on top of pump arm should be parallel to straight edge. Adjust by bending throttle connector rod (Early) at upper angle, (Late) at lower angle. (Use tool T109-213.)

METERING ROD ADJUSTMENT: Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows: 1. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw. 2. With metering rods in place, press down on vacumeter link until metering rods bottom in carbureter body casting. 3. Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link. Hold in place and carefully tighten clamp screw.

FAST IDLE ADJUSTMENT: (a) Loosen choke lever clamp screw on choke shaft. Insert .020" feeler gauge (T109-29) between lip of fast idle cam and boss of flange casting. Hold choke valve tightly closed and take slack out of linkage by pressing lever towards closed position—hold in place and tighten clamp screw. (b) With choke valve tightly closed, tighten fast idle adjusting screw until there is .012" (gauge T109-200) opening between throttle valve and bore of carbureter (side opposite idle port). Be sure fast idle adjusting screw is on high step of cam while making this adjustment.

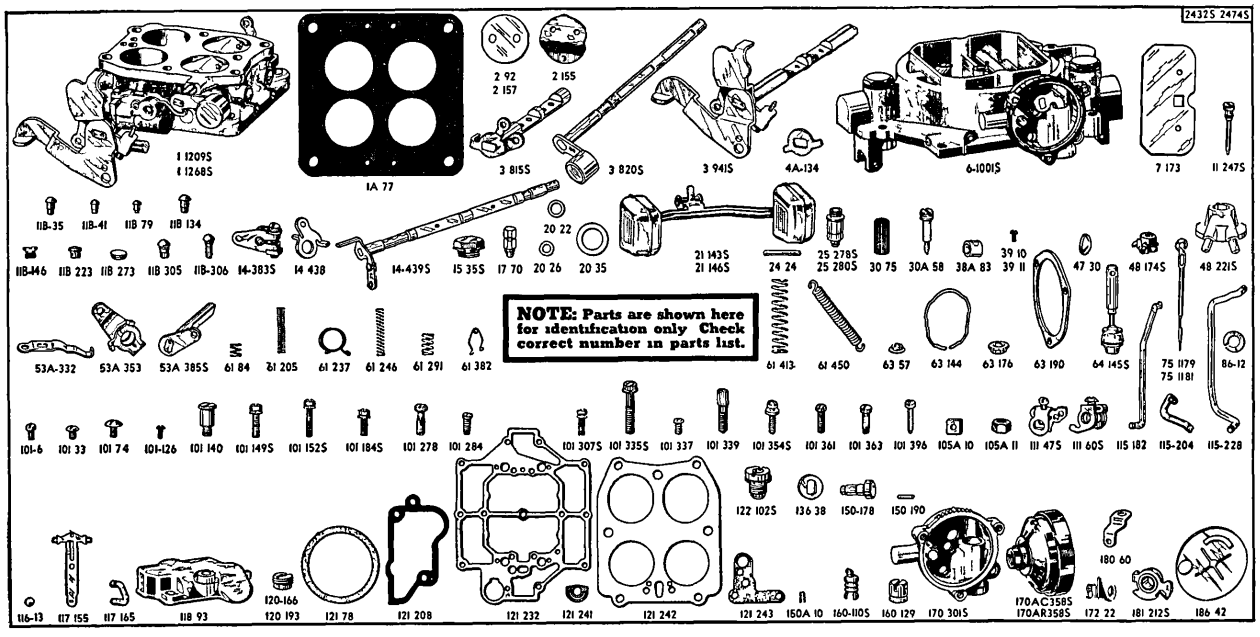
UNLOADER ADJUSTMENT: With throttle wide open there should be 3/16" clearance between upper edge of choke valve and inner wall of air horn (gauge T109-28). Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41).

AUXILIARY THROTTLE VALVE ADJUSTMENT: (a) Disconnect secondary throttle operating rod. (b) Adjust stop lug on secondary throttle lever (use bending tool T109-214) until there is 27/64" clearance (gauge T109-242) between lower edge of auxiliary throttle valve and bore, when lug is against stop on flange.

SECONDARY THROTTLE LEVER ADJUSTMENT: The stop lug on both primary and secondary throttle levers should contact boss on flange at the same time. To adjust bend secondary throttle operating rod at angle (use bending tool T109-213). NOTE: Secondary throttle valves will be a few degrees from wide open position.

AUXILIARY THROTTLE LOCK-OUT ADJUSTMENT: This adjustment should be made after completing fast idle adjustment. 1. With choke valve closed, edge of hook on lock-out arm should contact auxiliary throttle lever, making maximum contact of locking step on lever. 2. Open choke valve. Auxiliary throttle valve should become unlocked a few degrees before the choke reaches wide open position. Adjust by bending lock-out arm.

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Dodge "V-8"—1956—Carbureters Nos. 2432S-2474S

WHEN SERVICING, USE GASKET ASSORTMENT No. 234A

Part No	PART NAME	
1-1209S	Body flange assembly (2432S)	
1-1268S	Body flange assembly (2474S)	
1A-77	Flange gasket	
2-92	Primary throttle valve	(2)
2-155	Auxiliary throttle valve	(2)
2-157	Secondary throttle valve	(2)
3-815S	Secondary throttle shaft and operating lever assembly	
3-820S	Auxiliary throttle shaft lever and weight assembly	
3-941S	Primary throttle shaft and lever assembly	
4A-134	Primary throttle shaft dog	
6-1001S	Air horn assembly	
7-173	Choke valve	
11-247S	Low speed jet assembly	(4)
11B-35	Rivet plug	(6)
11B-41	Rivet plug	(2)
11B-79	Rivet plug	(4)
11B-134	Rivet plug	
11B-146	Level sight plug	(2)
11B-223	Nozzle passage and idle port rivet plug	(8)
11B-273	Secondary throttle shaft rivet plug	
11B-305	Rivet plug	
11B-306	Rivet plug	(2)
14-383S	Choke lever and screw assembly	
14-438	Cam trip lever	
14-439S	Choke piston lever link and shaft assembly	
15-35S	Strainer nut assembly	

Part No.	PART NAME	
17-70	Pump check needle	
20-22	Needle seat gasket	(2)
20-26	Relief valve gasket	
20-35	Bowl strainer gasket	
21-143S	Primary float and lever assembly	
21-146S	Secondary float and lever assembly	
24-24	Float lever pin	(2)
25-278S	Secondary needle and seat assembly	
25-280S	Primary needle and seat assembly	
30-75	Bowl strainer	
30A-58	Idle adjustment screw	(2)
38A-83	Counter bushing	
39-10	Primary throttle valve attaching screw	(4)
39-11	Choke valve attaching screw	(2)
47-30	Expansion welsh plug	
48-174S	Pump jet and housing assembly (2474S)	
48-221S	Pump jet and housing assembly (2432S)	
53A-332	Lockout arm	
53A-353	Primary operating lever	
53A-385S	Pump operating lever and countershaft assembly	
61-84	Idle adjustment screw spring	(2)
61-205	Vacuum piston spring (2474S)	
61-237	Fast idle cam spring	
61-246	Vacuum piston spring (2432S)	
61-291	Throttle lever adjusting screw spring	
61-382	Metering rod spring	
61-413	Upper pump spring	

Part No.	PART NAME	
61-450	Secondary throttle return spring	
63-57	Intake check ball retainer	
63-144	Delayer plate retainer ring	
63-176	Pump spring retainer	
63-190	Coil housing retainer	
64-145S	Pump plunger and rod assembly	
75-1179	Metering rod—standard (.075" x .065" x .055" (2432S)	(2)
75-1181	Metering rod—standard (.078" x .070" x .055" (2474S)	(2)
86-12	Flange stud lock washer	(4)
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	
101-126	Auxiliary throttle valve attaching screw	(4)
101-140	Fast idle cam screw	
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-278	Pump jet housing attaching screw	
101-284	Piston housing attaching screw	(2)
101-307S	Air horn and bracket attaching screw and washer assembly	(8)
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-339	Throttle lever adjusting screw	
101-354S	Choke lever clamp screw assembly	
101-361	Coil housing attaching screw	(3)
101-363	Piston housing attaching screw	
101-396	Fast idle adjustment screw	
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
115-182	Choke connector rod	
115-204	Throttle operating rod	
115-228	Throttle connector rod	
116-13	Pump intake check ball	
117-155	Vacumeter piston link	
117-165	Pump connector link	
118-93	Dust cover	
120-166	Primary metering rod jet	(2)
120-193	Secondary metering jet	(2)
121-78	Coil housing gasket	
121-208	Dust cover gasket	
121-232	Air horn gasket	
121-241	Pump jet housing gasket	
121-242	Body flange gasket	
121-243	Piston housing gasket	
122-102S	Pump relief plug assembly	
136-38	Throttle shaft washer	
150-178	Auxiliary valve lockout arm pin	
150-190	Choke piston pin	
150A-10	Pin spring	(4)
160-110S	Vacuum piston and pin assembly	
160-129	Choke piston	
170-301S	piston housing and plug assembly	
170AC358S	Thermostatic coil and housing assembly (2474S)	
170AR358S	Thermostatic coil and housing assembly (2432S)	
172-22	Throttle connector rod retainer	
180-60	Lever return spring bracket	
181-212S	Fast idle cam assembly	
186-42	Choke baffle plate	

NOTE **Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.**

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DODGE "V-8"

MODEL D-500

1956

WCFB Four-Bore Down-Draft Climatic® Control **Carbureters Nos. 2443S-2443SA**

CARBURETER SPECIFICATIONS

For Dodge 8 Cylinder Engine: 3.63 Inch Bore, 3.80 Inch Stroke

Dimensions Flange size 1¼ inch Four Bore—4 bolt type
Primary venturi size 11/32 inch I D
Main venturi size 1 3/16 inch I D

Vents 5 inside 4 outside

Gasoline Intake: Size No 42 (0935 inch) drill; in needle seat

Low Speed Jet Tube: Jet size 035 inch diameter By-pass in body size (057 inch) diameter Economizer plug in body size No 56 (0465 inch) drill Idle bleed, in body, size No 46 (081 inch) drill

Idle Port Upper slot type, primary length 140 inch, width 030 nch Secondary, length 103 inch, width 030 inch

Idle Port Opening: Primary 092 to 098 inch, secondary 065 to 071 inch above top edge of valve with valve tightly closed

Lower Port: Primary (for idle adjustment screw), size No 55 (052 inch) drill Secondary (no idle adjustment screw), size No 57 (043 inch) drill

Set Idle Adjustment Screw: ¾ to 1¾ turns open For richer mixture turn screw out Do not idle engine below 450 to 500 R P M in neutral

Main Nozzle: Installed permanently DO NOT REMOVE. Anti-percolating jet (4) size No 70 (028 inch) drill

Metering Rod: Primary; Economy step 077 inch diameter Middle step tapers to 068 inch diameter Power step 045 inch diameter Secondary, none

Metering Rod Jet: Primary: Size 0995 inch diameter. Secondary Size 067 inch diameter

Accelerating Pump: Discharge jet (twin) primary side only, size No 74 (0225 inch) drill Intake ball check seat, size 115 to 120 inch diameter Discharge needle seat, size No 50 (070 inch) drill Relief passage (vent) to fuel chamber size No 42 (0935 inch) drill

Choke. Carter Climatic® Control set on index Butterfly type offset choke valve, primary side only Choke heat suction hole restriction in piston housing size No 47 (0785 inch) drill

Vacuum Spark Port: Horizontal slot (round end) 045 x 110 inch Top of port 022 to 032 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .017"	Ignition Timing Breaker Points to Open: 2° B. T. D. C. At Vibration Damper	Valve Setting (Hot) Intake .012" Exhaust .022"	Float Setting Primary 7/32 Inch (Gauge T109-283) Secondary 9/32 Inch (Gauge T109-284)	Idle Adjustment Screw Setting ¾ to 1¾ Turns Open Idle engine at 450 to 500 R.P.M. in neutral

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: Two separate float adjustments must be made—lateral and vertical. **LATERAL ADJUSTMENT:** With bowl cover assembly inverted, bowl cover gasket removed and float resting on seated needle, place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting. Side of floats should just clear the vertical uprights of float gauge. Adjustment should be made by bending arms of floats. **VERTICAL ADJUSTMENT:** With float gauge in same position, floats should just clear the horizontal portion of gauge. Vertical distance between top of float and machined surface of casting must be 7/32" (gauge T109-283) for primary floats; and 9/32" (gauge T109-284) for secondary floats. Adjust by bending float arms.

FLOAT DROP ADJUSTMENT: With bowl cover held in upright position and measuring from center of floats, the distance between top of floats and bowl cover should be 23/32" for primary floats and 25/32" for secondary floats. Adjust by bending stop tabs on float bracket.

PUMP ADJUSTMENT: Install pump connector link in outer hole (long stroke) of pump arm, with ends extending toward countershaft arm. Back out throttle lever set screw until throttle valves seat in bores of carbureter. Hold straight edge across top of dust cover boss at pump arm. The flat on top of pump arm should be parallel to straight edge. Adjust by bending throttle connector rod (early) at upper angle, (late) at lower angle. (Use tool T109-213.)

METERING ROD ADJUSTMENT: Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows: 1. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw. 2. With metering rods in place, press down on vacumeter link until metering rods bottom in carbureter body casting. 3. Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link. Hold in place and carefully tighten clamp screw.

BOWL VAPOR VENT ADJUSTMENT: This adjustment should be made after completing pump and metering rod adjustments. Install dust cover and dust cover gasket. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter. There should be 1/16 inch (gauge T109-197) between lower edge of bowl vapor vent valve and dust cover. To adjust, remove dust cover and bend vapor vent arm.

FAST IDLE ADJUSTMENT: (a) Loosen choke lever clamp screw on choke shaft. Insert .020" feeler gauge (T109-29) between lip of fast idle cam and boss of flange casting. Hold choke valve tightly closed and take slack out of linkage by pressing lever towards closed position — hold in place and tighten clamp screw. (b) With choke valve tightly closed, tighten fast idle adjusting screw until there is .012" (gauge T109-200) opening between throttle valve and bore of carbureter (side opposite idle port). Be sure fast idle adjusting screw is on high step of cam while making this adjustment.

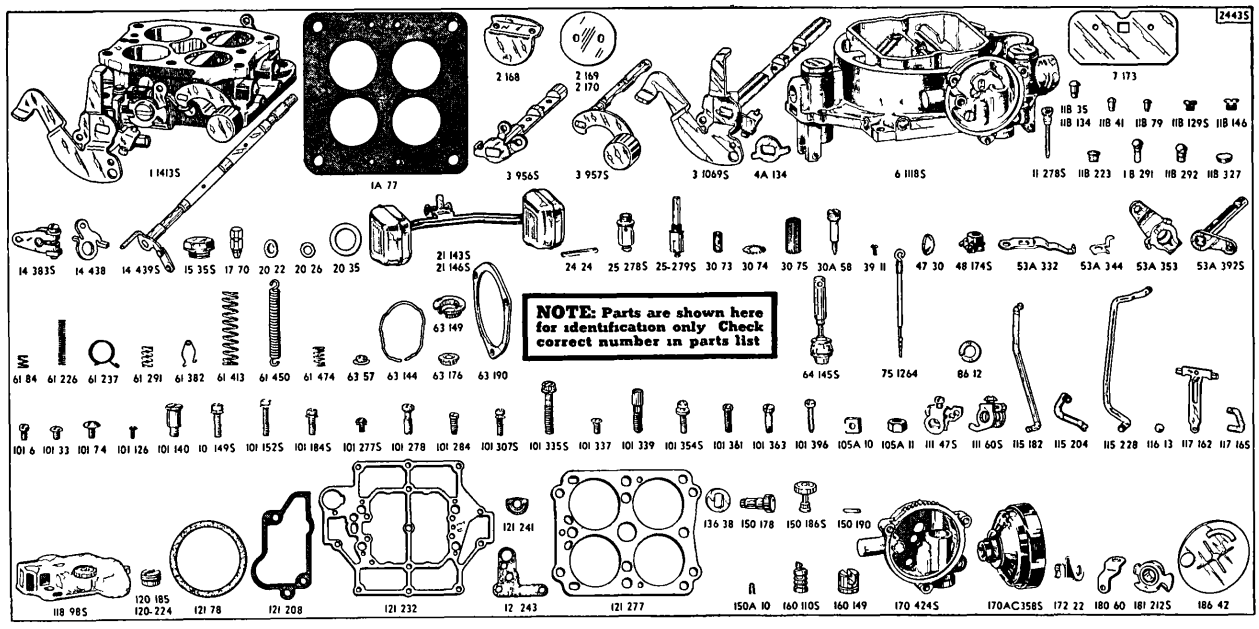
FAST IDLE ON CAR: 1300-1350 R.P.M.

UNLOADER ADJUSTMENT: With throttle wide open there should be 11/64" clearance between upper edge of choke valve and inner wall of air horn (gauge T109-166). Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41).

SECONDARY THROTTLE LEVER ADJUSTMENT: The stop lug on both primary and secondary throttle levers should contact boss on flange at the same time. To adjust bend secondary throttle operating rod at angle (use bending tool T109-213).

AUXILIARY THROTTLE LOCK-OUT ADJUSTMENT: This adjustment should be made after completing fast idle adjustment. 1. With choke valve closed, edge of hook on lockout arm should contact auxiliary throttle lever, making maximum contact of locking step on lever. 2. Open choke valve. Auxiliary throttle valve should become unlocked a few degrees before the choke reaches wide open position. Adjust by bending lockout arm.

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Dodge "V-8"—1956—Carbureters Nos. 2443S-2443SA

WHEN SERVICING, USE GASKET ASSORTMENT No. 288

Part No	PART NAME	
1-1413S	—Body flange assembly	
1A-77	Flange gasket	
2-168	Auxiliary throttle valve	(2)
2-169	Secondary throttle valve	(2)
2-170	Primary throttle valve	(2)
3-956S	Secondary throttle shaft and operating lever assembly	
3-957S	Auxiliary throttle shaft lever and weight assembly	
3-1069S	—Primary throttle shaft and lever assembly	
4A-134	Primary throttle shaft dog	
6-1118S	—Air horn assembly (2443S) (Casting No 6 1117)	
6-1173S	—Air horn assembly (2443SA) (Casting No 6 1147)	
7-173	Choke valve	
11-278S	Low speed jet assembly	(4)
11B-35	Rivet plug	(6)
11B-41	Rivet plug (2443S (2) (2443SA (1)	
11B-79	Rivet plug	(4)
11B-129S	Pump discharge passage plug assembly	
11B-134	Rivet plug	
11B-146	Level sight plug	(2)
11B-223	Nozzle passage and idle port rivet plug	(8)
11B-291	Rivet plug (2443S)	(2)
11B-292	Rivet plug (2443S)	
11B-305	Rivet plug (2443SA)	(2)
11B-306	Rivet plug (2443SA)	
11B-327	Secondary throttle shaft rivet plug	
14-383S	Choke lever and screw assembly	
14-438	Cam trip lever	

Part No.	PART NAME	
14-439S	Choke piston lever link and shaft assembly	
15-35S	Strainer nut assembly	(2)
17-70	Pump check needle	
20-22	Needle seat gasket	(2)
20-26	Gasket	
20-35	Bowl strainer gasket	(2)
21-143S	Primary float and lever assembly	
21-146S	Secondary float and lever assembly	
24-24	Float lever pin	(2)
25-278S	Primary needle and seat assembly	
25-279S	Secondary needle and seat assembly	
30-73	Primary needle seat strainer	
30-74	Secondary fuel inlet strainer	
30-75	Bowl strainer	
30A-58	Idle adjustment screw	(2)
39-11	Primary throttle and choke valve attaching screw	(6)
47-30	Welsh plug	
48-174S	Pump jet and housing assembly	
53A-332	Lockout arm	
53A-344	Vent arm	
53A-353	Primary operating lever	
53A-392S	Pump operating lever and countershaft assembly	
61-84	Idle adjustment screw lock spring	(2)
61-226	Vacuum piston spring	
61-237	Fast idle cam spring	
61-291	Throttle lever adjusting screw spring	
61-382	Metering rod spring	

Part No.	PART NAME	
61-413	Upper pump spring	
61-450	Secondary throttle return spring	
61-474	Bowl vent spring	
63-57	Intake check ball retainer	
63-144	Delayer plate retainer ring	
63-149	Bowl vent spring retainer	
63-176	Pump spring retainer	
63-190	Coil housing retainer	
64-145S	Pump plunger and rod assembly	
75-1264	—Metering rod	(2)
86-12	Flange stud lock washer	(4)
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	
101-126	Auxiliary throttle valve attaching screw	(4)
101-140	Fast idle cam screw	
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-275	Piston housing attaching screw (2443SA)	
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet housing attaching screw	
101-284	Piston housing attaching screw (2443S)	(2)
101-307S	Bracket and air horn attaching screw and washer assembly	(8)
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-339	Throttle lever adjusting screw	
101-354S	Choke lever clamp screw and washer assembly	
101-361	Coil housing attaching screw	(3)
101-363	Piston housing attaching screw (2443S (1), (2443SA (2)	
101-396	Fast idle adjustment screw	
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
115-182	Choke connector rod	
115-204	Throttle operating rod	
115-228	Throttle connector rod	
116-13	Pump intake check ball	
117-162	Vacumeter piston link	
117-165	Pump connector link	
118-98S	Dust cover assembly (2443S)	
118-102S	Dust cover assembly (2443SA)	
120-185	Secondary metering jet	(2)
120-224	Primary metering rod jet	(2)
121-78	Coil housing gasket	
121-208	Dust cover gasket	
121-232	Air horn gasket	
121-241	Pump jet housing gasket	
121-243	Piston housing gasket (2443S)	
121-277	Body flange gasket	—
121-283	Piston housing gasket (2443SA)	
136-38	Throttle shaft washer	
150-178	Auxiliary valve lockout arm pin	
150-186S	Pin and valve cap assembly	
150-190	Choke piston pin	
150A-10	Pin spring	(5)
160-110S	Vacuum piston and pin assembly	
160-149	Choke piston	
170-424S	—Piston housing and plug assembly (2443S)	
170-443S	—Piston housing and plug assembly (2443SA)	
170AC358S	Thermostatic coil and housing assembly	
172-22	Throttle connector rod retainer	
180-60	Lever return spring bracket	
181-212S	Fast idle cam assembly	
186 42	Choke baffle plate	

—Parts so marked are new and listed for the first time

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used.

DODGE "V-8"

MODEL D63-3

1956

(All Transmissions)

WCFB Four-Bore Down-Draft Climatic® Control Carbs **Nos. 2303S-2303SA-2303SB**

CARBURETER SPECIFICATIONS

For Dodge 8 Cylinder Engine 3 63 Inch Bore, 3.80 Inch Stroke

Dimensions Flange size 1⅛ inch Four Bore—4 bolt type Primary venturi size 11/32 inch I D Main venturi size 1 1/16 inch I D

Float Level See adjustments

Vents 5 inside 4 outside

Gasoline Intake Size No 42 (0935 inch) drill in needle seat

Low Speed Jet Tube Jet size 032 inch diameter By pass in body size No 54 (055 inch) drill Economizer in body size No 56 (0465 inch) drill Idle bleed in body size No 50 (070 inch) drill

Idle Port Upper slot type primary length 175 inch width 030 inch Secondary length 103 inch width 030 inch

Idle Port Opening Primary 116 to 122 inch secondary 059 to 065 inch above top edge of valve with valve tightly closed

Lower Port Primary (for idle adjustment screw) size No 55 (052 inch) drill Secondary (no idle adjustment screw) s re No 57 (043 inch) drill

Set Idle Adjustment Screw ½ to 1½ turns open For richer mixture turn screw out Do not idle engine below 500 R P M in neutral

Main Nozzle Installed permanently DO NOT REMOVE Anti percolating jet (4) size No 70 (028 inch) drill

Metering Rod Primary Economy step 073 inch diameter Middle step tapers to 068 inch diameter Power step 052 inch diameter Secondary none

Metering Rod Jet Primary Size 089 inch diameter Secondary Size 0492 inch diameter

Metering Rod Setting See adjustments

Accelerating Pump Discharge jet (twin) primary side only size No 74 (0225 inch) drill Intake ball check seat size 115 to 120 inch diameter Discharge needle seat size No 50 (070 inch) drill Relief passage (vent) to fuel chamber size No 42 (0935 inch) drill

Pump Adjustment See adjustments

Choke Carter Climatic® Control set one point rich Butterfly type offset choke valve primary side only Choke heat suction hole restriction in piston housing size No 47 (0785 inch) drill

Vacuum Spark Port Horizontal slot (round end) 045 x 110 inch Top of port 035 to 045 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .017"	Ignition Timing Breaker Points to Open 6° B. T. D. C. At Vibration Damper	Float Setting See Adjustments	Idle Adjustment Screw Setting ½ to 1½ Turns Open Idle engine at 500 R.P.M. in neutral

NOTE These cars are equipped with Hydraulic Valve Lifters—No Adjustment.

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: Two separate float adjustments must be made—lateral and vertical. LATERAL ADJUSTMENT: With bowl cover assembly inverted, bowl cover gasket removed and float resting on seated needle, place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting. Side of floats should just clear the vertical uprights of float gauge. Adjustment should be made by bending arms of floats. VERTICAL ADJUSTMENT: With float gauge in same position, floats should just clear the horizontal portion of gauge. Vertical distance between top of float and machined surface of casting must be 7/32" (gauge T109-283) for primary floats; and 9/32" (gauge T109-284) for secondary floats. Adjust by bending float arms.

FLOAT DROP ADJUSTMENT: With bowl cover held in upright position and measuring from center of floats, the distance between top of floats and bowl cover should be 23/32" for primary floats and 25/32" for secondary floats. Adjust by bending stop tabs on float bracket.

PUMP ADJUSTMENT: Install pump connector link in outer hole (long stroke) of pump arm, with ends extending toward countershaft arm. Back out throttle lever set screw until throttle valves seat in bores of carbureter. Hold straight edge across top of dust cover boss at pump arm. The flat on top of pump arm should be parallel to straight edge. Adjust by bending throttle connector rod at upper angle. (Use tool T109-213.)

METERING ROD ADJUSTMENT: Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows: 1. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw. 2. With metering rods in place, press down on vacumeter link until metering rods bottom in carbureter body casting. 3. Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link. Hold in place and carefully tighten clamp screw.

BOWL VAPOR VENT ADJUSTMENT: This adjustment should be made after completing pump and metering rod adjustments. Install dust cover and dust cover gasket. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter. There should be 1/16 inch (gauge T109-197) between lower edge of bowl vapor vent valve and dust cover. To adjust, remove dust cover and bend vapor vent arm.

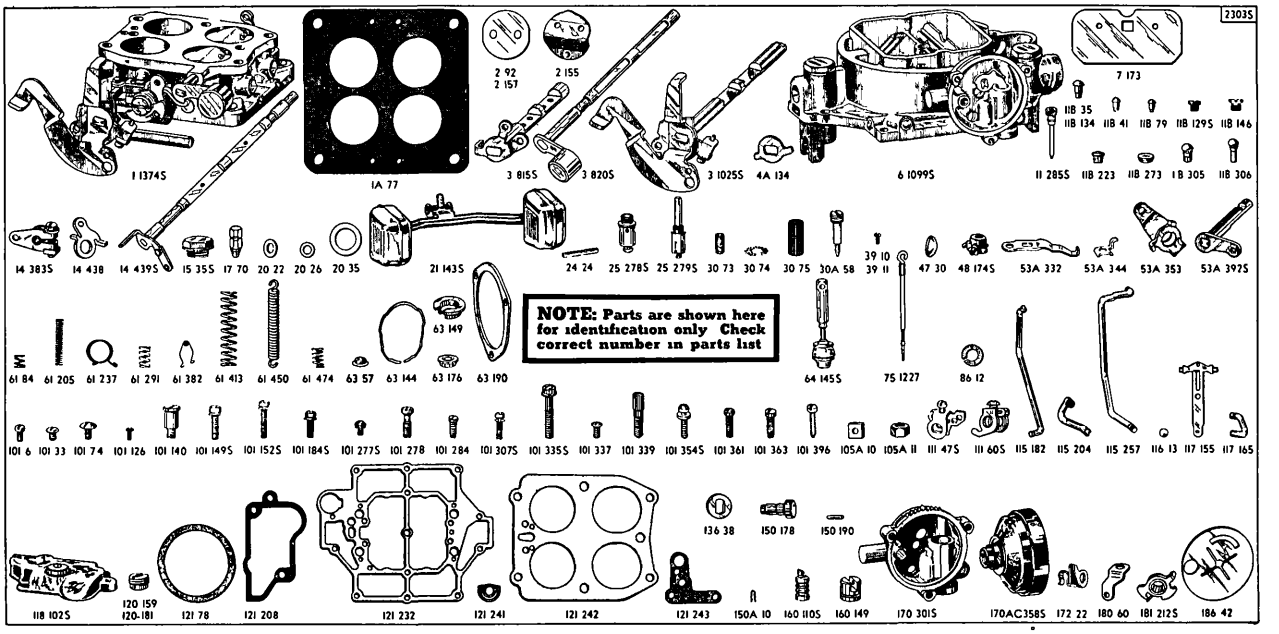
FAST IDLE ADJUSTMENT: (a) Loosen choke lever clamp screw on choke shaft. Insert .020" feeler gauge (T109-29) between lip of fast idle cam and boss of flange casting. Hold choke valve tightly closed and take slack out of linkage by pressing lever towards closed position — hold in place and tighten clamp screw. (b) With choke valve tightly closed, tighten fast idle adjusting screw until there is .012" (gauge T109-200) opening between throttle valve and bore of carbureter (side opposite idle port). Be sure fast idle adjusting screw is on high step of cam while making this adjustment.

UNLOADER ADJUSTMENT: With throttle wide open there should be 11/64" clearance between upper edge of choke valve and inner wall of air horn (gauge T109-166). Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41).

AUXILIARY THROTTLE VALVE ADJUSTMENT: (a) Disconnect secondary throttle operating rod. (b) Adjust stop lug on secondary throttle lever (use bending tool T109-214) until there is 27/64" clearance (gauge T109-242) between lower edge of auxiliary throttle valve and bore, when lug is against stop on flange.

SECONDARY THROTTLE LEVER ADJUSTMENT: The stop lug on both primary and secondary throttle levers should contact boss on flange at the same time. To adjust bend secondary throttle operating rod at angle (use bending tool T109-213).

AUXILIARY THROTTLE LOCK-OUT ADJUSTMENT: This adjustment should be made after completing fast idle adjustment. 1. With choke valve closed, edge of hook on lockout arm should contact auxiliary throttle lever, making maximum contact of locking step on lever. 2. Open choke valve. Auxiliary throttle valve should become unlocked a few degrees before the choke reaches wide open position. Adjust by bending lockout arm.



Dodge "V-8"—1956—Carbureters Nos. 2303S-2303SA-2303SB

WHEN SERVICING USE GASKET ASSORTMENT No 234A, REPAIR PACKAGE No 1846
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1374S	Body flange assembly	
1A-77	FLANGE GASKET	
2-92	Primary throttle valve	(2)
2-155	Auxiliary throttle valve	(2)
2-157	Secondary throttle valve	(2)
3-815S	Secondary throttle shaft and operating lever assembly	
3-820S	Auxiliary throttle shaft lever and weight assembly	
3-1025S	Primary throttle shaft and lever assembly	
4A-134	Primary throttle shaft dog	
6-1099S	Air horn assembly (2303S) (Casting No 6 1020) (Sup by 6 1118S)	
6-1118S	Air horn assembly (2303S SA) (Casting No 6 1117)	
6-1173S	Air horn assembly (2303SB) (Casting No 6 1147)	
7-173	Choke valve	
11-285S	Low speed jet assembly (Sup by 11 295S)	(4)
11-295S	LOW SPEED JET ASSEMBLY	(4)
11B-35	Rivet plug	(6)
11B-41	Rivet plug (2303S SA (2) (2303SB (1)	
11B-79	Rivet plug (early prod) (4) (late prod)	(3)
11B-129S	Pump discharge passage plug assembly	
11B-134	Rivet plug	
11B-146	Level sight plug	(2)
11B-223	Nozzle passage and idle port rivet plug	(8)
11B-273	Secondary throttle shaft rivet plug	
11B-291	Rivet plug (2303SA)	(2)
11B-292	Rivet plug (2303SA)	
11B-305	Rivet plug (2303S (1) (2303SB (2)	
11B-306	Rivet plug (2303S (2) (2303SB (1)	
14-383S	Choke lever and screw assembly	
14-438	Cam trip lever	
14-439S	Choke piston lever link and shaft assembly	
15-35S	Strainer nut assembly	(2)
17-70	PUMP CHECK NEEDLE	

Part No.	PART NAME	
20-22	Needle seat gasket	(2)
20-26	Gasket	
20-35	BOWL STRAINER GASKET	(2)
21-143S	Float and lever assembly	(2)
24-24	Float lever pin	(2)
25-278S	PRIMARY NEEDLE AND SEAT ASSEMBLY	
25-279S	SECONDARY NEEDLE AND SEAT ASSEMBLY	
30-73	PRIMARY NEEDLE SEAT STRAINER	
30-74	SECONDARY FUEL INLET STRAINER	
30-75	BOWL STRAINER	
30A-58	Idle adjustment screw	(2)
39-10	Primary throttle valve attaching screw	(4)
39-11	Choke valve attaching screw	(2)
47-30	Welsh plug	
48-174S	Pump jet and housing assembly	
53A-332	Lockout arm	
53A-344	VENT ARM	
53A-353	Primary operating lever	
53A-392S	Pump operating lever and countershaft assembly	
61-84	Idle adjustment screw lock spring	(2)
61-205	VACUUM PISTON SPRING	
61-237	Fast idle cam spring	
61-291	Throttle lever adjusting screw spring	
61-382	METERING ROD SPRING	
61-413	UPPER PUMP SPRING	
61-450	SECONDARY THROTTLE RETURN SPRING	
61-474	Bowl vent spring	

Part N .	PART NAME	
63-57	INTAKE CHECK BALL RETAINER	
63-144	Delayer plate retainer ring	
63-149	Bowl vent spring retainer	
63-176	Pump spring retainer	
63-190	Coil housing retainer	
64-145S	PUMP PLUNGER AND ROD ASSEMBLY	
75-1227	Metering rod—standard (Sup by 75 1251)	(2)
75-1251	METERING ROD	(2)
75-1280	Metering rod—1 size lean	(2)
75-1281	Metering rod—2 sizes lean	(2)
86-12	Flange stud lock washer	(4)
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	
101-126	Auxiliary throttle valve attaching screw	(4)
101-140	Fast idle cam screw	
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-275	Piston housing attaching screw (2303SB)	
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet housing attaching screw	
101-284	Piston housing attaching screw (2303S SA)	(2)
101-307S	Bracket and air horn attaching screw and washer assembly	(8)
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-339	Throttle lever adjusting screw	
101-354S	Choke lever clamp screw and washer assembly	
101-361	Coil housing attaching screw	(3)
101-363	Piston housing attaching screw (2303S SA (1) (2303SB (2)	
101-396	Fast idle adjustment screw	
103-14	Lead shot (late prod)	
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
111-47S	Pump arm and screw assembly	

Part No.	PART NAME	
111-60S	Metering rod arm and screw assembly	
115-182	Choke connector rod	
115-204	Throttle operating rod	
115-257	THROTTLE CONNECTOR ROD	
116-13	PUMP INTAKE CHECK BALL	
117-155	Vacumeter piston link (Sup by 117 162)	
117-162	Vacumeter piston link	
117-165	Pump connector link	
118-98S	Dust cover assembly (2303SA)	
118-102S	Dust cover assembly (2303S SB)	
120-159	PRIMARY METERING ROD JET	(2)
120-181	SECONDARY METERING JET	(2)
121-78	COIL HOUSING GASKET	
121-208	DUST COVER GASKET	
121-232	AIR HORN GASKET	
121-241	PUMP JET HOUSING GASKET	
121-242	BODY FLANGE GASKET	
121-243	PISTON HOUSING GASKET (2303S SA)	
121-283	PISTON HOUSING GASKET (2303SB)	
136-38	Throttle shaft washer	
150-178	Auxiliary valve lockout arm pin	
150-186S	Pin and valve cap assembly	
150-190	Choke piston pin	
150A-10	PIN SPRING	(5)
160-110S	Vacuum piston and pin assembly	
160-149	Choke piston	
170-301S	Piston housing and plug assembly (2303S SA) (Sup by 170 424S)	
170-424S	Piston housing and plug assembly (2303S SA)	
170-443S	Piston housing and plug assembly (2303SB)	
170AC358S	Thermostatic coil and housing assembly	
172-22	Throttle connector rod retainer	
180-60	Lever return spring bracket	
181-212S	Fast idle cam assembly	
186-42	Choke baffle plate	

NOTE **Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.**

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DODGE TRUCK "V-8" 2¾ and 3 TON 1955-1956

Domestic Models:
(2229S) C-3-R8, C-3-RS8, C-3-T8, 1955
(2420S) C-4-K8, C-4-KS8, C-4-KM8, C-4-KX8, 1956

Canadian Models:
Dodge (2420S) C-4-K8
Fargo (2420S) FC-4-K8
1956

BBD DUAL DOWN-DRAFT **CARBURETERS Nos. 2229S-2420S**

CARBURETER SPECIFICATIONS

For Dodge Truck 8 Cylinder Engine 3 81 Inch Bore 3 63 Inch Stroke

Dimensions Flange size 1¼ inch dual 4 bolt type
Throttle bore 1 7/16 inch I D
Primary venturi ⅜ inch I D
Main venturi 1 3/16 inch I D

Float Level See Adjustments

Vent Inside balance vent tube to bowl in air horn above choke valve

Gasoline Intake S ze No 38 (1015 inch) dr ll hole in needle seat

Idle Tube Jet size 0295 inch diameter
Idle bleed (in venturi cluster screw) size 0629 inch diameter
Idle restriction (in venturi cluster screw) size 0472 inch diameter

Idle Port Upper slot type length 149 inch width 030 inch

Idle Port Opening 102 to 106 inch above upper edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw) Size 053 to 057 inch diameter

Set Idle Adjustment Screw ¼ to 1¼ turns open For richer mixture turn screw out Idle engine between 450 and 500 r p m

Main Nozzle Nozzle is installed permanently DO NOT RE MOVE

Main Vent Tube S de holes (4) 0354 inch diameter Bleed in top of tube size 0275 inch diameter

Step Up Rod (Vacuum operated) (2229S) 026 inch (2420S) 022 inch diameter Length (end of wire to inside of angle) 1⅜ inch

Metering Jet Calibrated to flow (2229S) 382 cc (2420S) 340 cc per minute (Do not gauge for size if in doubt replace with new part)

Accelerating Pump Pump discharge jets (2) size 0275 inch diameter
Intake ball check seat size 110 to 120 inch diameter
Discharge ball check seat size 130 to 140 inch diameter

Pump Adjustment See Adjustments

Choke Manual offset butterfly type with poppet valve

Vacuum Spark Port None

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter

Spark Plug Gap 035"	Breaker Point Setting 017"	Ignition Timing Breaker Points to Open 4° B T D C	Float Setting (See Adjustments)	Idle Adjustment Screw Setting ¼ to 1¼ Turns Open Idle engine at 450 to 500 R P M In Neutral

NOTE These trucks equipped with Hydraulic Valve Lifters NO ADJUSTMENT

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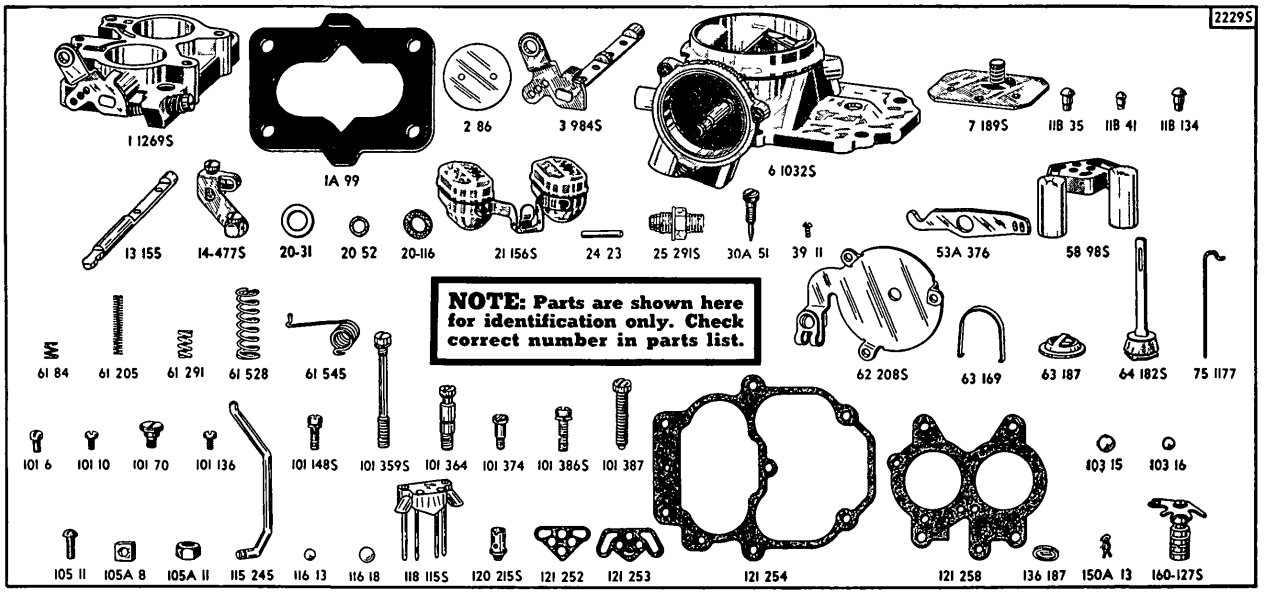
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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT This adjustment must be made with bowl cover gasket and float pin retainer removed Hold the lip on float arm against the seated intake needle, making sure the float pin is at the bottom of its guide slots The distance from the top surface of the body casting to the top of each float should be 7/32 inch (gauge T109-239) If one float is lower than the other, equalize by bending the float arm If both floats require the same correction adjust by bending lip on float arm The floats must not rub anywhere against the inner walls of the bowl If necessary, bend float arms slightly to provide clearance on all sides of floats.

PUMP ADJUSTMENT Back out throttle adjusting screw so that throttle valves seat in bores of carbureter Install pump connector rod in middle hole of throttle lever and innner hole of pump arm The distance from the top of the bowl cover to the top of plunger shaft (not pump arm) should be 1 inch Adjust by bending pump connector rod at lower angle (use Tool T109-213)



Dodge Truck—1955-1956—Carbureters Nos. 2229S-2420S

WHEN SERVICING, USE GASKET ASSORTMENT No 265

Part N	PART NAME	
1-1269S	Body flange assembly	
1A-99	Flange gasket	
2-86	Throttle valve	(2)
3-984S	Throttle shaft and lever assembly	
6-1032S	Air horn assembly	
7-189S	Choke valve assembly	
11B-35	Rivet plug (early production) (2229S)	
11B-41	Rivet plug (early production) (2229S)	(2)
11B-134	Rivet plug (early production) (2229S)	
13-155	Choke shaft	
14-477S	Choke lever assembly	
20-31	Needle seat gasket	
20-52	Step up piston gasket	
20-116	Main metering jet gasket	(2)
21-156S	Float and lever assembly	
24-23	Float lever pin	
25-291S	Needle and seat assembly	
30A-51	Idle adjustment screw	(2)
39-11	Choke and throttle valve attaching screw	(6)
53A-376	Pump arm	
58-98S	Venturi cluster and nozzle assembly	
61-84	Idle adjustment screw spring	(2)
61-205	Step up piston spring	
61-291	Throttle adjustment screw spring	
61-528	Pump spring	
61-545	Choke spring	
62-208S	Choke tube bracket assembly	
63-169	Float lever pin retainer	
63-187	Intake check ball retainer	
64-182S	Pump plunger and rod assembly	
75-1140	Step up rod (2420S)	
75-1177	Step up rod (2229S)	(2)

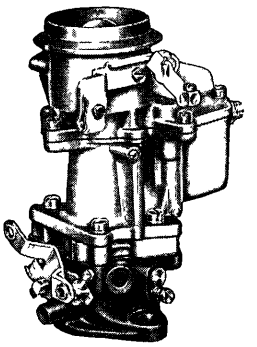
Part No.	PART NAME	
101-6	Choke tube bracket screw	
101-10	Choke wire clamp screw	
101-70	Pump arm screw	
101-136	Choke tube bracket attaching screw	(3)
101-148S	Air horn attaching screw and washer assembly	(4)
101-359S	Body attaching screw and washer assembly	(2)
101-361	Choke tube bracket attaching screw (Sup by (101 136) (2229S)	(3)
101-364	Venturi cluster screw	(2)
101-374	Step up piston plate screw	
101-386S	Body flange attaching screw and washer assembly	(2)
101-387	Throttle adjusting screw	
103-14	Lead shot	
103-15	Lead shot	(2)
103-16	Lead shot	(2)
105-11	Choke cable clamp screw	
105A-8	Choke cable clamp nut	
105A-11	Flange stud nut	(4)
115-245	Throttle connector rod	
116-13	Discharge check ball	
116-18	Intake check ball	
118-115S	Venturi cover and tube assembly	
120-209S	Main metering jet assembly—2 sizes lean (2420S)	
120-212S	Main metering jet assembly—1 size lean (2420S)	
120 213S	Main metering jet assembly—standard (2420S) 2 sizes lean (2229S)	(2)
120-214S	Main metering jet assembly—1 size lean (2229S)	(2)
120-215S	Main metering jet assembly—standard (2229S)	(2)
121-252	Venturi housing gasket	
121-253	Venturi cover gasket	
121-254	Body gasket (Sup by 121 274) (2229S)	
121-258	Body flange gasket	
121-274	Body gasket	
136-187	Pump spring retainer washer	
150A-13	Pin spring	(2)
160-127S	Step up piston rod and plate assembly	

NOTE Figures in parentheses indicate number of pieces used in ne carbureter Where no figure is shown, only one is used.

MODELS
(E9K1)
B-4-K, 1953

(E9Y1)
C-1-K6, 1954
C-3-K6, 1955
C-4-HH6, C-4-HHS6, 1956

(Two Carbureters Per Engine)



DODGE TRUCK
2½ TON
1953-1956

BB DOWN-DRAFT CARBURETERS—**MODELS E9K1-E9Y1**

CARBURETER SPECIFICATIONS

For Dodge Truck Six Cylinder Engine 3-7/16 Inch Bore, 4¾ Inch Stroke

Dimensions Flange size 1½ inch S A E
Throttle bore 1 11/16 inch
Main venturi 1 11/32 inch I D

Float Setting See adjustments

Gasoline Intake Spring loaded needle size No 44 (086 inch) drill in needle seat

Idle Orifice Tube Jet size 0295 inch drill Idle passage air bleed (in air horn) size 057 inch drill Restriction in body size 0531 inch drill

Idle Port Upper slot type length 149 inch width 030 inch

Idle Port Opening Top of port located 118 inch to 122 inch above top edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw) Size 053 to 057 inch diameter

Set Idle Adjustment Screw ½ to 1½ turns open For richer mixture turn screw out Do not idle engine under 450 R P M

Main Metering Jet Calibrated to flow 334 cc per minute (Do not gauge for size If in doubt replace with new part)

Main Vent Through diffuser (air bleed inside bowl) size 0315 inch drill

Main Vent Tube Side holes 4—0354 inch diameter

Step Up Jet Size 0335 inch diameter

Accelerating Pump Pump intake passage ball check seat size 107 to 112 inch Pump discharge passage restriction (under ball check) size 062 to 065 inch diameter in body Pump (discharge) jet size 0315 inch diameter

Pump Adjustment See adjustments

Choke Offset butterfly type with poppet valve

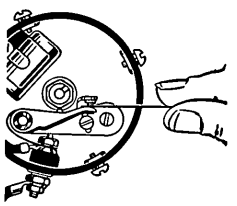
Vacuum Spark Port Slot (round end) type Size 040 by 110 inch Bottom of port 012 to 018 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

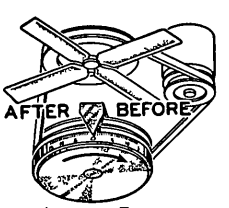
CAUTION Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter



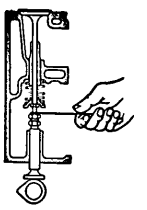
Spark Plug
Gap
035"



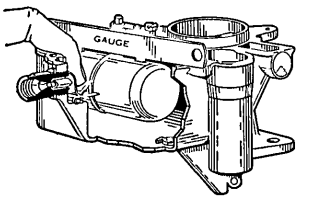
Breaker Point
Setting
020"



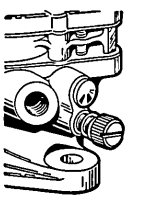
Ignition Timing
Breaker Points to Open
2° ATDC (B 4 K)
1° BTDC
(C-1-K6) (C-3-K6)
2° BTDC
(C-4-HH6, C 4 HHS6)



Valve Setting
(Hot)
Intake 010"
Exhaust 018"



Float Setting
(See Adjustments)



Idle Adjustment
Screw Setting
½ to 1½
Turns Open

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT This adjustment must be made with the bowl cover gasket and float pin retainer removed Place a 050 inch feeler gauge (T109-226) between lip of float and intake pin Hold the lip on float arm against the seated intake needle fully compressing the intake needle spring The distance from the top surface of the body casting to the top of the float should be 5/64 inch (gauge T109-50) To adjust bend lip on float arm

PUMP ADJUSTMENT Remove air horn assembly, back out throttle adjustment screw and be sure pump operating link is in center hole of throttle shaft arm Place Universal pump travel gauge T109-117S on edge of bowl cover so that lip of gauge extends over top of plunger shaft With throttle valve seated turn knurled nut of gauge until lip contacts top of plunger shaft Take reading indicated on gauge Repeat with throttle valve wide open and plunger pushed to bottom of cylinder The difference in reading obtained should be '26" (26/64 inch) Adjust by bending horizontal portion of pump lifter link

Pump stroke adjustable for high or low temperatures Set to longest stroke for cold weather, shorter stroke for hot weather driving

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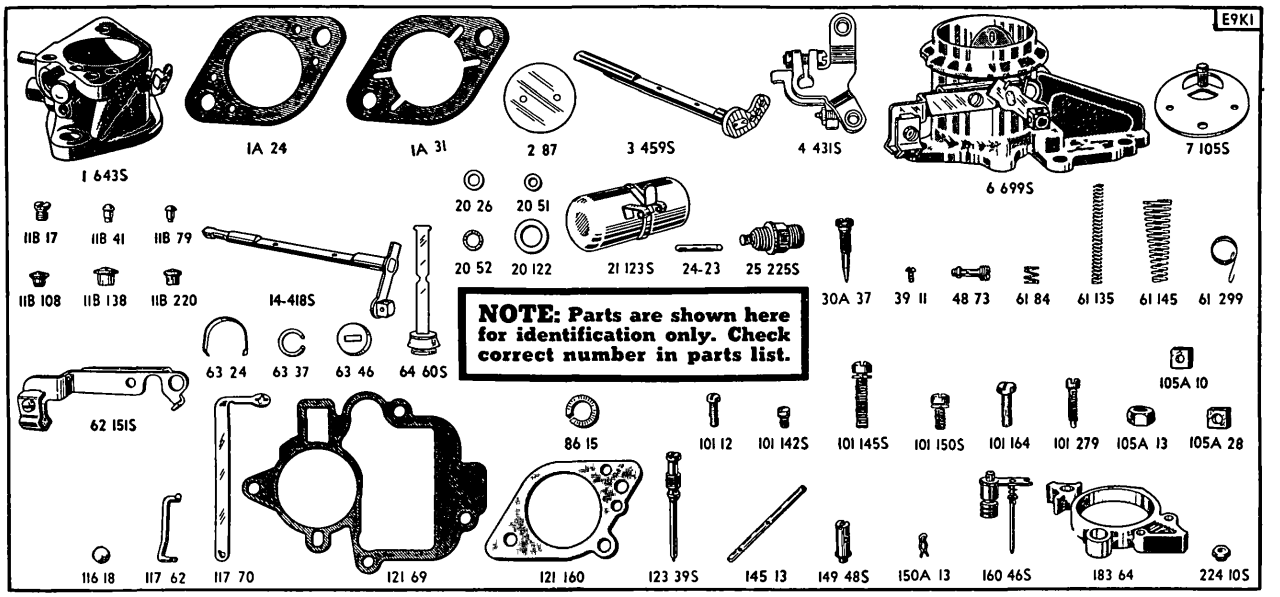
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RECOMMENDED PROCEDURE FOR SETTING IDLE

1 Back out idle speed screw on rear carb (fully closed throttle)
2 Adjust idle speed screw on front carb to give 450 r p m
3 Adjust idle mixture on front carb to best operation and readjust idle speed if necessary
4 Back out idle speed screw on front carb two full turns (or whatever is necessary to insure closed throttle)
5. Adjust idle speed screw on rear carb to give 450 r p m
6 Adjust idle mixture screw on rear carb to give best operation and readjust idle speed if necessary
7 Turn in idle speed screw on front carbureter same number of turns as in step No 4

This should result in balancing the two carbureters Any further adjustment to idle speed or mixture should be made by turning the screw the same amount on each carbureter



Dodge Truck—1953-1956—Carbureters Models E9K1-E9Y1

WHEN SERVICING, USE GASKET ASSORTMENT No 236, REPAIR PACKAGE No 1794

PART NAMES IN CAPITAL LETTERS LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-643S	Body flange assembly	
1A-24	FLANGE GASKET—FOR USE WITH GOVERNOR	
1A 31	FLANGE GASKET—FOR USE WITHOUT GOVERNOR	
2 87	Throttle valve	
3-452S	Throttle shaft and arm assembly	
3 459S	Throttle shaft and arm assembly (Sup by 3 452S)	
4-431S	Throttle lever assembly (E9K1)	
4-702S	Throttle lever assembly (E9Y1)	
6-699S	Air horn assembly	
7-105S	Choke valve assembly	
11B-17	Pump discharge passage plug	
11B-41	Rivet plug	
11B-79	Rivet plug	(2)
11B-108	IDLE PORT RIVET PLUG	
11B-138	PUMP PASSAGE RIVET PLUG	
11B-220	RIVET PLUG	
14-418S	Choke lever and shaft assembly	
20-26	Main metering jet gasket	
20-51	Step up jet gasket	
20-52	STEP UP PISTON GASKET	
20-122	Needle seat gasket	
21-123S	Float and lever assembly	
24-23	Float lever pin	
25-225S	NEEDLE AND SEAT ASSEMBLY	
30A-37	Idle adjustment screw	
39-11	Valve attaching screw	(4)
48 73	PUMP JET	
48-75	Pump jet (E9K1) (Sup by 48 73)	
61-84	Idle adjustment screw spring	
61-135	STEP UP PISTON SPRING	
61-145	PUMP SPRING	
61-299	Choke pull back spring	
62-151S	Choke tube bracket assembly	

Part No	PART NAME	
63-24	FLOAT LEVER PIN RETAINER	
63-37	PUMP INTAKE CHECK BALL RETAINER RING	
63 46	Pump spring retainer	
64 60S	PLUNGER AND ROD ASSEMBLY	
86-15	Flange stud lock washer	(2)
101-12	Choke tube clamp screw	
101-142S	Choke bracket attaching screw and washer assembly	
101-145S	Body flange attaching screw and washer assembly	(3)
101 150S	Air horn attaching screw and washer assembly	(4)
101-164	Throttle lever clamp screw	
101-279	Throttle lever adjusting screw	
105A 10	Tube clamp nut	
105A-13	Flange nut	(2)
105A 28	Throttle lever clamp nut	
116-13	PUMP INTAKE CHECK BALL	
116-18	PUMP DISCHARGE CHECK BALL	
117-62	PUMP LINK	
117-70	PUMP LIFTER LINK	
121-69	BODY GASKET	
121-160	BODY FLANGE GASKET	(2)
123-39S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
145-13	MAN VENT TUBE	
149 43S	Step up jet assembly (E9K1) (Sup by 149 48S)	
149 48S	STEP UP JET ASSEMBLY	
150A-13	PIN SPRING	
160 46S	STEP UP PISTON PLATE AND ROD ASSEMBLY	
183 64	Insulator	
224-10S	MAIN METERING JET ASSEMBLY—STANDARD	
224-12S	Main metering jet assembly—3 sizes lean (E9K1) (Sup by 224 15S)	
224-13S	*Main metering jet assembly—1 size lean	
224 14S	Main metering jet assembly—2 sizes lean	
224-15S	Main metering jet assembly—3 sizes lean	

*224 13S used as standard main metering jet on E9K1 carbureters code dated B3 and earlier

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

DODGE TRUCK—1953-1956

½, ¾, 1 and 1½ TON

MODELS

(E7R1)
B-4-D—1953
C-1-B6, C6, D6, F6, FS6—1954
C-3-B6, C6, D6, F6, FS6—1955
C-4-B6, C6, D6—1956

(E9J1)
B-4-DU, EU (Route Van) 1953
C-1-DU6, EU6 (Route Van) 1954
C-3-DU6, EU6 (Route Van) 1955

(Equipped with Fluid Drive or Power Flite Transmission)

BB Down-Draft Carbureters—**Models E7R1-E9J1**

CARBURETER SPECIFICATIONS

For Dodge Truck Six Cylinder Engine 3¼ Inch Bore 4⅝ Inch Stroke

Dimensions Flange size 1½ inch
Throttle bore 1 11/16 inch
Main venturi 1 11/32 inch I D

Float Setting When using a solid needle the distance from the top of float should be 5/64 inch (gauge T109 50) plus or minus 1/64 inch below top surface of carbureter body casting Float setting for spring loaded needle and seat assembly See footnote (†) on page two

Vents Outside none Inside balance vent tube 218 inch diameter

Gasoline Intake Needle Triangular horizontal No 44 (086 inch) drill in needle seat

Idle Orifice Tube Jet size 0276 inch drill Idle passage air bleed in air horn size 0465 inch diameter Restriction in body size 0452 inch diameter

Idle Ports Upper port Slot type length 149 inch width 030 inch Top of port located 118 to 122 inch above top edge of valve Lower port size 053 to 057 inch drill (For idle adjustment screw)

Set Idle Adjustment Screw ½ to 1½ turns open For richer mixture turn screw out Idle engine between 450 500 r p m

Main Metering Jet Calibrated to flow 315 to 319 cc per minute (Do not gauge for size If in doubt replace with new part)

Main Vent Through diffuser (air bleed inside bowl) Size 0315 inch drill

Main Vent Tube Side Holes 4—0354 inch diameter

Step-Up Jet Size (E7R1) 0413 inch (E9J1) 037 inch diameter

Accelerating Pump Type—delayed action seasonal adjustment Stroke—Summer setting (inner hole short stroke) Intermediate setting (center hole) Winter setting (outer hole long stroke) Pump intake passage ball check seat size 115 to 120 inch diameter in body Pump discharge passage Restriction (under ball check) size 062 to 065 inch diameter in body Pump (discharge) jet size 0374 inch drill

Pump Adjustment 26/64 inch plunger travel—full throttle position medium stroke Use gauge T109 117S

Choke Offset butterfly type (with poppet valve)

Slow Closing Throttle Dash pot with discharge (by pass) size 0197 inch drill through plunger shaft

Vacuum Spark Port Slot (round end) type size 040 by 110 inch Bottom of port 012 to 018 inch above top edge of valve

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter

Spark Plug Gap	Set Breaker Points	Ignition Timing Breaker Points to Open	Set Valves (Hot)	Float Setting (Use Gauge T109-50)	Idle Adjustment Screw Setting
035"	020"	1953—T D C 1954 56—2° B T D C	Intake 010" Exhaust 014"	Solid Needle—5/64 Inch Spring Loaded Needle See Footnote on Page 2	½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

If carbureter loads up after considerable service check float level Wear on lip of float lever will raise float level Before adjusting float be sure float lever pin is firmly seated Reset float level by bending lip of float lever away from needle to raise level or bend lip toward needle to lower float level Bend vertical lip of float only

If motor stalls while idling set throttle lever adjusting screw so motor runs between 450 500 r p m Then set idle adjustment screw to specifications If these adjustments do not correct the trouble remove idle orifice tube and plug assembly Clean tube and passages with compressed air

If acceleration is not satisfactory, remove pump jet and clean with compressed air However it is usually advisable to replace the pump jet as its cost is nominal All jets must be seated gasoline tight Poor acceleration may be due to damaged or worn plunger leather in accelerating pump sediment in pump cylinder or clogged intake ball check at bottom of pump cylinder and discharge ball check in discharge passage If plunger is removed from cylinder use care in installing to avoid damage to plunger leather

Correct air fuel ratio is provided by a balance tube in the air horn The balance tube should be checked each time the carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type size or condition of air cleaner Should the cleaner become clogged the capacity will be reduced but the air fuel mixture ratio will not be changed

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Excessive richness above 50 miles per hour may be caused by a clogged main vent tube After removal of rivet plug beneath float bowl with tool No T109 43 main vent tube can be removed and a new tube inserted with tool No T109 195 Care must be exercised in inserting new tube which must seat tightly Use new rivet to complete the installation

Pump Adjustment Remove air horn assembly back out throttle adjustment screw and be sure pump operating link is in center hole of throttle shaft arm Place universal pump travel gauge T109 117S on edge of bowl cover so that lip of gauge extends over top of plunger shaft Turn knurled nut of gauge until lip contacts top of plunger shaft with throttle valve seated Take reading indicated on gauge Repeat with throttle valve wide open and plunger pushed to bottom of cylinder The difference in reading obtained should be 26 (26/64") plunger travel

Adjust by bending horizontal portion of pump lifter link Pump stroke adjustable for high or low temperatures Set to longest stroke for cold weather shorter stroke for hot weather driving

Dash-Pot Adjustment Engines operating in connection with fluid couplings frequently tend to stall during rapid deceleration unless the throttle closes slowly Slow throttle movement is necessary only during the last part of the closing The dash-pot or decelerating pump acts as a snubber to the throttle allowing fast movement to almost closed position, then slow closing from that point to the idle position

When the throttle is released, the throttle valve closes rapidly until throttle shaft arm contacts the dash-pot pick up arm Then the dash pot plunger must be pushed to the bottom of the cylinder before the throttle can close A ball check located in the lower end of the plunger shaft seals the larger upper opening and the gasoline must leave the cylinder through the small metered hole in lower part of the shaft

This reduces the rate at which plunger can be forced to the bottom of the cylinder making the last part of the throttle closing very slow **The adjusting screw** (in top of bowl cover) **should be opened five full turns from closed position** for average conditions Under extreme driving conditions greater openings may be necessary although extreme dash pot action will affect gear changes and not enough action will allow engine to stall

Be sure plunger leather is soft and pliable and effects a good seal against the cylinder wall

Dodge Truck—1953-56—Models E7R1-E9J1

WHEN SERVICING, USE GASKET ASSORTMENT No. 242

Part No	PART NAME	
1-784S	Body flange assembly	
1A-24	Flange gasket—for use with governor	
1A-31	Flange gasket—for use without governor	
1A-45	Flange gasket—for use with governor (E7R1) (Sup by 1A 24)	
1A-46	Flange gasket—for use without governor (E7R1) (Sup by 1A 31)	
2-87	Throttle valve	
3 700S	Throttle shaft and arm assembly	
4-431S	Throttle lever assembly	
6-686S	Air horn assembly	
7-105S	Choke valve assembly	
11B-17	Pump discharge passage plug	
11B-41	Rivet plug	
11B-79	Rivet plug	(2)
11B-108	Idle port rivet plug	
11B-138	Pump jet rivet plug	
11B-220	High speed passage rivet plug	
14-292S	Choke shaft and lever assembly	
20-26	Main metering jet gasket	
20-31	Needle seat gasket	
20-51	Step up jet gasket	
20-52	Step up piston gasket	
21-49S	Float and lever assembly	
24-23	Float lever pin	
25-102S	Needle and seat assembly	
25-202S	†Needle pin spring and seat assembly	
30A-37	Idle adjustment screw	
39-11	Valve attaching screw	(4)
48-75	Pump jet	
61-84	Idle adjustment screw spring	
61-119	Choke pull back spring	
61-135	Step up piston spring	
61-145	Pump spring	
61 244	Dash pot adjustment screw spring	
61-372	Dash pot pick up arm spring	
62-77S	Choke tube bracket assembly	
63-24	Float lever pin retainer	
63 37	Pump cylinder ball retainer	
63-46	Spring retainer	
64-60S	Plunger and rod assembly (Identify by shaft No 49 120)	
64 74S	Dash pot plunger and rod assembly	
86-10	Lock washer	
86-15	Flange stud lock washer	(2)
101-10	Wire clamp screw	
101-32	Pump link screw	
101-141	Dash pot adjustment screw	
101-142S	Choke bracket attaching screw and washer assembly	
101-145S	Body flange attaching screw and washer assembly	(3)
101-150S	Air horn attaching screw and washer assembly	(4)
101-164	Throttle lever clamp screw	
101-279	Throttle adjusting screw	
105-11	Tube clamp screw	
105A-8	Choke tube clamp nut	
105A-13	Flange nut	(2)
105A-28	Clamp nut	
114-81	Dash pot pick up arm	
116-13	Pump intake check ball	
116-18	Pump discharge check ball	
117 62	Pump link	
117-70	Pump connector link	
117-144	Dash pot lifter	
121-90	Body gasket	
121-160	Body flange gasket	(2)
123-31S	Idle orifice tube and plug assembly	
145-13	Main vent tube	
149-43S	Step up jet assembly (E9J1)	
149-56S	Step up jet assembly (E7R1)	
150-111	Dash pot pin	
150A-13	Pin spring	(2)
160-46S	Step up piston plate and rod assembly	
183-64	Insulator	
224-12S	Main metering jet assembly—3 sizes lean	
224-13S	Main metering jet assembly—standard	
224-14S	Main metering jet assembly—1 size lean	
224 15S	Main metering jet assembly—2 sizes lean	

†Available for service (Not used in production) When using a spring loaded needle and seat place a 050" feeler gauge between lip of float and intake needle pin With intake needle spring fully compressed top of float should be 5/64 inch (gauge T109 50) below top surface of carbureter body casting Adjust by bending lip on float

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

DODGE TRUCK "V-8"

3½ TON – MODEL C-3-V8

1955

(Two Carbureters Per Engine)

BBS Down-Draft **Carbureter No. 2227S**

CARBURETER SPECIFICATIONS

For Dodge Eight Cylinder Engine: 3.81 Inch Bore, 3.63 Inch Stroke

Dimensions: Flange size, 1½ inch S A E
Throttle bore 1-11/16 inch I D
Main venturi, 1-11/32 inch I D

Float Setting: See adjustments

Vents. Outside, none Inside balance vent tube

Gasoline Intake: Size No 44 (.086 inch) drill in needle seat

Idle Tube: Jet, size .0315 inch diameter Idle passage air bleed in body size No 68 (.031 inch) drill Restriction in body, .0394 inch diameter

Idle Port: Upper slot type length .143 inch, width .030 inch

Idle Port Opening: Top of port located .111 to .115 inch above top edge of valve, with valve tightly closed

Lower Port (For Idle Adjustment Screw): Size .053 to .057 inch diameter

Set Idle Adjustment Screw: ¼ to 1 turn open For richer mixture turn screw out Idle engine between 450-500 r p m

Main Metering Jet: Calibrated to flow 453 cc per minute (Do not gauge for size if in doubt, replace with new part)

Main Vent Tube: Side holes 6—.0354 inch diameter Bleed in top of tube .0315 inch diameter

Step-Up Rod: (Vacuum operated) .024 inch diameter

Accelerating Pump: Pump intake passage ball check seat, size .110 to .120 inch diameter
Pump discharge passage, restriction (under ball check), size .110 to .120 inch diameter in body
Pump (discharge) jet, size .0393 inch drill

Pump Adjustment: See adjustments

Choke: Manual—butterfly type with poppet valve

Vacuum Spark Port: None

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .017"	Ignition Timing Breaker Points to Open: 4° B.T.D.C. At Vibration Damper	Float Setting (See Adjustments)	Idle Adjustment Screw Setting ¼ to 1 Turn Open Idle engine at 450 to 500 R.P.M.

NOTE: These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT. This adjustment must be made with the bowl cover gasket and float pin retainer removed Hold the lip on float arm against the seated intake needle, making sure the float pin is at the bottom of its guide slots The distance from the top surface of the body casting to the top of each float should be 9/32 inch (gauge T109-239) If one float is lower than the other, equalize by bending the float arm If both floats require the same correction, adjust by bending lip on float arm The floats must not rub anywhere against the inner walls of the bowl If necessary, bend float arms slightly to provide clearance on all sides of floats

PUMP ADJUSTMENT Back out throttle adjusting screw and open choke valve so that throttle valve seats in bore of carbureter Install throttle connector rod in center hole (medium stroke) of throttle lever The distance from the top of the bowl cover to the top of plunger shaft (not pump arm) should be 55/64 inch Adjust by bending pump connector rod at lower angle (use tool T109-213)

Dodge Truck "V8"—1955—Carbureter No. 2227S

WHEN SERVICING, USE GASKET ASSORTMENT No. 252

Part No.	PART NAME	
1-1293S	—Body flange assembly	
1A-90	Flange gasket—for use without governor	
2-87	Throttle valve	
3-898S	Throttle shaft and lever assembly	
6-1043S	—Air horn assembly	
7-195S	Choke valve assembly	
11B-79	Rivet plug	(6)
11B-220	Rivet plug	
11B-296	Pump jet rivet plug	
11B-303	Rivet plug	
13-149	Choke shaft	
14-350S	Choke lever assembly	
20-31	Needle seat gasket	
20-52	Step up piston gasket	
20-116	Main metering jet gasket	
21-144S	Float and lever assembly	
24-23	Float lever pin	
25-102S	Needle and seat assembly	
30A-44	Idle adjustment screw	
39-11	Choke and throttle valve attaching screw	(4)
48-219	Pump jet	
53A-372	Pump arm	
61-291	Fast idle screw spring	
61-467	Idle adjustment screw spring	
61-476	Pump spring	
61-484	Step up piston spring	
61-511	Choke spring	

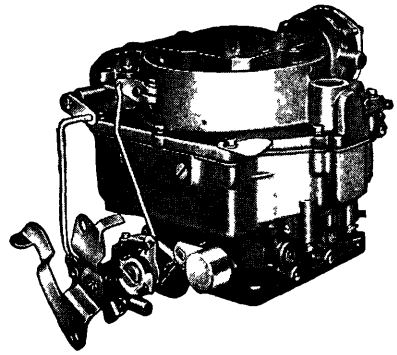
Part No.	PART NAME	
62-199S	Choke tube bracket assembly	
63-57	Intake check ball retainer	
63-169	Float lever pin retainer	
64-183S	—Pump plunger and rod assembly	
75-943	Step up rod	
100-16	Throttle adjusting screw	
101-6	Screw	
101-10	Wire clamp screw	
101-148S	Bowl cover attaching screw and washer assembly	(2)
101-290	Choke tube bracket attaching screw	
101-318	Pump arm screw	
101-359S	Air horn attaching screw and washer assembly	(4)
101-374	Step up piston plate guide screw	
105-11	Choke tube bracket clamp screw	
105A-8	Choke tube bracket clamp nut	
105A-13	Flange nut	(2)
115-196	Throttle connector rod	
115-234	Throttle connector rod (Sup by 115 196)	
116-13	Pump intake and discharge check ball	(2)
120-199S	Main metering jet assembly	
121-225	Body gasket	
121-247	Body flange gasket	
123-65S	Idle orifice tube and plug assembly	
136-187	Pump spring retainer washer	
145-91	Main vent tube	
150A-13	Pin spring	
160-124S	Step up piston and plate assembly	

—Parts so marked are new and listed for the first time

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, nly one is used.

2181S
Power Flite Transmission

2253S
Standard and Overdrive
Transmissions



DODGE "V-8" MODEL D-55 ROYAL 1955

WCFB Four-Bore Down-Draft Climatic® Control **Carbureters Nos. 2181S-2253S**

CARBURETER SPECIFICATIONS

For Dodge 8 Cylinder Engine. 3.63 Inch Bore, 3.256 Inch Stroke

Dimensions: Flange size, 1 1/8 inch Four Bore—4 bolt type
Primary venturi size, 11/32 inch I D
Main venturi size, 1-1/16 inch I. D

Float Level: See adjustments

Vents: Combination inside and outside (6).

Gasoline Intake: Size No 42 (0935 inch) drill, in needle seat

Low Speed Jet Tube: Jet, primary and secondary, size No 69 (0293 inch) drill By pass in body size (2181S) primary and secondary (057 inch) diameter (2253S) Primary No 52 (0635 inch) drill secondary (057 inch) diameter Economizer in body size (0453 inch) diameter Idle Bleed, in body size (2181S) primary and secondary No 44 (086 inch) drill (2253S) Primary (059 inch) diameter secondary No 44 (086 inch) drill

Idle Port Upper slot type primary length (2181S) 110 inch, (2253S) 175 inch width 030 inch Secondary length 103 inch width 030 inch

Idle Port Opening Primary (2181S) 049 to 055 inch (2253S) 116 to 122 inch secondary 059 to 065 inch above top edge of valve with valve tightly closed

Lower Port Primary (for idle adjustment screw), size No 55 (.052 inch) drill

Secondary (no idle adjustment screw), size No 57 (043 inch) drill

Set Idle Adjustment Screw: 1/2 to 1 1/2 turns open For richer mixture turn screw out Do not idle engine below 450 R P M in neutral

Main Nozzle: Installed permanently DO NOT REMOVE. Anti percolating jet (4) size No 70 (028 inch) drill

Metering Rod: Primary Economy step (2181S) 072 inch, (2253S) 076 inch diameter Middle step tapers to (2181S) 060 inch (2253S) 066 inch diameter Power step 048 inch diameter Secondary none

Metering Rod Jet Primary Size 0935 inch diameter
Secondary Size 057 inch diameter

Metering Rod Setting: See adjustments

Accelerating Pump: Discharge jet (twin) primary side only size (2281S) No 70 (028 inch) (2253S) No 74 (0225 inch) drill Intake ball check seat size 115 to 120 inch diameter Discharge needle seat, size No 50 (070 inch) drill Relief passage (vent) to fuel chamber size No 42 (0935 inch) drill

Discharge relief plug size No 74 (022 inch) drill

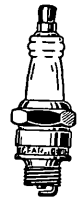
Pump Adjustment: See adjustments.

Choke: Carter Climatic® Control, set on index Butterfly type offset choke valve, primary side only Choke heat suction hole restriction in piston housing, size No 42 (0935 inch) drill

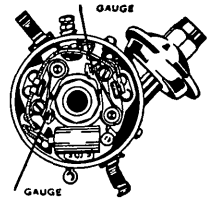
Vacuum Spark Port Horizontal slot (round end) 045 x .110 inch. Top of port 035 to 045 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

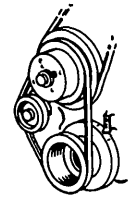
CAUTION Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



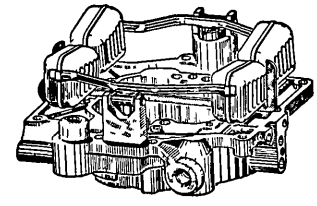
Spark Plug Gap .035"



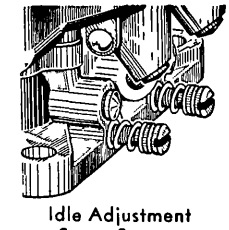
Breaker Point Setting .017"



Ignition Timing Breaker Points to Open 4° B. T. D. C.



Float Setting See Adjustments



Idle Adjustment Screw Setting 1/2 to 1 1/2 Turns Open

NOTE: These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT.

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MARCA REGISTRADA

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT (Fig 1)

Two separate float adjustments must be made—lateral and vertical
LATERAL ADJUSTMENT With bowl cover assembly inverted bowl cover gasket removed and float resting on seated needle place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting Side of floats should just clear the vertical uprights of float gauge (A) Adjustment should be made by bending arms of floats
VERTICAL ADJUSTMENT With float gauge in same position floats should just clear the horizontal portion of gauge Vertical distance (B) between top of float and machined surface of casting must be 1/8" (gauge T109 232) for primary floats and 3/16" (gauge T109 222) for secondary floats Adjust by bending float arms

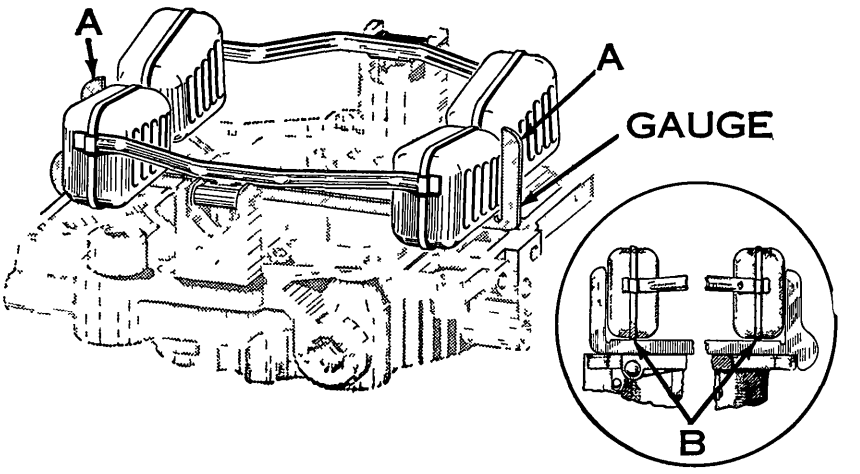


Figure 1
Float Adjustment

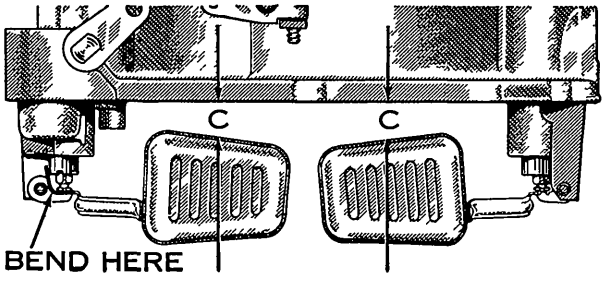


Figure 2
Float Drop Adjustment

FLOAT DROP ADJUSTMENT (Fig. 2)

With bowl cover held in upright position and measuring from center of floats the distance (C) between top of floats and bowl cover should be 5/8" for primary floats and 11/16" for secondary floats Adjust by bending stop tabs on float bracket.

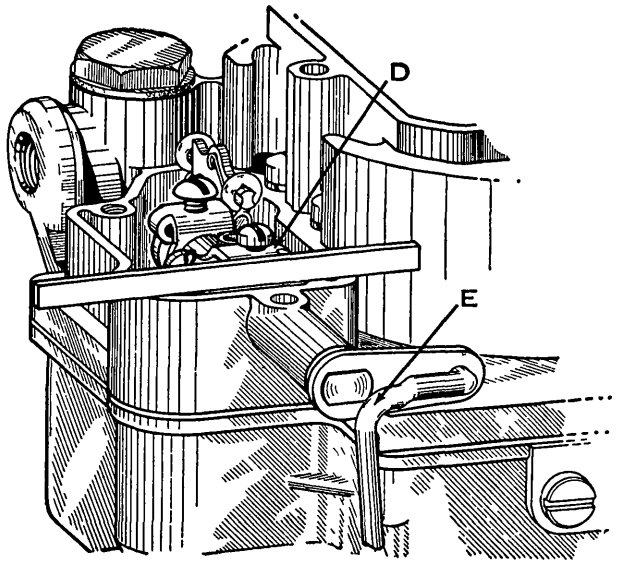


Figure 3
Pump Adjustment

PUMP ADJUSTMENT (Fig 3)

Install pump connector link in outer hole (long stroke) of pump arm with ends extending toward countershaft arm Back out throttle lever set screw until throttle valves seat in bores of carbureter Hold straight edge across top of dust cover boss at pump arm The flat on top of pump arm (D) should be parallel to straight edge Adjust by bending throttle connector rod (early) at upper angle (E) (late) at lower angle (Use tool T109 213)

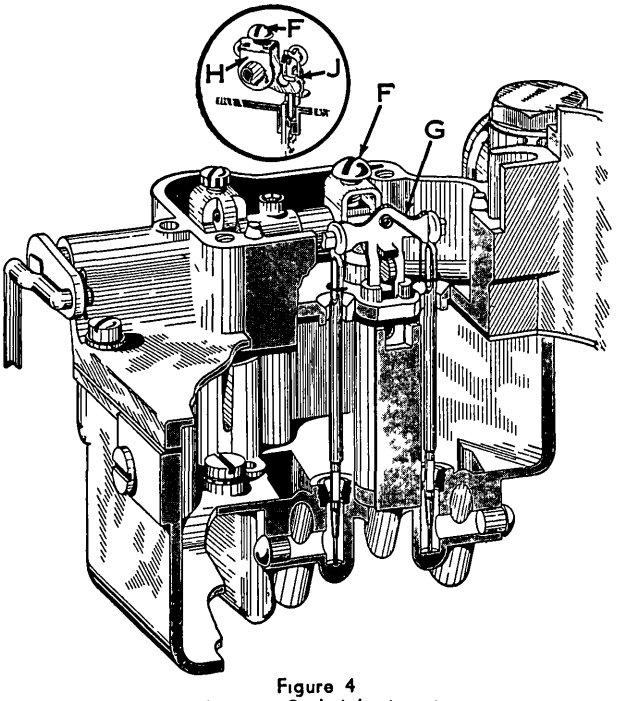


Figure 4
Metering Rod Adjustment

METERING ROD ADJUSTMENT (Fig. 4)

Metering rod adjustment is impo tant and must be made after completing the pump adjustment No metering rod gauges are necessary Procedure is as follows 1 Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw (F) 2 With metering rods in place press down on vacumeter link (G) until metering rods bottom in carbureter body casting 3 Holding rods in downward position and throttle valves seated revolve metering rod arm (H) until finger on arm contacts lip of vacumeter link (J) Hold in place and carefully tighten clamp screw (F).

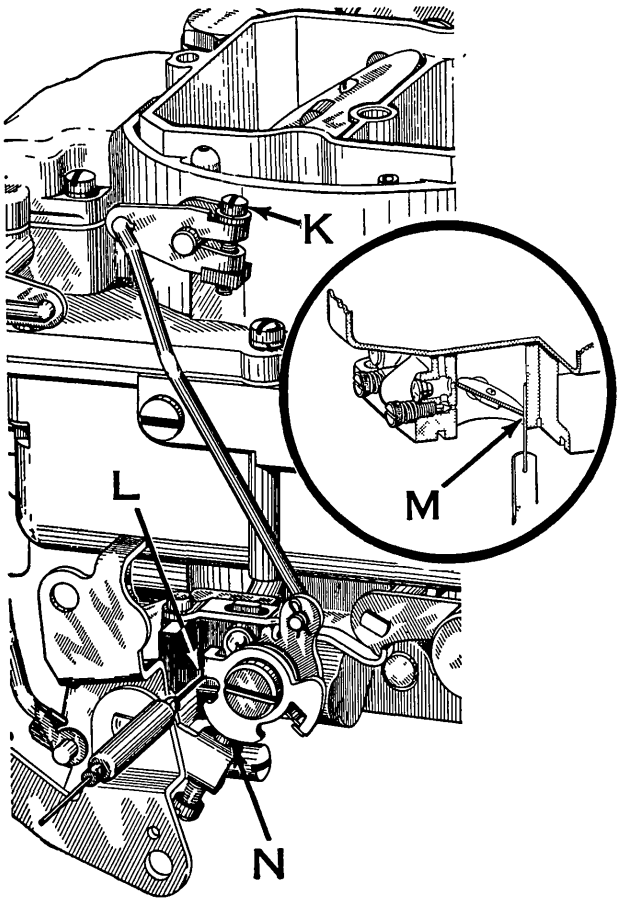


Figure 5
Fast Idle Adjustment

FAST IDLE ADJUSTMENT (Fig. 5):

(a) Loosen choke lever clamp screw (K) on choke shaft. Insert 020" feeler gauge (T109-29) (L) between lip of fast idle cam and boss of flange casting Hold choke valve tightly closed and take slack out of linkage by pressing lever towards closed position—hold in place and tighten clamp screw (K).

(b) With choke valve tightly closed, tighten fast idle adjusting screw until there is 012" (gauge T109-200) opening (M) between throttle valve and bore of carbureter (side opposite idle port). Be sure fast idle adjusting screw is on high step of cam (N) while making this adjustment

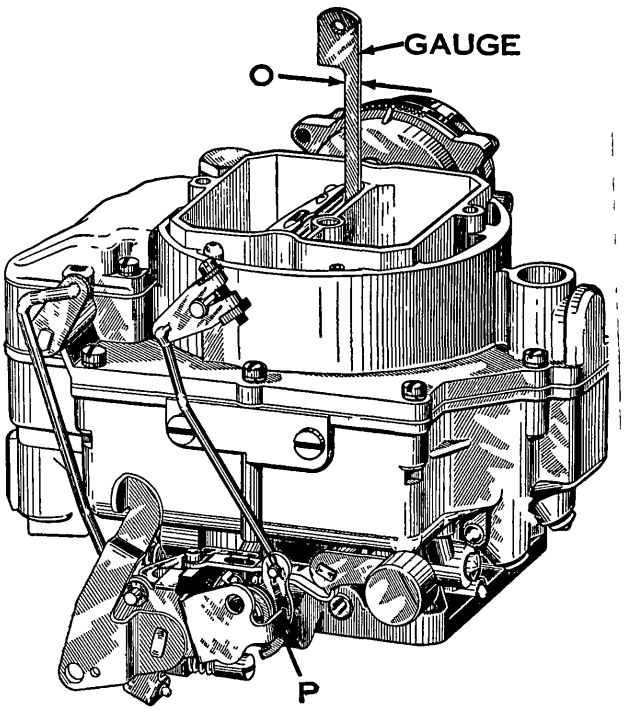


Figure 6
Unloader Adjustment

UNLOADER ADJUSTMENT (Fig. 6):

With throttle wide open there should be 3/16" clearance (O) between upper edge of choke valve and inner wall of air horn (gauge T109-28). Adjust by bending unloader lip (P) on throttle shaft lever (use bending tool T109-41)

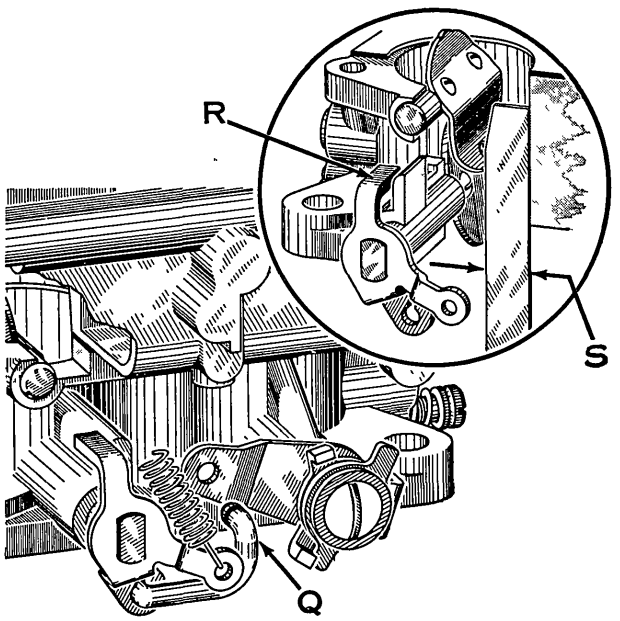


Figure 7
Auxiliary Thr ttle Valve Adjustment

AUXILIARY THROTTLE VALVE ADJUSTMENT (Fig. 7).

(a) Disconnect secondary throttle operating rod (Q). (b) Adjust stop lug (R) on secondary throttle lever (use bending tool T109-214) until there is 27/64" clearance (S) (gauge T109-242) between lower edge of auxiliary throttle valve and bore when lug (R) is against stop on flange.

Part No.	PART NAME	
75-1224U	Unitized package (consists of (2) 75 1180 and (1) 122 102S) (2253S)	
86-12	Flange stud lock washer	
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	
101-126	Auxiliary throttle valve attaching screw	(4)
101-140	Fast idle cam screw	
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-278	Pump jet housing attaching screw	
101-284	Piston housing attaching screw	(2)
101-288	Throttle lever adjusting screw (Sup by 101 339)	
101-307S	Air horn and bracket attaching screw and washer assembly	(8)
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-339	Throttle lever adjusting screw	
101-354S	Choke lever clamp screw assembly	
101-361	Coil housing attaching screw	(3)
101-363	Piston housing attaching screw	
101-396	Fast idle adjustment screw	
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
115-182	Choke connector rod	

Part No.	PART NAME	
115 204	Throttle operating rod	
115 228	THROTTLE CONNECTOR ROD	
116 13	PUMP INTAKE CHECK BALL	
117-155	Vacumeter piston link	
117-165	Pump connector link	
118-93	Dust cover	
120-166	PRIMARY METERING ROD JET	(2)
120-193	SECONDARY METERING JET	(2)
121 78	COIL HOUSING GASKET	
121-208	DUST COVER GASKET	
121 232	AIR HORN GASKET	
121-241	PUMP JET HOUSING GASKET	
121-242	BODY FLANGE GASKET	
121-243	PISTON HOUSING GASKET	
122-102S	PUMP RELIEF PLUG ASSEMBLY	
136-38	Throttle shaft washer	
150 178	Auxiliary valve lockout arm pin	
150-190	Choke piston pin	
150A-10	PIN SPRING	(4)
160-110S	Vacuum piston and pin assembly	
160-129	Choke piston	
170-301S	Piston housing and plug assembly	
170AC358S	Thermostatic coil and housing assembly (2253S)	
170AR358S	Thermostatic coil and housing assembly (2181S)*	
172 22	Throttle connector rod retainer	
180-60	Lever return spring bracket	
181-212S	Fast idle cam assembly	
186 42	Choke baffle plate	

NOTE: **Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.**

CARBURETER
TRADE MARK REG U S PAT OFF
MARCA REGISTRADA

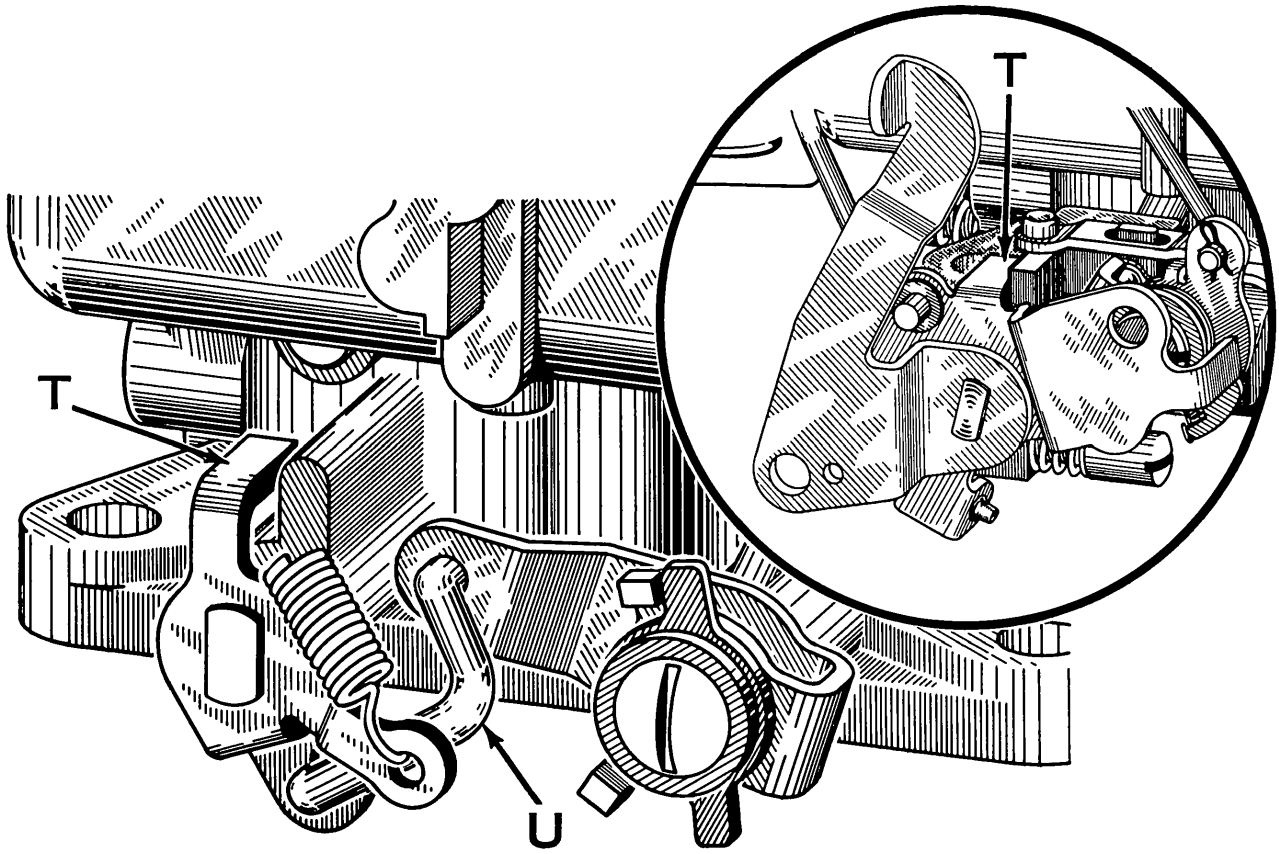


Figure 8
Secondary Throttle Lever Adjustment

SECONDARY THROTTLE LEVER ADJUSTMENT (Fig. 8):

The stop lug (T) on both primary and secondary throttle levers should contact boss on flange at the same time To adjust bend secondary throttle operating rod at angle (U) (use bending tool T109 213) NOTE Secondary throttle valves will be a few degrees from wide open position

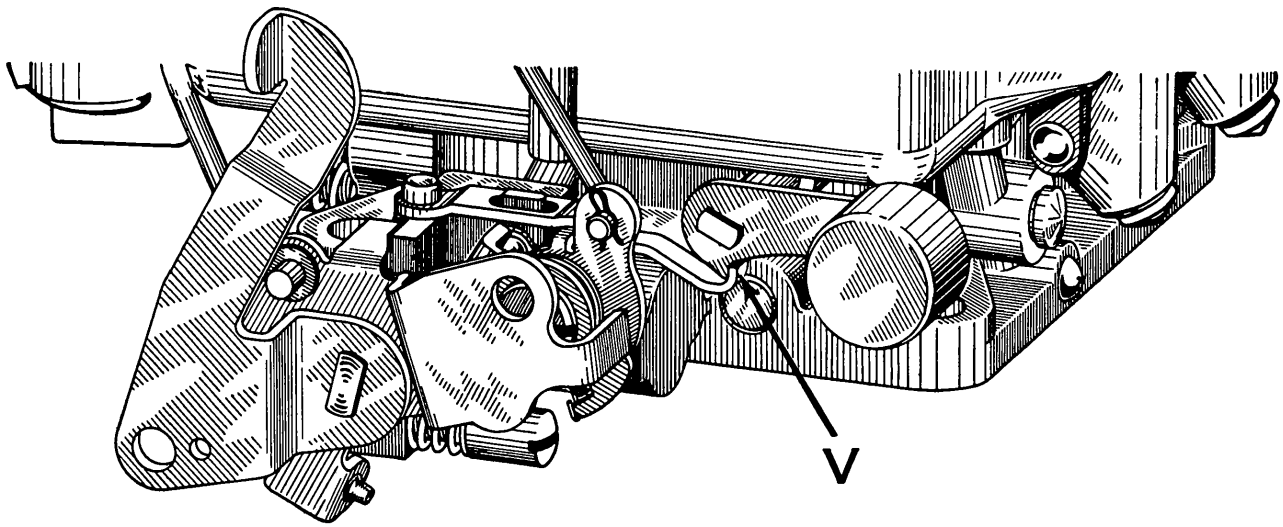
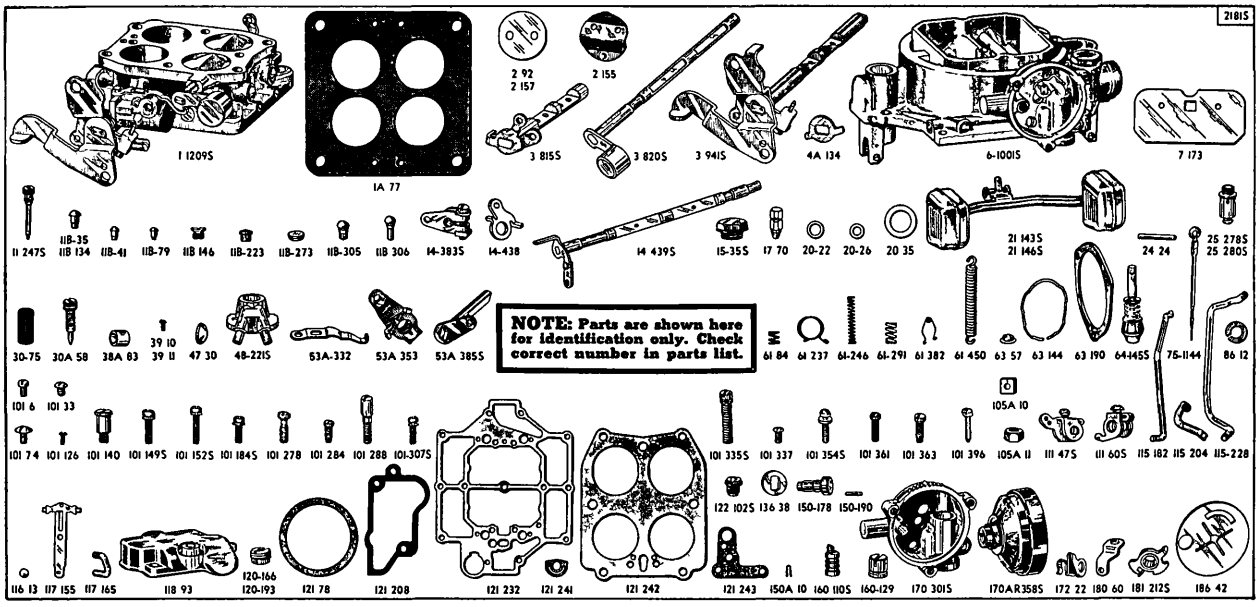


Figure 9
Auxiliary Throttle Lock-Out Adjustment

AUXILIARY THROTTLE LOCK-OUT ADJUSTMENT (Fig. 9)

This adjustment should be made after completing fast idle adjustment 1 With choke valve closed edge of hook (V) on lock-out arm should contact auxiliary throttle lever, making maximum contact of locking step on lever 2 Open choke valve Auxiliary throttle valve should become unlocked a few degrees before the choke reaches wide open position Adjust by bending lock-out arm.



Dodge "V8"—1955—Carbureters Nos. 2181S-2253S

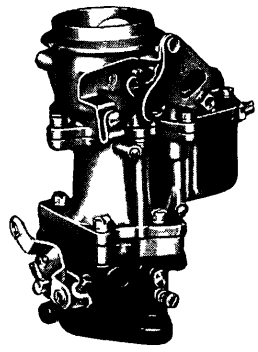
WHEN SERVICING USE GASKET ASSORTMENT No 234A REPAIR PACKAGE No 1801 (2181S) No 1806 (2253S)
PART NAMES IN CAPITAL LETTERS LISTED BELOW INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-1209S	Body flange assembly (2181S)	
1-1268S	Body flange assembly (2253S)	
1A-77	FLANGE GASKET	
2-92	Primary throttle valve	(2)
2-155	Auxiliary throttle valve	(2)
2-157	Secondary throttle valve	(2)
3-815S	Secondary throttle shaft and operating lever assembly	
3-820S	Auxiliary throttle shaft lever and weight assembly	
3-941S	Primary throttle shaft and lever assembly	
4A-134	Primary throttle shaft dog	
6-1001S	Air horn assembly	
7-173	Choke valve	
11-247S	LOW SPEED JET ASSEMBLY	(4)
11B-35	Rivet plug	(6)
11B-41	Rivet plug	(2)
11B-79	Rivet plug	(4)
11B 129S	Pump discharge passage plug assembly (2253S) (Sup by 122 102S)	
11B-134	Rivet plug	
11B-146	Level sight plug	(2)
11B-223	Nozzle passage and idle port rivet plug	(8)
11B 273	Secondary throttle shaft rivet plug	
11B-305	Rivet plug	
11B-306	Rivet plug	(2)
14-383S	Choke lever and screw assembly	
14 438	Cam trip lever	
14-439S	Choke piston lever link and shaft assembly	
15-35S	Strainer nut assembly	
17-70	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	(2)
20-26	Relief valve gasket	
20-35	BOWL STRAINER GASKET	
21-143S	Primary float and lever assembly	
21-146S	Secondary float and lever assembly	

Part No	PART NAME	
24-24	Float lever pin	(2)
25-278S	SECONDARY NEEDLE AND SEAT ASSEMBLY	
25-280S	PRIMARY NEEDLE AND SEAT ASSEMBLY	
30-75	BOWL STRAINER	
30A 58	Idle adjustment screw	(2)
38A 83	Countershaft bushing	
39 10	Primary throttle valve attaching screw	(4)
39 11	Choke valve attaching screw	(2)
47 30	Expansion welsh plug	
48 174S	Pump jet and housing assembly (2253S)	
48 221S	Pump jet and housing assembly (2181S)	
53A 332	Lockout arm	
53A 353	Primary operating lever	
53A 385S	Pump operating lever and countershaft assembly	
61 84	Idle adjustment screw spring	(2)
61 205	VACUUM PISTON SPRING (2253S)	
61 237	Fast idle cam spring	
61 246	VACUUM PISTON SPRING (2181S) (Sup by 61 205 on 2253S)	
61 291	Throttle lever adjusting screw spring	
61 382	METERING ROD SPRING	
61-413	Upper pump spring	
61 450	SECONDARY THROTTLE RETURN SPRING	
63 57	INTAKE CHECK BALL RETAINER	
63 144	Delayer plate retainer ring	
63-176	Pump spring retainer	
63 190	Coil housing retainer	
64 145S	PUMP PLUNGER AND ROD ASSEMBLY	
75 1144	METERING ROD—STANDARD (2181S)	(2)
75-1160	METERING ROD—STANDARD (2253S)	(2)
75 1178	Metering rod—1 size lean (2181S)	
75 1179	Metering rod—2 sizes lean (2181S)	
75-1180	Metering rod—1 size lean (2253S)	
75 1181	Metering rod—2 sizes lean (2253S)	

MODELS

B-4-DU, EU 1953
C-1-DU6, EU6 1954
C-3-DU6, EU6 1955
(Route Van)



DODGE TRUCK
1 and 1½ TON
1953-1955

B-B DOWN-DRAFT CARBURETER—**MODEL E9H1**

CARBURETER SPECIFICATIONS

For Dodge Truck 6 Cylinder Engine 3¼ Inch Bore, 4⅝ Inch Stroke

Dimensions Flange size 1½ inch
Throttle bore 1 11/16 inch
Main Venturi 1 11/32 inch I D

Float Setting See adjustments

Vents Outside none Inside balance vent tube

Gasoline Intake Needle Spring loaded needle Size No 44 (086 inch) drill

Idle Orifice Tube Jet size 0276 inch drill Idle passage air bleed (in air horn) size 0465 inch diameter Restriction in body size 0452 inch diameter

Idle Port Upper port slot type length 149 inch width 030 inch

Idle Port Opening Top of port located 118 to 122 inch above top edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw) Size 053 to 057 inch diameter

Set Idle Adjustment Screw ½ to 1½ turns open For richer mixture turn screw out Idle engine between 450 500 r p m

Main Metering Jet Calibrated to flow 315 to 319 cc per minute (Do not gauge for size If in doubt replace with new part)

Main Vent Through diffuser (air bleed inside bowl) Size 0315 inch drill

Main Vent Tube Side holes 4—0354 inch drill

Step Up Jet Size No 63 (037 inch) drill

Accelerating Pump Pump intake passage ball check seat size 107 to 112 inch diameter Pump discharge passage restriction (under ball check) size 062 to 065 inch diameter in body Pump (discharge) jet size 0374 inch diameter

Pump Adjustment See adjustments

Choke Offset butterfly type (with poppet valve)

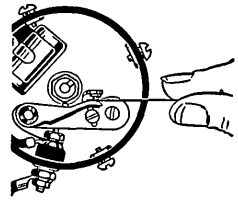
Vacuum Spark Port Slot (round end) type Size 040 by 110 inch Top of port 052 to 058 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

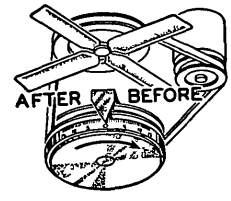
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



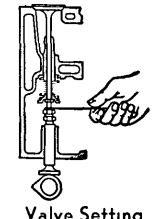
Spark Plug
Gap
035"



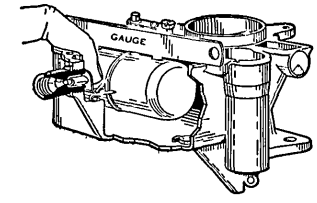
Breaker Point
Setting
020"



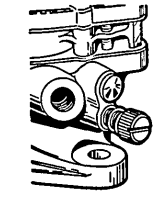
Ignition Timing
Breaker Points to Open
1953—T D C
1954-55—2° B T D C



Valve Setting
(Hot)
Intake 010"
Exhaust 014"



Float Setting
See Adjustments



Idle Adjustment
Screw Setting
½ to 1½
Turns Open

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CARBURETER
TRADE MARK REG U S PAT OFF
MARCA REGISTRADA

PRINTED IN U.S.A.

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT This adjustment must be made with the bowl cover gasket and float pin retainer removed Place a 050 inch feeler gauge (T109-226) between lip of float and intake pin Hold the lip on float arm against the seated intake needle fully compressing the intake needle spring The distance from the top surface of the body casting to the top of the float should be 5/64 inch (gauge T109-50) To adjust bend lip on float arm

PUMP ADJUSTMENT Remove air horn assembly, back out throttle adjustment screw and be sure pump operating link is in center hole of throttle shaft arm Place Universal pump travel gauge T109-117S on edge of bowl cover so that lip of gauge extends over top of plunger shaft With throttle valve seated, turn knurled nut of gauge until lip contacts top of plunger shaft Take reading indicated on gauge Repeat with throttle valve wide open and plunger pushed to bottom of cylinder The difference in reading obtained should be '26 (26/64 inch) Adjust by bending horizontal portion of pump lifter link

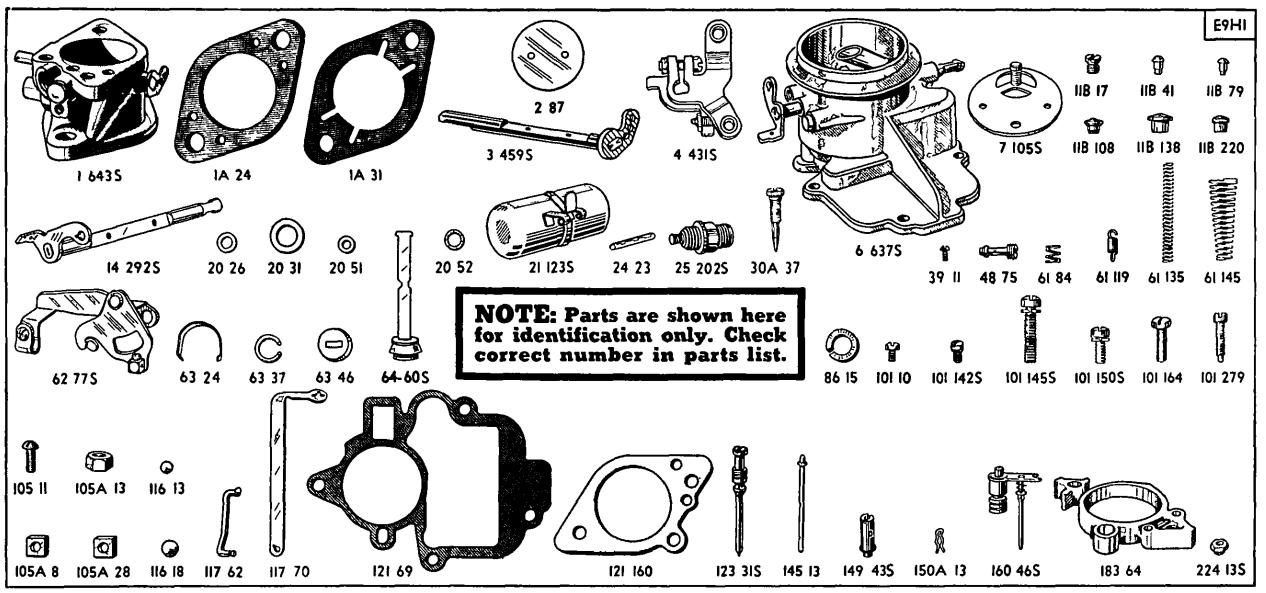
Pump stroke adjustable for high or low temperatures Set to longest stroke for cold weather shorter stroke for hot weather driving

EXCESSIVE RICHNESS above 50 miles per hour may be caused by a clogged main vent tube After removal of rivet plug beneath float bowl with tool No T109-210 main vent tube can be removed and a new tube inserted with tool No T109-195 Care must be exercised in inserting new tube which must seat tightly Use new rivet to complete the installation

MAXIMUM ECONOMY and performance are secured only when breaker points spark plugs valves and motor timing are set to manufacturer s specifications After motor is properly tuned the following should also be done to insure satisfactory performance and economy

(a) Float level must be set as above
(b) Step-up rod in step up jet must seat and move freely When reassembling jet must be screwed in tight against seat
(c) Step-up piston in body casting should not bind and must be free of dirt
(d) Main metering jet can be replaced with leaner than standard metering jets, for altitude

CAUTION Do not attempt to gauge metering jets with drills These jets have been flow-tested to insure correct fuel flow



Dodge Truck—1953-55—Model E9H1

WHEN SERVICING, USE GASKET ASSORTMENT No 137A

Part No.	PART NAME	
1-643S	Body flange assembly	
1A-24	Flange gasket—for use with governor	
1A-31	Flange gasket—for use without governor	
2-87	Throttle valve	
3-452S	Throttle shaft and arm assembly	
3-459S	Throttle shaft and arm assembly (Sup by 3-452S)	
4-431S	Throttle lever assembly	
6-637S	Air horn assembly	
7-105S	Choke valve assembly	
11B-17	Pump check plug	
11B-41	Rivet plug	
11B-79	Rivet plug	(2)
11B-108	Idle port rivet plug	
11B-138	Pump jet rivet plug	
11B-220	High speed passage plug	
14-292S	Choke lever and shaft assembly	
20-26	Main metering jet gasket	
20-31	Needle seat gasket	
20-51	Step up jet gasket	
20-52	Step-up piston gasket	
21-123S	Float and lever assembly	
24-23	Float lever pin	
25-202S	Needle and seat assembly	
30A-37	Idle adjustment screw	
39-11	Choke and throttle valve attaching screw	(4)
48-75	Pump jet	
61-84	Idle adjustment screw spring	
61-119	Choke pull back spring	
61-135	Step up piston spring	
61-145	Pump spring	
62-77S	Choke tube bracket assembly	
63-24	Float lever pin retainer	
63-37	Pump intake ball check retainer ring	

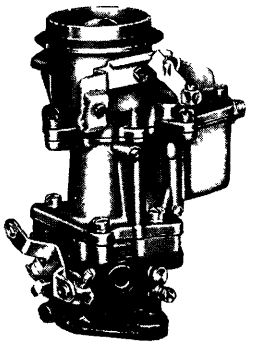
Part No.	PART NAME	
63-46	Pump spring retainer	
64-60S	Plunger and rod assembly	
86-15	Flange stud lock washer	(2)
101-10	Wire clamp screw	
101-142S	Choke bracket attaching screw and washer assembly	
101-145S	Body flange attaching screw and washer assembly	(3)
101-150S	Bowl cover attaching screw and washer assembly	(4)
101-164	Throttle lever clamp screw	
101-279	Throttle lever adjusting screw	
105-11	Choke tube clamp screw	
105A-8	Choke tube clamp nut	
105A-13	Flange stud nut	(2)
105A-28	Throttle lever clamp screw	
116-13	Pump intake check ball	
116-18	Pump discharge check ball	
117-62	Pump link	
117-70	Pump lifter link	
121-69	Body gasket	
121-160	Body flange gasket	(2)
123-31S	Idle orifice tube and plug assembly	
145-13	Main vent tube	
149-43S	Step-up jet assembly	
150A-13	Pin spring	
160-46S	Step-up piston plate and rod assembly	
183-64	Insulator	-
224-12S	Main metering jet assembly—3 sizes lean	
224-13S	Main metering jet assembly—standard	
224-14S	Main metering jet assembly—1 size lean	
224-15S	Main metering jet assembly—2 sizes lean	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

MODELS

B-4-R, T, V, Y, YX—1953
C-1-Y6, YX6—1954
C-3-Y6, YX6—1955

(Two carbureters per engine)



DODGE TRUCK
2¾, 3, 3½ TON—1953
4 TON—1953-1955

BB DOWN-DRAFT CARBURETER—**MODEL E9G1**

CARBURETER SPECIFICATIONS

FOR DODGE TRUCK SIX CYLINDER ENGINES

3¾ Inch Bore 4⅝ Inch Stroke (B-4 R)
3¾ Inch Bore, 5 Inch Stroke (B-4 T B-4-V)
4-1/16 Inch Bore 5-5/16 Inch Stroke (B-4-Y YX C 1 Y6 YX6 C-3 Y6 YX6)

Dimensions Flange size 1½ inch S A E
Throttle bore 1 11/16 inch
Main venturi 1¼ inch I D

Float Setting See adjustments

Gasoline Intake Spring loaded needle size No 44 (086 inch) drill in needle seat

Idle Orifice Tube Jet size 0295 inch drill Idle passage air bleed (in air horn) size 057 inch drill Restriction in body size 0531 inch drill

Idle Port Upper slot type length 149 inch width 030 inch

Idle Port Opening Top of port located 118 inch to 122 inch above top edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw) Size 053 to 057 inch diameter

Set Idle Adjustment Screw ½ to 1½ turns open For richer mixture turn screw out Do not idle engine below 450 r p m

Main Metering Jet Calibrated to flow 334 cc per minute (Do not gauge for size If in doubt replace with new part)

Main Vent Through diffuser (air bleed inside bowl) size 0315 inch drill

Main Vent Tube Side holes 4—0354 inch diameter

Step-Up Jet Size 0374 inch drill

Accelerating Pump Pump intake passage ball check seat size 107 to 112 inch Pump discharge passage restriction (under ball check) size 062 to 065 inch diameter in body Pump (discharge) jet size 0374 inch diameter

Pump Adjustment See adjustments

Choke Offset butterfly type with poppet valve

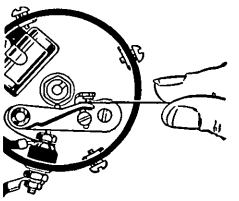
Vacuum Spark Port Slot (round end) type Size 040 by 110 inch Bottom of port 012 to 018 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

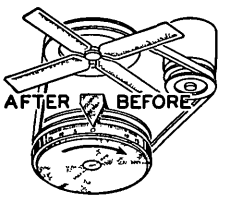
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



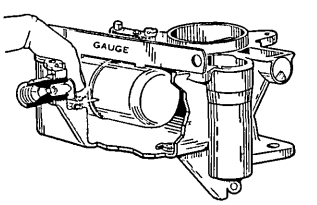
Spark Plug
Gap
035'



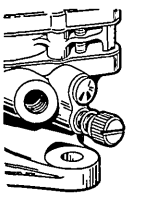
Breaker Point
Setting
020"



Ignition Timing
Breaker Points to Open
1° A T C (B 4-R)
T D C (B-4-T V Y, YX
C-1-Y6 YX6 C 3-Y6 YX6)



Float Setting
(See Adjustments)



Idle Adjustment
Screw Setting
½ to 1½
Turns Open

NOTE These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT This adjustment must be made with the bowl cover gasket and float pin retainer removed Place a 050 inch feeler gauge (T109-226) between lip of float and intake pin Hold the lip on float arm against the seated intake needle fully compressing the intake needle spring The distance from the top surface of the body casting to the top of the float should be 5/64 inch (gauge T109-50) To adjust bend lip on float arm

PUMP ADJUSTMENT Remove air horn assembly, back out throttle adjustment screw and be sure pump operating link is in center hole of throttle shaft arm Place Universal pump travel gauge T109-117S on edge of bowl cover so that lip of gauge extends over top of plunger shaft With throttle valve seated turn knurled nut of gauge until lip contacts top of plunger shaft Take reading indicated on gauge Repeat with throttle valve wide open and plunger pushed to bottom of cylinder The difference in reading obtained should be '26 (26/64 inch) Adjust by bending horizontal portion of pump lifter link

Pump stroke adjustable for high or low temperatures Set to longest stroke for cold weather shorter stroke for hot weather driving

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RECOMMENDED PROCEDURE FOR SETTING IDLE

1 Back out idle speed screw on rear carbureter (fully closed throttle)

2 Adjust idle speed screw on front carbureter to give 450 r p m

3 Adjust idle mixture on front carbureter to best operation and readjust idle speed if necessary

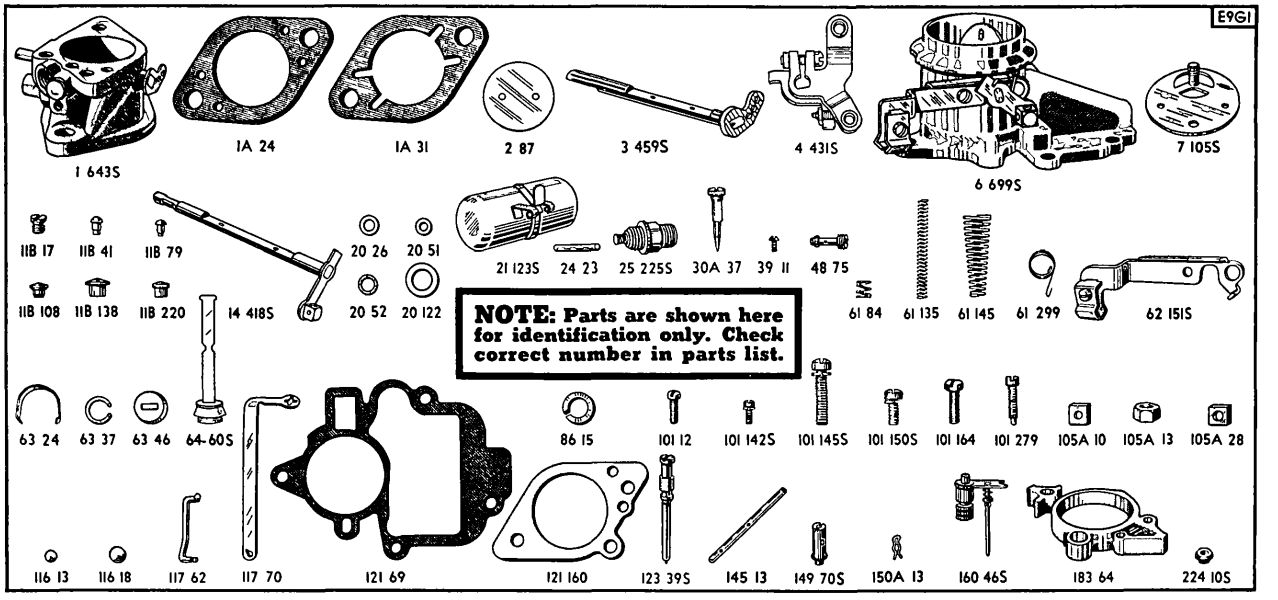
4 Back out idle speed screw on front carbureter two full turns (or whatever is necessary to insure closed throttle)

5 Adjust idle speed screw on rear carbureter to give 450 r p m

6 Adjust idle mixture screw on rear carbureter to give best operation and readjust idle speed if necessary

7 Turn in idle speed screw on front carbureter same number of turns as in step No 4

This should result in balancing the two carbureters Any further adjustment to idle speed or mixture should be made by turning the screw the same amount on each carbureter



Dodge Truck—1953-1955—Carbureter Model E9G1

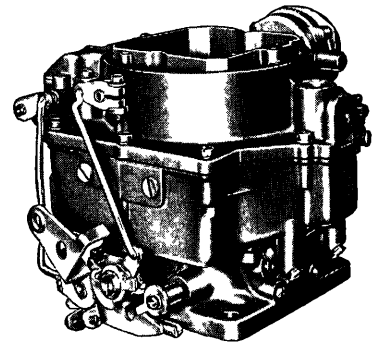
WHEN SERVICING, USE GASKET ASSORTMENT No 236

Part No	PART NAME	
1-643S	Body flange assembly (Sup by 1 1164S)	
1-1164S	Body flange assembly	
1A-24	Flange gasket—for use with governor	
1A-31	Flange gasket—for use without governor	
2-87	Throttle valve	
3-452S	Throttle shaft and arm assembly	
3-459S	Throttle shaft and arm assembly (Sup by 3 452S)	
4-431S	Throttle lever assembly	
6 699S	Air horn assembly	
7-105S	Choke valve assembly	
11B-17	Pump discharge passage plug	
11B-41	Rivet plug	
11B-79	Rivet plug	(2)
11B-108	Idle port rivet plug	
11B-138	Pump passage rivet plug	
11B 220	High speed passage plug	
14-418S	Choke shaft and lever assembly (Sup by 14 343S)	
14-343S	Choke shaft and lever assembly	
20-26	Main metering jet gasket	
20-51	Step up jet gasket	
20-52	Step up piston gasket	
20-122	Needle seat gasket	
21-123S	Float and lever assembly	
24 23	Float lever pin	
25-225S	Needle and seat assembly	
30A-37	Idle adjustment screw	
39-11	Choke and throttle valve attaching screw	(4)
48-75	Pump jet	
61-84	Idle adjustment screw spring	
61-135	Step up piston spring	
61-145	Pump spring	
61-299	Choke pull back spring	
62-151S	Choke tube bracket assembly	
63-24	Float lever pin retainer	

Part No	PART NAME	
63-37	Pump intake check ball retainer	
63-46	Pump spring retainer	
64 60S	Plunger and rod assembly	
86 15	Flange stud lock washer	(2)
101-10	Wire clamp screw	
101-12	Choke bracket clamp screw	
101-142S	Choke bracket attaching screw and washer assembly	
101-145S	Body flange attaching screw and washer assembly	(3)
101-150S	Air horn attaching screw and washer assembly	(4)
101-164	Throttle lever clamp screw	
101-279	Throttle lever adjusting screw	
105A-10	Choke tube clamp nut	
105A-13	Flange stud nut	(2)
105A 28	Throttle lever clamp nut	
116-13	Pump intake check ball	
116-18	Pump discharge check ball	
117-62	Pump link	
117-70	Pump lifter link	
121-69	Body gasket	
121-160	Body flange gasket	(2)
123-39S	Idle orifice tube and plug assembly	
145-13	Main vent tube	
149-62S	Step up jet assembly (Sup by 149 70S)	
149-70S	Step up jet assembly	
150A-13	Pin spring	
160-46S	Step up piston plate and rod assembly	
183-64	Insulator	
224-10S	Main metering jet assembly—standard	
224-12S	Main metering jet assembly—3 sizes lean(Sup by 224 15S)	
224-13S	Main metering jet assembly—1 size lean	
224-14S	Main metering jet assembly—2 sizes lean	
224-15S	Main metering jet asembly—3 sizes lean	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

MODEL
"D53-3 ROYAL"
(Convertible Special)



DODGE "V-8"
1954

WCFB Four Bore Down-Draft Climatic® Control **Carbureter No. 2191S**

CARBURETER SPECIFICATIONS

For Dodge 8 Cylinder Engine: 3-7/16 Inch Bore, 3¼ Inch Stroke

Dimensions: Flange size, 1⅛ inch Four Bore —4 bolt type.
Primary venturi size, 11/32 inch I. D.
Main venturi size, 1-1/16 inch I. D.

Float Level: See adjustments.

Vents: Inside, primary side (2), secondary side (3). Outside, primary side (2) size No. 38 (.1015 inch) drill; secondary (2) size No. 42 (.0935 inch) drill.

Gasoline Intake: Size No. 42 (.0935 inch) drill hole in needle seat.

Low Speed Jet Tube: Jet, size No. 69 (.0292 inch) drill. By-pass (2 in low speed jet), size No. 56 (.0465 inch) drill. Economizer in body size No. 56 (.0465 inch) drill.
Idle bleed, in body, size .059 inch diameter.

Idle Port: (Upper) Slot type. Primary, length .140 inch; width .030 inch. Secondary length .103 inch; width .030 inch.

Idle Port Opening: Primary, .091 to .097 inch, secondary, .067 to .073 inch, above upper edge of valve, with valve tightly closed.

Lower Port: Primary (For Idle Adjustment Screw) size No. 53 (.0595 inch) drill. Secondary (None).

Set Idle Adjustment Screw: 1 to 2 turns open. For richer mixture turn screw out. Do not idle engine below 475 R.P.M. with shift lever in neutral position.

Main Nozzle: Installed permanently. Do not remove. Anti-percolating jet, size No. 70 (.028 inch) drill.

Metering Rod: Primary economy step .071 inch diameter. Power step, .058 inch diameter.
(These rods designed with stabilizing flats on economy step.)
Secondary, none.

Metering Rod Jet: Primary, size .0935 inch diameter (for metering rod).
Secondary, size .0595 inch diameter (no metering rod).

Metering Rod Setting: See adjustments.

Accelerating Pump: Discharge jet (twin) primary only, size No. 68 (.031 inch) drill. Intake ball check seat size .115 to .120 inch diameter. Discharge needle seat size .070 inch diameter.

Pump Adjustment: See adjustments.

Choke: Carter Climatic® Control, set 3 points lean. Butterfly type offset choke valve, primary side only. Choke heat suction hole, restriction in piston housing, size No. 40 (.098 inch) drill.

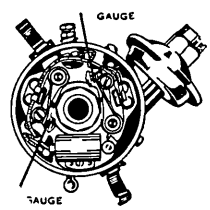
Vacuum Spark Port: Horizontal slot (round end) .045 x .110 inch. Top of port .035 to .045 inch above valve, with valve tightly closed.

Motor Tune-Up—Be Accurate!

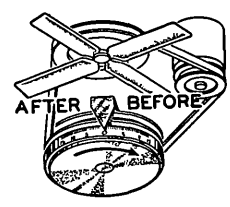
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



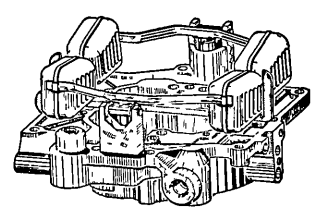
Spark Plug
Gap
.035"



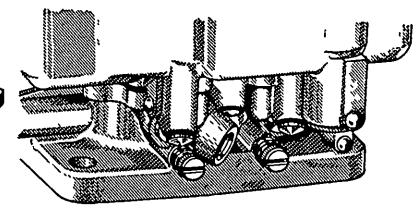
Breaker Point
Setting
.015"-.018"



Ignition Timing
Breaker Points to Open:
8° B. T. C.
At Crank Pulley



Float Setting
See Adjustments



Idle Adjustment
Screw Setting
1 to 2
Turns Open

NOTE: These cars are equipped with hydraulic valve lifters.—NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: Two separate float adjustments must be made—lateral and vertical. LATERAL ADJUSTMENT: With bowl cover assembly inverted, bowl cover gasket removed and float resting on seated needle, place float gauge directly under center of floats with notched portions of gauge fitted over edges of casting. Side of floats should just clear the vertical upright of float gauges. Adjustment should be made by bending arms of floats. VERTICAL ADJUSTMENT: With float gauge in same position, floats should just clear the horizontal portion of gauge. The vertical distance between top of float and machined surface of casting must be 1/8 inch (gauge T109-232) for primary floats and 3/16 inch (gauge T109-222) for secondary floats. Adjust by bending float arms.

FLOAT DROP ADJUSTMENT: With bowl cover held in upright position and measuring from center of float, the distance between top of floats and bowl cover should be 5/8 inch for primary floats and 11/16 inch for secondary floats. Adjust by bending stop tabs on float bracket.

PUMP ADJUSTMENT: Install pump connector link in outer hole (long stroke) of pump arm, with ends extending toward countershaft arm. Back out throttle lever set screw until throttle valves seat in bores of carbureter. Hold straight edge across top of dust cover boss at pump arm. The flat on top of pump arm should be parallel to straight edge. Adjust by bending throttle connector rod at lower angle. (Use tool T109-213).

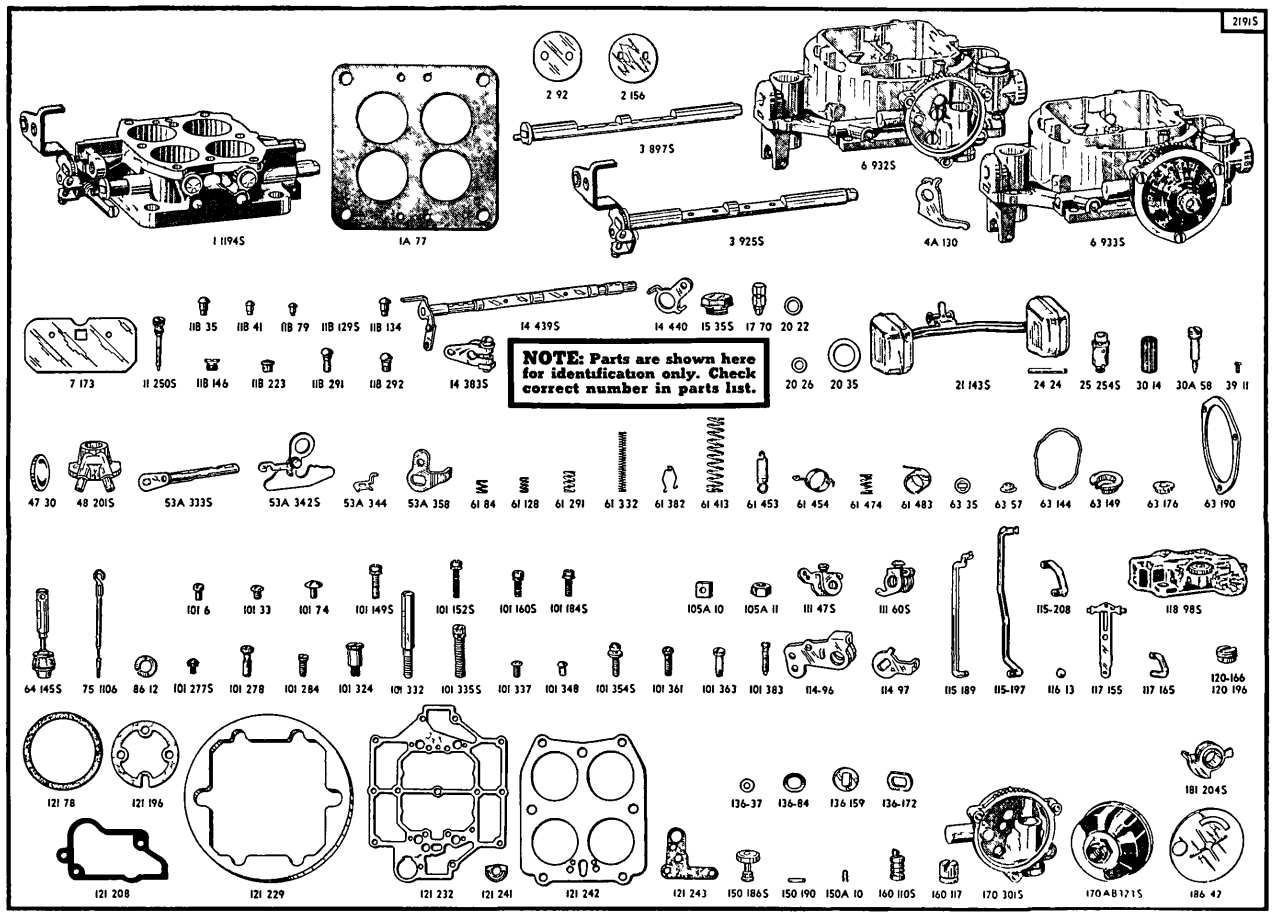
METERING ROD ADJUSTMENT: Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows: 1. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw. 2. With metering rods in place, press down on vacumeter link until metering rods bottom in carbureter body casting. 3. Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link. Hold in place and carefully tighten clamp screw.

BOWL VAPOR VENT ADJUSTMENT: This adjustment should be made after completing pump and metering rod adjustments. Install dust cover gasket and dust cover. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter. There should be 1/16 inch (gauge T109-197) between lower edge of bowl vapor vent valve and dust cover. To adjust, remove dust cover and bend vapor vent arm.

FAST IDLE AND SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: 1. Preliminary Adjustment: Loosen choke clamp screw on choke shaft. Insert .020 inch feeler gauge (T109-29) between lip of fast idle cam and boss of flange casting. Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw. 2. Secondary Throttle Lock-Out Adjustment: (a) With choke valve tightly closed, tighten fast idle adjustment screw until there is .015 inch (gauge T109-44) opening between primary throttle valve and bore of carbureter (side opposite idle port). Lock pawl should now be in unlocked position; if not, adjust by bending tang on lock pawl (use bending tool T109-105). (b) Hold primary throttle valves half way open. Open choke valve fully, then open primary throttle valves all the way. Tang on secondary throttle arm should engage in notch on lock out lever preventing secondary throttle shaft movement. Keep choke valve in wide open position. Close primary throttle valves so that lock pawl is unlocked, then open primary throttle valves all the way. Lock-out lever should fall free allowing secondary throttle valves to be open before primary throttle valves are fully open. If necessary, bend tang on secondary throttle lever to provide clearance for proper operation of lock-out lever.

UNLOADER ADJUSTMENT: With throttle wide open there should be 3/16 inch (gauge T109-28) clearance between upper edge of choke valve and inner wall of air horn. Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41).

SECONDARY THROTTLE LEVER ADJUSTMENT: Primary and secondary throttle valves should reach wide open position at the same time. To adjust bend throttle operating rod at upper angle. (Use bending tool T109-213.)



Dodge "V8"—1954—Carbureter No. 2191S

WHEN SERVICING, USE GASKET ASSORTMENT No. 244; REPAIR PACKAGE No. 1752

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

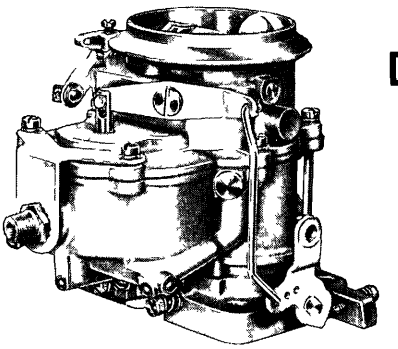
Part No.	PART NAME	
1-1194S	Body flange assembly	
1A-77	FLANGE GASKET	
2-92	Primary throttle valve	(2)
2-156	Secondary throttle valve	(2)
3-897S	Secondary throttle shaft and dog assembly	
3-925S	Primary throttle shaft and lever assembly	
4A-130	Throttle shaft dog	
6-932S	Air horn assembly	
6-933S	Air horn and Climatic® control assembly	
7-173	Choke valve	
11-250S	LOW SPEED JET ASSEMBLY	(4)
11B-35	Rivet plug	(6)
11B-41	Rivet plug	(2)
11B-79	Rivet plug	(4)
11B-129S	Pump discharge passage plug assembly	
11B-134	Rivet plug	
11B-146	Level sight plug	(2)
11B-223	Nozzle passage rivet plug	(8)
11B 291	Rivet plug	(2)

Part No.	PART NAME	
11B-292	Rivet plug	
14-383S	Choke lever and screw assembly	
14-439S	Choke piston lever link and shaft assembly	
14 440	Cam trip lever	
15-35S	Strainer nut assembly	
17-70	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	(2)
20-26	Pump passage plug gasket	
20-35	BOWL STRAINER GASKET	
21-143S	Float and lever assembly	(2)
24-24	Float lever pin	(2)
25-254S	NEEDLE AND SEAT ASSEMBLY	(2)
30-14	BOWL STRAINER	
30A-58	Idle adjustment screw	(2)
39-11	Choke valve attaching screw	(2)
47-30	Welsh plug	
48-201S	Pump jet and housing assembly	
53A-333S	Pump operating lever and countershaft assembly	
53A-342S	Lockout arm and pawl assembly	

Part No.	PART NAME	
53A-344	Vent arm	
53A-358	Secondary operating lever	
61-84	Idle adjustment screw spring	(2)
61-128	CONNECTOR ROD SPRING	
61-291	Throttle lever adjusting screw spring	
61-332	VACUUM PISTON SPRING	
61-382	METERING ROD SPRING	
61-413	UPPER PUMP SPRING	
61-453	Throttle flex spring	
61-454	Fast idle cam spring	
61-474	Bowl vent spring	
61-483	SECONDARY THROTTLE RETURN SPRING	
63-35	CONNECTOR ROD SPRING RETAINER	
63-57	INTAKE BALL CHECK RETAINER	
63 144	Delayer plate retainer ring	
63-149	Bowl vent spring retainer	
63-176	Pump spring retainer	
63-190	Coil housing retainer	
64-145S	PUMP PLUNGER AND ROD ASSEMBLY	
75-963U	Metering rod and jet unit—1 size lean	
75-964U	Metering rod and jet unit—2 sizes lean	
75 1106	METERING ROD—STANDARD	(2)
86-12	Flange stud lock washer	(4)
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	(2)
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	
101-160S	Air horn attaching screw and washer assembly (early prod.)	(8)
101-184S	Dust cover attaching screw and washer assembly	(2)
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet housing attaching screw	
101-284	Coil housing attaching screw	(2)
101-296	Fast idle adjustment screw	
101-307S	Air horn attaching screw and washer assembly (late prod.)	(8)
101-324	Fast idle cam screw	
101-332	Throttle lever adjusting screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-348	Primary throttle valve attaching screw	(4)
101-354S	Choke lever clamp screw assembly	
101-361	Coil housing attaching screw	(3)
101-363	Piston housing attaching screw	
101-383	Fast idle adjustment screw (Sup by 101 296)	
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
114-96	Inner throttle shaft arm	
114-97	Outer throttle shaft arm	
115-189	Choke connector rod	
115-197	THROTTLE CONNECTOR ROD	
115-208	Throttle operating rod	
116-13	PUMP INTAKE CHECK BALL	
117-155	Vacumeter piston link	
117-165	PUMP CONNECTOR LINK	
118-98S	Dust cover assembly	
120-166	PRIMARY METERING ROD JET	(2)
120-196	SECONDARY METERING JET	(2)
121 78	COIL HOUSING GASKET	
121-196	Delayer plate gasket	
121-208	DUST COVER GASKET	
121-229	AIR CLEANER GASKET	
121-232	AIR HORN GASKET	
121-241	PUMP JET HOUSING GASKET	
121-242	BODY FLANGE GASKET	
121-243	PISTON HOUSING GASKET	
136-37	Throttle operating rod washer	(5)
136-84	Throttle shaft spring washer	
136-159	Primary throttle shaft washer	
136-172	Secondary throttle shaft washer	
150-186S	Pin and valve cap assembly	
150-190	Choke piston pin	
150A-10	PIN SPRING	(5)
160-110S	Vacuum piston and pin assembly	
160-117	Choke piston	
170-301S	Piston housing and plug assembly	
170AB323S	Thermostatic coil and housing assembly	
181 204S	Fast idle cam assembly	
186 42	Choke baffle plate	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.

MODELS
C-1-T8, C-1-V8



DODGE TRUCK "V-8" 3 and 3½ TON 1954

(2229S can also be used)

BBD DUAL DOWN-DRAFT **CARBURETER No. 907S**

CARBURETER SPECIFICATIONS

For Dodge Truck 8 Cylinder Engine· 3-13/16 Inch Bore, 3⅝ Inch Stroke

Dimensions. Flange size 1¼ inch dual, 4 bolt type
Throttle bore, 1-7/16 inch I D
Primary venturi, ⅜ inch I. D.
Main venturi, 1-3/16 inch I D

Float Level. See Adjustments.

Vent: Inside balance vent tube to bowl, in air horn above choke valve

Gasoline Intake: Size No 44 (.086 inch) drill hole in needle seat

Idle Tube: Jet, size 0295 inch drill
Idle bleed (in venturi cluster screw), size 059 inch drill
Idle restriction (in venturi cluster screw), size 0472 inch drill.

Idle Port: Upper, slot type length, 149 inch, width, 030 inch

Idle Port Opening: 101 to 105 inch above upper edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw): Size, 053 to .057 inch diameter.

Set Idle Adjustment Screw: ¼ to 1¼ turns open For richer mixture turn screw out Idle engine between 450 and 500 r p m

Main Nozzle Nozzle is installed permanently DO NOT RE MOVE

Main Vent Tube Side holes (4) 0354 inch diameter Bleed in top of tube size 0196 inch diameter

Step-Up Rod· (Vacuum operated) 022 inch diameter Length (end of wire to inside of angle) 1 11/32 inch

Metering Jet Calibrated to flow 390 to 394 cc per minute (Do not gauge for size if in doubt replace with new part)

Accelerating Pump· Pump discharge jets (2) size 0315 inch drill
Intake ball check seat size 115 to 120 inch diameter
Discharge ball check seat size 115 to 120 inch diameter

Pump Adjustment See adjustments

Choke Manual offset butterfly type with poppet valve

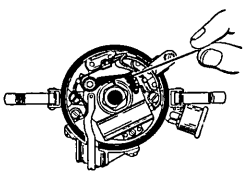
Vacuum Spark Port· None

Motor Tune-Up—Be Accurate!

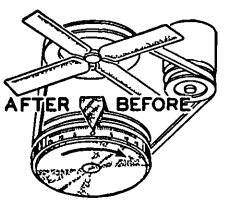
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



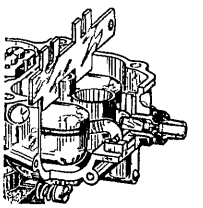
Spark Plug
Gap
035"



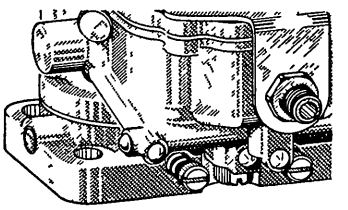
Breaker Point
Setting
017"



Ignition Timing
Breaker Points to Open
4° B T.D.C



Float Setting
(See Adjustments)



Idle Adjustment
Screw Setting
¼ to 1¼
Turns Open

NOTE These cars are equipped with hydraulic valve lifters.—NO ADJUSTMENT

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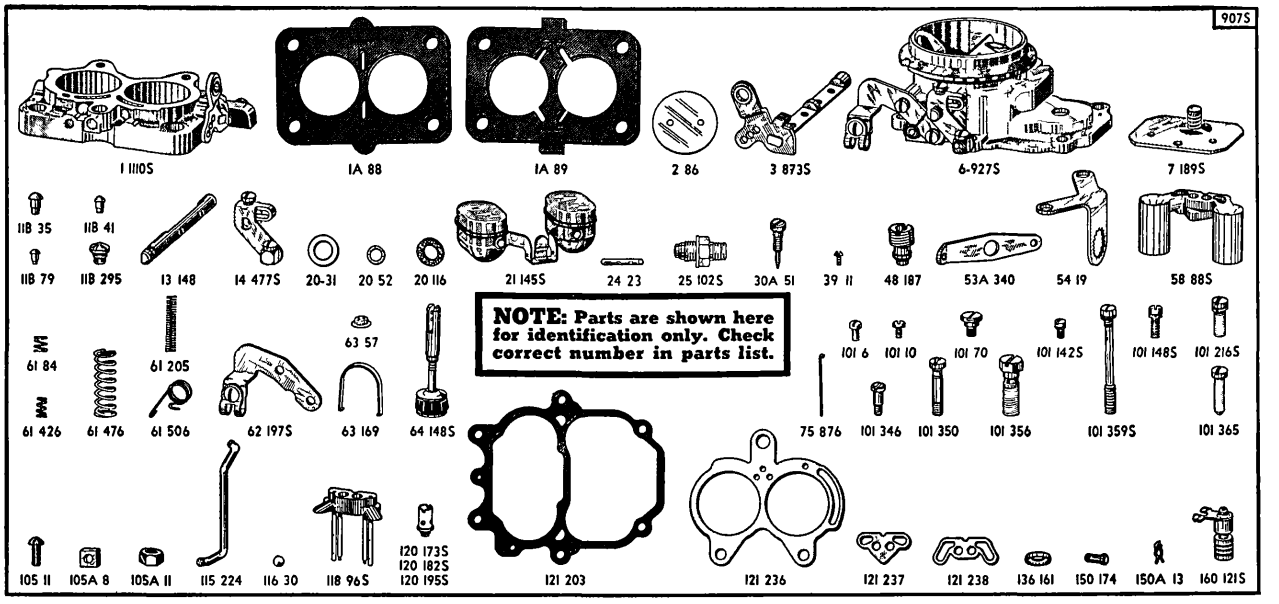
CARBURETER
TRADE MARK REG U S PAT OFF.
MARCA REGISTRADA

PRINTED IN U.S.A.

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT This adjustment must be made with the bowl cover gasket and float pin retainer removed Hold the lip on float arm against the seated intake needle, making sure the float pin is at the bottom of its guide slots The distance from the top surface of the body casting to the top of each float should be 9/32 inch (gauge T109-239) for floats with flat top or 7/32 inch (gauge T109-230) for floats with curved top If one float is lower than the other, equalize by bending the float arm If both floats require the same correction, adjust by bending lip on float arm The floats must not rub anywhere against the inner walls of the bowl If necessary bend float arms slightly to provide clearance on all sides of floats

PUMP ADJUSTMENT Back out throttle adjusting screw so that throttle valves seat in bores of carbureter Install pump connector rod in outer hole of throttle lever and pump arm pin in top hole of the plunger shaft The distance from the top of the bowl cover to the top of plunger shaft (not pump arm) should be 57/64 inch Adjust by bending pump connector rod at lower angle (use Tool T109-213)



Dodge Truck—1954—Carbureter No. 907S

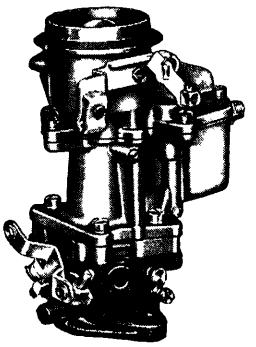
WHEN SERVICING USE GASKET ASSORTMENT No 251

Part No	PART NAME	
1-1110S	Body flange assembly	
1A-88	Flange gasket—for use with governor	
1A-89	Flange gasket—for use without governor	
2-86	Throttle valve	(2)
3-873S	Throttle shaft and lever assembly	
6-927S	Air horn assembly	
7-189S	Choke valve assembly	
11B-26	Rivet plug	(2)
11B-35	Rivet plug	(3)
11B-41	Rivet plug (Sup by 11B 26)	(2)
11B-62	Rivet plug (late prod)	
11B-79	Rivet plug	
11B-134	Rivet plug (late prod) (Sup by 11B 62)	
11B-295	Pump jet rivet plug	(2)
11B-319	Rivet plug	(4)
13-148	Choke shaft	
14-477S	Choke lever assembly	
20-31	Needle seat gasket	
20-52	Step up piston gasket	
20-116	Main metering jet gasket	(2)
21-145S	Float and lever assembly	
24-23	Float lever pin	
25-102S	Needle and seat assembly	
30A-51	Idle adjustment screw	(2)
39-11	Choke and throttle valve attaching screw	(6)
48-187	Pump jet	(2)
53A-340	Pump arm	
54-19	Needle seat lock	
58-88S	Venturi cluster and nozzle assembly	
61-84	Idle adjustment screw spring	(2)
61-205	Step up piston spring	
61-426	Throttle adjusting screw spring	
61-476	Pump spring	
61-506	Choke spring	
62-197S	Choke tube bracket assembly	
63-57	Intake check ball retainer	
63-169	Float lever pin retainer	

Part No	PART NAME	
64-148S	Pump plunger and rod assembly	
75-876	Step up rod	(2)
101-6	Choke lever screw	
101-10	Wire clamp screw	
101-70	Pump arm screw	
101-142S	Choke bracket attaching screw and washer assembly	(2)
101-216S	Air horn attaching screw and washer assembly	(4)
101-346	Step up piston plate guide screw	
101-350	Venturi cluster screw	(2)
101-356	Step up piston passage screw	
101-359S	Body attaching screw and washer assembly	(2)
101-365	Throttle lever adjusting screw	
105-11	Choke tube clamp screw	
105A-8	Choke tube clamp nut	
105A-11	Flange stud nut	(4)
115-224	Throttle connector rod	
116-30	Pump intake and discharge check ball	(3)
118-96S	Venturi cover and tube assembly	
120-173S	Main metering jet assembly—1 size lean (Sup by 120 201S)	(2)
120-182S	Main metering jet assembly—2 sizes lean (Sup by 120 204S)	(2)
120-195S	Main metering jet assembly—standard (S p by 120 200S)	(2)
120 200S	Main metering jet assembly—standard	
120-201S	Main metering jet assembly—1 size lean	
120-204S	Main metering jet assembly—2 sizes lean	
121-203	Body gasket	
121-236	Body flange gasket	
121-237	Venturi housing gasket	
121 238	Venturi cover gasket	
136-161	Pump spring retainer	
150 174	Pump arm pin	
150A 13	Pin spring	(3)
160 121S	Step up piston plate assembly	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

MODELS
C-1-R8, C-1-RS8



DODGE TRUCK "V-8"
2¾ TON
1954

B-B DOWN-DRAFT CARBURETER—**MODEL E9X1**

CARBURETER SPECIFICATIONS

For Dodge Truck 8 Cylinder Engine: 3-13/16 Inch Bore, 3⅝ Inch Stroke

Dimensions: Flange size, 1½ inch S. A. E.
Throttle bore, 1-11/16 inch.
Main venturi, 1-11/32 inch I. D.

Float Setting: See adjustments.

Vents: Outside, none. Inside, balance vent tube.

Gasoline Intake: Size No. 44 (.086 inch) drill in needle seat.

Idle Orifice Tube: Jet size .0276 inch diameter. Idle passage air bleed (in air horn) size No. 56 (.0465 inch) drill. Restriction in body, size .0452 inch diameter.

Idle Port: Upper port, slot type, length .149 inch; width .030 inch.

Idle Port Opening: Top of port located .118 to .122 inch above top edge of valve, with valve tightly closed.

Lower Port (For Idle Adjustment Screw): Size .053 to .057 inch diameter.

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture turn screw out. Idle engine between 450-500 r.p.m.

Main Metering Jet: Calibrated to flow 315 to 319 cc per minute. (Do not gauge for size. If in doubt replace with new part.)

Main Vent: Through diffuser (air bleed inside bowl) size .0315 inch drill.

Main Vent Tube: Side Holes, 4—.0354 inch diameter.

Step-Up Jet: Size .0335 inch drill.

Accelerating Pumps: Pump intake passage, ball check seat, size .107 to .112 inch diameter. Pump discharge passage, restriction (under ball check), size .062 to .065 inch diameter in body. Pump (discharge) jet, size .0374 inch diameter.

Pump Adjustment: See adjustments.

Choke: Offset butterfly type, with poppet valve.

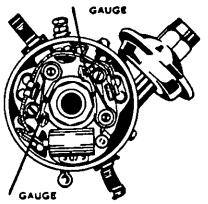
Vacuum Spark Port: Slot (round end) type. Size .040 by .110 inch. Bottom of port .012 to .018 inch above top edge of valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

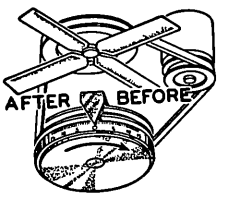
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



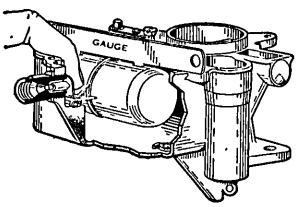
Spark Plug Gap .035"



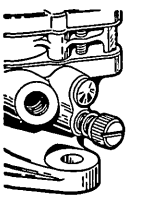
Breaker Point Setting .017"



Ignition Timing Breaker Points to Open: 4° B.T.D.C.



Float Setting (See Adjustments)



Idle Adjustment Screw Setting ½ to 1½ Turns Open

NOTE: These cars are equipped with hydraulic valve lifters.—NO ADJUSTMENT.

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CARBURETER
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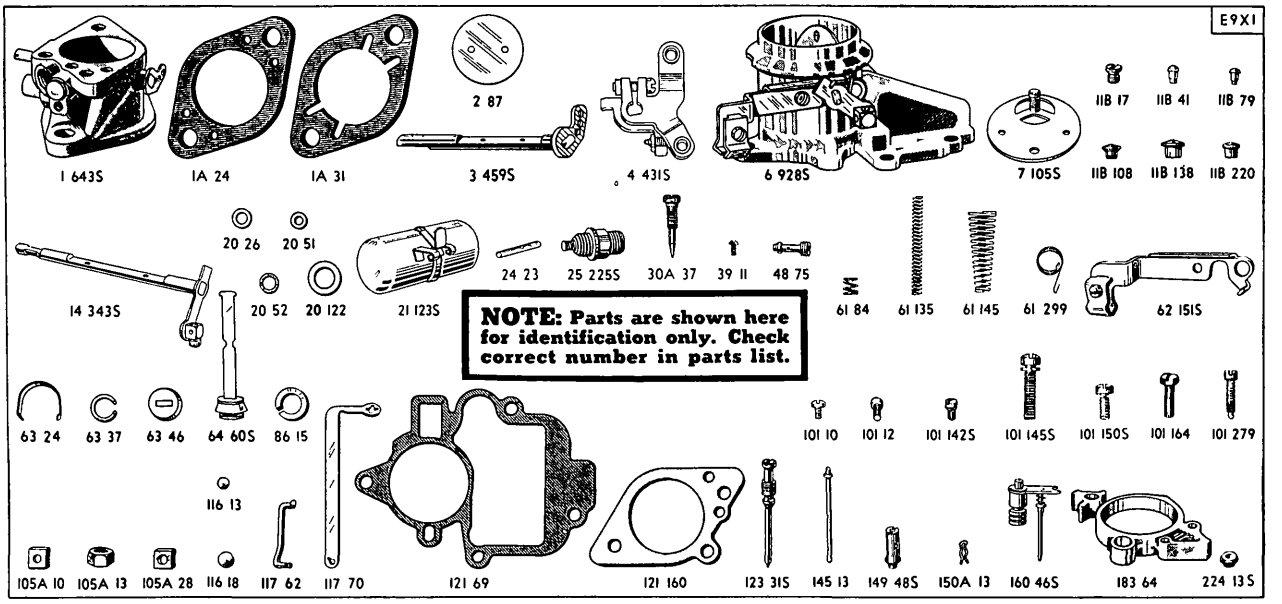
S. S. PRINTED IN U.S.A.

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT This adjustment must be made with the bowl cover gasket and float pin retainer removed Place a 050 inch feeler gauge (T109-226) between lip of float and intake pin Hold the lip on float arm against the seated intake needle fully compressing the intake needle spring The distance from the top surface of the body casting to the top of the float should be 5/64 inch (gauge T109-50) To adjust bend lip on float arm

PUMP ADJUSTMENT Remove air horn assembly, back out throttle adjustment screw and be sure pump operating link is in center hole of throttle shaft arm Place Universal pump travel gauge T109-117S on edge of bowl cover so that lip of gauge extends over top of plunger shaft With throttle valve seated, turn knurled nut of gauge until lip contacts top of plunger shaft Take reading indicated on gauge Repeat with throttle valve wide open and plunger pushed to bottom of cylinder The difference in reading obtained should be '26 (26/64 inch) Adjust by bending horizontal portion of pump lifter link

Pump stroke adjustable for high or low temperatures Set to longest stroke for cold weather, shorter stroke for hot weather driving



Dodge Truck—1954—Model E9X1

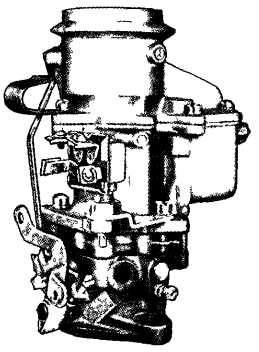
WHEN SERVICING, USE GASKET ASSORTMENT No. 236

Part No	PART NAME	
1-643S	Body flange assembly (Sup by 1 1164S)	
1-1164S	Body flange assembly	
1A-24	Flange gasket—for use with governor	
1A-31	Flange gasket—for use without governor	
2-87	Throttle valve	
3-452S	Throttle shaft and arm assembly	
3 459S	Throttle shaft and arm assembly (Sup by 3 452S)	
4-431S	Throttle lever assembly	
6-928S	Air horn assembly	
7-105S	Choke valve assembly	
11B-17	Pump discharge passage plug	
11B-41	Rivet plug	
11B-79	Rivet plug	(2)
11B-108	Idle port rivet plug	
11B-138	Pump jet rivet plug	
11B-220	High speed passage plug	
14-343S	Choke shaft and lever assembly	
20-26	Main metering jet gasket	
20 51	Step up jet gasket	
20-52	Step up piston gasket	
20 122	Needle seat gasket	
21-123S	Float and lever assembly	
24-23	Float lever pin	
25 225S	Needle and seat assembly	
30A 37	Idle adjustment screw	
39-11	Valve attaching screw	(4)
48-75	Pump jet	
61-84	Idle adjustment screw spring	
61-135	Step up piston spring	
61-145	Pump spring	
61-299	Choke pull back spring	
62-151S	Choke tube bracket assembly	
63-24	Float lever pin retainer	
63-37	Intake check ball retainer ring	
63-46	Pump spring retainer	

Part No	PART NAME	
64-60S	Pump plunger and rod assembly	
86-15	Flange stud lock washer	
101-10	Wire clamp screw	
101-12	Choke bracket clamp screw	
101-142S	Choke bracket attaching screw and washer assembly	
101-145S	Body flange attaching screw and washer assembly	(3)
101-150S	Air horn attaching screw and washer assembly	(4)
101-164	Throttle lever clamp screw	
101-279	Throttle lever adjusting screw	
105A-10	Choke tube clamp nut	
105A-13	Flange stud nut	
105A-28	Throttle lever clamp nut	
116-13	Pump intake check ball	
116-18	Pump discharge check ball	
117-62	Pump link	
117-70	Pump lifter link	
121-69	Body gasket	
121 160	Body flange gasket	(2)
123 31S	Idle orifice tube and plug assembly	
145-13	Main vent tube	
149-46S	Step up jet assembly (Sup by 149 48S)	
149 48S	Step up jet assembly	
150A-13	Pin spring	
160-46S	Step up piston plate and rod assembly	
183-64	Insulator	
224-10S	Main metering jet assembly—standard (Sup by 224 13S)	
224 12S	Main metering jet assembly—3 sizes lean	
224 13S	Main metering jet assembly—standard	
224-14S	Main metering jet assembly—1 size lean	
224-15S	Main metering jet assembly—2 sizes lean	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

E9N1—Standard Transmission with Overdrive
E9T1—Standard Transmission
E9U1—Power Flite Transmission; Fluid Coupling and Standard Transmission
E9V1—Fluid Coupling or Torque Convertor and M6 Transmission



DODGE 6

MODELS "D-51", "D-52"

1954

BB Down-Draft Carbureters—Models E9N1-E9T1-E9U1-E9V1

CARBURETER SPECIFICATIONS

For Dodge Six Cylinder Engine: 3¼ Inch Bore, 4⅝ Inch Stroke

Dimensions: Flange size, 1½ inch S A E Throttle bore 1-11/16 inch Main venturi, 1-11/32 inch I D

Float Setting: See Adjustments

Vents: Outside, none. Inside, balance vent tube.

Gasoline Intake: Size No 44 (.086 inch) drill in needle seat

Idle Orifice Tube: Jet, size .0276 inch diameter Idle passage air bleed (in air horn) size No. 56 (.0465 inch) drill. Restriction in body, size .0452 inch diameter.

Idle Port: Upper port, slot type, length .149 inch; width .030 inch

Idle Port Opening: Top of port located .118 to .122 inch above top edge of valve, with valve tightly closed.

Lower Port (For Idle Adjustment Screw): Size .053 to .057 inch diameter.

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture turn screw out. Idle engine between 450-500 r p m

Main Metering Jet: Calibrated to flow 332 to 336 cc per minute (Do not gauge for size If in doubt replace with new part.)

Main Vent: Through diffuser (air bleed inside bowl) size .0315 inch drill.

Main Vent Tube: Side Holes, 4—.0354 inch diameter

Step-Up Jet: Size .0394 inch drill

Accelerating Pump: Pump intake passage, ball check seat, size .107 to .112 inch diameter. Pump discharge passage, restriction (under ball check), size .062 to .065 inch diameter in body. Pump (discharge) jet, size .0374 inch diameter

Pump Adjustment: See adjustments

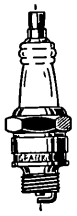
Choke: Butterfly type, with poppet valve Inter-connected to open throttle valve to fast idle position when choke is used.

Slow Closing Throttle: Dash pot with discharge (by-pass), size .019 inch, E9U1—through plunger shaft; E9V1—through valve cage

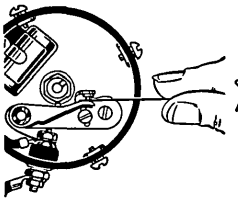
Vacuum Spark Port: Slot (round end) type. Size .040 by .110 inch Bottom of port .012 to .018 inch above top edge of valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

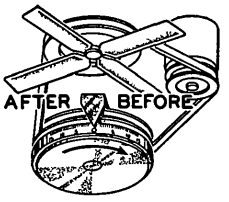
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



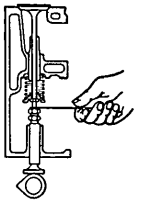
Spark Plug Gap .035"



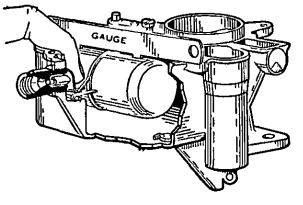
Breaker Point Setting .020"



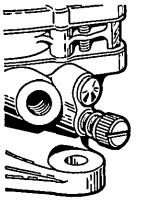
Ignition Timing Breaker Points to Open: 2° B.T.D.C.



Valve Setting (Hot) Intake .010" Exhaust .010"



Float Setting (See Adjustments)



Idle Adjustment Screw Setting ½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

Float Adjustment: This adjustment must be made with the bowl cover gasket and float pin retainer removed. Hold the lip on float arm against the seated intake needle, making sure the float pin is at the bottom of its guide slots The distance from the top surface of the body casting to the top of the float should be 5/64 inch (gauge T109-50) (E9N1-E9T1-E9V1); 1/16 inch (gauge T109-49) (E9U1). To adjust bend lip on float arm

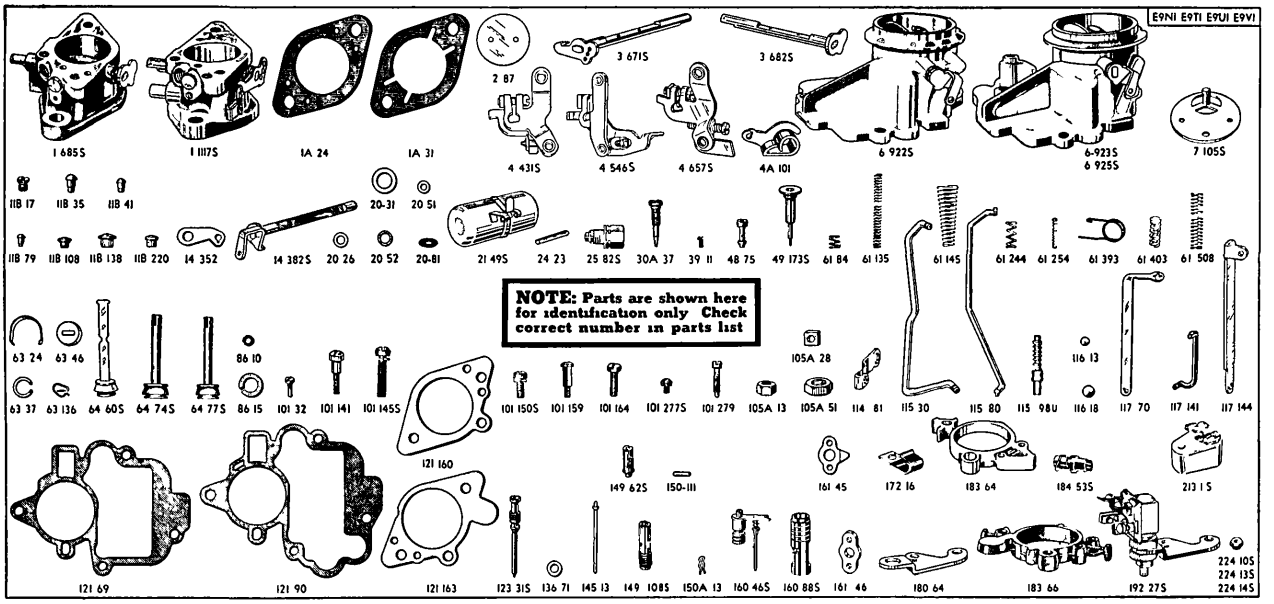
Pump Adjustment: No gauge is necessary. Pump lifter arm should be at a right angle to pump lifter shaft Adjustment can be made by bending pump lifter arm up or down (use tool T109-41). Pump stroke adjustable for high or low temperatures Set to longest stroke for cold weather, shorter stroke for hot weather driving.

Dash-pot Adjustment (E9U1 Only): Tighten adjustment screw — then turn counter clockwise 4½ turns Further adjustment outward will increase the action of the dash-pot and lengthen its retarding effect

Overdrive Kickdown Switch Adjustment (E9N1 Only): With throttle valve in wide open position adjust hex nuts on switch to have 1/64 to 3/64 inch clearance between kickdown lever and switch stem guide

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Dodge—1954—Carbureters E9N1-E9T1-E9U1-E9V1

WHEN SERVICING, USE GASKET ASSORTMENT No 137A (E9N1-E9T1); No. 242 (E9U1), No. 164A (E9V1); REPAIR PKG. No. 1775

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

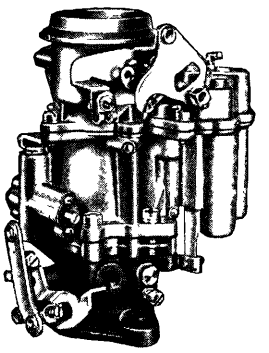
Part No	PART NAME
1-685S	Body flange assembly (E9N1-E9T1)
1-1117S	Body flange assembly (E9U1 E9V1)
1A-24	Flange gasket—for use with governor
1A-31	FLANGE GASKET—FOR USE WITHOUT GOVERNOR
2-87	Throttle valve
3-671S	Throttle shaft and arm assembly (E9U1 E9V1)
3-682S	Throttle shaft and arm assembly (E9N1 E9T1)
4-431S	Throttle lever assembly (E9T1 E9U1)
4-546S	Throttle lever assembly (E9V1)
4-657S	Throttle lever assembly (E9N1)
4A-101	Throttle shaft dog
6-922S	Air horn assembly (E9T1-E9N1)
6-923S	Air horn assembly (E9U1)
6-925S	Air horn assembly (E9V1)
7-105S	Choke valve assembly
11B-17	Pump discharge passage plug
11B-35	Rivet plug (E9V1)
11B-41	Rivet plug
11B-79	Rivet plug (2)
11B-108	Idle port rivet plug
11B-138	PUMP JET RIVET PLUG
11B-220	HIGH SPEED PASSAGE PLUG
14-352	Choke lever — loose
14-382S	Choke shaft and lever assembly
20-26	Main metering jet gasket
20-31	Needle seat gasket
20-51	Step up jet gasket
20-52	STEP UP PISTON GASKET
20-81	Switch plunger gasket (E9V1)
21-49S	Float and lever assembly
24-23	Float lever pin
25-82S	NEEDLE AND SEAT ASSEMBLY
30A-37	Idle adjustment screw
39-11	Valve attaching screw (4)
48-75	PUMP JET
49-173S	Valve plunger rod and plate assembly (E9V1)
61-84	Idle adjustment screw spring
61-135	STEP UP PISTON SPRING
61-145	PUMP SPRING
61-244	Dash pot adjustment screw spring (E9U1)
61-254	Plunger operating spring (E9V1)
61-393	Dash pot pick up arm spring (E9U1 E9V1)
61-403	Push rod sleeve spring (E9V1)
61-508	Switch piston spring (E9V1)
63-24	FLOAT LEVER PIN RETAINER
63-37	INTAKE CHECK BALL RETAINER RING
63-46	Pump spring retainer
63-136	Connector retainer clip (E9V1)
64-60S	PUMP PLUNGER AND ROD ASSEMBLY
64-74S	Dash pot plunger and rod assembly (E9U1)
64-77S	Dash pot plunger and rod assembly (E9V1)

Part No.	PART NAME
86-10	Dash pot lifter link attaching screw lock washer (E9U1-E9V1)
86-15	Flange stud lock washer (2)
101-32	Dash pot lifter link attaching screw (E9U1-E9V1)
101-141	Dash pot adjustment screw (E9U1)
101-145S	Body flange attaching screw and lock washer assembly (3)
101-150S	Air horn attaching screw and washer assembly (4)
101-159	Electro magnet assembly attaching screw (E9V1)
101-164	Throttle lever clamp screw
101-277S	Plate attaching screw and washer assembly (E9V1)
101-279	Throttle lever adjusting screw
105A-13	Flange stud nut (2)
105A-28	Throttle lever clamp nut
105A-51	Kickdown switch bracket attaching nut (E9N1) (2)
114-81	Dash pot pick up arm (E9U1 E9V1)
115-30	Choke connector rod (E9N1 E9T1)
115-80	Choke connector rod (E9U1 E9V1)
115-98U	Push rod assembly and spring unit (consists of 1 61 403 and 1-115-79S) (E9V1)
116-13	PUMP INTAKE CHECK BALL
116-18	PUMP DISCHARGE CHECK BALL
117-70	PUMP LIFTER LINK
117-141	PUMP LINK
117-144	Dash pot lifter link (E9U1 E9V1)
121-69	BODY GASKET (E9N1 E9T1)
121-90	BODY GASKET (E9U1 E9V1)
121-160	BODY FLANGE GASKET (E9N1 E9T1 E9U1)—2) (E9V1—1)
121-163	BODY TO INSULATOR GASKET (E9V1)
123 31S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY
136 71	Switch plunger washer (E9V1)
145-13	MAIN VENT TUBE
149-62S	STEP UP JET ASSEMBLY
149-108S	Dash-pot valve cage assembly (E9V1)
150-111	Dash pot pin (E9U1 E9V1)
150A-13	PIN SPRING (E9V1—2) (E9N1 E9T1 E9U1—1)
160 46S	STEP UP PISTON PLATE AND ROD ASSEMBLY
160-88S	Kickdown switch piston assembly (E9V1)
161-45	Terminal end plate (E9V1)
161-46	Push rod end plate (E9V1)
172-16	Cable clip (E9N1 E9V1)
180-64	Kickdown switch bracket (E9N1)
183-64	Insulator (E9N1 E9T1 E9U1)
183-66	Insulator (E9V1)
184-53S	Terminal block and retainer clip assembly (E9V1)
192-27S	Kickdown switch assembly (complete) (E9N1)
213-11S	Electro magnet and housing assembly (E9V1)
224-10S	MAIN METERING JET ASSEMBLY—STANDARD
224-13S	Main metering jet assembly—1 size lean
224-14S	Main metering jet assembly—2 size lean

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

MODELS
B-4-B, C—1953
C-1-B6, C6—1954

Fluid Coupling and
M-6 Transmission



DODGE TRUCK
½ and ¾ TON
1953-1955

BB DOWN-DRAFT CARBURETERS—**MODELS DTL1-DTL2**

CARBURETER SPECIFICATIONS

For Dodge Six Cylinder Engine: 3¼ Inch Bore, 4⅜ Inch Stroke

Dimensions: Flange size, 1½ inch S. A. E.
Throttle bore, 1-9/16 inch.
Main venturi, 1¼ inch I. D.

Float Setting: See Adjustments.

Gasoline Intake: Size No. 44 (.086 inch) drill in needle seat.

Idle Orifice Tube: Jet, size .0276 inch diameter. Idle passage air bleed (in air horn), size .065 inch diameter. Restriction in body, size .0565 inch diameter.

Idle Port: Upper port, slot type, length .149 inch; width .030 inch.

Idle Port Opening: Top of port located .118 to .122 inch above top edge of valve with valve tightly closed.

Lower Port (For Idle Adjustment Screw): Size .053 to .057 inch diameter.

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture turn screw out. Idle engine between 450-500 r.p.m. (gear shift lever in neutral).

Main Metering Jet: Calibrated to flow 256 cc per minute. (Do not gauge for size. If in doubt replace with new part.)

Main Vent: Through diffuser (air bleed inside bowl) size .0315 inch diameter.

Main Vent Tube: Side holes: 6—.0354 inch diameter.

Step-Up Jet: Size No. 65 (.035 inch) drill.

Accelerating Pump: Pump intake passage ball check seat, size .107 to .112 inch diameter. Pump discharge passage, restriction (under ball check), size .062 to .065 inch diameter in body.

Pump (discharge) jet, size .0276 inch drill.

Pump Adjustment: See Adjustments.

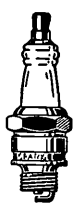
Choke: Butterfly type, with poppet valve.

Slow Closing Throttle: Dash pot with discharge (By-pass), size .019 inch drill through valve cage.

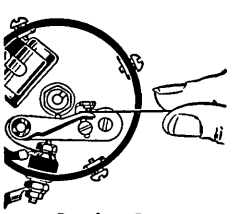
Vacuum Spark Port: Slot (round end) type. Size .040 by .110 inch. Bottom of port .021 to .027 inch above top edge of valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

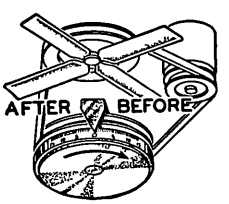
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



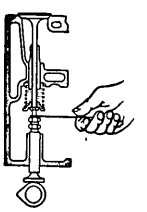
Spark Plug
Gap
.035"



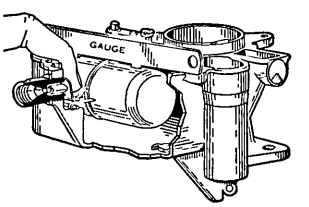
Breaker Point
Setting
.020"



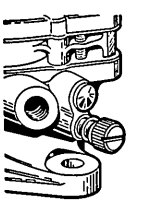
Ignition Timing
Breaker Points to Open:
T.D.C.



Valve Setting
Hot
Intake .010"
Exhaust .014"



Float Setting
(See Adjustments)



Idle Adjustment
Screw Setting
½ to 1½
Turns Open

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: This adjustment must be made with the bowl cover gasket and float pin retainer removed. Place a .050 inch feeler gauge (T109-226) between lip of float and intake pin. Hold the lip on float arm against the seated intake needle fully compressing the intake needle spring. The distance from the top surface of the body casting to the top of the float should be 5/64 inch (gauge T109-50). To adjust bend lip on float arm.

PUMP ADJUSTMENT: Remove air horn assembly, back out throttle adjustment screw and be sure pump operating link is in center hole of throttle shaft arm. Place Universal pump travel gauge T109-117S on edge of bowl cover so that lip of gauge extends over top of plunger shaft. With throttle valve seated turn knurled nut of gauge until lip contacts top of plunger shaft. Take reading indicated on gauge. Repeat with throttle valve wide open and plunger pushed to bottom of cylinder. The difference in reading obtained should be "22" (22/64") plunger travel. Adjust by bending horizontal portion of pump lifter link.

Pump stroke adjustable for high or low temperatures. Set to longest stroke for cold weather, shorter stroke for hot weather driving.

EXCESSIVE RICHNESS above 50 miles per hour may be caused by a clogged main vent tube. After removal of rivet

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plug beneath float bowl with tool No. T109-210 main vent tube can be removed and a new tube inserted with tool No T109-195 Care must be exercised in inserting new tube which must seat tightly Use new rivet to complete the installation

MAXIMUM ECONOMY and performance are secured only when breaker points, spark plugs, valves and motor timing are set to manufacturer's specifications After motor is properly tuned, the following should also be done to insure satisfactory performance and economy

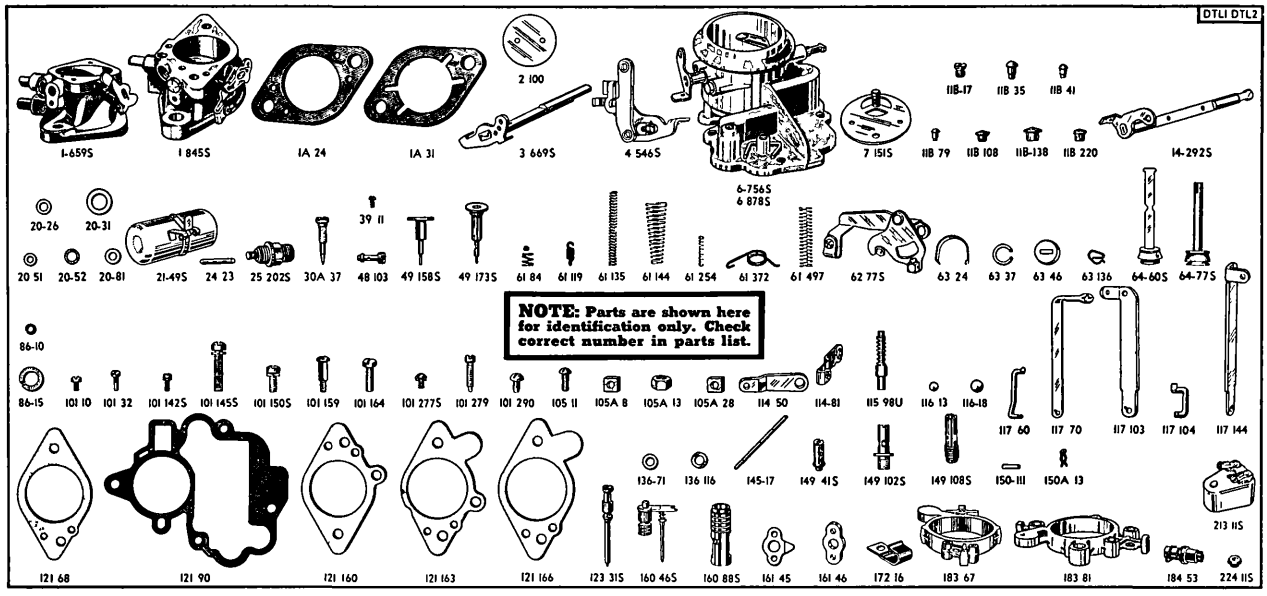
(a) Float level must be set as above

(b) Step-up rod in step-up jet must seat and move freely When reassembling, jet must be screwed in tight against seat

(c) Step-up piston in body casting should not bind and must be free of dirt

(d) Main metering jet can be replaced with leaner than standard metering jets, for altitude

CAUTION. Do not attempt to gauge metering jets with drills These jets have been flow-tested to insure correct fuel flow



Dodge Truck—1953-1954—Carbureters DTL1-DTL2

WHEN SERVICING, USE GASKET ASSORTMENT No 164A

Part No.	PART NAME	
1-659S	Body flange assembly (DTL1)	
1-845S	Body flange assembly (DTL2)	
1A-24	Flange gasket—for use with governor	
1A-31	Flange gasket—for use without governor	
2-100	Throttle valve	
3-669S	Throttle shaft and arm assembly	
4-546S	Throttle lever assembly	
6-756S	Air horn assembly	
6-878S	Air horn assembly (DTL1) (Sup by 6-756S)	
7-151S	Choke valve assembly	
11B-17	Pump discharge passage plug	
11B-35	Rivet plug	
11B-41	Rivet plug	
11B-79	Rivet plug	(3)
11B-108	Idle port rivet plug	
11B-138	Pump jet passage rivet plug	
11B-220	High speed passage rivet plug	
14-292S	Choke shaft and lever assembly	
20-26	Main metering jet gasket	
20-31	Needle seat gasket	
20-51	Step-up jet gasket	
20-52	Step-up piston gasket	
20-81	Switch plunger gasket	
21-49S	Float and lever assembly	
24-23	Float lever pin	
25-202S	Needle, pin, spring and seat assembly	
30A-37	Idle adjustment screw	
39-11	Choke and throttle valve attaching screw	(4)
48-103	Pump jet	
49-158S	Valve cage plunger rod assembly (DTL1)	
49-173S	Valve cage plunger rod assembly (DTL2)	
61-84	Idle adjustment screw spring	
61-119	Choke pull-back spring	
61-135	Step-up piston spring	
61-144	Pump spring	
61-254	Plunger operating spring	
61-372	Dashpot arm spring	
61-497	Switch piston spring	
62-77S	Choke tube bracket assembly	
63-24	Float lever pin retainer	
63-37	Intake ball check retainer ring	
63-46	Pump spring retainer	
63-136	Connector retainer clip	
64-60S	Pump plunger and rod assembly	
64-77S	Dashpot plunger and rod assembly	
86-10	Dashpot lifter link attaching screw lock washer (DTL2)	
86-15	Flange stud lock washer	(2)
101-10	Wire clamp screw	
101-32	Dashpot lifter link attaching screw (DTL2)	
101-142S	Choke bracket attaching screw and washer assembly	

Part No.	PART NAME	
101-145S	Body flange attaching screw and washer assembly (DTL1) (2) (DTL2)	(3)
101-150S	Bowl cover attaching screw and washer assembly	(4)
101-159	Electro magnet assembly attaching screw	
101-164	Throttle lever clamp screw	
101-277S	Plate attaching screw and washer assembly	
101-279	Throttle adjusting screw	
101-290	Terminal attaching screw	
105-11	Choke tube clamp screw	
105A-8	Choke tube clamp nut	
105A-13	Flange stud nut	(2)
105A-28	Throttle lever clamp nut	
114-50	Dashpot pickup arm (loose) (DTL1)	
114-81	Dashpot pickup arm (loose) (DTL2)	
115-98U	Push rod assembly and spring unit (consists of (1) 61-403 and (1) 115-79S)	
116-13	Pump intake check ball	
116-18	Pump discharge check ball	
117-60	Pump link	
117-70	Pump lifter link	
117-103	Dashpot lifter link (DTL1)	
117-104	Dashpot link (DTL1)	
117-144	Dashpot lifter link (DTL2)	
121-68	Body flange gasket (DTL1)	
121-90	Body gasket	
121-160	Body flange gasket (DTL2)	
121-163	Carbureter body to insulator gasket (DTL2)	
121-166	Carbureter body to insuator gasket (DTL1)	
123-31S	Idle orifice tube and plug assembly	
136-71	Switch plunger washer	
136-116	Terminal attaching screw washer	
145-17	Main vent tube	
149-41S	Step-up jet assembly	
149-102S	Dashpot valve cage assembly (DTL1)	
149-108S	Dashpot valve cage assembly (DTL2)	
150-111	Dashpot pin	
150A-13	Pin spring	
160-46S	Step-up piston, plate and rod assembly	
160-88S	Piston and contact plate assembly	
161-45	Terminal end plate	
161-46	Push rod end plate	
172-16	Cable clip	
183-67	Insulator (DTL1)	
183-81	Insulator (DTL2)	
184-53S	Terminal block and retainer clip assembly	
213-11S	Electro magnet and housing assembly	
224-11S	Main metering jet assembly (standard)	
224-17S	Main metering jet assembly—1 size lean	
224-18S	Main metering jet assembly—2 sizes lean	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

MODELS

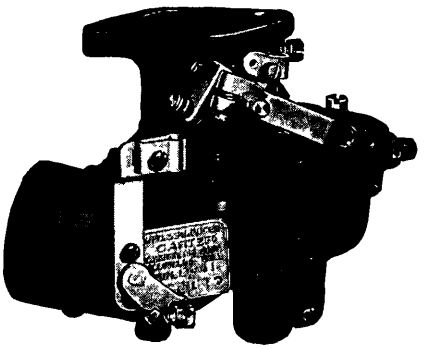
B-2-GM, GMA, HM, HMA, HHM, HHMA, JM, JMA, KM, KMA 1950

B-3-GM, GMA, HM, HMA, HHM, HHMA, JM, JMA, KM, KMA 1951-52

B-4-HM, JM, KMA—1953

C-1-HM6, JM6, KMA6—1954

C-3-HM6, HHM6, JM6, KMA6 1955



DODGE TRUCK CAB-OVER-ENGINE 1950-1955

B-B UP-DRAFT CARBURETERS—Nos. 6N1-6N2

CARBURETER SPECIFICATIONS

For Dodge Six Cylinder Engines:

3-7/16 Inch Bore, 4¼ Inch Stroke: B-2-GM, GMA, HM, HMA, HHM, HHMA; B-3-GM, GMA, HM, HMA, HHM, HHMA
3-7/16 Inch Bore, 4½ Inch Stroke: B-2-JM, JMA, KM, KMA; B-3-JM, JMA, KM, KMA; B-4-HM; C-1-HM6; C-3-HM6
3-7/16 Inch Bore, 4¾ Inch Stroke: B-4-JM, KMA; C-1-JM6, KMA6; C-3-HHM6, JM6, KMA6

Dimensions: Flange size, 1½ inch (38.10 mm).
Throttle bore, 1-7/16 inch (38.51 mm).
Main venturi, 1⅛ inch I. D. (28.58 mm).
Air bleed through venturi to idle passage .0885 to .0905 inch diameter (2.25 to 2.30 mm) drill.

Float Setting: Distance from top of float to top surface of lower body casting 1/32 to 1/16 inch (.79 to 1.59 mm).

Vent: To float chamber size, No. 30 (3.26 mm) drill.

Balance Vent Tube: Inside diameter, 7/32 inch (5.56 mm).

Gasoline Intake Needle: Triangular, horizontal. No. 44 (2.18 mm) drill in needle seat.

Idle Jet Tube: Jet size, .0236 inch (.60 mm) drill.

Idle Ports: Lower port size: .078 to .080 inch (1.98 to 2.03 mm) diameter. Top of port located .000 to .004 inch (.0 to .102 mm) below lower edge of valve.
Upper port size: .053 to .057 inch (1.35 to 1.45 mm) diameter (for idle adjustment screw).

Set Idle Adjustment Screw: ½ to 1 turn open. For richer mixture, turn screw out. Do not idle engine below 300 r.p.m. or 6 m.p.h.

Main Metering Screw: Calibrated to flow 316 to 320 cc per minute. (Do not gauge for size. If in doubt, replace with new part.)

Nozzle: Discharge jet size, No. 33 (2.87 mm) drill.
Side holes: 2—.0394 inch (1.00 mm) drill 1/16 inch (1.59 mm) from shoulder.
1—.051 inch (1.3 mm) drill ⅜ inch (9.525 mm) from shoulder.
1—.063 inch (1.6 mm) drill 23/32 inch (18.256 mm) from shoulder.
1—.051 inch (1.3 mm) drill 1-1/16 inch (26.99 mm) from shoulder.

Air Bleed to Nozzle: (Vent tube) Size, .0394 inch (1.00 mm) drill.

Step-Up Jet: (Power Orifice) Size, .0472 inch (1.20 mm) drill.

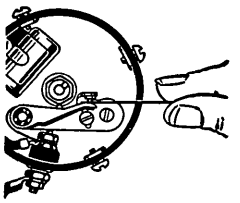
Accelerating Pump: Type, low pressure, delayed action. Stroke: Summer setting (inner hole, short stroke 9/16 inch (14.29 mm).
Winter setting (outer hole, long stroke) 1 inch (25.40 mm).
Pump intake ball check: Size .125 inch (3.175 mm).
Pump discharge (through nozzle).

Motor Tune-Up—Be Accurate!

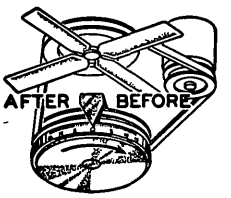
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



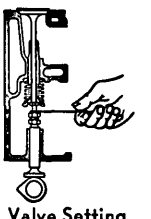
Spark Plug Gap .035"



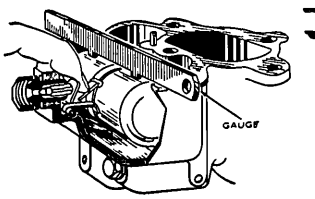
Breaker Point Setting .020"



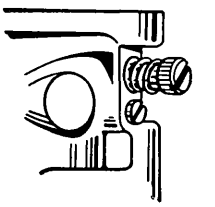
Ignition Timing Breaker Points to Open:
1950-52—T. D. C.
1953—2° A. T. D. C.
1954-55—1° B. T. D. C.



Valve Setting (Hot)
B-2-GM, GMA; B-3-GM, GMA; C-1-HM6
Intake .010"
Exhaust .014"
C-3-HM6, HHM6
All Others
Intake .010"
Exhaust .018"



Float Setting (Use Gauge)
1/32 to 1/16 Inch



Idle Adjustment Screw Setting
½ to 1 Turn Open

CARBURETER ADJUSTMENTS

To Secure a Good Idle: Set throttle lever adjusting screw so motor runs approximately 300 r.p.m. Then set idle adjustment screw so motor fires evenly. Correct setting will be found between ½ to 1 turn open. A richer mixture is obtained by backing out adjustment screw—a leaner mixture by turning screw in. If motor stalls while idling, remove idle passage tube and idle jet tube and clean with compressed air.

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To Improve Acceleration Examine pump link setting For winter driving link screw should be set in outer hole, giving long stroke, for hot weather, in high altitudes, pump link should be connected in inner hole, giving short stroke If this does not give desired results, the main metering jet, pump metering jet check valve assembly and pump valve assembly should be removed and cleaned with compressed air

If Motor Loads—Check Float Level Wear on lip of float lever will raise float level from factory setting causing carbureter to load up To lower float level, bend lip of float lever toward needle To raise float level bend lip away from needle A very slight bend is sufficient Be sure to bend lip of float **not** bracket

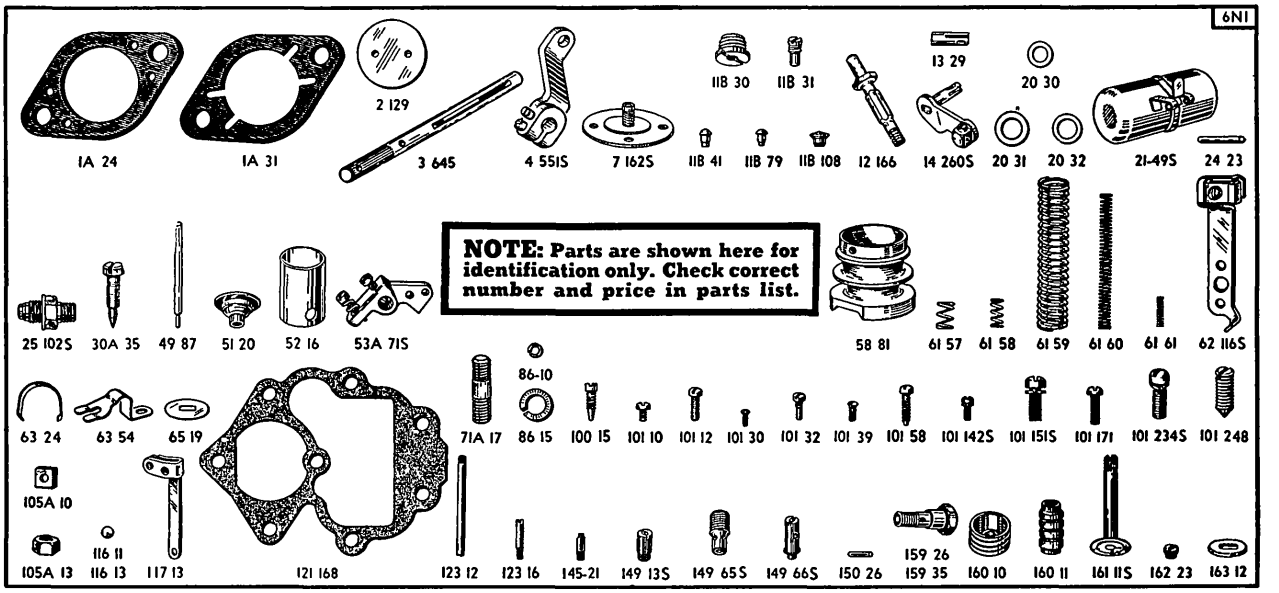
Economy (a) Maximum economy is secured only when breaker points, spark plugs, valves and motor timing are set to manufacturer s specifications

(b Float level must set as instructed on Page 1

(c) Step-up valve cage assembly should be examined Ball check in this assembly must seat and move freely When reassembling valve cage must be screwed in tight against seat

(d) Step-up push rod must move freely in upper and lower guides

(e) Step-up piston in upper casting should not bind and must be free from dirt



Dodge Carbureters Nos. 6N1-6N2—1950-1955

WHEN SERVICING, USE GASKET ASSORTMENT No 172A, REPAIR PACKAGE No. 1597

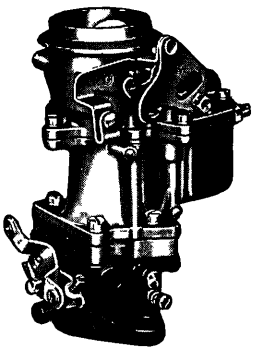
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1A-24	FLANGE GASKET—FOR USE WITH GOVERNOR	
1A-31	FLANGE GASKET—FOR USE WITHOUT GOVERNOR	
2-129	Throttle valve	
3 645	Throttle shaft	
4-551S	Throttle lever assembly	
7-162S	Choke valve assembly	
11B-19	Rivet plug (6N2)	
11B-30	Step up piston plug	
11B-31	Idle hole plug	
11B-41	Rivet plug	(3)
11B-79	Rivet plug	
11B-108	Idle port rivet plug	
12-166	Nozzle	
13-29	Choke shaft stub	
14 260S	Choke assembly with clamp and screw	
20-30	NOZZLE GASKET	
20-31	Needle seat gasket	
20-32	METERING SCREW GASKET	
21-49S	Float and lever assembly	
24-23	FLOAT LEVER PIN	
25-102S	NEEDLE AND SEAT ASSEMBLY	
30A-35	Idle adjustment screw	
49-87	STEP UP PUSH ROD	
51-20	Pump collar	
52-16	Pump sleeve	
53A-71S	Pump arm assembly	
58-81	Venturi	
61-57	Idle adjustment screw spring	
61-58	Throttle lever adjusting screw spring	
61-59	PUMP SPRING	
61-60	STEP UP PISTON SPRING	
61-61	Step up spring	
62 116S	Choke tube bracket assembly	
63-24	FLOAT LEVER PIN RETAINER	
63 54	Packing retainer	
65-19	Pump link cover plate	(2)

Part No.	PART NAME	
71A-17	Flange stud	
86 10	Lock washer	
86-15	Flange stud lock washer	(2)
100-15	Throttle lever set screw	
101-10	Wire clamp screw	
101-12	Clamp screw	
101-30	Choke valve screw	(2)
101-32	PUMP LINK SCREW	
101-39	Throttle valve screw	(2)
101-58	Throttle lever adjusting screw	
101-142S	Attaching screw and washer assembly	(3)
101-171	Throttle lever clamp screw	
101-234S	Body attaching screw and washer assembly (upper)	(6)
101-248	Set screw	
105A-10	Choke tube clamp nut	
105A-13	Flange nut	(2)
116-13	Step up check ball	
117-13	Pump link	
121-168	BODY GASKET	
123-12	Idle passage tube	
123-16	IDLE ORIFICE TUBE	
145-21	VENT TUBE	
149-13S	CHECK VALVE CAGE ASSEMBLY	
149-65S	PUMP VALVE CAGE ASSEMBLY	
149-66S	STEP UP VALVE CAGE ASSEMBLY	
150-26	Pump collar pin	
150-29	Venturi pin (6N2)	
159-26	Main metering screw—1 size lean	
159-35	MAIN METERING SCREW	
160-10	Pump piston	
160-11	STEP UP PISTON	
161-11S	Pump rod plate and rod assembly	
162-23	Power orifice	
163-12	FELT PACKING	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used.

MODELS
1950—B-2-B, C
1951-52—B-3-B, C, D
1953—B-4-B, C
1954—C-1-B6, C6



DODGE TRUCK
½ and ¾ TON
1950-1954
1 TON – 1952

B-B DOWN-DRAFT CARBURETERS—**MODELS DTE1-DTE2**

CARBURETER SPECIFICATIONS

For Dodge Truck Six Cylinder Engine: 3¼ Inch Bore, 4⅜ Inch Stroke
For Dodge Truck Six Cylinder Engine: 3¼ Inch Bore, 4⅝ Inch Stroke (B-3-D)

Dimensions: Flange size, 1½ inch S. A. E.
Throttle bore, 1-9/16 inch (39.69 mm).
Main venturi, 1¼ inch (31.75 mm) I. D.

Float Setting: When using a solid needle, the distance from the top of float, should be 5/64 inch (1.98 mm) (gauge T109-50), plus or minus 1/64 inch (.397 mm) below top surface of carbureter body casting. Float setting for spring loaded needle and seat assembly: See footnote (*) on page two.

Vents: Outside, none. Inside balance vent .218 inch (5.54 mm) diameter.

Gasoline Intake Needle: Triangular, horizontal. No. 44 (2.18 mm) drill in needle seat.

Idle Orifice Tube: Jet size, .0276 inch (.70 mm). Idle passage air bleed (in air horn), size .065 inch (1.65 mm). Restriction in body, size .054 to .055 inch (1.37 to 1.39 mm) diameter.

Idle Ports: Upper port, slot type; length .149 inch (3.789 mm): width, .030 inch (.76 mm).
Top of port located .118 to .122 inch (2.997 to 3.099 mm) above top edge of valve.
Lower port: (For Idle Adjustment Screw) Size, .053 to .057 inch (1.35 to 1.45 mm) diameter.

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture, turn screw out. Idle engine between 450-500 r.p.m

Main Metering Jet: Calibrated to flow 256 cc per minute. (Do not gauge for size. If in doubt, replace with new part.)

Main Vent: Through diffuser (air bleed inside bowl) size .0315 inch (.80 mm) drill.

Main Vent Tube: Side holes, 6—.0354 inch diameter.

Step-Up Jet: No. 65 (.89 mm) drill size.

Accelerating Pump: Type, delayed action. Stroke, summer setting (inner hole, short stroke). Intermediate setting (center hole). Winter setting (outer hole, long stroke).
Pump intake passage, ball check seat, size .115 to .120 inch (2.93 to 3.05 mm) diameter.
Pump discharge passage; restriction (under ball check), size .062 to .065 inch (1.58 to 1.65 mm) diameter in body.
Pump (discharge) jet, size .0276 inch (.70 mm) drill.

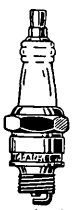
Pump Adjustment: 22/64" (8.731 mm) plunger travel (center hole). Use gauge No. T109-117S.

Choke: Butterfly type, with poppet valve.

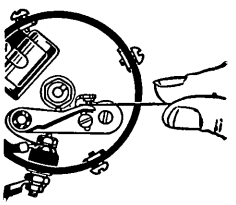
Vacuum Spark Port: Slot (round end) type. Size .040 by .110 inch (1.016 to 2.794 mm). Bottom of port, .021 to .027 inch (.533 to .686 mm) above top edge of valve.

Motor Tune-Up—Be Accurate!

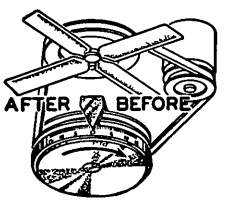
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



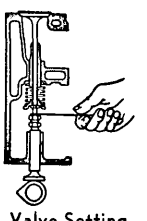
Spark Plug Gap
B-2-B, C
.036"-.040"
B-3-B, C, D;
B-4-B, C;
C-1-B6, C6
.035"



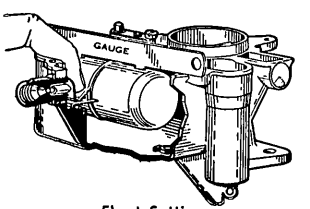
Breaker Point Setting
.020"



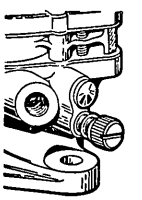
Ignition Timing
Breaker Points to Open:
T.D.C.



Valve Setting
(Hot)
Intake .010"
Exhaust .014"



Float Setting
(Use Gauge T109-50)
Solid Needle—5/64 Inch
Spring Loaded Needle
See Footnote (*) on Page 2



Idle Adjustment Screw Setting
½ to 1½
Turns Open

CARBURETER ADJUSTMENTS

If carbureter loads up after considerable service, check float level. Wear on lip of float lever will raise float level. Before adjusting float, be sure float lever pin is firmly seated. Reset float level by bending lip of float lever away from needle to raise level, or bend lip toward needle to lower float level. Bend vertical lip of float only.

If motor stalls while idling, set throttle lever adjusting screw so motor runs between 450-500 r.p.m. Then set idle adjustment screw to specifications. If these adjustments do not correct the trouble, remove idle orifice tube and plug assembly. Clean tube and passages with compressed air.

If acceleration is not satisfactory, remove pump jet and clean with compressed air. However, it is usually advisable to replace the pump jet, as its cost is nominal. All jets must be seated gasoline tight. Poor acceleration may be due to damaged or worn plunger leather in accelerating pump, sediment in pump cylinder or clogged intake ball check at bottom of pump cylinder and discharge ball check in discharge passage. If plunger is removed from cylinder, use care in installing to avoid damage to plunger leather.

Correct air fuel ratio is provided by a "balance tube" in the air horn. The balance tube should be checked each time the

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carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type, size or condition of air cleaner Should the cleaner become clogged, the capacity will be reduced but the air-fuel mixture ratio will not be changed

Excessive richness above 50 miles per hour may be caused by a clogged main vent tube After removal of rivet plug beneath float bowl with tool No T109-43, main vent tube can be removed and a new tube inserted with tool No T109-195 Care must be exercised in inserting new tube which must seat tightly Use new rivet to complete the installation

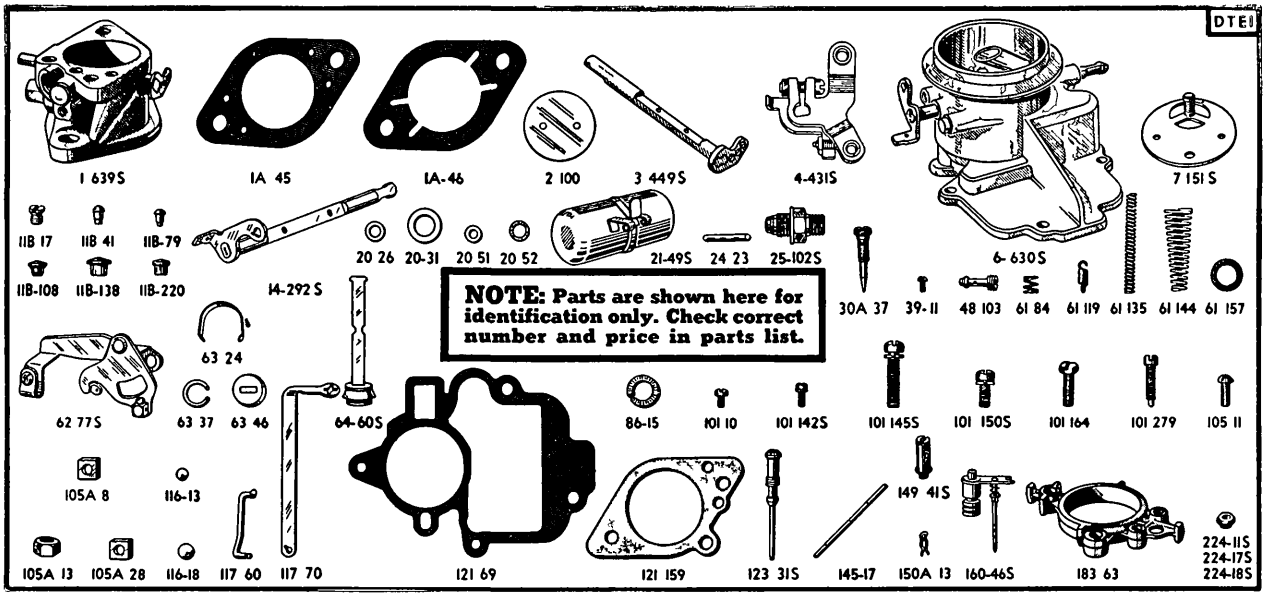
Pump Adjustment Remove air horn assembly, back out throttle adjustment screw and be sure pump operating link is in center hole of throttle shaft arm Place Universal pump travel gauge T109-117S on edge of bowl cover so that lip of gauge extends over top of plunger shaft Turn knurled nut of gauge until lip contacts top of plunger shaft with throttle valve seated Take reading indicated on gauge Repeat with throttle valve wide open and plunger pushed to bottom of cylinder The difference in reading obtained should be ' 22 (22/64) plunger travel

Adjust by bending horizontal portion of pump lifter link Pump stroke adjustable for high or low temperatures Set to longest stroke for cold weather, shorter stroke for hot weather driving

Maximum economy and performance are secured only when breaker points, spark plugs, valves and motor timing are set to manufacturer s specifications After motor is properly tuned, the following should also be done to insure satisfactory performance and economy

(a) Float level must be set as above
(b) Step-up rod in step-up jet must seat and move freely When reassembling, jet must be screwed in tight against seat
(c) Step-up piston in body casting should not bind and must be free of dirt
(d) Main metering jet can be replaced with leaner than standard metering jets, for altitude

CAUTION Do not attempt to gauge metering jets with drills These jets have been flow-tested to insure correct fuel flow



Dodge Truck Carbureters Nos. DTE1-DTE2—1950-1954

WHEN SERVICING, USE GASKET ASSORTMENT No 203 REPAIR PACKAGE No 1533A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-639S	Body flange assembly	
1A-45	Flange gasket—for use with governor	
1A-46	FLANGE GASKET—FOR USE WITHOUT GOVERNOR	
2-100	Throttle valve	
3-449S	Throttle shaft and arm assembly	
4-431S	Throttle lever assembly	
6-630S	Air horn assembly	
7-151S	Choke valve assembly	
11B-17	Pump discharge passage plug	
11B-41	Rivet plug	
11B-79	Rivet plug	(2)
11B-108	IDLE PORT RIVET PLUG	
11B-138	PUMP JET RIVET PLUG	
11B-220	HIGH SPEED PASSAGE PLUG	
14-292S	Choke control lever and shaft assembly	
20-26	Gasket	
20-31	Needle seat gasket	
20-51	Step up jet gasket	
20-52	STEP UP PISTON GASKET	
21-49S	Float and lever assembly (Sup by 21 123S)	
21-123S	Float and lever assembly	
24-23	Float lever pin	
25-102S	Needle and seat assembly (Sup by 25 202S)	
25-202S	*NEEDLE PIN SPRING AND SEAT ASSEMBLY	
30A-37	Idle adjustment screw	
39-11	Valve attaching screw	(4)
48-103	PUMP JET	
61-84	Idle adjustment screw spring	
61-119	Choke pull back spring	
61-135	STEP UP PISTON SPRING	
61-144	PUMP SPRING	
61-157	Plunger spring	
61-207	Intake needle spring	

Part No.	PART NAME	
62-77S	Choke tube bracket assembly	
63-24	FLOAT LEVER PIN RETAINER	
63-37	PUMP BALL RETAINER RING	
63-46	Pump spring retainer	
64-60S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49 120)	
86-15	Flange stud lock washer	(2)
101-10	Wire clamp screw	
101-142S	Choke bracket attaching screw and washer assembly	
101-145S	Flange attaching screw and washer assembly	(3)
101-150S	Bowl cover attaching screw and washer assembly	(4)
101-164	Throttle lever clamp screw	
101-279	Throttle lever adjusting screw	
105-11	Choke tube clamp screw	
105A-8	Choke tube clamp nut	
105A-13	Flange nut	(2)
105A-28	Throttle lever clamp nut	
116-13	PUMP INTAKE CHECK BALL	
116-18	PUMP DISCHARGE CHECK BALL	
117-60	PUMP LINK	
117-70	PUMP LIFTER LINK	
121-69	BODY GASKET	
121-159	BODY FLANGE GASKET	(2)
123-31S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
145-17	MAIN VENT TUBE	
149-41S	STEP UP JET ASSEMBLY	
150-98	Intake needle pin	
150A-13	PIN SPRING	
160-46S	STEP UP PISTON PLATE AND ROD ASSEMBLY	
183-63	Insulator	
224-11S	MAIN METERING JET ASSEMBLY	
224-17S	Main metering jet assembly—1 size lean	
224-18S	Main metering jet assembly—2 sizes lean	

*When using a spring loaded needle and seat place a 050" feeler gauge between lip of float and intake needle pin With intake needle spring fully compressed top of float should be 5/64 inch (1 98 mm) (Gauge T109 50) below top surface of carbureter body casting Adjust by bending lip on float

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

MODELS
1949-50—B-2-B, B-2-C
1951-52—B-3-B, B-3-C
1952—B-3-D
1953—B-4-B, B-4-C
1954—C-1-B6, C6

(Trucks equipped with Fluid Coupling)

DODGE TRUCK
½ and ¾ TON – 1949-1954
1 TON – 1952

BB DOWN-DRAFT CARBURETER—**MODEL DTG1**

CARBURETER SPECIFICATIONS

For Dodge Truck Six Cylinder Engines 3¼ Inch Bore, 4⅜ Inch Stroke, B 2-B, C B 3-B, C B 4 B C C-1-B6, C6
3¼ Inch Bore, 4⅝ Inch Stroke B 3 D

Dimensions Flange size 1½ inch S A E
Throttle bore 1 9/16 inch (39 69 mm)
Main venturi 1¼ inch (31 75 mm)

Float Setting When using a solid needle the distance from the top of float should be 5/64 inch (1 98 mm) (gauge T109 50) plus or minus 1/64 inch (397 mm) below top surface of car bureter body casting Float setting for spring loaded needle and seat assembly See footnote (*) on page two

Vents Outside none Inside balance vent 218 inch (5 54 mm) diameter

Gasoline Intake Needle Triangular horizontal No 44 (2 18 mm) drill in needle seat

Idle Orifice Tube Jet size 0276 inch (70 mm) Idle passage air bleed (in air horn) size 0649 inch (1 65 mm) Idle restriction in body size 054 055 inch (1 371 1 397 mm)

Idle Ports Upper port slot type length 149 inch (3 78 mm) Width 030 inch (76 mm) Top of port located 118 to 122 inch (3 00 to 3 10 mm) above top edge of valve Lower port size 053 to 057 inch (1 35 to 1 45 mm) diameter (For idle adjustment screw)

Set Idle Adjustment Screw ½ to 1½ turns open For richer mixture turn screw out Idle engine between 450 and 500 r p m

Main Metering Jet Calibrated to flow 254 to 258 cc per minute

Main Vent Through diffuser (air bleed in side bowl) size 0315 inch (80 mm) drill

Main Vent Tube Side holes 6—0354 inch diameter

Step-Up Jet No 65 (89 mm) drill

Accelerating Pump Type delayed action Adjustable stroke Pump intake passage Restriction (under ball check) size 093 inch (2 36 mm) diameter in body Pump discharge passage Restriction (under ball check) size 062 to 065 inch (1 58 to 1 65 mm) diameter in body Pump (discharge) jet size 0276 inch (70 mm) drill

Pump Adjustment 22/64" (8 731 mm) plunger travel (center hole) Use gauge No T109 117S

Slow Closing Throttle Dash pot with discharge (by pass) size 018" 020" (.50 mm) drill through plunger shaft

Vacuum Spark Port Slot type size 040 by 110 inch (1 016 by 2 794 mm) Bottom of port to be 021 to 027 inch (53 to 70 mm) above top edge of valve

MOTOR TUNE-UP

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open	Valve Setting (Hot)	Float Setting (Use Gauge T109-50) Solid Needle—5/64 Inch Spring Loaded Needle See Footnote (*) on Page 2	Idle Adjustment Screw Setting
1949 50 038" 1951 54 035"	020"	T D C	Intake 010' Exhaust 014"		½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

If carbureter loads up after considerable service check float level Wear on lip of float lever will raise float level Before adjusting float, be sure float lever pin is firmly seated Reset float level by bending lip of float lever away from needle to raise level, or bend lip toward needle to lower float level Bend vertical lip of float only

If motor stalls while idling, set throttle lever adjusting screw so motor runs between 450-500 r p m Then set idle adjustment screw to specifications If these adjustments do not correct the trouble, remove idle orifice tube and plug assembly Clean tube and passages with compressed air

If acceleration is not satisfactory, remove pump jet and clean with compressed air However, it is usually advisable to replace the pump jet, as its cost is nominal All jets must be seated gasoline tight Poor acceleration may be due to damaged or worn plunger leather in accelerating pump, sediment in pump cylinder or clogged intake ball check at bottom of pump cylinder and discharge ball check in discharge passage If plunger is removed from cylinder, use care in installing to avoid damage to plunger leather

Correct air fuel ratio is provided by a 'balance tube in the air horn The balance tube should be checked each time the carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type, size or condition of air cleaner Should the cleaner become clogged the capacity will be reduced but the air-fuel mixture ratio will not be changed

Excessive richness above 50 miles per hour may be caused by a clogged main vent tube After removal of rivet plug beneath float bowl with tool No T109-43 main vent tube can be removed and a new tube inserted with tool No T109-195 Care must be exercised in inserting new tube which must seat tightly Use new rivet to complete the installation

Pump Adjustment Remove air horn assembly, back out throttle adjustment screw and be sure pump operating link

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is in center hole of throttle shaft arm Place universal pump travel gauge T109-117S on edge of bowl cover so that lip of gauge extends over top of plunger shaft Turn knurled nut of gauge until lip contacts top of plunger shaft with throttle valve seated Take reading indicated on gauge Repeat with throttle valve wide open and plunger pushed to bottom of cylinder The difference in reading obtained should be '22' (22/64") plunger travel

Adjust by bending horizontal portion of pump lifter link Pump stroke adjustable for high or low temperatures Set to longest stroke for cold weather, shorter stroke for hot weather driving

Dash-Pot Adjustment Engines operating in connection with fluid couplings frequently tend to stall during rapid deceleration unless the throttle closes slowly Slow throttle movement is necessary only during the last part of the closing The dash-pot or decelerating pump acts as a snubber to the throttle allowing fast movement to almost closed position, then slow closing from that point to the idle position

When the throttle is released, the throttle valve closes rapidly until throttle shaft arm contacts the dash-pot pick-up arm Then the dash-pot plunger must be pushed to the bottom of the cylinder before the throttle can close A ball check located in the lower end of the plunger shaft seals the larger upper opening and the gasoline must leave the cylinder through the small metered hole in lower part of the shaft

This reduces the rate at which plunger can be forced to the bottom of the cylinder making the last part of the throttle closing very slow **The adjusting screw (in top of bowl cover) should be opened five full turns from closed position** for average conditions Under extreme driving conditions greater openings may be necessary, although extreme dash-pot action will affect gear changes, and not enough action will allow engine to stall

Be sure plunger leather is soft and pliable and effects a good seal against the cylinder wall

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Dodge Truck—1949-1954—DTG1

WHEN SERVICING, USE GASKET ASSORTMENT No. 215; REPAIR PACKAGE No 1533A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-732S	Body flange assembly	
1A-45	Flange gasket for use with governor	
1A-46	FLANGE GASKET FOR USE WITHOUT GOVERNOR	
2-100	Throttle valve	
3 578S	Throttle shaft and arm assembly	
4-431S	Throttle lever assembly	
6-664S	Air horn assembly	
7-151S	Choke valve assembly	
11B-17	Pump discharge passage plug	
11B-41	Rivet plug	
11B-79	Rivet plug	(2)
11B-108	IDLE PORT RIVET PLUG	
11B-138	PUMP JET RIVET PLUG	
11B 220	RIVET PLUG	
14-292S	Choke control lever and shaft assembly	
20-26	Main metering jet gasket	
20 31	Needle seat gasket	
20-51	Step up jet gasket	
20 52	STEP UP PISTON GASKET	
21-49S	Float and lever assembly (Sup by 21 123S)	
21-123S	Float and lever assembly	
24 23	Float lever pin	
25-102S	Needle and seat assembly	
25-202S	*NEEDLE, PIN SPRING AND SEAT ASSEMBLY	
30A-37	Idle adjustment screw	
39-11	Valve attaching screw	(4)
48-103	PUMP JET	
61-84	Idle adjustment screw spring	
61-119	Choke pull back spring	
61-135	STEP UP PISTON SPRING	
61-144	PUMP SPRING	
61-157	Plunger spring	(2)
61-244	Dash pot adjustment screw spring	
61-372	Dash pot arm spring	
62-77S	Choke tube bracket assembly	
63 24	FLOAT LEVER PIN RETAINER	
63-37	PUMP CYLINDER BALL RETAINER	
63-46	Pump spring retainer	
64-60S	PLUNGER AND ROD ASSEMBLY (IDENTIFY BY SHAFT No 49 120)	

Part No.	PART NAME	
64-74S	Dash pot plunger and rod assembly	
86-10	Lock washer	
86-15	Flange stud lock washer	(2)
101-10	Wire clamp screw	
101-32	Screw (special)	
101-141	Dash pot adjustment screw	
101-142S	Choke bracket attaching screw and washer assembly	
101 145S	Body flange attaching screw and washer assembly	(3)
101-150S	Air horn attaching screw and washer assembly	(4)
101-164	Throttle lever clamp screw	
101-279	Throttle adjusting screw	
105-11	Choke tube clamp screw	
105A-8	Choke tube clamp nut	
105A-13	Flange nut	(2)
105A-28	Throttle lever clamp nut	
114-81	Dash pot pick up arm	
116-13	PUMP INTAKE CHECK BALL	
116-18	PUMP DISCHARGE CHECK BALL	
117-60	PUMP OPERATING LINK	
117-70	PUMP LIFTER LINK	
117-144	Dash pot lifter link	
121-90	BODY GASKET	
121-159	BODY FLANGE GASKET	(2)
123-31S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
145-17	MAIN VENT TUBE	
149-41S	STEP UP JET ASSEMBLY	
150-111	Dash pot pin	
150A-13	PIN SPRING	
160-46S	STEP UP PISTON PLATE AND ROD ASSEMBLY	
183-63	Insulator	
224-11S	MAIN METERING JET ASSEMBLY, STANDARD	
224-17S	Main metering jet assembly 1 size lean	
224 18S	Main metering jet assembly 2 sizes lean	

*When using a spring loaded needle and seat place a 050" feeler gauge (T109 226) between lip of float and intake needle pin With intake needle spring fully compressed, top of float should be 5/64 inch (Gauge T109 50) below top surface of carbureter body casting Adjust by bending lip on float

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used

DODGE 6

MODELS
"D-46", "D-47"
1953

(Fluid Drive with Standard Transmission and Overdrive)

BB DOWN-DRAFT CARBURETER—**MODEL D6V1**

CARBURETER SPECIFICATIONS

For Dodge Six Cylinder Engine 3¼ Inch Bore, 4⅝ Inch Stroke

Dimensions Flange size 1½ inch S A E
Throttle bore 1 9/16 inch
Main venturi 1¼ inch I D

Float Setting See Adjustments

Vents Outside none Inside balance vent tube

Gasoline Intake Size No 44 (086 inch) drill

Idle Orifice Tube Jet size 0276 inch diameter Idle passage air bleed (in air horn) size 065 inch diameter Restriction in body size 0565 inch diameter

Idle Port Upper port slot type length 149 inch width 030 inch

Idle Port Opening Top of port located 118 to 122 inch above top edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw) Size 053 to 057 inch diameter

Set Idle Adjustment Screw ½ to 1½ turns open For richer mixture turn screw out Idle engine between 450 500 r p m

Main Metering Jet Calibrated to flow 256 cc per minute (Do not gauge for size If in doubt replace with new part)

Main Vent Through diffuser (air bleed inside bowl) size 0315 inch drill

Main Vent Tube Side holes 6—0354 inch diameter

Step Up Jet Size No 65 (035 inch) drill

Accelerating Pumps Pump intake passage ball check seat size 107 to 112 inch diameter Pump discharge passage restriction (under ball check) size 062 to 065 inch diameter in body Pump (discharge) jet size 0276 inch diameter

Pump Adjustment See adjustments

Choke Butterfly type with poppet valve Inter connected to open throttle valve to fast idle position when choke is used

Slow Closing Throttle Dash pot with discharge (by pass) size 0197 inch drill through plunger shaft

Vacuum Spark Port Slot (round end) type Size 040 by 110 inch Bottom of port 021 to 027 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate! Always Use Feeler Gauges!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open	Valve Setting (Hot)	Float Setting	Idle Adjustment Screw Setting
035"	020"	2° B T D C	Intake 010" Exhaust 010"	5/64 Inch (Use Gauge T109 50)	½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT This adjustment must be made with the bowl cover gasket and float pin retainer removed Hold the lip on float arm against the seated intake needle making sure the float pin is at the bottom of its guide slots The distance from the top surface of the body casting to the top of the float should be 5/64 inch (gauge T109-50) To adjust bend lip on float arm

PUMP ADJUSTMENT Remove air horn assembly, back out throttle adjustment screw and be sure pump operating link is in center hole of throttle shaft arm Place Universal pump travel gauge T109-117S on edge of bowl cover so that lip of gauge extends over top of plunger shaft With throttle valve seated turn knurled nut of gauge until lip contacts top of plunger shaft Take reading indicated on gauge Repeat

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with throttle valve wide open and plunger pushed to bottom of cylinder The difference in reading obtained should be "22 (22/64") plunger travel Adjust by bending horizontal portion of pump lifter link

Pump stroke adjustable for high or low temperatures Set to longest stroke for cold weather, shorter stroke for hot weather driving

OVERDRIVE KICKDOWN SWITCH ADJUSTMENT With throttle valve in wide open position, adjust hex nuts on switch to have 1/64 inch to 3/64 inch clearance between kickdown lever and switch stem guide

DASH-POT ADJUSTMENT Tighten adjustment screw—then turn counter clockwise 4½ turns Further adjustment outward will increase the action of the dash-pot and lengthen its retarding effect

EXCESSIVE RICHNESS above 50 miles per hour may be caused by a clogged main vent tube After removal of rivet plug beneath float bowl with tool No T109-210 main vent tube can be removed and a new tube inserted with tool No T109-135 Care must be exercised in inserting new tube which must seat tightly Use new rivet to complete the installation

MAXIMUM ECONOMY and performance are secured only when breaker points spark plugs valves and motor timing are set to manufacturer s specifications After motor is properly tuned, the following should also be done to insure satisfactory performance and economy

(a) Float level must be set as above

(b) Step-up rod in step-up jet must seat and move freely When reassembling, jet must be screwed in tight against seat

(c) Step-up piston in body casting should not bind and must be free of dirt

(d) Main metering jet can be replaced with leaner than standard metering jets for altitude

CAUTION Do not attempt to gauge metering jets with drills These jets have been flow-tested to insure correct fuel flow

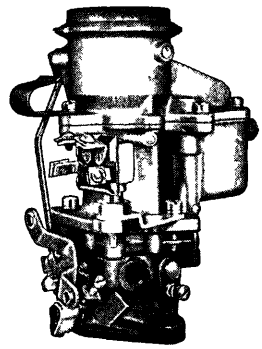
Dodge—1953—Carbureter D6V1

WHEN SERVICING, USE GASKET ASSORTMENT No 215

Part No	PART NAME	
1-1007S	Body flange assembly	
1A-45	Flange gasket—for use with governor	
1A-46	Flange gasket—for use without governor	
2-100	Throttle valve	
3-578S	Throttle shaft and arm assembly	
4-657S	Throttle lever assembly	
4A-101	Fast idle cam	
6-646S	Air horn assembly	
7-151S	Choke valve assembly	
11B-17	Pump discharge passage plug	
11B-41	Rivet plug	
11B-79	Rivet plug	(2)
11B-108	Idle port rivet plug	
11B-138	Pump jet rivet plug	
11B-220	High speed passage plug	
14-352	Choke lever (loose)	
14-382S	Choke shaft and lever assembly	
20-26	Main metering jet gasket	
20-31	Needle seat gasket	
20-51	Step up jet gasket	
20-52	Step up piston gasket	
21-49S	Float and lever assembly	
24-23	Float lever pin	
25-82S	Needle and seat assembly	
30A-37	Idle adjustment screw	
39-11	Valve attaching screw	(4)
48-103	Pump jet	
61-84	Idle adjustment screw spring	
61-135	Step up piston spring	
61-144	Pump spring	
61-244	Dash pot adjustment screw spring	
61-372	Dash pot arm spring	
63-24	Float lever pin retainer	
63-37	Intake ball check retainer ring	
63-46	Pump spring retainer	
64-60S	Plunger and rod assembly	
64-74S	Dash pot plunger and rod assembly	
86-10	Dash pot lifter link attaching screw lock washer	
86-15	Flange stud lock washer	(2)
101-32	Dash pot lifter link attaching screw	
101-141	Dash pot adjustment screw	
101-145S	Body flange attaching screw and washer assembly	(3)
101-150S	Air horn attaching screw and washer assembly	(4)
101-164	Throttle lever clamp screw	
101-279	Throttle adjusting screw	
105A-13	Flange stud nut	(2)
105A-28	Throttle lever clamp nut	
105A-51	Kickdown switch bracket attaching nut	(2)
114-81	Dash pot pick up arm	
115-30	Choke connector rod	
116-13	Pump intake check ball	
116-18	Pump discharge check ball	
117 60	Pump link	
117-70	Pump lifter link	
117-144	Dash pot lifter link	
121-90	Body gasket	
121-159	Body flange gasket	(2)
123-31S	Idle orifice tube and plug assembly	
145-17	Main vent tube	
149-41S	Step up jet assembly	
150-111	Dash pot pin	
150A-13	Pin spring	
160-46S	Step up piston plate and rod assembly	
172-26	Cable clip	
180-64	Kickdown switch bracket	
183-63	Insulator	
192-27S	Overdrive kickdown switch assembly (complete)	
224-11S	Main metering jet assembly—standard	
224-17S	Main metering jet assembly—1 size lean	
224-18S	Main metering jet assembly—2 sizes lean	

NOTE *Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.*

(Standard Clutch, Standard Transmission with Overdrive)



DODGE 6
MODELS
"D-46", "D-47"
1953

(D6H2 and 195-63U can also be used)

BB DOWN-DRAFT CARBURETER—**MODEL D6U1**

CARBURETER SPECIFICATIONS

For Dodge Six Cylinder Engine: 3¼ Inch Bore, 4⅝ Inch Stroke

Dimensions: Flange size, 1½ inch S. A. E.
Throttle bore, 1-9/16 inch.
Main venturi, 1¼ inch I. D.

Float Setting: See adjustments.

Vents: Outside, none. Inside, balance vent tube.

Gasoline Intake: Size No. 44 (.086 inch) drill in needle seat.

Idle Orifice Tube: Jet, size .0276 inch.
Idle passage air bleed (in air horn), size .065 inch.
Restriction in body, size .056 to .057 inch diameter.

Idle Port: Upper port, slot type, length .149 inch; width, .030 inch.

Idle Port Opening: Top of port located .118 to .122 inch above top edge of valve, with valve tightly closed.

Lower Port (For Idle Adjustment Screw): Size, .053 to .057 inch diameter.

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture turn screw out. Idle engine between 450-500 r.p.m.

Main Metering Jet: Calibrated to flow 287 cc per minute. (Do not gauge for size. If in doubt, replace with new part.)

Main Vent: Through diffuser (air bleed inside bowl) size .0315 inch drill.

Main Vent Tube: Side holes, 6—.0354 inch diameter.

Step-Up Jet: Size .0295 inch diameter.

Accelerating Pump: Pump intake passage, ball check seat, size .115 to .120 inch diameter.
Pump discharge passage, restriction (under ball check), size .062 to .065 inch diameter in body.
Pump (discharge) jet, size .0276 inch drill.

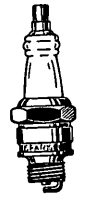
Pump Adjustment: See adjustments.

Choke: Butterfly type, with poppet valve. Inter-connected to open throttle valve to fast idle position when choke is used.

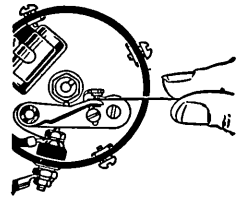
Vacuum Spark Port: Slot (round end) type. Size .040 by .110 inch. Bottom of port, .021 to .027 inch above top edge of valve, with valve tightly closed.

Motor Tune-Up—Be Accurate!

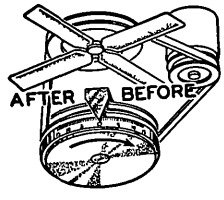
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



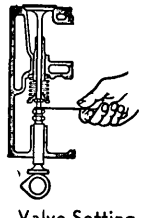
Spark Plug Gap .035"



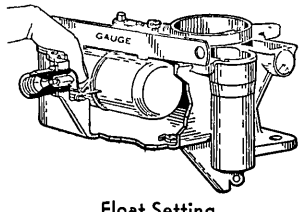
Breaker Point Setting .020"



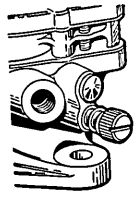
Ignition Timing Breaker Points to Open: 2° B. T. C.



Valve Setting (Hot) Intake .010" Exhaust .010"



Float Setting 5/64 Inch (Use Gauge T109-50)



Idle Adjustment Screw Setting ½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: This adjustment must be made with the bowl cover gasket and float pin retainer removed. Hold the lip on float arm against the seated intake needle, making sure the float pin is at the bottom of its guide slots. The distance from the top surface of the body casting to the top of the float should be 5/64 inch (gauge T109-50). To adjust bend lip on float arm.

PUMP ADJUSTMENT: Remove air horn assembly, back out throttle adjustment screw and be sure pump operating link is in center hole of throttle shaft arm. Place Universal pump travel gauge T109-117S on edge of bowl cover so that lip of gauge extends over top of plunger shaft. With throttle valve seated turn knurled nut of gauge until lip contacts top of plunger shaft. Take reading indicated on gauge. Repeat with throttle valve wide open and plunger pushed to bottom of cylinder. The difference in reading obtained should be "22" (22/64") plunger travel. Adjust by bending horizontal portion of pump lifter link.

Pump stroke adjustable for high or low temperatures. Set to longest stroke for cold weather, shorter stroke for hot weather driving.

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OVERDRIVE KICKDOWN SWITCH ADJUSTMENT· With throttle valve in wide open position, adjust hex nuts on switch to have 1/64 inch to 3/64 inch clearance between kickdown lever and switch stem guide

EXCESSIVE RICHNESS above 50 miles per hour may be caused by a clogged main vent tube After removal of rivet plug beneath float bowl with tool No T109-210 main vent tube can be removed and a new tube inserted with tool No T109-195 Care must be exercised in inserting new tube which must seat tightly Use new rivet to complete the installation

MAXIMUM ECONOMY and performance are secured only when breaker points, spark plugs valves and motor timing are set to manufacturer s specifications After motor is properly tuned the following should also be done to insure satisfactory performance and economy

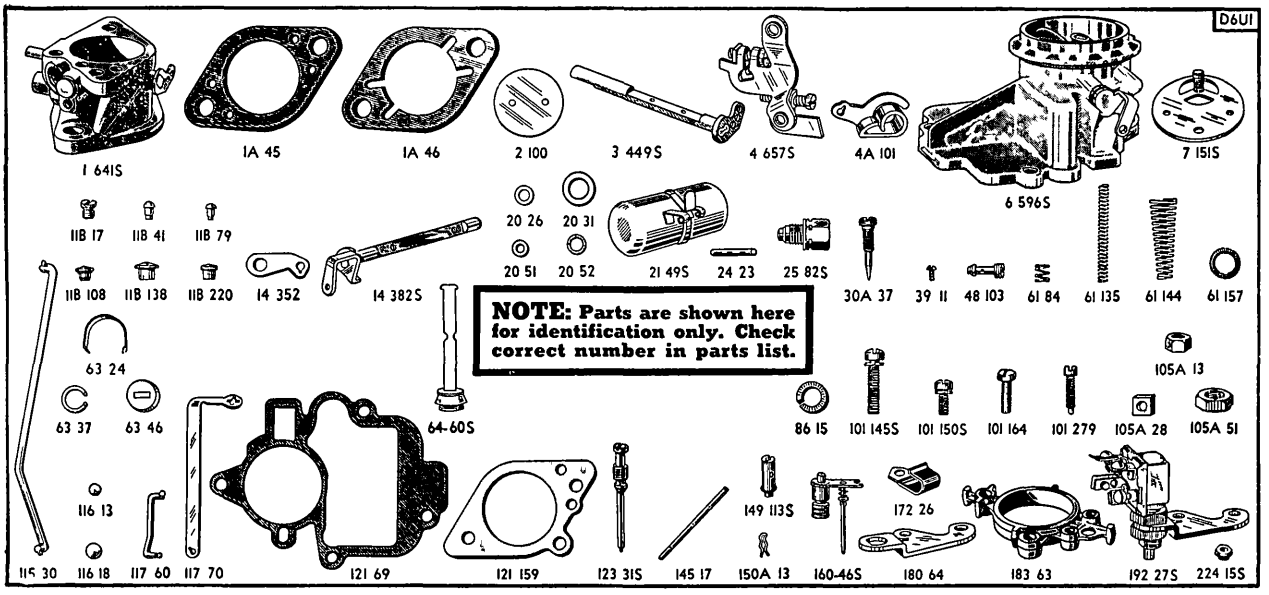
(a) Float level must be set as above

(b) Step-up rod in step-up jet must seat and move freely When reassembling, jet must be screwed in tight against seat

(c) Step-up piston in body casting should not bind and must be free of dirt

(d) Main metering jet can be replaced with leaner than standard metering jets, for altitude

CAUTION· Do not attempt to gauge metering jets with drills These jets have been flow-tested to insure correct fuel flow



Dodge—1953—Carbureter D6U1

WHEN SERVICING, USE GASKET ASSORTMENT No. 203, REPAIR PACKAGE No 1513A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

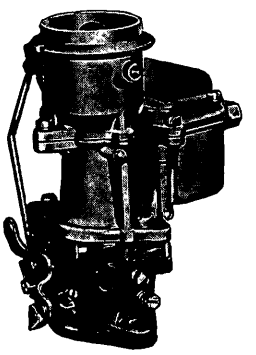
Part No.	PART NAME	
1-641S	Body flange assembly	
1A-45	Flange gasket—for use with governor	
1A-46	FLANGE GASKET—FOR USE WITHOUT GOVERNOR	
2-100	Throttle valve	
3-449S	Throttle shaft and arm assembly	
4-657S	Throttle lever assembly	
4A-101	Fast idle cam	
6-596S	Air horn assembly	
7-151S	Choke valve assembly	
11B-17	Pump check plug	
11B-41	Rivet plug	
11B-79	Rivet plug	(2)
11B-108	IDLE PORT RIVET PLUG	
11B-138	PUMP JET RIVET PLUG	
11B-220	HIGH SPEED PASSAGE PLUG	
14-352	Choke lever—loose	
14-382S	Choke lever and shaft assembly	
20-26	Gasket	
20-31	Needle seat gasket	
20-51	Step up jet gasket	
20-52	STEP UP PISTON GASKET	
21-49S	Float and lever assembly	
24-23	Float lever pin	
25-82S	NEEDLE AND SEAT ASSEMBLY	
30A-37	Idle adjustment screw	
39-11	Valve attaching screw	(4)
48 103	PUMP JET	
61-84	Idle adjustment screw spring	
61-135	STEP UP PISTON SPRING	
61-144	PUMP SPRING (CONICAL)	
61-157	Plunger spring	
63-24	FLOAT LEVER PIN RETAINER	
63-37	PUMP INTAKE CHECK BALL RETAINER	

Part No	PART NAME	
63-46	Pump spring retainer	
64-60S	PLUNGER AND ROD ASSEMBLY (IDENTIFY BY SHAFT No 49 120)	
86-15	Flange stud lock washer	(2)
101-145S	Body flange attaching screw and washer assembly	(3)
101-150S	Air horn attaching screw and washer assembly	(4)
101-164	Clamp screw	
101-279	Throttle lever adjusting screw	
105A-13	Flange nut	(2)
105A-28	Throttle lever clamp nut	
105A-51	Kickdown switch bracket attaching nut	(2)
115 30	Fast idle rod	
116-13	PUMP INTAKE CHECK BALL	
116-18	PUMP DISCHARGE CHECK BALL	
117-60	PUMP LINK	
117-70	PUMP LIFTER LINK	
121-69	BODY GASKET	
121-159	BODY FLANGE GASKET	(2)
123-31S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
145-17	MAIN VENT TUBE	
149-41S	Step up jet assembly (Sup by 149 113S)	
149-113S	STEP UP JET ASSEMBLY	
150A-13	PIN SPRING	
160-46S	STEP UP PISTON PLATE AND ROD ASSEMBLY	
172-26	Cable clip	
180-64	Kickdown switch bracket	
183-63	Insulator	
192-27S	Kickdown switch assembly—complete	
224-11S	*Main metering jet assembly—2 sizes lean	
224-12S	Main metering jet assembly—1 size lean	
224-15S	MAIN METERING JET ASSEMBLY—STANDARD	
224-17S	Main metering jet assembly—1 size lean (Sup by 224 12S)	

*224 11S used as standard main metering jet on carbureters code dated B3 and earlier

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

Standard Clutch
and
Standard Transmission



DODGE MODELS "D-46" and "D-47" 1953

B-B DOWN-DRAFT CARBURETER—**MODEL D6H2**

CARBURETER SPECIFICATIONS

For Dodge Six Cylinder Engine: 3¼ Inch Bore, 4⅝ Inch Stroke

Dimensions: Flange size, 1½ inch S. A. E.
Throttle bore, 1-9/16 inch.
Main venturi, 1¼ inch I. D.

Float Setting: Top of float 5/64 inch plus or minus 1/64 inch below top surface of carbureter body casting.

Vents: Outside, none. Inside balance vent tube.

Gasoline Intake Needle: Size No. 44 (.086 inch) drill in needle seat.

Idle Orifice Tube: Jet size, .0276 inch. Idle passage air bleed (in air horn), size .065 inch. Restriction in body, size .056 to .057 inch diameter.

Idle Ports: Upper port, slot type; length .149 inch; width, .030 inch.
Top of port located .118 to .122 inch above top edge of valve with valve tightly closed.
Lower port: (For Idle Adjustment Screw) Size, .053 to .057 inch diameter.

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture, turn screw out. Idle engine between 450-500 r.p.m.

Main Metering Jet: Calibrated to flow 287 cc per minute. (Do not gauge for size. If in doubt, replace with new part.)

Main Vent: Through diffuser (air bleed inside bowl) size .0315 inch drill.

Main Vent Tube: Side holes, 6—.0354 inch diameter.

Step-Up Jet: Size .0295 inch diameter.

Accelerating Pump: Type, delayed action. Stroke, summer setting (inner hole, short stroke). Intermediate setting (center hole). Winter setting (outer hole, long stroke).
Pump intake passage, ball check seat, size .115 to .120 inch diameter.
Pump discharge passage; restriction (under ball check), size .062 to .065 inch diameter in body.
Pump (discharge) jet, size .0276 inch drill.

Pump Adjustment: 22/64" plunger travel (center hole). Use gauge No. T109-117S.

Choke: Butterfly type, with poppet valve. Inter-connected to open throttle valve to fast idle position when choke is used.

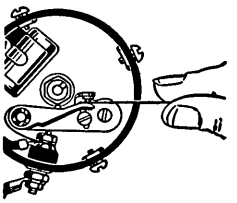
Vacuum Spark Port: Slot (round end) type. Size .040 by .110 inch. Bottom of port, .021 to .027 inch above top edge of valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

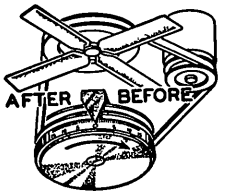
CAUTION: **Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.**



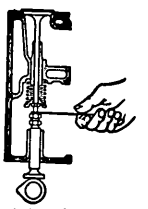
Spark Plug Gap .035"



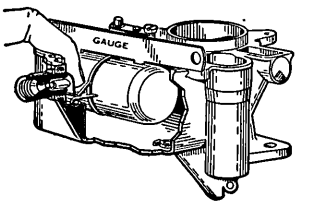
Breaker Point Setting .020"



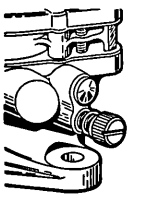
Ignition Timing Breaker Points to Open: 2° B. T. C.



Valve Setting (Hot) Intake .010" Exhaust .010"



Float Setting 5/64 Inch (Use Gauge T109-50)



Idle Adjustment Screw Setting ½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

If carbureter loads up after considerable service, check float level. Wear on lip of float lever will raise float level. Before adjusting float, be sure float lever pin is firmly seated. Reset float level by bending lip of float lever away from needle to raise level, or bend lip toward needle to lower float level. Bend vertical lip of float only.

If motor stalls while idling, set throttle lever adjusting screw so motor runs between 450-500 r.p.m. Then set idle adjustment screw to specifications. If these adjustments do not correct the trouble, remove idle orifice tube and plug assembly. Clean tube and passages with compressed air.

If acceleration is not satisfactory remove pump jet and clean with compressed air. However, it is usually advisable to replace the pump jet, as its cost is nominal. All jets must be seated gasoline tight. Poor acceleration may be due to damaged or worn plunger leather in accelerating pump, sediment in pump

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cylinder or clogged intake ball check at bottom of pump cylinder and discharge ball check in discharge passage If plunger is removed from cylinder, use care in installing to avoid damage to plunger leather

Correct air fuel ratio is provided by a "balance tube' in the air horn The balance tube should be checked each time the carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type, size or condition of air cleaner Should the cleaner become clogged, the capacity will be reduced but the air-fuel mixture ratio will not be changed

Excessive richness above 50 miles per hour may be caused by a clogged main vent tube After removal of rivet plug beneath float bowl with tool T109-43, main vent tube can be removed and a new tube inserted with tool No T109-195 Care must be exercised in inserting new tube which must seat tightly Use new rivet to complete the installation

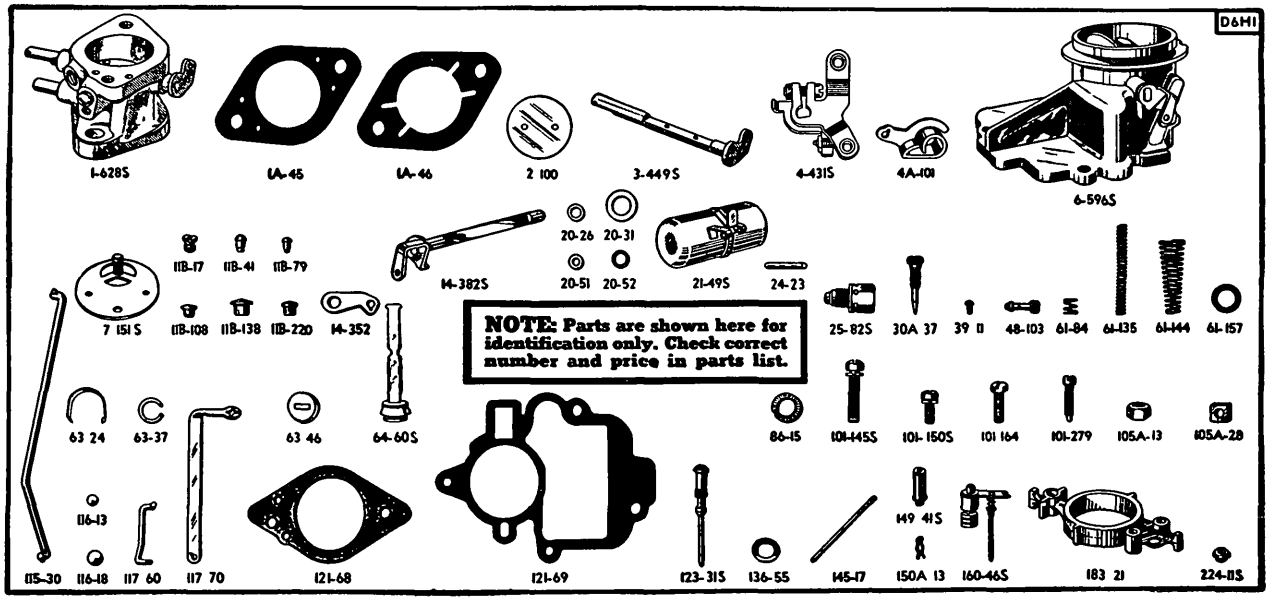
Pump Adjustment Remove air horn assembly back out throttle adjustment screw and be sure pump operating link is in center hole of throttle shaft arm Place Universal pump travel gauge T109-117S on edge of bowl cover so that lip of gauge extends over top of plunger shaft Turn knurled nut of gauge until lip contacts top of plunger shaft with throttle valve seated Take reading indicated on gauge Repeat with throttle valve wide open and plunger pushed to bottom of cylinder The difference in reading obtained should be ' 22 (22/64) plunger travel

Adjust by bending horizontal portion of pump lifter link Pump stroke adjustable for high or low temperatures Set to longest stroke for cold weather, shorter stroke for hot weather driving

Maximum economy and performance are secured only when breaker points, spark plugs, valves and motor timing are set to manufacturer s specifications After motor is properly tuned the following should also be done to insure satisfactory performance and economy

(a) Float level must be set as above
(b) Step-up rod in step-up jet must seat and move freely When reassembling jet must be screwed in tight against seat
(c) Step-up piston in body casting should not bind and must be free of dirt
(d) Main metering jet can be replaced with leaner than standard metering jets, for altitude

CAUTION Do not attempt to gauge metering jets with drills These jets have been flow-tested, to insure correct fuel flow



Dodge Carbureter No. D6H2—1953

WHEN SERVICING, USE GASKET ASSORTMENT No 203; REPAIR PACKAGE No 1513A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

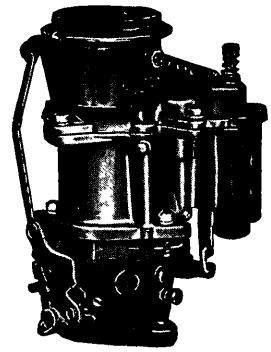
Part No	PART NAME	
1-641S	Body flange assembly	
1A 45	Flange gasket—for use with governor	
1A-46	FLANGE GASKET—FOR USE WITHOUT GOVERNOR	
2 100	Throttle valve	
3-449S	Throttle shaft and arm assembly	
4-431S	Throttle lever assembly	
4A-101	Fast idle cam	
6-596S	Air horn assembly	
7-151S	Choke valve assembly	
11B 17	Pump check plug	
11B-41	Rivet plug	
11B-79	Rivet plug	(2)
11B-108	IDLE PORT RIVET PLUG	
11B 138	PUMP JET RIVET PLUG	
11B 220	HIGH SPEED PASSAGE PLUG	
14-352	Choke lever—loose	
14-382S	Choke lever and shaft assembly	
20 26	Gasket	
20 31	Needle seat gasket	
20-51	Step up jet gasket	
20 52	STEP UP PISTON GASKET	
21-49S	Float and lever assembly	
24-23	Float lever pin	
25 82S	NEEDLE AND SEAT ASSEMBLY	
30A-37	Idle adjustment screw	
39-11	Valve attaching screw	(4)
48 103	PUMP JET	
61 84	Idle adjustment screw spring	
61-135	STEP UP PISTON SPRING	
61-144	PUMP SPRING (CONICAL)	
61-157	Plunger spring	

Part No.	PART NAME	
63-24	FLOAT LEVER PIN RETAINER	
63-37	PUMP INTAKE CHECK BALL	
63-46	Pump spring retainer	
64-60S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49-120)	
86 15	Flange stud lock washer	(2)
101-145S	Body flange attaching screw and washer assembly	(2)
101-150S	Air horn attaching screw and washer assembly	(4)
101-164	Clamp screw	
101-279	Throttle lever adjusting screw	
105A-13	Flange nut	(2)
105A-28	Clamp nut	-
115-30	Fast idle rod	
116 13	PUMP INTAKE CHECK BALL	
116-18	PUMP DISCHARGE CHECK BALL	
117-60	PUMP LINK	
117-70	PUMP LIFTER	
121-69	BODY GASKET	
121-159	BODY FLANGE GASKET	(2)
123-31S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
145-17	MAIN VENT TUBE	
149-41S	Step up jet assembly (Sup by 149 113S)	
149-113S	STEP UP JET ASSEMBLY	
150A-13	PIN SPRING	
160-46S	STEP UP PISTON PLATE AND ROD ASSEMBLY	
183-63	Insulator	
224-11S	*MAIN METERING JET ASSEMBLY (2 sizes lean)	
224-12S	Main metering jet assembly (1 size lean)	
224-15S	MAIN METERING JET ASSEMBLY (STANDARD)	
224-17S	Main metering jet assembly (1 size lean) (Sup by 224 12S)	

*224 11S used as standard main metering jet on carbureter code dated B3 and earlier

NOTE Figures in parentheses indicate number f pieces used in ne carbureter. Wher n figure is sh wn, only n is used.

Fluid Drive—Standard Transmission



DODGE MODELS "D-29", "D-30" "D-33", "D-34" "D-41", "D-42" "D-46", "D-47" 1949-1953

B-B DOWN-DRAFT CARBURETERS—**MODELS D6P1-D6P2**

CARBURETER SPECIFICATIONS

For Dodge Six Cylinder Engine: 3¼ Inch Bore, 4⅝ Inch Stroke

Dimensions: Flange size, 1½ inch S. A. E.
Throttle bore, 1-9/16 inch.
Main venturi, 1¼ inch I. D.

Float Setting: Top of float 5/64 inch plus or minus 1/64 inch below top surface of carbureter body casting.

Vents: Outside, none. Inside balance vent .218 inch diameter.

Gasoline Intake Needle: Triangular, horizontal. No. 44 (.086 inch) drill in needle seat.

Idle Orifice Tube: Jet size, .0276 inch. Idle passage air bleed (in air horn), size .065 inch. Restriction in body, size .0565 inch diameter.

Idle Ports: Upper port, slot type; length .149 inch; width, .030 inch. Top of port located .118 to .122 inch above top edge of valve.
Lower port: (For Idle Adjustment Screw) Size, .053 to .057 inch diameter.

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixturn, turn screw out. Idle engine between 450-500 r.p.m.

Main Metering Jet: Calibrated to flow 256 cc per minute. (Do not gauge for size. If in doubt, replace with new part.)

Main Vent: Through diffuser (air bleed inside bowl) size .0315 inch drill.

Main Vent Tubes: Side holes, 6—.0354 inch diameter.

Step-Up Jet: No. 65 drill size.

Accelerating Pump: Type, delayed action. Stroke, summer setting (inner hole, short stroke). Intermediate setting (center hole). Winter setting (outer hole, long stroke).
Pump intake passage, ball check seat, size .107 to .112 inch diameter.
Pump discharge passage; restriction (under ball check), size .062 to .065 inch diameter in body.
Pump (discharge) jet, size .0276 inch drill.

Pump Adjustment: 22/64" plunger travel (center hole). Use gauge No. T109-117S.

Choke: Butterfly type, with poppet valve. Inter-connected to open throttle valve to fast idle position when choke is used.

Slow Closing Throttle: Dash pot with discharge (by pass), size .0197 inch drill, through plunger shaft.

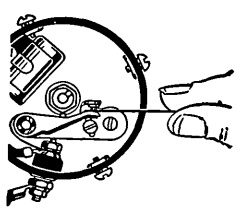
Vacuum Spark Port: Slot (round end) type. Size .040 by .110 inch. Bottom of port, .021 to .027 inch above top edge of valve.

Motor Tune-Up—Be Accurate!

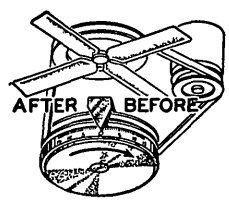
CAUTION: **Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.**



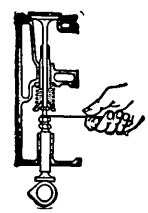
Spark Plug Gap .035"



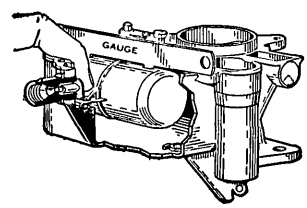
Breaker Point Setting .020"



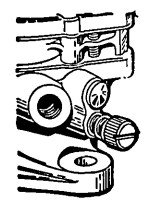
Ignition Timing Breaker Points to Open:
(1949-50) T.D.C.
(1951-53) 2° B.T.D.C.



Valve Setting (Hot)
Intake .008" (1949-51)
Intake .010" (1952-53)
Exhaust .010"



Float Setting (Use Gauge) 5/64 Inch



Idle Adjustment Screw Setting ½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

If carbureter loads up after considerable service, check float level. Wear on lip of float lever will raise float level. Before adjusting float, be sure float lever pin is firmly seated. Reset float level by bending lip of float lever away from needle to raise level, or bend lip toward needle to lower float level. Bend vertical lip of float only.

If motor stalls while idling, set throttle lever adjusting screw so motor runs between 450-500 r.p.m. Then set idle adjustment screw to specifications. If these adjustments do not correct the trouble, remove idle orifice tube and plug assembly. Clean tube and passages with compressed air.

If acceleration is not satisfactory remove pump jet and clean with compressed air. However, it is usually advisable to replace the pump jet, as its cost is nominal. All jets must be seated gasoline tight. Poor acceleration may be due to damaged or worn plunger leather in accelerating pump, sediment in pump cylinder or clogged intake ball check at bottom of pump cylinder and discharge ball check in discharge passage. If plunger is

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removed from cylinder, use care in installing to avoid damage to plunger leather

Correct air fuel ratio is provided by a 'balance tube" in the air horn The balance tube should be checked each time the carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type, size or condition of air cleaner Should the cleaner become clogged, the capacity will be reduced but the air-fuel mixture ratio will not changed

Excessive richness above 50 miles per hour may be caused by a clogged main vent tube After removal of rivet plug beneath float bowl with tool No T109-43 main vent tube can be removed and a new tube inserted with tool No T109-195 Care must be exercised in inserting new tube which must seat tightly Use new rivet to complete the installation

Pump Adjustment Remove air horn assembly, back out throttle adjustment screw and be sure pump operating link is in center hole of throttle shaft arm Place universal pump travel gauge T109-117S on edge of bowl cover so that lip of gauge extends over top of plunger shaft Turn knurled nut of gauge until lip contacts top of plunger shaft with throttle valve seated Take reading indicated on gauge Repeat with throttle valve wide open and plunger pushed to bottom of cylinder The difference in reading obtained should be "22' (22/64") plunger travel

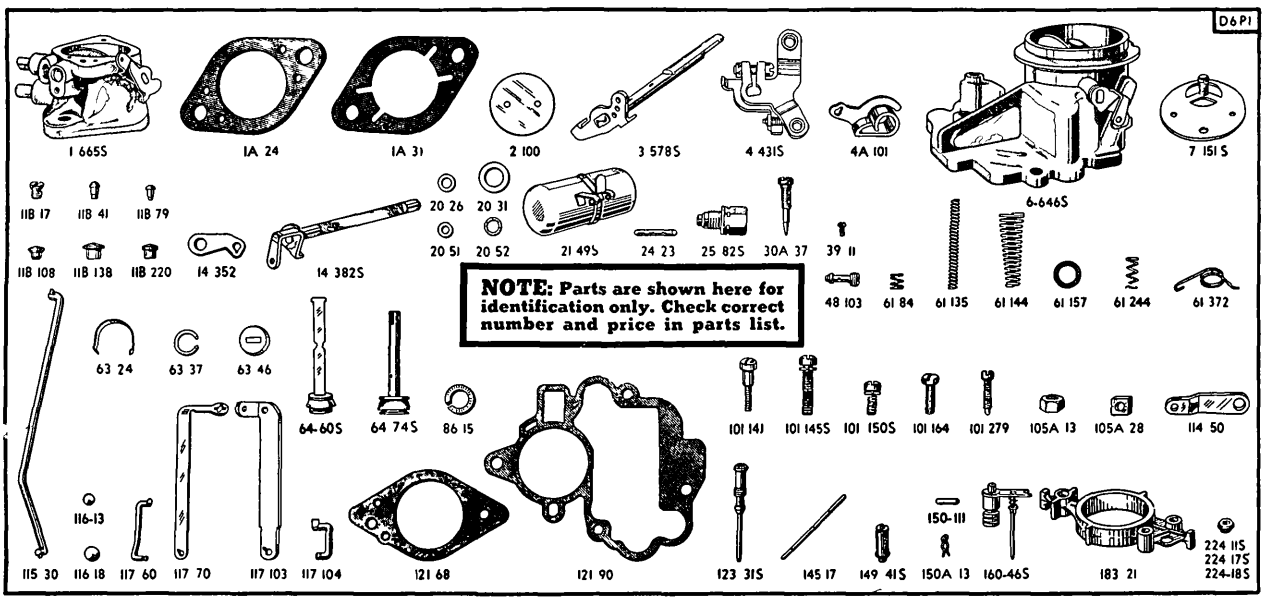
Adjust by bending horizontal portion of pump lifter link Pump stroke adjustable for high or low temperatures Set to longest stroke for cold weather, shorter stroke for hot weather driving

Dash-Pot Adjustment· Engines operating in connection with fluid couplings frequently tend to stall during rapid deceleration unless the throttle closes slowly Slow throttle movement is necessary only during the last part of the closing The dash-pot or decelerating pump acts as a snubber to the throttle, allowing fast movement to almost closed position, then slow closing from that point to the idle position

When the throttle is released, the throttle valve closes rapidly until throttle shaft arm contacts the dash-pot pick-up arm Then the dash-pot plunger must be pushed to the bottom of the cylinder before the throttle can close A ball check located in the lower end of the plunger shaft seals the larger upper opening and the gasoline must leave the cylinder through the small metered hole in lower part of the shaft

This reduces the rate at which plunger can be forced to the bottom of the cylinder making the last part of the throttle closing very slow **The adjusting screw (in top of bowl cover) should be opened five turns for D6P1 or 4½ turns for D6P2 from closed position** for average conditions Under extreme driving conditions greater openings may be necessary, although extreme dash-pot action will affect gear changes, and not enough action will allow engine to stall

Be sure plunger leather is soft and pliable and effects a good seal against the cylinder wall



Dodge Carbureters Nos. D6P1-D6P2—1949-1953

WHEN SERVICING, USE GASKET ASSORTMENT No. 215; REPAIR PACKAGE No 1526A

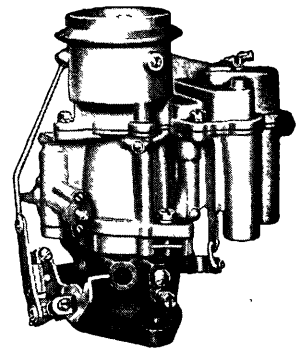
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-665S	Body flange assembly (D6P1) (Sup by 1-1007S)	
1-1007S	Body flange assembly	
1A-24	Flange gasket—for use with governor (D6P1) (Sup by 1A-45)	
1A-31	Flange gasket—for use without governor (D6P1) (Sup by 1A-46)	
1A-45	Flange gasket—for use with governor	
1A-46	FLANGE GASKET—FOR USE WITHOUT GOVERNOR	
2-100	Throttle valve	
3-578S	Throttle shaft and arm assembly	
4-431S	Throttle lever assembly	
4A-101	Fast idle cam	
6-646S	Air horn assembly	
7-151S	Choke valve assembly	
11B-17	Pump discharge passage plug	
11B-41	Rivet plug	
11B-79	Rivet plug	(2)
11B-108	IDLE PORT RIVET PLUG	
11B-138	PUMP JET RIVET PLUG	
11B-220	HIGH SPEED PASSAGE PLUG	
14-352	Choke lever (loose)	
14-382S	Choke lever and shaft assembly	
20-26	Main metering jet gasket	
20-31	Needle seat gasket	
20-51	Step-up jet gasket	
20-52	STEP-UP PISTON GASKET	
21-49S	Float and lever assembly	
24-23	FLOAT LEVER PIN	
25-82S	NEEDLE AND SEAT ASSEMBLY	
30A-37	Idle adjustment screw	
39-11	VALVE ATTACHING SCREW	(4)
48-103	PUMP JET	
61-84	Idle adjustment screw spring	
61-135	STEP-UP PISTON SPRING	
61-144	PUMP SPRING	
61-244	Dash-pot adjustment screw spring	
61-372	Dash-pot arm spring	
63-24	FLOAT LEVER PIN RETAINER	
63-37	PUMP CYLINDER BALL RETAINER	

Part No.	PART NAME	
63-46	Pump spring retainer	
64-60S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49-120)	
64-74S	Dash-pot plunger and rod assembly	
86-10	Dash-pot lifter link attaching screw lock washer (D6P2)	
86-15	Flange stud lock washer	(2)
101-32	Dash-pot lifter link attaching screw (D6P2)	
101-141	Dash-pot adjustment screw	
101-145S	Body flange attaching screw and washer assembly	(2)
101-150S	Air horn attaching screw and washer assembly	(4)
101-164	Throttle lever clamp screw	
101-279	Throttle adjusting screw	
105A-13	Flange nut	(2)
105A-28	Clamp nut	
114-50	Dash-pot pick up arm (D6P1)	
114-81	Dash-pot pick up arm (D6P2)	
115-30	FAST IDLE ROD	
116-13	PUMP INTAKE CHECK BALL	
116-18	PUMP DISCHARGE CHECK BALL	
117-60	PUMP LINK	
117-70	PUMP LIFTER	
117-103	Dash-pot lifter link (D6P1)	
117-104	Dash-pot link (D6P1)	
117-144	Dash-pot lifter link (D6P2)	
121-68	Body flange gasket (D6P1) (Sup by 121-159)	(2)
121-90	BODY GASKET	
121-159	BODY FLANGE GASKET	(2)
123-31S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
145-17	MAIN VENT TUBE	
149-41S	STEP-UP JET ASSEMBLY	
150-111	Dash-pot pin	
150A-13	PIN SPRING	(2)
160-46S	STEP-UP PISTON PLATE AND ROD ASSEMBLY	
183-21	Insulator (D6P1) (Sup by 183-63)	
183-63	Insulator	
224-11S	MAIN METERING JET ASSEMBLY—STANDARD	
224-17S	Main metering jet assembly—1 size lean	
224-18S	Main metering jet assembly—2 sizes lean	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.

FLUID DRIVE &
M6 TRANSMISSION



DODGE "6"
MODELS
"D-30, D-34, D-41, D-42, D-46, D-47"
1949-1953

B-B DOWN-DRAFT CARBURETER—**MODEL D6M1**

CARBURETER SPECIFICATIONS

For Dodge Six Cylinder Engine: 3¼ Inch Bore, 4⅝ Inch Stroke

Dimensions: Flange size, 1½ inch S. A. E.
Throttle bore, 1-9/16 inch (39.69 mm).
Main venturi, 1¼ inch (31.75 mm) I. D.

Float Setting: Top of float 5/64 inch (1.98 mm) plus or minus 1/64 inch (.397 mm) below top surface of carbureter body casting.

Vents: Outside, none. Inside balance vent .218 inch (5.54 mm) diameter.

Gasoline Intake Needle: Triangular, horizontal. No. 44 (2.18 mm) drill in needle seat.

Idle Orifice Tube: Jet size, .0276 inch (.70 mm). Idle passage air bleed (in air horn), size .065 inch (1.65 mm). Restriction in body, size .054 to .055 inch (1.37 to 1.39 mm) diameter.

Idle Ports: Upper port, slot type; length .149 inch (3.789 mm); width, .030 inch (.76 mm).
Top of port located .118 to .122 inch (2.997 to 3.099 mm) above top edge of valve.
Lower port: (For Idle Adjustment Screw) Size, .053 to .057 inch (1.35 to 1.45 mm) diameter.

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture turn screw out. With gear shift lever in neutral position, idle engine between 450 to 500 r.p.m.

Main Metering Jet: Calibrated to flow 256 cc per minute. (Do not gauge for size. If in doubt, replace with new part.)

Main Vent: Through diffuser (air bleed inside bowl) size .0315 inch (.80 mm) drill.

Main Vent Tube: Side holes, 6—.0354 inch diameter.

Step-Up Jet: No. 65 (.89 mm) drill size.

Accelerating Pump: Type, delayed action. Stroke, summer setting (inner hole, short stroke). Intermediate setting (center hole). Winter setting (outer hole, long stroke).
Pump intake passage, ball check seat, size .115 to .120 inch (2.93 to 3.05 mm) diameter.
Pump discharge passage; restriction (under ball check), size .062 to .065 inch (1.58 to 1.65 mm) diameter in body.
Pump (discharge) jet, size .0276 inch (.70 mm) drill.

Pump Adjustment: 22/64" (8.731 mm) plunger travel (center hole). Use gauge No. T109-117S.

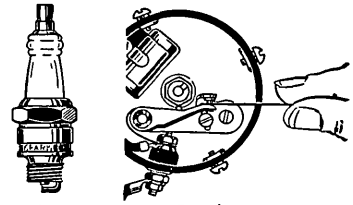
Choke: Butterfly type, with poppet valve. Inter-connected to open throttle valve to fast idle position when choke is used.

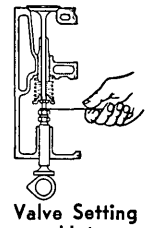
Slow Closing Throttle: Dash pot with discharge (By-pass), size .0197 inch (.5 mm) drill, through valve cage.

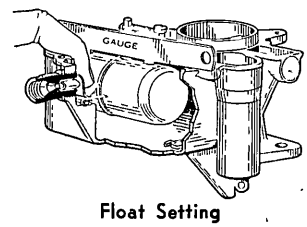
Vacuum Spark Port: Slot (round end) type. Size .040 by .110 inch (1.016 to 2.794 mm). Bottom of port, .021 to .027 inch (.553 to .686 mm) above top edge of valve.

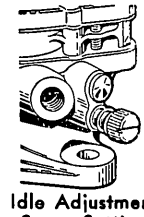
Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.









Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open:	Valve Setting Hot	Float Setting (Use Gauge)	Idle Adjustment Screw Setting
.038"	.020"	T. D. C.	Intake .008" Exhaust .010"	5/64 Inch	½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

If carbureter loads up after considerable service, check float level. Wear on lip of float lever will raise float level. Before adjusting float, be sure float lever pin is firmly seated. Reset float level by bending lip of float lever away from needle to raise level, or bend lip toward needle to lower float level. Bend vertical lip of float only.

If motor stalls while idling, set throttle lever adjusting screw so motor runs 450-500 r. p. m. Then set idle adjustment screw to specifications. If these adjustments do not correct the trouble, remove idle orifice tube and plug assembly. Clean tube passages with compressed air.

If acceleration is not satisfactory, remove pump jet and clean with compressed air. However, it is usually advisable to replace the pump jet as its cost is nominal. All jets must be seated gasoline tight. Poor acceleration may be due to damaged or worn plunger leather in accelerating pump,

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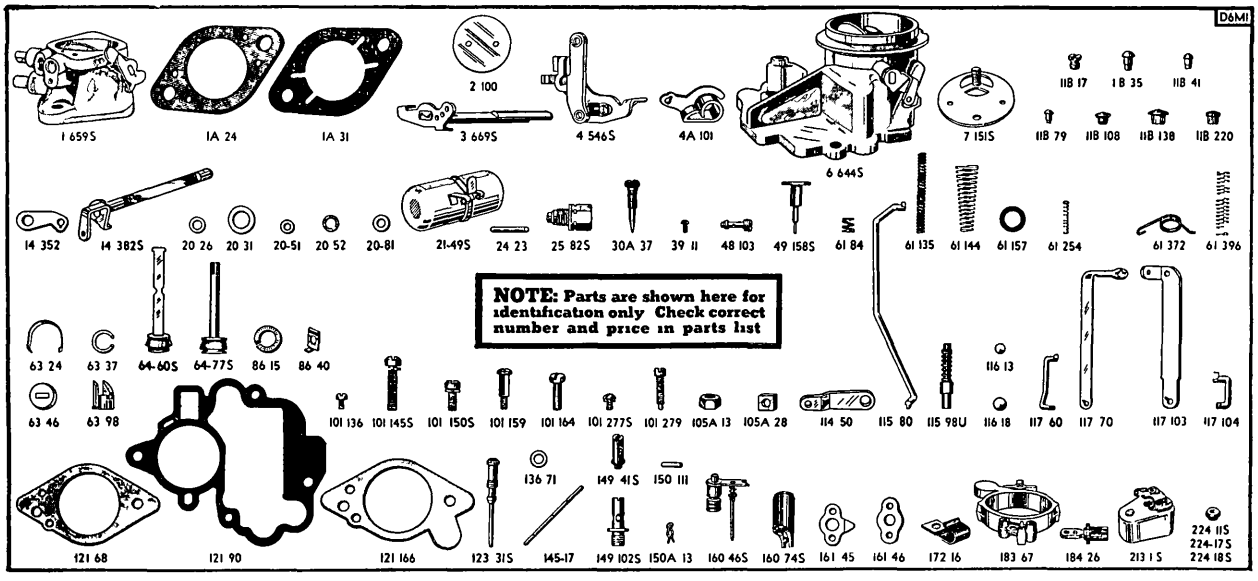
sediment in pump cylinder or clogged intake ball check at bottom of pump cylinder and discharge ball check in discharge passage If plunger is removed from cylinder, use care in installing to avoid damage to plunger leather

Correct air fuel ratio is provided by a balance tube' in the air horn The balance tube should be checked each time the carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type, size or condition of air cleaner Should the cleaner become clogged, the capacity will be reduced but the air-fuel mixture ratio will not be changed

Excessive richness above 50 miles per hour may be caused by a clogged main vent tube After removal of rivet plug beneath float bowl with tool No T109-43, main vent tube can be removed and a new tube inserted with tool No T109-195 Care must be exercised in inserting new tube which must seat tightly Use new rivet to complete the installation

Pump Adjustment. Remove air horn assembly, back out throttle adjustment screw and place pump operating link in center hole of throttle shaft arm Place gauge T109-117S on edge of bowl cover so that lip of gauge extends over top of plunger shaft Turn knurled nut of gauge until lip contacts plunger shaft at closed and wide open throttle positions Difference in readings obtained should be "22 ' (22/64" plunger travel) Adjustments can be made by bending horizontal portion of pump connector link

Pump stroke adjustable for high or low temperature Set to long stroke for cold weather, short stroke for hot weather driving



Dodge Six—1949-1953—No. D6MI

WHEN SERVICING, USE GASKET ASSORTMENT No 199, REPAIR PACKAGE No 1527

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-659S	Body flange assembly	
1A-24	Flange gasket—for use with governor (Sup by 1A 45)	
1A 31	Flange gasket—for use without governor (Sup by 1A-46)	
1A-45	Flange gasket (for use with governor)	
1A-46	FLANGE GASKET (FOR USE WITHOUT GOVERNOR)	
2 100	Throttle valve	
3-669S	Throttle shaft and arm assembly	
4-546S	Throttle lever assembly	
4A-101	Fast idle cam	
6-644S	Air horn assembly	
7-151S	Choke valve assembly	
11B 17	Pump discharge passage plug	
11B-35	Rivet plug	
11B-41	Rivet plug	
11B-79	Rivet plug	(3)
11B-108	IDLE PORT RIVET PLUG	
11B-138	PUMP JET RIVET PLUG	
11B 220	HIGH SPEED PASSAGE PLUG	
14 352	Choke lever (loose)	
14 382S	Choke lever and shaft assembly	
20 26	Main metering jet gasket	
20 31	Needle seat gasket	
20-51	Step-up jet gasket	
20-52	STEP-UP PISTON GASKET	
20 81	SWITCH PLUNGER GASKET	
21-49S	Float and lever assembly	
24 23	Float lever pin	
25-82S	NEEDLE AND SEAT ASSEMBLY	
30A-37	Idle adjustment screw	
39-11	Valve attaching screw	(4)
48 103	PUMP JET	
49-158S	Valve cage plunger rod and plate assembly	
61-84	Idle adjustment screw spring	
61-135	STEP-UP PISTON SPRING	
61-144	PUMP SPRING	
61 157	Plunger spring	(2)
61-254	Dash-pot plunger operating spring	
61-372	Dash-pot arm spring	
61-396	Switch piston spring (Sup by 61-399)	
61-399	Switch piston spring	
63-24	FLOAT LEVER PIN RETAINER	
63 37	PUMP CYLINDER BALL RETAINER	
63-46	Pump spring retainer	
63-98	Switch piston locator (Use with 160 74S)	
64-60S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49-120)	
64 77S	Dash pot plunger and rod assembly	

Part No.	PART NAME	
86 15	Flange stud lock washer	(2)
86-40	Terminal lock washer (Use with 101-136)	
101-136	Terminal connector screw (Use with 184-26)	
101-145S	Body flange attaching screw and washer assembly	(2)
101-150S	Air horn attaching screw and washer assembly	(4)
101-159	Electro magnet assembly attaching screw	
101-164	Throttle lever clamp screw	
101-277S	Attaching screw and washer assembly	(4)
101-279	Throttle adjusting screw	
101-290	Terminal attaching screw	
105A-13	Flange nut	(2)
105A 28	Throttle lever clamp nut	
114 50	Dash-pot pick-up arm	
115-80	Fast idle rod	
115-98U	Push rod assembly and spring unit (Consists of 61-403 and 115 79S)	
116-13	PUMP INTAKE CHECK BALL	
116 18	PUMP DISCHARGE CHECK BALL	
117-60	PUMP LINK	
117-70	PUMP LIFTER	
117-103	Dash-pot lifter	
117-104	Dash-pot link	
121-68	BODY FLANGE GASKET	
121-90	BODY GASKET	
121-166	CARBURETER BODY TO INSULATOR GASKET	
123-31S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
136-71	Switch plunger washer	
136-116	Terminal attaching screw washer	
145-17	MAIN VENT TUBE	
149-41S	STEP-UP JET ASSEMBLY	
149-102S	Dash pot valve cage assembly	
150-111	Dash-pot pin	
150A 13	PIN SPRING	(2)
160-46S	STEP-UP PISTON, PLATE AND ROD ASSEMBLY	
160-74S	Piston contact plate washer and screw assembly (Sup by 160-88S)	
160-88S	Kick-down switch piston assembly	
161-45	Terminal end plate	
161-46	Push rod end plate	
172-16	Cable clip	
183 67	Insulator	
184 26	Terminal block (Sup by 184-53S 101-290 and 136-116)	
184-52	Terminal block (Sup by 184 53S)	
184-53S	Terminal block and clip assembly	
213-11S	Electro magnet and housing assembly	
224-11S	MAIN METERING JET ASSEMBLY—STANDARD	
224-17S	Main metering jet assembly—1 size lean	
224-18S	Main metering jet assembly—2 sizes lean	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

DODGE TRUCK 1949-1952

2¾, 3, 3½ and 4 Ton

BB DOWN-DRAFT CARBURETERS—**E7U1-E7U2**

(Two carbureters per engine)

DODGE TRUCK, MODELS T-190, T-320, T-322, T-324, T-325

CARBURETER SPECIFICATIONS

For Dodge Truck Six Cylinder Engines
T190 T324 and T325 4 Inch Bore, 5 Inch Stroke
T320 3¾ Inch Bore 4⅝ Inch Stroke
T322 and T323 3¾ Inch Bore, 5 Inch Stroke

Dimensions Flange size 1½ inch (38 1 mm)
Throttle bore 1 11/16 inch (42 86 mm)
Main venturi 1 11/32 inch (34 13 mm) I D

Float Setting See Adjustments

Vents Outside none Inside balance vent tube 218 inch diameter (5 54 mm)

Gasoline Intake Needle Triangular horizontal No 44 (2 18 mm) drill in needle seat

Idle Orifice Tube Jet size (E7U1) 0276 inch (70 mm) drill (E7U2) 0295 inch (75 mm) drill Idle passage air bleed in air horn size (E7U1) 0465 inch (1 18 mm) diameter (E7U2) 057 inch (1 45 mm) diameter Restriction in body size (E7U1) 0452 inch (1 15 mm) diameter (E7U2) 0531 inch (1 35 mm) diameter

Idle Ports Upper port Slot type length 149 inch (3 78 mm) width 030 inch (76 mm) Top of port located 118 to 122 inch (3 00 to 3 10 mm) above top edge of valve Lower port size 053 to 057 inch (1 35 to 1 45 mm) drill (For idle adjustment screw)

Set Idle Adjustment Screw ½ to 1½ turns open For richer mixture turn screw out Do not idle engine under 400 r p m

Main Metering Screw Calibrated to flow 315 to 319 cc per minute (Do not gauge for size If in doubt replace with new part)

Main Vent Through diffuser (air bleed inside bowl) Size 0315 inch (80 mm) drill

Main Vent Tube Side hole 6— 0354 inch diameter

Step-Up Jet Power orifice 0394 inch (1 00 mm) drill

Accelerating Pump Type—delayed action seasonal adjustment Stroke—Summer setting (inner hole short stroke) Intermediate setting (center hole) Winter setting (outer hole long stroke) Pump intake passage ball check seat size 115 to 120 inch (2 93 to 3 05 mm) diameter in body Pump discharge passage Restriction (under ball check) size 062 to 065 inch (1 58 to 1 65 mm) diameter in body Pump (discharge) jet size 0374 inch (90 mm) drill

Pump Adjustment 26/64 inch plunger travel—full throttle position medium stroke Use gauge T109 117S

Choke Offset butterfly type with poppet valve

Vacuum Spark Port Slot (round end) type size 040 by 110 inch (1 016 by 2 794 mm) (E7U1) Top of port 052 to 058 inch (1 32 to 1 47 mm) above top edge of valve (E7U2) Bottom of port 012 to 018 inch (305 to 457 mm) above top edge of valve

MOTOR TUNE-UP

Spark Plug Gap	Set Breaker Points	Use Motor Gauge Breaker Points to Open	Set Valves	Float Setting (Use Gauge T109 50)	Idle Adjustment Screw Setting
T190 .038" T320, T322, T324, T325 .035"	.020"	T322, T323 T D C T320 1° A T D C T190, T324, T325 2° A T D C	Hydraulic Tappets (No Adjustments)	Solid Needle—5/64 Inch Spring Loaded Needle— See Adjustments	½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

FLOAT SETTING When using a spring loaded needle and seat, place a .050 feeler gauge between lip of float and intake needle pin With intake needle spring fully compressed, top of float should be 5/64 inch (1 98 mm) (gauge T109-50) below top surface of carbureter body casting Adjust by bending lip on float

When using a solid needle, the distance from the top of float, should be 5/64 inch (1 98 mm) (gauge T109-50), plus or minus 1/64 inch (397 mm) below top surface of carbureter body casting DO NOT USE FEELER GAUGE

PUMP ADJUSTMENT. Remove air horn assembly, back out throttle adjustment screw, and place pump operating link in center hole of throttle shaft arm Adjustment can be made by bending horizontal portion of pump lifter link so that top of pump plunger shaft contacts lip of indicator on pump stroke gauge T109-117S Correct travel is 26/64'

PUMP STROKE adjustable for high or low temperature Set to longest stroke for cold weather, shorter stroke for hot weather driving

RECOMMENDED PROCEDURE FOR SETTING IDLE

1 Back out idle speed screw on rear carb (fully closed throttle)
2 Adjust idle speed screw on front carb to give 400 r p m
3 Adjust idle mixture on front carb to best operation and readjust idle speed if necessary
4 Back out idle speed screw on front carb two full turns (or whatever is necessary to insure closed throttle)
5 Adjust idle speed screw on rear carb to give 400 r p m
6 Adjust idle mixture screw on rear carb to give best operation and readjust idle speed if necessary
7 Turn in idle speed screw on front carb same number of turns as in step No 4

This should result in balancing the two carbureters Any further adjustment to idle speed or mixture should be made by turning the screws the same amount on each carbureter

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PARTS LIST

WHEN SERVICING, USE GASKET ASSORTMENT No. 137A; REPAIR PACKAGE No. 1551 (E7U1), No. 1562 (E7U2)

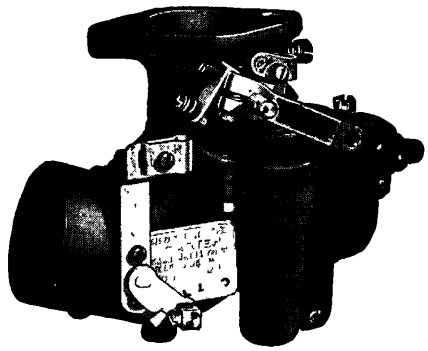
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME
1-643S	Body flange assembly
1A-24	Flange gasket—for use with governor
1A-31	FLANGE GASKET—FOR USE WITHOUT GOVERNOR
2-87	Throttle valve
3-452S	Throttle shaft and arm assembly
3-459S	Throttle shaft and arm assembly (Sup by 3 452S)
4-431S	Throttle lever assembly
6-637S	Air horn assembly (E7U1)
6-699S	Air horn assembly (E7U2)
7-105S	Choke valve assembly
11B-17	Pump discharge passage plug
11B-41	Rivet plug
11B-79	Rivet plug (2)
11B-108	IDLE PORT RIVET PLUG
11B-138	RIVET PLUG
11B-220	HIGH SPEED PASSAGE PLUG
14-292S	Choke control lever and shaft assembly (E7U1)
14-418S	Choke lever and shaft assembly (E7U2)
20-26	Gasket
20-31	Needle seat gasket
20-51	Step up jet gasket
20-52	STEP UP PISTON GASKET
21-49S	Float and lever assembly (Sup by 21 123S)
21-123S	Float and lever assembly
24-23	Float lever pin
25-102S	Needle and seat assembly (Sup by 25 202S)
25-202S	NEEDLE PIN SPRING AND SEAT ASSEMBLY
30A-37	Idle adjustment screw
39-11	Valve attaching screw (4)
48-75	PUMP JET
61-84	Idle adjustment screw spring
61-119	Choke pull back spring (E7U1)
61-135	STEP UP PISTON SPRING
61-145	PUMP SPRING
61-157	Plunger spring
61 207	Intake needle spring
61-299	Choke pull back spring (E7U2)
62-77S	Choke tube bracket assembly (E7U1)
62-151S	Choke tube bracket assembly (E7U2)
63-24	FLOAT LEVER PIN RETAINER
63-37	PUMP BALL RETAINER RING
63-46	Pump spring retainer
64-60S	PLUNGER AND ROD ASSEMBLY
86-15	Flange stud lock washer
101-10	Wire clamp screw
101-142S	Choke bracket attaching screw and washer assembly
101-145S	Attaching screw and washer assembly (3)
101-150S	Attaching screw and washer assembly (4)
101-164	Throttle lever clamp screw
101-279	Throttle lever adjusting screw
105-11	Choke tube clamp screw (E7U1)
105A-8	Choke tube clamp nut (E7U1)
105A-10	Choke tube clamp nut (E7U2)
105A-13	Flange nut (2)
105A-28	Throttle lever clamp nut
116-13	PUMP INTAKE CHECK BALL
116-18	PUMP DISCHARGE CHECK BALL
117-62	PUMP LINK
117-70	PUMP LIFTER LINK
121-69	BODY GASKET
121-160	BODY FLANGE GASKET (2)
123-31S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY (E7U1)
123-39S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY (E7U2)
145-13	MAIN VENT TUBE
149-62S	STEP-UP JET ASSEMBLY
150-98	Intake needle pin
150A-13	PIN SPRING
160-46S	STEP-UP PISTON PLATE AND ROD ASSEMBLY
183-64	Insulator
224-12S	Main metering jet assembly—3 sizes lean
224-13S	MAIN METERING JET ASSEMBLY—STANDARD
224-14S	Main metering jet assembly—1 size lean
224-15S	Main metering jet assembly—2 sizes lean

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.

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MOTOR SERIAL NUMBERS
T152—2745 and up
T154—2482 and up



DODGE TRUCK CAB-OVER-ENGINE

Model Nos.: B-1-FM, B-1-HM, B-1-HHM, B-1-JML, B-1-KMAL—1½ Ton
Model Nos.: B-1-JM, B-1-KMA—2 Ton

1948-1949

(6N2 can also be used)

B-B UP-DRAFT CARBURETER—**No. 6M1**

CARBURETER SPECIFICATIONS

For Dodge Six Cylinder Engine: 3-7/16 Inch Bore, 4¼ Inch Stroke (T152)

For Dodge Six Cylinder Engine: 3-7/16 Inch Bore, 4½ Inch Stroke (T154)

Dimensions: Flange size, 1½ inch (38.10 mm).
Throttle bore, 1-7/16 inch (38.51 mm).
Main venturi, 1⅛ inch I. D. (28.58 mm).
Air bleed through venturi to idle passage .0885 to .0905 inch diameter (2.25 to 2.30 mm) drill.

Float Setting: Distance from top of float to top surface of lower body casting 1/32 to 1/16 inch (.79 to 1.59 mm).

Vent: To float chamber size, No. 30 (3.26 mm) drill.

Balance Vent Tube: Inside diameter, 7/32 inch (5.56 mm). Restriction hole, upper body 5/32 inch (3.97 mm) diameter.

Gasoline Intake Needle: Triangular, horizontal. No. 44 (2.18 mm) drill in needle seat.

Idle Jet Tube: Jet size, .0236 inch (.60 mm) drill.

Idle Ports: Lower port size: .062 to .064 inch (1.58 to 1.63 mm) diameter.
Top of port located .005 to .009 inch (.13 to .23 mm) below lower edge of valve. Upper port size: .053 to .057 inch (1.35 to 1.45 mm) diameter (for idle adjustment screw).

Set Idle Adjustment Screw: ½ to 1 turn open. For richer mixture, turn screw out. Do not idle engine below 300 r.p.m. or 6 m.p.h.

Main Metering Screw: Calibrated to flow 316 to 320 cc per minute. (Do not gauge for size. If in doubt, replace with new part.)

Nozzle: Discharge jet size, No. 33 (2.87 mm) drill.
Side holes: 2—.0394 inch (1.00 mm) drill 1/16 inch (1.59 mm) from shoulder.
1—.051 inch (1.3 mm) drill ⅜ inch (9.525 mm) from shoulder.
1—.063 inch (1.6 mm) drill 23/32 inch (18.256 mm) from shoulder.
1—.051 inch (1.3 mm) drill 1-1/16 inch (26.99 mm) from shoulder.

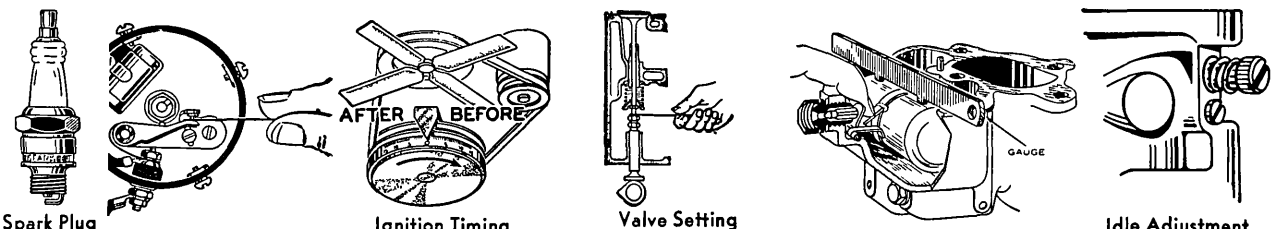
Air Bleed to Nozzle: (Vent tube) Size, .0394 inch (1.00 mm) drill.

Step-Up Jet: (Power Orifice) Size, .0472 inch (1.20 mm) drill.

Accelerating Pump: Type, low pressure, delayed action. Stroke: Summer setting (inner hole, short stroke) 9/16 inch (14.29 mm).
Winter setting (outer hole, long stroke) 1 inch (25.40 mm).
Pump intake ball check: Size ⅛ inch (3.175 mm).
Pump discharge (through nozzle).

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



Spark Plug Gap .028"-.032" (Std.) .038" (Resistor)

Breaker Point Setting .020"

Ignition Timing Breaker Points to Open: T.D.C. (T152) 2° A.T.D.C. (T154)

Valve Setting (Hot) Intake .010" Exhaust .014" (T152) .018" (T154)

Float Setting (Use Gauge) 1/32 to 1/16

Idle Adjustment Screw Setting ½ to 1 Turn Open

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CARBURETER ADJUSTMENTS

To Secure a Good Idle: Set throttle lever adjusting screw so motor runs approximately 300 r.p.m. Then set idle adjustment screw so motor fires evenly. Correct setting will be found between ½ to 1 turn open. A richer mixture is obtained by backing out adjustment screw—a leaner mixture by turning screw in. If motor stalls while idling, remove idle passage tube and idle jet tube and clean with compressed air.

To Improve Acceleration: Examine pump link setting: For winter driving, link screw should be set in outer hole, giving long stroke, for hot weather, in high altitudes, pump link should be connected in inner hole, giving short stroke. If this does not give desired results, the main metering jet, pump metering jet, check valve assembly and pump valve assembly should be removed and cleaned with compressed air.

If Motor Loads—Check Float Level: Wear on lip of float lever will raise float level from factory setting, causing carbureter to load up. To lower float level, bend lip of float lever toward needle. To raise float level, bend lip away from needle. A very slight bend is sufficient. Be sure to bend lip of float, not bracket.

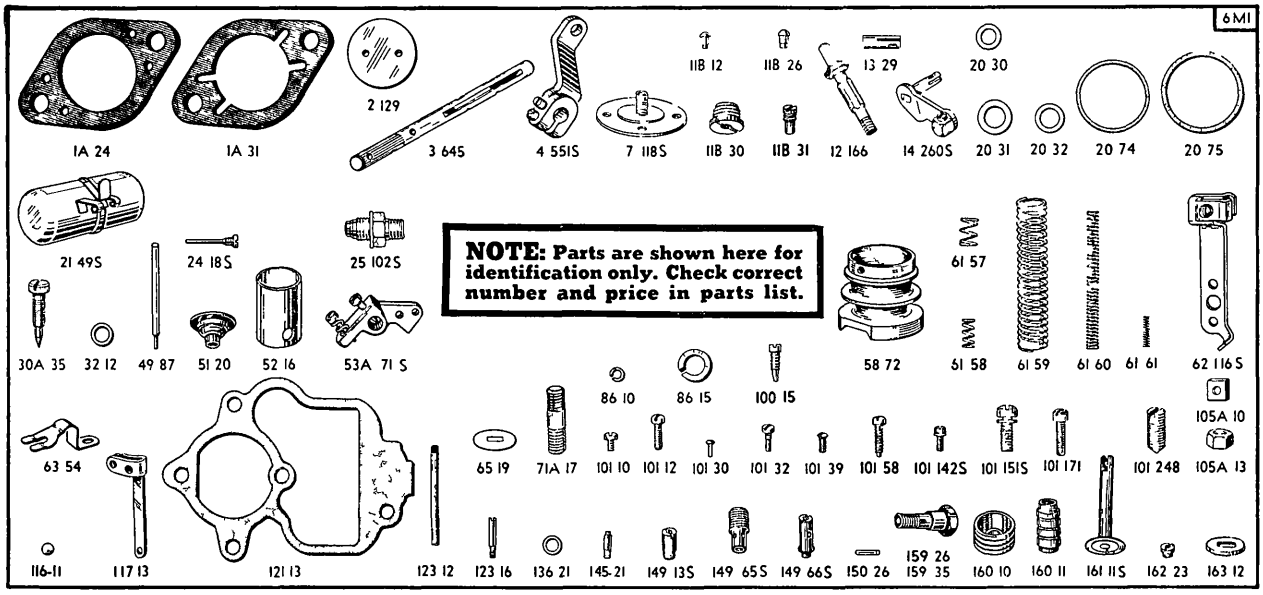
Economy: (a) Maximum economy is secured only when breaker points, spark plugs, valves and motor timing are set to manufacturer's specifications.

(b) Float level must set as instructed on page 1.

(c) Step-up valve cage assembly should be examined. Ball check in this assembly must seat and move freely. When reassembling valve cage must be screwed in tight against seat.

(d) Step-up push rod must move freely in upper and lower guides.

(e) Step-up piston in upper casting should not bind and must be free from dirt.



Dodge Carbureter No. 6M1—1948-1949

WHEN SERVICING, USE GASKET ASSORTMENT No. 172A; REPAIR PACKAGE No. 1597

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1A-24	FLANGE GASKET—FOR USE WITH GOVERNOR	
1A-31	FLANGE GASKET—FOR USE WITHOUT GOVERNOR	
2-129	Throttle valve	
3-645	Throttle shaft	
4-551S	Throttle lever assembly	
7-118S	Choke valve assembly	
11B-12	Rivet passage plug	
11B-26	Rivet plug	(3)
11B-30	Step up piston plug	
11B-31	Idle hole plug	
12-166	Nozzle	
13-29	Choke shaft—stub	
14-260S	Choke assembly with clamp and screw	
20 30	NOZZLE GASKET	
20-31	Needle seat gasket	
20-32	METERING SCREW GASKET	
20 74	Venturi gasket—upper	
20 75	Venturi gasket—lower	
21-49S	Float and lever assembly	
24-18S	FLOAT LEVER PIN AND PLUG ASSEMBLY	
25-102S	NEEDLE AND SEAT ASSEMBLY	
30A-35	Idle adjustment screw	
32-12	Pump rod gasket	
49 87	STEP UP PUSH ROD	
51-20	Pump collar	
52-16	Pump sleeve	
53A 71S	Pump arm assembly	
58-72	Venturi	
61-57	Idle adjustment screw spring	
61-58	Throttle lever adjusting screw spring	
61-59	PUMP SPRING	
61-60	STEP UP PISTON SPRING	
61-61	Step up spring	
62-116S	Choke tube bracket assembly	
63 54	Packing retainer	

Part No.	PART NAME	
65-19	Pump link cover plate	(2)
71A-17	Flange stud	(2)
86-10	Lock washer	
86-15	Flange stud lock washer	(2)
100-15	Pump arm clamp screw	
101-10	Wire clamp screw	
101-12	Clamp screw	
101-30	Choke valve screw	(2)
101-32	PUMP LINK SCREW	
101-39	Throttle valve screw	(2)
101-58	Throttle lever adjusting screw	
101-142S	Attaching screw and washer assembly	(3)
101-151S	Body attaching screw and washer assembly	(3)
101-171	Throttle lever clamp screw	
101-248	Throttle lever set screw	
105A-10	Choke tube clamp nut	
105A 13	Flange nut	(2)
116-13	Step up check ball	
117-13	Pump link	
121-13	BODY GASKET	
123-12	Idle passage tube	
123-16	IDLE ORIFICE TUBE	
136-21	Float pin plug washer	
145-21	VENT TUBE	
149-13S	CHECK VALVE CAGE ASSEMBLY	
149-65S	PUMP VALVE CAGE ASSEMBLY	
149-66S	STEP UP VALVE CAGE ASSEMBLY	
150-26	Pump collar pin	
159-26	Main metering screw—1 size lean	
159-35	MAIN METERING SCREW	
160-10	Pump piston	
160 11	STEP UP PISTON	
161-11S	Pump rod plate and rod assembly	
162-23	Power orifice	
163-12	FELT PACKING	

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

DODGE TRUCK 1948-1949

BB DOWN-DRAFT CARBURETER WITH GOVERNOR—**E7B1**

Vehicle Model Nos.: B-1-T, F-1-T, S-1-T, B-1-V, F-1-V, S-1-V

Engine Symbol Nos.: T-158 and TX-158

Note: Motor Serial Nos. T158-1001 and higher

CARBURETER SPECIFICATIONS

Six Cylinder Engine 3¾ Inch Bore 5 Inch Stroke

Dimensions Flange size 1½ inch S A E
Throttle bore 1 11/16 inch (42 86 mm)
Main venturi 1 11/32 inch (3 413 mm)

Float Setting Top of float 5/64 inch (1 98 mm) plus or minus 1/64 inch (397 mm) below top surface of carbureter body casting

Vents Outside none Inside balance vent tube 218 inch (5 56 mm) inside diameter

Gasoline Intake Needle Triangular horizontal needle seat size No 44 (2 18 mm) drill

Idle Orifice Tube Jet size 0276 inch (70 mm)
Idle passage air bleed (in air horn) size 059 inch (1 50 mm)
Idle restriction in body size 055 inch (1 397 mm)

Idle Ports Upper port slot type Length 128 inch (3 251 mm) Width 027 inch (686 mm)
Top of port 104 inch (2 642 mm) to 110 inch (2 794 mm) above top edge of valve (in slot)
Lower port size 053 to 057 inch (1 35 to 1 45 mm) diameter (For idle adjustment screw)

Set Idle Adjustment ½ to 1½ turns open For richer mixture turn screw out Do not idle engine below 450 to 500 r p m motor speed

Vacuum Spark Port None

Main Metering Jet Calibrated to flow 328 to 332 cc per min ute Do not gauge for size If in doubt replace with new part

Main Vent Fuel chamber to vent tube well (in air horn) size 063 inch (1 60 mm) diameter In vent tube plug size 0433 (1 10 mm) diameter

Main Vent Tube Side holes 1—0354 (90 mm) d ameter 3/32 inch (2 381 mm) from end
1—0354" (90 mm) diameter ⅛ inch (3 175 mm) from end
1—0236" (60 mm) diameter ½ inch (12 70 mm) from end
1—0236" (60 mm) diameter 17/32 inch (13 49 mm) from end
1—0157" (40 mm) diameter 1 15/32 inch (37 31 mm) from end

Step Up Jet Size 0492 (1 25 mm) diameter

Accelerating Pump Type vacuum operated Stroke non ad justable Pump intake passage ball check seat size 115 to 120 inch (2 92 to 3 05 mm) diameter
Pump discharge passage ball check seat size 062 to 065 inch (1 58 to 1 65 mm) diameter
Pump discharge jet size 0315 inch (80 mm) d ameter

Choke Offset butterfly type with poppet valve

FOR GOVERNOR INSTRUCTIONS, SEE FORM 4718F

MOTOR TUNE-UP

Spark Plug Gap	Set Breaker Points	Use Motor Gauge Breaker Points to Open	Set Valves (Hot)		Idle Adjustment Screw Setting
			Intake 010	Float Setting	½ to 1½
025"	020"	T D C	Exhaust 018"	5/64 Inch	Turns Open

CARBURETER ADJUSTMENTS

Correct float adjustment is important and should be made in the following way

Place float gauge (No T109 50) across the carbureter body Press float lever down to hold float pin against the bottom of the slot in the body casting Floats should just clear the projections on the gauge If adjustment is necessary, bend lip on float lever toward intake needle to lower level or away from the needle to raise the float level

If motor stalls while idling, set throttle lever adjusting screw so motor runs between 450 and 500 R P M Then set idle adjustment screw ½ to 1½ turns open from closed position If a vacuum gauge is available adjust to highest steady gauge reading

Accelerating pump is actuated by the intake manifold vacuum and no adjustment is necessary However, be sure the bowl cover gasket and flange gasket seal to prevent any air leaks to the pump vacuum passages

If engine misses when load is suddenly increased remove pump jet and clean with compressed air However, it is usually advisable to replace the pump jet as its cost is nominal (All jets must be seated gasoline tight) This con dition may also be due to damaged or worn plunger leather in accelerating pump cylinder or discharge check in discharge passage If plunger is removed from cylinder use care when installing to avoid damage to plunger leather

Correct air fuel ratio is provided by a 'balance tube in the air horn The balance tube should be checked each time the carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type size or condition of air cleaner Should the cleaner become clogged the capacity will be reduced but the air-fuel mixture ratio will not be changed

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PARTS LIST

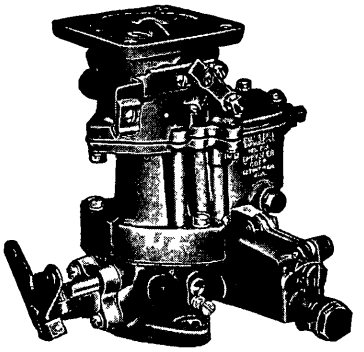
WHEN SERVICING, USE GASKET ASSORTMENT No 205, REPAIR PACKAGE No. 1503

PART NAMES IN CAPITAL LETTERS, LISTED BELOW INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-578S	Body flange and governor assembly	
1A-31	FLANGE GASKET	
3-583S	Throttle lever shaft and arm assembly (stub)	
4-491S	Throttle lever assembly	
4A-96	Throttle shaft pick up dog	
6-585S	Air horn assembly	
7-105S	Choke valve assembly	
11B-17	PUMP DISCHARGE PASSAGE PLUG	
11B-41	Rivet plug	(4)
11B-69	Rivet plug	
11B-79	Rivet plug	
11B-108	Idle port rivet plug	
11B-138	PUMP JET RIVET PLUG	
11B-186S	Governor primary adjusting screw passage plug assembly	
11B-194	Bowl drain plug	
11B-201S	Governor secondary adjusting screw passage plug assembly	
11B-220	HIGH SPEED PASSAGE PLUG	
14-357S	Choke shaft and lever assembly	
20-26	Main metering jet gasket	
20 31	NEEDLE SEAT GASKET	
20-35	Governor primary adjusting screw plug gasket	
20-36	Governor secondary adjusting screw plug gasket	
20-51	Step up jet gasket	
20 52	STEP UP PISTON GASKET	
21-91S	Float and lever assembly	
24 23	FLOAT LEVER PIN	
25-102S	NEEDLE AND SEAT ASSEMBLY	
30A-37	Idle adjustment screw	
38A-57S	Adjusting nut assembly (Stamped No 27)	
39-10	Choke valve attaching screw	(2)
48-73	PUMP JET	
61-84	Idle adjustment screw spring	
61-135	STEP UP PISTON SPRING	
61 144	Pump spring (Cadmium plated)	
61 157	Plunger spring	
61-299	Choke spring	
61-302	Secondary friction spring	
61-308	Governor primary spring (Cadmium plate .043" wire dia.)	
61 322S	Secondary spring assembly	
61-373	Pump spring (Copper oxide plated) altitude operation only	
62 151S	Choke tube bracket assembly	
63-24	Float lever pin retainer	
63-37	Pump retainer ring	
63 85	Secondary adjusting screw retainer	
63-104	Retainer ring (Sup by 136 55)	
64 117S	PLUNGER ROD SPRING AND PISTON ASSEMBLY	
64 118S	Plunger rod spring and piston assembly (Altitude operation only)	
86 10	Choke bracket attaching screw lock washer	
86 15	Flange stud lock washer	(2)
86-17	Throttle stop screw lock washer	
86-51	Throttle shaft dog lock washer	
86-54	Throttle valve screw lock washer	(2)
101-10	Wire clamp screw	
101-12	Choke bracket clamp screw	
101-38	Choke bracket attaching screw (Special)	
101-121	Throttle adjusting screw	
101-142S	Choke tube bracket attaching screw and washer assembly	
101-145S	Body flange attaching screw and washer assembly	(2)
101-149S	Throttle shaft housing attaching screw and washer assembly	(3)
101-150S	Air horn attaching screw and washer assembly	(3)
101-160S	Cover to governor housing attaching screw and washer assembly	(6)
101-164	Throttle lever clamp screw	
101-199S	Air horn attaching screw and washer assembly	(2)
101-215	Secondary adjusting screw	
101-220	Primary adjusting screw (Stamped No 27 1-19/32" long)	
101-231	Throttle shaft pick up dog attaching screw	
101-232	Throttle valve screw	(2)
101-234S	Body flange attaching screw and washer assembly	
101-257	Throttle stop screw	
103-11	Lead shot	(2)
105A 10	Choke tube clamp nut	
105A-13	Flange nut	(2)
105A-28	Throttle lever clamp nut	
116-13	PUMP INTAKE CHECK BALL	
116-18	PUMP DISCHARGE CHECK BALL	
118 57	Governor housing cover	
118-59S	Governor housing cover assembly (Sup by 118 57)	
121-104	MAIN BODY GASKET	
121-114	BODY FLANGE GASKET	
121 123	Governor housing cover gasket	
121 141	THROTTLE SHAFT HOUSING GASKET	
123-47S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
136 55	SPRING WASHER (Between throttle lever and casting)	
136 82	MAIN VENT PLUG GASKET	
136-105	Throttle lever shaft washer	
136 124	Spring washer (Between throttle lever and casting) (Sup by 63 104)	
145 51S	MAIN VENT TUBE AND PLUG ASSEMBLY	
149-99S	STEP UP JET ASSEMBLY	
159 63S	Main metering jet assembly—3 sizes lean	
159-87S	Main metering jet assembly—2 sizes lean	
159 89S	Main metering jet assembly—1 size lean	
159 93S	MAIN METERING JET ASSEMBLY—STANDARD	
160 78S	STEP UP PISTON PLATE AND ROD ASSEMBLY	
163-37	Car seal	
163 49	Adjusting nut seal	
170 143S	Shaft housing assembly	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

MOTOR SERIAL NUMBERS
T136-5774 and higher
T156-1001 and higher
TS156-1001 and higher



DODGE TRUCK
Model Nos.
WJ and B-1-R
1947-48-49

B-B Down-Draft Carbureter With Governor—**E7C1**

CARBURETER SPECIFICATIONS

For Dodge Six Cylinder Engine 3¾ Inch Bore 4¼ Inch Stroke

Dimensions Flange size 1½ inch S A E
Throttle bore 1 11/16 inch (42 86 mm)
Main venturi 1 11/32 inch (3 413 mm)

Float Setting Top of float 5/64 inch (1 98 mm) plus or minus 1/64 inch (397 mm) below top surface of carbureter body casting

Vents Outside none Inside balance vent tube 218 inch (5 56 mm) inside diameter

Gasoline Intake Needle Triangular horizontal needle seat size No 44 (2 18 mm) drill

Idle Orifice Tube Jet size 0276 inch (70 mm)
Idle passage air bleed (in air horn) size 059 inch (1 50 mm)
Idle restriction in body size 055 inch (1 397 mm)

Idle Ports Upper port slot type Length 128 inch (3 251 mm) Width 027 inch (686 mm)
Top of port 104 inch (2 642 mm) to 110 inch (2 794 mm) above top edge of valve in slot (early production), 096 inch (2 388 mm) to 100 inch (2 540 mm) above top edge of valve in slot (late production)
Lower port size 053 to 057 inch (1 35 to 1 45 mm) diamerer (For idle adjustment screw)

Set Idle Adjustment ½ to 1½ turns open For richer mixture turn screw out Do not idle engine below 450 to 500 r p m motor speed

Vacuum Spark Port None

Main Metering Jet Calibrated to flow 328 to 332 cc per minute Do not gauge for size If in doubt replace with new part

Main Vent Fuel chamber to vent tube well (in air horn) size 063 inch (1 60 mm) diameter In vent tube plug size 0433 inch (1 10 mm) diameter

Main Vent Tube Side holes 1—0354" (90 mm) diameter 3/32 inch (2 381 mm) from end
1—0354" (90 mm) diameter ⅛ inch (3 175 mm) from end
1—0236" (60 mm) diameter ½ inch (12 70 mm) from end
1—0236" (60 mm) diameter 17/32 inch (13 49 mm) from end
1—0157" (40 mm) diameter 1 15/32 inch (37 31 mm) from end

Step Up Jet Size 0492" (1 25 mm) diameter

Accelerating Pump Type vacuum operated Stroke non adjustable Pump intake passage ball check seat size 115 to 120 inch (2 92 to 3 05 mm) diameter
Pump discharge passage ball check seat size 062 to 065 inch (1 58 to 1 65 mm) diameter
Pump discharge jet size 0315 inch (80 mm) diameter

Choke Offset butterfly type with poppet valve

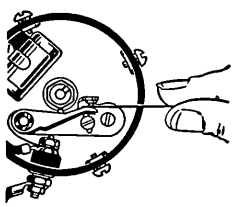
FOR GOVERNOR INSTRUCTIONS, SEE FORM 4718F

Motor Tune-Up—Be Accurate!

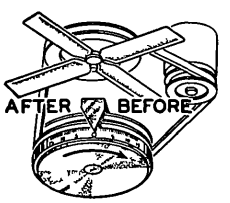
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



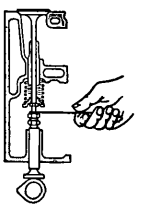
Spark Plug Gap .025"



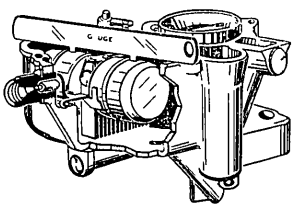
Breaker Point Setting 022"



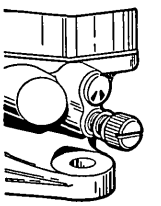
Ignition Timing Breaker Points to Open 005" B T D C



Valve Setting (Hot) Int 010" Exh 018"



Float Setting (Use Gauge) 5/64 Inch



Idle Adjustment Screw Setting ½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

Correct float adjustment is important and should be made in the following way

Place float gauge (No T109-50) across the carbureter body Press float lever down to hold float pin against the bottom of the slot in the body casting Floats should just clear the projections on the gauge If adjustment is necessary, bend lip on float lever toward intake needle to lower level or away from the needle to raise the float level

If motor stalls while idling, set throttle lever adjusting screw so motor runs between 450 and 500 R P M Then set idle adjustment screw ½ to 1½ turns open from closed position If a vacuum gauge is available adjust to highest steady gauge reading

Accelerating pump is actuated by the intake manifold vacuum and no adjustment is necessary However, be sure the bowl cover gasket and flange gasket seal to prevent any air leaks to the pump vacuum passages

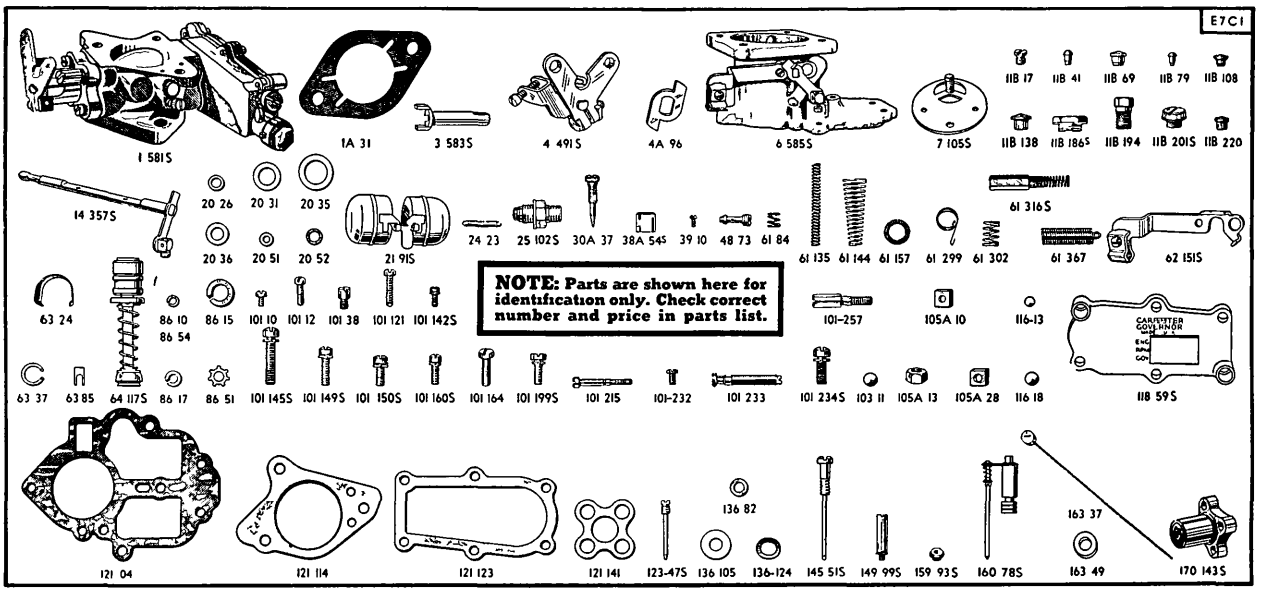
If engine misses when load is suddenly increased remove pump jet and clean with compressed air However, it is usually advisable to replace the pump jet, as its cost is nominal (All jets must be seated gasoline tight) This condition may also be due to damaged or worn plunger leather in accelerating pump cylinder or discharge check in discharge passage If plunger is removed from cylinder use care when installing to avoid damage to plunger leather

Correct air fuel ratio is provided by a balance tube in the air horn The balance tube should be checked each time the carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type size or condition of air cleaner Should the cleaner become clogged the capacity will be reduced but the air-fuel mixture ratio will not be changed

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Dodge Carbureter No. E7C1—1947-1948-1949

WHEN SERVICING, USE GASKET ASSORTMENT No. 205; REPAIR PACKAGE No. 1503

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-581S	Body flange and governor assembly	
1A-31	FLANGE GASKET	
3-583S	Throttle lever shaft and arm assembly	
4-491S	Throttle lever assembly	
4A-96	Throttle shaft pick up dog	
6-585S	Air horn assembly	
7-105S	Choke valve assembly	
11B-17	PUMP DISCHARGE PASSAGE PLUG	
11B-41	Rivet passage plug	(4)
11B-69	Rivet passage plug	
11B-79	Rivet passage plug	
11B-108	Idle port rivet plug	
11B-138	PUMP JET RIVET PLUG	
11B-186S	Governor primary adjusting screw passage plug assembly	
11B-194	Bowl drain plug	
11B-201S	Governor secondary adjusting screw passage plug assembly	
11B-220	HIGH SPEED PASSAGE PLUG	
14-357S	Choke shaft and lever assembly	
20-26	Main metering jet gasket	
20 31	NEEDLE SEAT GASKET	
20-35	Governor primary adjusting screw plug gasket	
20-36	Governor secondary adjusting screw plug gasket	
20 51	Step up jet gasket	
20 52	STEP UP PISTON GASKET	
21-91S	Float and lever assembly	
24-23	FLOAT LEVER PIN	
25-102S	NEEDLE AND SEAT ASSEMBLY	
30A-37	Idle adjustment screw	
38A-54S	Primary adjusting nut assembly (Stamped No 30)	
39-10	Choke valve attaching screw	(2)
48-73	PUMP JET	
61-84	Idle adjustment screw spring	
61-135	STEP UP PISTON SPRING	
61-144	Pump spring (cadmium plated)	
61-157	Plunger spring	
61-299	Choke spring	
61-302	Secondary friction spring	
61-316S	Secondary spring assembly	
61-367	Primary spring (copper plate .043" wire dia.)	
61-373	Pump spring (copper oxide plated)—Altitude operation only	
62-151S	Choke tube bracket assembly	
63 24	Float lever pin retainer	
63-37	Pump check ball retainer ring	
63-85	Secondary spring assembly retainer	
63-104	Throttle shaft retaining ring (Sup by 136 55)	
64 117S	PLUNGER ROD SPRING AND PISTON ASSEMBLY (Identify by cadmium plated spring)	
64-118S	Plunger, rod spring and piston assembly (Identify by copper oxide spring)—Altitude operation only	
86-10	Choke bracket attaching screw lock washer	
86-15	Flange stud lock washer	(2)
86-17	Throttle stop screw lock washer	
86-51	Throttle shaft dog lock washer	
86-54	Throttle valve screw lock washer	(2)
101-10	Wire clamp screw	
101-12	Choke bracket clamp screw	
101-38	Choke bracket attaching screw (special)	
101-121	Throttle adjusting screw	
101-142S	Choke tube bracket attaching screw and washer assembly	
101-145S	Body flange attaching screw and washer assembly	(2)
101-149S	Shaft housing attaching screw and washer assembly	(3)
101-150S	Air horn attaching screw and washer assembly	(3)
101-160S	Cover to governor housing attaching screw and washer assembly	(6)
101-164	Throttle lever clamp screw	
101-199S	Air horn attaching screw and washer assembly	(2)
101-215	Secondary adjusting screw	
101-232	Throttle valve screw	(2)
101-233	Primary adjusting screw (Stamped No 30 1-19/32" long)	
101-234S	Body flange attaching screw and washer assembly	
101-257	Throttle stop screw	
103-11	Lead shot	(2)
105A-10	Choke tube clamp nut	
105A-13	Flange nut	
105A-28	Throttle lever clamp nut	
116-13	PUMP INTAKE CHECK BALL	
116-18	PUMP DISCHARGE CHECK BALL	
118-57	Governor housing cover	
118-59S	Governor housing cover assembly (Sup by 118 57)	
121-104	MAIN BODY GASKET	
121-114	BODY FLANGE GASKET	
121-123	Governor housing cover gasket	
121-141	THROTTLE SHAFT HOUSING GASKET	
123-47S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
136 55	SPRING WASHER (Between throttle lever and casting)	
136-82	MAIN VENT PLUG GASKET	
136-105	Throttle lever shaft seal retainer	
136-124	Spring washer (Between throttle lever and boss) (Sup by 63 104)	
145-51S	MAIN VENT TUBE AND PLUG ASSEMBLY	
149-99S	STEP UP JET ASSEMBLY	
159-63S	Main metering jet assembly—3 sizes lean	
159-87S	Main metering jet assembly—2 sizes lean	
159-89S	Main metering jet assembly—1 size lean	
159-93S	MAIN METERING JET ASSEMBLY—STANDARD	
160-78S	STEP UP PISTON PLATE AND ROD ASSEMBLY	
163-37	Carter seal	
163-49	Primary adjusting nut seal	
170-143S	Throttle shaft housing assembly	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

DODGE TRUCK 1947-1949

BB DOWN-DRAFT CARBURETER WITH GOVERNOR—**E7F1**

MODEL NUMBERS: **WDX, B-1-PW, F-1-PW**

Note: Motor Serial Nos. T137-8219 and higher

CARBURETER SPECIFICATIONS

Six Cylinder Engine 3¼ Inch Bore, 4⅝ Inch Stroke

Dimensions Flange size 1½ inch S A E
Throttle bore 1 11/16 inch (42 86 mm)
Main venturi 1 11/32 inch (3 413 mm)

Float Setting Top of float 5/64 inch (1 98 mm) plus or minus 1/64 inch (397 mm) below top surface of carbureter body casting

Vents Outside none Inside balance vent tube 218 inch (5 56 mm) inside diameter

Gasoline Intake Needle Triangular horizontal needle seat size No 44 (2 18 mm) drill

Idle Orifice Tube Jet size 0276 inch (70 mm)
Idle passage air bleed (in air horn) size 059 inch (1 50 mm)
Idle restriction in body size 055 inch (1 397 mm)

Idle Ports Upper port slot type Length 128 inch (3 251 mm) Width 027 inch (686 mm)
Top of port 104 inch (2 642 mm) to 110 inch (2 794 mm) above top edge of valve in slot (early production) 096 inch (2 388 mm) to 100 inch (2 540 mm) above top edge of valve in slot (late production)
Lower port size 053 to 057 inch (1 35 to 1 45 mm) diameter (For idle adjustment screw)

Set Idle Adjustment ½ to 1½ turns open For richer mixture turn screw out Do not idle engine below 450 to 500 r p m motor speed

Vacuum Spark Port None

Main Metering Jet Calibrated to flow 328 to 332 cc per minute Do not gauge for size If in doubt replace with new part

Main Vent Fuel chamber to vent tube well (in air horn) size 063 inch (1 60 mm) diameter In vent tube plug size 0433 (1 10 mm) diameter

Main Vent Tube Side holes 1—0354 (90 mm) diameter 3/32 inch (2 381 mm) from end

1—0354 (90 mm) diameter ⅛ inch (3 175 mm) from end
1—0236 (60 mm) diameter ½ inch (12 70 mm) from end
1—0236 (60 mm) diameter 17/32 inch (13 49 mm) from end

1—0157 (40 mm) diameter 1 15/32 inch (37 31 mm) from end

Step Up Jet Size 0492 (1 25 mm) diameter

Accelerating Pump Type vacuum operated Stroke non adjustable Pump intake passage ball check seat size 115 to 120 inch (2 92 to 3 05 mm) diameter
Pump discharge passage ball check seat size 062 to 065 inch (1 58 to 1 65 mm) diameter
Pump discharge jet size 0315 inch (80 mm) diameter

Choke Offset butterfly type with poppet valve

FOR GOVERNOR INSTRUCTIONS, SEE FORM 4718F

MOTOR TUNE-UP

Spark Plug Gap	Set Breaker Points	Use Motor Gauge Breaker Points to Open	Set Valves (Hot)		Idle Adjustment Screw Setting
025"- 030'	018"- 024"	002" A T D C	Intake 008" Exhaust 010"	Float Setting 5/64 Inch	½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

Correct float adjustment is important and should be made in the following way

Place float gauge (No T109-50) across the carbureter body Press float lever down to hold float pin against the bottom of the slot in the body casting Floats should just clear the projections on the gauge If adjustment is necessary, bend lip on float lever toward intake needle to lower level or away from the needle to raise the float level

If motor stalls while idling, set throttle lever adjusting screw so motor runs between 450 and 500 R P M Then set idle adjustment screw ½ to 1½ turns open from closed position If a vacuum gauge is available, adjust to highest steady gauge reading

Accelerating pump is actuated by the intake manifold vacuum and no adjustment is necessary However be sure the bowl cover gasket and flange gasket seal to prevent any air leaks to the pump vacuum passages

If engine misses when load is suddenly increased, remove pump jet and clean with compressed air However, it is usually advisable to replace the pump jet, as its cost is nominal (All jets must be seated gasoline tight) This condition may also be due to damaged or worn plunger leather in accelerating pump cylinder or discharge check in discharge passage If plunger is removed from cylinder, use care when installing to avoid damage to plunger leather

Correct air fuel ratio is provided by a 'balance tube in the air horn The balance tube should be checked each time the carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type, size or condition of air cleaner Should the cleaner become clogged, the capacity will be reduced but the air-fuel mixture ratio will not be changed

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PARTS LIST

WHEN SERVICING, USE GASKET ASSORTMENT No. 205, REPAIR PACKAGE No. 1503

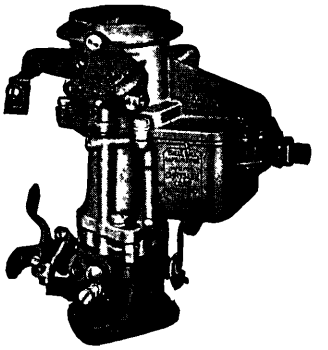
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-587S	Body flange and governor assembly	
1A-31	FLANGE GASKET	
3 585S	Throttle lever shaft and arm assembly	
4-506S	Throttle lever assembly	
4A-96	Throttle shaft dog	
4A-103S	Throttle shaft dog assembly	
6-582S	Air horn assembly	
7-105S	Choke valve assembly	
11B-17	PUMP DISCHARGE PASSAGE PLUG	
11B-41	Rivet plug	(4)
11B-69	Rivet plug	
11B-79	Rivet plug	
11B-108	Idle port rivet plug	
11B-138	PUMP JET RIVET PLUG	
11B-186S	Governor primary adjusting screw plug assembly	
11B-194	Bowl drain plug	
11B-201S	Governor secondary adjusting screw plug assembly	
11B-220	HIGH SPEED PASSAGE PLUG	
14-357S	Choke shaft and lever assembly	
20-26	Main metering jet gasket	
20-31	NEEDLE SEAT GASKET	
20-35	Governor primary adjusting screw plug gasket	
20-36	Governor secondary adjusting screw plug gasket	
20 51	Step up jet gasket	
20-52	STEP UP PISTON GASKET	
21-91S	Float and lever assembly	
24-23	FLOAT LEVER PIN	
25-102S	NEEDLE AND SEAT ASSEMBLY	
30A-37	Idle adjustment screw	
38A-57S	Adjusting nut assembly (Stamped No 27)	
39-10	Choke valve attaching screw	(2)
48-73	PUMP JET	
61-84	Idle adjustment screw spring	
61-135	STEP UP PISTON SPRING	
61-144	Pump spring	
61 157	Plunger spring	
61-299	Choke spring	
61-302	Secondary friction spring	
61-314S	Secondary spring assembly	
61-366	Governor primary spring (Cadmium plate .041" wire dia.)	
61-373	Pump spring (Altitude operation only)	
62-151S	Choke tube bracket assembly	
63-24	Float lever pin retainer	
63-37	Pump retainer ring	
63-85	Secondary adjusting screw retainer	
63-104	Throttle shaft retaining ring (Sup by 136 55)	
64-117S	PLUNGER ROD SPRING AND PISTON ASSEMBLY	
64-118S	Plunger rod spring and piston assembly (Altitude operation only)	
86 9	Lock washer	
86-10	Lock washer	
86-15	Flange stud lock washer	
86-17	Throttle stop screw lock washer	
86-51	Throttle shaft dog lock washer	
86-54	Throttle valve screw lock washer	(2)
101-10	Wire clamp screw	
101-12	Choke bracket clamp screw	
101-38	Screw	
101-142S	Choke tube bracket attaching screw and washer assembly	
101-145S	Body flange attaching screw and washer assembly	(2)
101-149S	Throttle shaft housing attaching screw and washer assembly	(3)
101-150S	Air horn attaching screw and washer assembly	(3)
101-160S	Cover to governor housing attaching screw and washer assembly	(6)
101-164	Throttle lever clamp screw	
101-199S	Air horn attaching screw and washer assembly	(2)
101-215	Secondary adjusting screw	
101-220	Primary adjusting screw (Stamped No 27 1 19/32" long)	
101-231	Throttle shaft dog attaching screw	
101-232	Throttle valve screw	(2)
101-234S	Body flange attaching screw and washer assembly	
101-246	Throttle adjusting screw	
101-248	Throttle lever set screw	
101-249	Clamp screw	
101-257	Throttle stop screw	
103-11	Lead shot	(2)
105A-10	Choke tube clamp nut	
105A-13	Flange nut	
105A-28	Throttle lever clamp nut	
116-13	PUMP INTAKE CHECK BALL	
116-18	PUMP DISCHARGE CHECK BALL	
118-58	Governor housing cover	
118-60S	Governor housing cover assembly (Sup by 118 58)	
121-104	MAIN BODY GASKET	
121-114	BODY FLANGE GASKET	
121-123	Governor housing cover gasket	
121-141	THROTTLE SHAFT HOUSING GASKET	
123-47S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
136-55	SPRING WASHER (BETWEEN THROTTLE LEVER AND CASTING)	
136-82	MAIN VENT PLUG GASKET	
136-124	Spring washer (Sup by 63 104)	
145 51S	MAIN VENT TUBE AND PLUG ASSEMBLY	
149-99S	STEP UP JET ASSEMBLY	
159-63S	Main metering jet assembly—3 sizes lean	
159-87S	Main metering jet assembly—2 sizes lean	
159-89S	Main metering jet assembly—1 size lean	
159-93S	MAIN METERING JET ASSEMBLY—STANDARD	
160-78S	STEP UP PISTON PLATE AND ROD ASSEMBLY	
163-37	Car seal	(2)
170-143S	Shaft housing assembly	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used.

DTC1 Used on "T112-T113-T125"
ETT1 Used on "T118 and T120"

MOTOR SERIAL NUMBERS
DTC1—P14—1001 and higher
ETT1—1001 and higher



DODGE TRUCKS 1942-49

(DTE2 can be used in place of DTC1, E7T2 can be used in place of ETT1)

Casting number on face of flange DTC1, 242, ETT1, 271

B-B Down-Draft Carbureters—**Models DTC1-ETT1**

CARBURETER SPECIFICATIONS

DTC1 for Engines T112-T113-T125. 3¼" Bore; 4⅜" Stroke
ETT1 for Engines T118-T120. 3-7/16" Bore; 4½" Stroke.

Dimensions (Both) Flange size, 1½ inch S A E
(DTC1) Throttle bore, 1-9/16 inch (39 69 mm)
(ETT1) Throttle bore, 1-11/16 inch (42 86 mm)
(DTC1) Main venturi, 1¼ inch (31 75 mm)
(ETT1) Main venturi 1-11/32 inch (34 13 mm)

Float Setting (Both) Top of float 5/64 inch (1 98 mm) plus or minus 1/64 inch (397 mm) below top surface of carbureter body casting

Vents: (Both) Outside, none Inside, balance vent 218 inch (5 54 mm) diameter

Gasoline Intake Needle. (Both) Triangular, horizontal No 44 (2 18 mm) drill in needle seat

Idle Orifice Tube. (DTC1) Jet size 0295 inch (75 mm)
(ETT1) Jet size, 0276 inch (70 mm)
(DTC1) Idle passage air bleed (in body) size 067 inch (1 70 mm)
(ETT1) Idle passage air bleed (in body) size 063 inch (1 60 mm)
(DTC1) Restriction (in body) size 054-055 inch (1 371-1 397 mm)
(ETT1) Restriction (in body) size 053 inch (1 346 mm)

Idle Ports (DTC1) Upper port keyhole type, length, 160 inch (4 06 mm) Width 030 inch (76 mm), 045 inch (1 14 mm) diameter hole at top Top of port located (early production) 118 to 122 inch, (late production) 128 to 132 inch above top edge of valve
(ETT1) Upper port, keyhole type, length, 128 inch (3 25 mm) Width, 027 inch (686 mm), 063 inch (1 6 mm) diameter hole at top Top of port located 088 to 092 inch (2 24 to 2 34 mm) above top edge of valve (early production), 093 to 097 inch (2 36 to 2 46 mm) above top edge of valve (late production)
(Both) Lower port size 053 to 057 inch (1 35 to 1 45 mm) diameter (For idle adjustment screw)

Set Idle Adjustment Screw (Both) ½ to 1½ turns open For richer mixture, turn screw out Do not idle engine below 300 r p m or 6 m p h

Main Metering Jet: (DTC1) Calibrated to flow 254 to 258 cc per minute
(ETT1) Calibrated to flow 312 to 316 cc per minute Do not gauge for size If in doubt, replace with new part

Main Vent: (Both) Through diffuser (air bleed inside bowl) size, 0315 inch (80 mm) drill

Accelerating Jets (DTC1) 2—0354 (90 mm) drill approximately 5/16 inch (7 94 mm) from end
2—0354 (90 mm) drill approximately 1 inch (25 40 mm) from end
2—0354 (90 mm) drill approximately 1½ inch (38 10 mm) from end
(ETT1) 2—0354 (90 mm) drill approximately 5/16 inch (7 94 mm) from end
2—0354 (90 mm) drill approximately 1 inch (25 40 mm) from end

Step-up Jet (DTC1) No 63 (94 mm) drill
(ETT1) 0413 inch (1 05 mm) drill

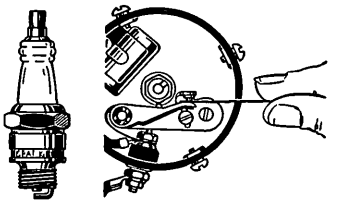
Accelerating Pump. (Both) Type, delayed action Stroke, summer setting (inner hole, short stroke) Intermediate setting (center hole) Winter setting (outer hole, long stroke) Pump intake passage, ball check seat, size 115 to 120 inch (2 93 to 3 05 mm) diameter
Pump discharge passage Restriction (under ball check) size 062 to 065 inch (1 58 to 1 65 mm) diameter in body
(DTC1) Pump (discharge) jet, size 0276 inch (70 mm) drill
(ETT1) Pump (discharge) jet, size 0374 inch (95 mm) drill

Choke Offset butterfly type with poppet valve

Vacuum Spark Port (Both) Slot type size, 040 by 110 inch (1 016 by 2 794 mm)
(DTC1) Bottom of port to be 003 to 009 inch (076 to 229 mm) above top edge of valve
(ETT1) Top of port to be 052 to 058 inch (1 321 to 1 473 mm) above top edge of valve

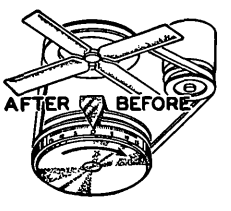
Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter

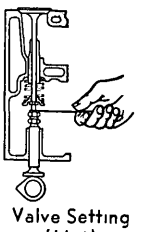


Spark Plug Gap .025"

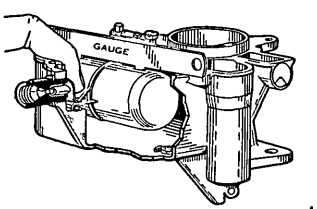
Breaker Point Setting .020"



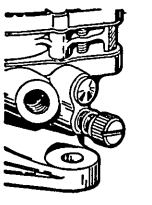
Ignition Timing Breaker Points to Open: T. D C.



Valve Setting (Hot)
T112-T113-T125
Int. .006"—Ex .008
T118-T120
Int. .010"—Ex .012"



Float Setting (Use Gauge) 5/64 Inch



Idle Adjustment Screw Setting ½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

If carbureter loads up after considerable service, check float level Wear on lip of float lever will raise float level Before adjusting float, be sure float lever pin is firmly seated Reset float level by bending lip of float lever away from needle to raise level, or bend lip toward needle to lower float level Bend vertical lip of float only

If motor stalls while idling, set throttle lever adjusting screw so motor runs approximately 300 r p m Then set idle adjustment screw to specifications If these adjustments do not correct the trouble remove idle orifice tube and plug assembly Clean tube and passages with compressed air

If acceleration is not satisfactory, remove pump jet and clean with compressed air However, it is usually advisable to replace the pump jet as its cost is nominal All jets must be seated gasoline tight Poor acceleration may be due to damaged or worn plunger leather in accelerating pump, sediment in pump cylinder or clogged intake ball check at bottom of pump cylinder and discharge ball check in discharge passage If plunger is removed from cylinder, use care in installing to avoid damage to plunger leather

Correct air fuel ratio is provided by a 'balance tube" in the air horn The balance tube should be checked each time

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the carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type size or condition of air cleaner Should the cleaner become clogged the capacity will be reduced but the air-fuel mixture ratio will not be changed

Excessive richness above 50 miles per hour may be caused by a clogged main vent tube After removal of rivet plug beneath float bowl with tool No T109-43 main vent tube can be removed and a new tube inserted with tool No T109-195 Care must be exercised in inserting new tube which must seat tightly Use new rivet to complete the installation

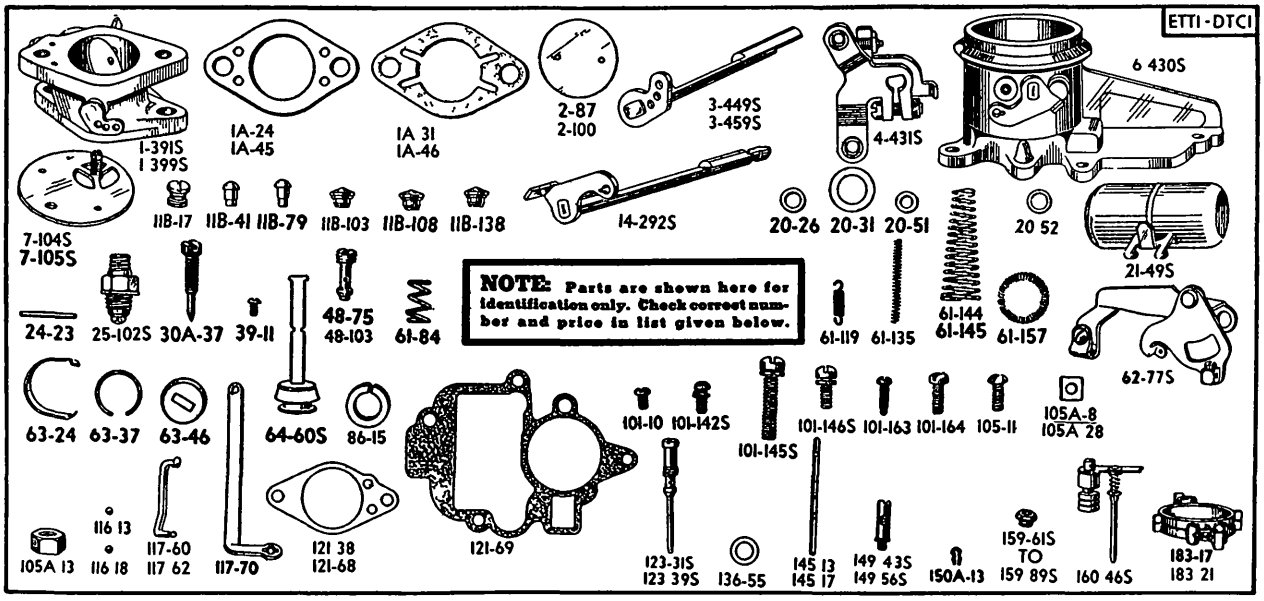
Pump Adjustment Remove air horn assembly back out throttle adjustment screw, and place pump operating link in center hole of throttle shaft arm Adjustment can be made by bending horizontal portion of pump lifter link so that top of pump plunger shaft contacts lip of indicator on pump stroke gauge T109-117S Correct travel is 24/64" on DTC1 and 26/64' on ETT1

Pump stroke adjustable for high or low temperature Set to longest stroke for cold weather, shorter stroke for hot weather driving

Maximum economy and performance are secured only when breaker points, spark plugs valves and motor timing are set to manufacturer s specifications After motor is properly tuned the following should be done to insure satisfactory performance and economy

(a) Float level must be set as above
(b) Step-up rod in step-up jet must seat and move freely When reassembling, jet must be screwed in tight against seat
(c) Step-up piston in body casting should not bind and must be free of dirt
(d) Main metering jet can be replaced with leaner than standard metering jets, for altitude or high test fuel

Caution Do not attempt to gauge metering jets with drills These jets have been flow-tested to insure correct fuel flow



Dodge Trucks—1942-49—Nos. DTC1-ETT1

WHEN SERVICING, USE GASKET ASSORTMENT No. 136 FOR DTC1, No. 137A FOR ETT1, REPAIR PACKAGE FOR ETT1, No. 1311C, FOR DTC1, No 1326D

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME
1 268S	Body flange assembly (DTC1)
1 391S	Body flange assembly (DTC1) (Sup. by 1-268S)
1 399S	Body flange assembly (ETT1)
1A-24	★Flange gasket—with governor (ETT1)
1A-31	FLANGE GASKET—WITHOUT GOVERNOR (ETT1)
1A-45	★Flange gasket—with governor (DTC1)
1A-46	FLANGE GASKET—WITHOUT GOVERNOR (DTC1)
2-87	Throttle valve (ETT1)
2-100	Throttle valve (DTC1)
3-449S	Throttle shaft and arm assembly (DTC1)
3-452S	Throttle shaft and arm assembly (ETT1)
3-459S	Throttle shaft and arm assembly (ETT1) (Sup by 3-452S)
4 431S	Throttle lever assembly
6-430S	Air horn assembly (Sup by 6-563S on DTC1) (Sup by 6-600S on ETT1)
6-563S	Air horn assembly (DTC1)
6 600S	Air horn assembly (ETT1)
7-104S	Choke valve assembly (DTC1) (Sup by 7-151S)
7-105S	Choke valve assembly (ETT1)
7-151S	Choke valve assembly (DTC1)
11B-17	Pump discharge passage plug
11B-41	Rivet plug
11B-79	Rivet plug (2)
11B 103	Main vent tube rivet plug (Sup by 11B-220)
11B-108	IDLE PORT RIVET PLUG
11B-138	PUMP JET RIVET PLUG
11B-220	MAIN VENT TUBE RIVET PLUG
14 292S	Choke control lever and shaft assembly
20-26	Main metering jet gasket
20-31	Needle seat gasket
20-51	Step-up jet gasket
20-52	STEP-UP PISTON GASKET
21-49S	Float and lever assembly
24-23	Float lever pin
25-102S	NEEDLE AND SEAT ASSEMBLY
30A 37	Idle adjustment screw
39-11	Choke and throttle valve attaching screw (4)
48 75	PUMP JET (ETT1)
48-103	PUMP JET (DTC1)
61-84	Idle adjustment screw spring
61-119	Choke pull-back spring
61-135	STEP-UP PISTON SPRING
61-144	PUMP SPRING (DTC1)
61-145	PUMP SPRING (ETT1)
61 157	Pump plunger spring
62-77S	Choke tube bracket assembly
63 24	FLOAT LEVER PIN RETAINER
63 37	PUMP BALL RETAINER RING

Part No.	PART NAME
63-46	Pump spring retainer
64 60S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49-120)
86 15	Flange stud lock washer (2)
101-10	Choke wire clamp screw
101-142S	Choke bracket screw and washer assembly
101-145S	Flange screw and washer assembly (2)
101-146S	Air horn screw and washer assembly (Sup by 101-150S)
101-150S	†Bowl cover attaching screw and washer assembly (4)
101-163	Throttle lever adjusting screw (Sup by 101-279)
101-164	Throttle lever clamp screw
101-279	Throttle lever adjusting screw
105-11	Choke tube clamp screw
105A-8	Choke tube clamp nut
105A-13	Flange stud nut (2)
105A-28	Throttle lever clamp nut
116 13	PUMP CYLINDER BALL
116-18	PUMP CHECK BALL
117-60	PUMP LINK (DTC1)
117-62	PUMP LINK (ETT1)
117-70	PUMP LIFTER LINK
121 38	BODY FLANGE GASKET (ETT1) (2)
121-68	BODY FLANGE GASKET (DTC1) (2)
121-69	BODY GASKET
121-159	Body flange gasket (2)
123-31S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY (ETT1)
123-39S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY (DTC1)
136-55	Throttle centering spring washer
145-13	MAIN VENT TUBE (ETT1)
145-17	MAIN VENT TUBE (DTC1)
149-43S	STEP-UP JET ASSEMBLY (DTC1)
149-56S	STEP-UP JET ASSEMBLY (ETT1)
150A-13	PIN SPRING
159 61S	MAIN METERING JET ASSEMBLY—STANDARD (DTC1)
159-63S	Main metering jet assembly—2 sizes lean (ETT1)
159-66S	Main metering jet assembly—1 size lean (DTC1)
159 76S	Main metering jet assembly—3 sizes lean (ETT1)
159-82S	Main metering jet assembly—2 sizes lean (DTC1)
159 87S	Main metering jet assembly—1 size lean (ETT1)
159-89S	MAIN METERING JET ASSEMBLY—STANDARD (ETT1)
160 46S	STEP UP PISTON PLATE AND ROD ASSEMBLY
183-17	Insulator (ETT1) (Sup by 183-64)
183-21	Insulator (DTC1)
183-64	Insulator (ETT1)

★This gasket to be installed between carbureter and governor when governor is installed Original flange gasket to remain between governor and manifold

†Install 101-150S in bowl cover attaching screw to the rear of the air horn

NOTE· Figures in parentheses indicate number of pieces used In one carbureter Where no figure is shown, only one is used

DODGE TRUCKS CAB-OVER-ENGINE 1940-1948

CARBURETER INDEX

Year	Carbureter Numbers	Car Model
1940-41	†6C1-6C2	T88-T89
1940-41	†6D1	T88
1940-41	6D1R	Retail
1940-48	6E1	T90-T91-T128-T130
1941-42	6F1	T98-T128-T130
1941-42	6G1	T130

(6D1R can be used in place of 6C1-6C2-6D1)

† 6D1R Carbureter will be shipped on orders for 6C1, 6C2 or 6D1. The instructions below should be followed when 6D1R Carbureter is used to replace 6C1, 6C2 or 6D1.

6C1—Use the following parts which are packed in carton with carbureter:—4-238S, 4A-39S, and 62-118S.

6C2—No additional parts necessary.

6D1—Use 156-29 gas line connection which is packed in carton with carbureter.

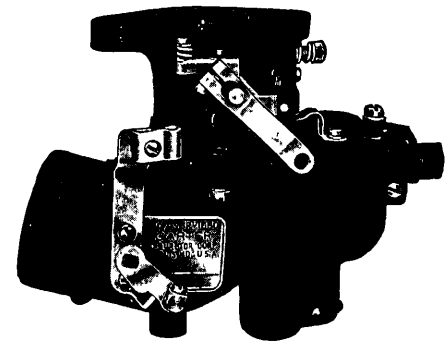


Figure shows 1940 Carbureter, No. 6C1.

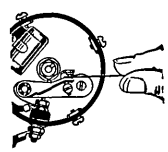
MOTOR TUNE-UP—BE ACCURATE! ALWAYS USE FEELER GAUGES!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



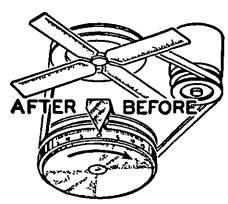
SPARK PLUG GAP

.025"



BREAKER POINTS

.020"



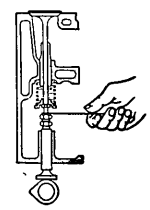
IGNITION TIMING

Breaker Points to Open

6C1-6C2-6D1-6D1R-6G1
T. D. C.

6E1
Aluminum Pistons
2° A. T. D. C.
Cast Iron Pistons
6° A. T. D. C.

6F1
2° A. T. D. C.

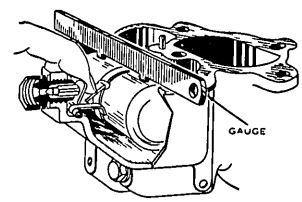


SET VALVES
With Motor at Operating Temperature

6C1-6C2-6D1-6D1R
Intake .008"
Exhaust .012"

6E1-6F1
Intake .010"
Exhaust .012"

6G1
Intake .010"
Exhaust .014"



FLOAT LEVEL
(Remove Gasket)

Correct Float Level
1/32" to 1/16"
Below Edge of
Casting

CARBURETER ADJUSTMENTS

To Secure a Good Idle: Set throttle lever adjusting screw so motor runs approximately 300 rpm. Then set idle adjustment screw so motor fires evenly. Correct setting will be found between (1/4 to 1 1/4 on 6E1, 6F1) (1/2 to 1 1/2 on 6C1, 6C2, 6D1, 6D1R) turns open. A richer mixture is obtained by backing out adjustment screw—a leaner mixture by turning screw in. If motor stalls while idling, remove idle passage tube and idle jet tube and clean with compressed air.

To Improve Acceleration: Examine pump link setting: For winter driving, link screw should be set in outer hole, giving long stroke; for hot weather, in high altitudes, pump link should be connected in inner hole, giving short stroke. If this does not give desired results, the main metering jet, pump metering jet, check valve assembly and pump valve assembly should be removed and cleaned with compressed air.

If Motor Loads—Check Float Level: Wear on lip of float lever will raise float level from factory setting, causing carbureter to load up. To lower float level, bend lip of float lever toward needle. To raise float level, bend lip away from needle. A very slight bend is sufficient. Be sure to bend lip of float, not bracket.

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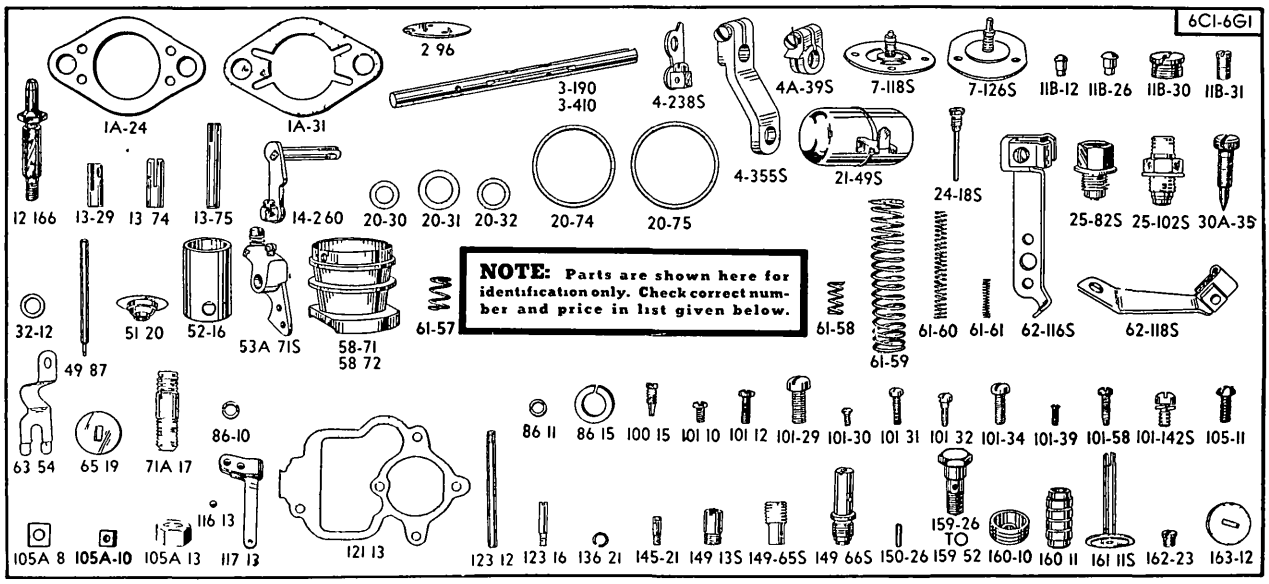
Economy. (a) Maximum economy is secured only when breaker points, spark plugs valves and motor timing are set to manufacturer s specifications.

(b) Float level must set as instructed on page 1

(c) Step-up valve cage assembly should be ex amined Ball check in this assembly must seat and move freely. When reassembling valve cage must be screwed in tight against seat.

(d) Step-up push rod must move freely in upper and lower guides

(e) Step-up piston in upper casting should not bind and must be free from dirt.



PARTS LIST

WHEN SERVICING, USE GASKET ASSORTMENT No. 172A (All); REPAIR PACKAGE No. 1597 (6E1)
PART NUMBERS IN BOLD TYPE, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

PART NAME	6C1-6C2	6D1-6D1R	6E1	6F1	6G1
Flange Gasket—With Gov.	1A-24	1A-24	1A-24	1A-24	1A-24
Flange Gasket—Without Gov.	1A-31	1A-31	1A-31	1A-31	1A-31
Throttle valve	2-96	2-96	2 96	2-96	2-96
Throttle shaft	3-190	3-190	3 410	3-190	3-410
Throttle lever ass'y (loose)	4-238S (6C1)			4-238S	
Throttle lever ass'y	4-355S	4-355S	4-355S	4-355S	4-355S
Fast idle cam	4A-39S (6C1)			4A-39S	
Choke valve assembly	7-118S	7-118S	7-118S	7-126S	7-126S
Rivet plug	11B-12	11B-12	11B-12	11B-12	11B-12
Rivet plug	11B 26	11B-26	11B-26	11B 26	11B-26
Step-up piston plug	11B 30	11B-30	11B-30	11B-30	11B-30
Idle hole plug	11B-31	11B-31	11B-31	11B-31	11B-31
N zzle	12-166	12-166	12-166	12-166	12-166
Choke shaft—stub . .	13-29	13-29	13-29	13-74	13-74
Choke shaft				13-75	13-75
Choke lever and clamp ass'y	14-260S	14-260S	14-260S		
Nozzle gasket	20 30	20 30	20-30	20-30	20-30
Needle seat gasket	20-31	20-31	20-31	20-31	20-31
Metering screw gasket	20 32	20-32	20-32	20-32	20-32
Venturi gasket—upper	20-74	20-74	20-74	20 74	20-74
Venturi gasket—lower	20-75	20 75	20-75	20-75	20-75
Float and lever ass'y	21-49S	21-49S	21-49S	21-49S	21-49S
Float lever pin and plug ass'y	24-18S	24-18S	24-18S	24-18S	24-18S
Needle and seat ass y	25 82S	{25 82S (6D1R) {25 102S (6D1)	25-102S	25-102S	25-102S
Idle adjustment screw	30A-35	30A-35	30A-35	30A-35	30A-35
Pump rod gasket	32-12	32-12	32-12	32-12	32-12
Step-up push rod	49-87	49-87	49-87	49-87	49-87

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PART NAME	6C1-6C2	6D1-6D1R	6E1	6F1	6G1
Pump collar	51-20	51-20	51-20	51-20	51-20
Pump sleeve	52-16	52-16	52-16	52-16	52-16
Pump arm assembly	53A-71S	53A-71S	53A-71S	53A-71S	53A-71S
Venturi	58-71	58-71	58-72	58-71	58-71
Idle adjustment screw spring	61-57	61-57	61-57	61-57	61-57
Throttle lever adjusting screw spring	61-58	61-58	61-58	61-58	61-58
Pump spring	61-59	61-59	61-59	61-59	61-59
Step-up piston spring	61-60	61-60	61-60	61-60	61-60
Step up spring	61-61	61-61	61-61	61-61	61-61
Choke tube bracket ass'y	62-116S	62-116S	62-116S		
Choke tube clamp assembly	62-118S (6C1)			62-118S	
Packing retainer	63-54	63-54	63 54	63-54	63 54
Pump link cover plate	265-19	265-19	265-19	265-19	265-19
Flange stud	271A-17	271A-17	271A-17	271A-17	271A-17
Lock washer	86-10	86-10	86-10	86-10	86-10
Lock washer	386-11	*386 11	*386-11	*386 11	*386-11
Flange stud lock washer	286 15	286-15	286-15	286-15	286-15
Headless screw	100-15	100 15	100-15	100-15	100-15
Wire clamp screw	101-10	101-10	101-10	101-10	
Clamp screw	101-12	101-12	101-12	101-12	
Body attaching screw	3101-29				
Choke valve screw	2101-30	2101-30	2101-30	2101-30	2101-30
Throttle lever adjusting screw	101-58 *(101-31)*	101-58 *(101-31)*	101-58	101-58	101-31
Pump link screw	101-32	101-32	101-32	101-32	101-32
Throttle lever clamp screw	101-34	101-34	101-34	101-34	101-34
Throttle valve screw	2101-39	2101-39	2101-39	2101-39	2101-39
Choke bracket screw and washer assembly	101-142S	101-142S	101 142S	101-142S	101-142S
Screw and lock washer ass'y		3101 151S *(101-29)*	3101-151S *(101-29)*	3101-151S *(101-29)*	3101-151S *(101-29)*
Clamp screw	105-11	105-11		105-11	
Tube clamp nut	105A-8	105A-8		105A-8	
Choke tube clamp nut	105A-10	105A 10	105A-10		
Flange stud nut	2105A-13	2105A-13	2105A-13	2105A-13	2105A-13
Check ball	2116-13	2116-13	2116-13	2116-13	2116-13
Pump link	117-13	117-13	117-13	117-13	117-13
Body gasket	121-13	121-13	121-13	121-13	121-13
Idle passage tube	123-12	123-12	123 12	123-12	123-12
Idle orifice tube	123-16	123-16	123-16	123-16	123-16
Plug washer	136-21	136-21	136 21	136-21	136 21
Vent tube	145-21	145-21	145-21	145-21	145-21
Check valve cage ass'y	149-13S	149-13S	149-13S	149-13S	149-13S
Pump valve cage ass'y	149-65S	149-65S	149-65S	149-65S	149-65S
Step up valve cage ass'y	149-66S	149-66S	149-66S	149-66S	149-66S
Pump collar pin	150 26	150 26	150-26	150-26	150-26
Main metering screw—Standard	159-51	159-51	159-35	159-51	159-51
Main metering screw—One size lean	159 52	159 52	159 26	159-52	159-52
Main metering screw—Two sizes lean	159-48	159-48		159-48	159-48
Pump piston	160-10	160-10	160-10	160-10	160-10
Step-up piston	160-11	160-11	160-11	160-11	160-11
Pump rod plate and rod ass'y	161-11S	161-11S	161-11S	161-11S	161-11S
Power orifice	162-23	162-23	162 23	162-23	162-23
Felt packing	163-12	163-12	163-12	163-12	163-12

*Use with 101-29 on 6D1, 6D1R, 6E1, 6F1, 6G1.

NOTE: Parts in parentheses (in small italic type) are superseded by the part number shown above them. Small figures preceding part number indicates number of pieces in one carbureter.

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CARBURETER SPECIFICATIONS

	6C1-6C2-6D1-6D1R	6E1	6F1-6G1
DIMENSIONS			
Flange size	1½" (38 10 mm)	1½" (38 10 mm)	1½" (38 10 mm)
Throttle bore	1-7/16" (36 51 mm)	1-7/16" (36 51 mm)	1-7/16" (36 51 mm)
Main venturi I D	1 1/16" (26 99 mm)	1⅛" (28 58 mm)	1-1/16" (26 99 mm)
Air bleed through venturi to idle passage Dia	0885" to 0905" (2 25 to 2 30 mm) Dr	0885" to 0905" (2 25 to 2 30 mm) Dr	0885" to 0905" (2 25 to 2 30 mm) Dr
FLOAT SETTING Distance from top of float to top surface of lower body casting	1/32" to 1/16" (79 to 1 59 mm)	1/32" to 1/16" (79 to 1 59 mm)	1/32" to 1/16" (79 to 1 59 mm)
VENT (To Float Chamber) Size	No 30 (3 26 mm) Dr	No 30 (3 26 mm) Dr	No 30 (3 26 mm) Dr
BALANCE VENT TUBE Inside diameter	7/32" (5 56 mm)	7/32" (5 56 mm)	7/32" (5 56 mm)
Restriction hole upper body—diam	5/32" (3 97 mm)	5/32" (3 97 mm)	5/32" (3 97 mm)
GASOLINE INTAKE Needle Triangular, Horizontal Hole in needle seat Size	No 44 (2 18 mm) Dr	No 44 (2 18 mm) Dr	No 44 (2 18 mm) Dr
IDLE JET TUBE Jet size	0236" (60 mm) Dr	0236" (60 mm) Dr	0236" (60 mm) Dr
IDLE PORTS Lower port size diam	062" to 064" (1 58 to 1 63 mm)	062" to 064" (1 58 to 1 63 mm)	062" to 064" (1 58 to 1 63 mm)
Distance — Top of port below lower edge of valve	005" to 009" (13 to 23 mm)	005" to 009" (13 to 23 mm)	005" to 009" (13 to 23 mm)
Upper port (for idle adj screw) diam	053" to 057" (1 35 to 1 45 mm)	053" to 057" (1 35 to 1 45 mm)	053" to 057" (1 35 to 1 45 mm)
SET IDLE ADJUSTMENT SCREW Turns open (Do not idle engine below 6 mph)	½ to 1½	¼ to 1¼	¼ to 1¼
MAIN METERING SCREW Calibrated to flow per minute	286 to 290 cc	316 to 320 cc	286 to 290 cc
NOZZLE Discharge jet size	No 33 (2 87 mm) Dr	No 33 (2 87 mm) Dr	No 33 (2 87 mm) Dr
SIDE HOLES 2—0394" (1 00 mm) Dr Distance from shoulder	1/16" (1 59 mm)	1/16" (1 59 mm)	1/16" (1 59 mm)
1—051" (1 3 mm) Dr Distance from shoulder	⅜" (9 525 mm)	⅜" (9 525 mm)	⅜" (9 525 mm)
1—063" (1 6 mm) Dr Distance from shoulder	23/32" (18 256 mm)	23/32" (18 256 mm)	23/32" (18 256 mm)
1—051" (1 3 mm) Dr Distance from shoulder	1 1/16" (26 99 mm)	1 1/16" (26 99 mm)	1 1/16" (26 99 mm)
AIR BLEED TO NOZZLE Vent tube size	0394" (1 00 mm) Dr	0394" (1 00 mm) Dr	0394" (1 00 mm) Dr
STEP UP JET (Power orifice) Size	0472" (1 20 mm) Dr	0472" (1 20 mm) Dr	0472" (1 20 mm) Dr
ACCELERATING PUMP Type, Low Pressure Delayed Action			
Summer setting (inner hole) short stroke	9/16" (14 29 mm)	9/16" (14 29 mm)	9/16" (14 29 mm)
Winter setting (outer hole) long stroke	1" (25 40 mm)	1" (25 40 mm)	1" (25 40 mm)
Pump intake ball check size	⅛" (3 175 mm)	⅛" (3 175 mm)	⅛" (3 175 mm)
Pump discharge through nozzle			
VACUUM SPARK PORT Slot (round end type)	040" x 110" (1 016 x 2 794 mm)	040" x 110" (1 016 x 2 794 mm)	040" x 110" (1 016 x 2 794 mm)
Distance—Top of port below valve	003" to 009" (076 to 229 mm)	003" to 009" (076 to 229 mm)	003" to 009" (076 to 229 mm)

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DODGE TRUCK 1946-1947

BB Down-Draft Carbureters With Governor—**ET1-ET2-ET4**

VEHICLE MODEL No. WDX

ENGINE SYMBOL No. T-137

E7F1 can also be used

Note: Truck Serial Nos. (Detroit—8390001 and higher), (Los Angeles—88750001 and higher)

Motor Nos. T-137, 1001 and higher

CARBURETER SPECIFICATIONS

Six Cylinder Engine 3¼ Inch Bore 4⅝ Inch Stroke

Dimensions Flange size 1½ inch S A E
Throttle bore 1 11/16 inch (42 86 mm)
Main venturi 1 11/32 inch (3 413 mm)

Float Setting Top of float 5/64 inch (1 98 mm) plus or minus 1/64 inch (397 mm) below top surface of carbureter body casting

Vents Outside none Inside balance vent tube 218 inch (5 56 mm) inside diameter

Gasoline Intake Needle Triangular horizontal needle seat hole No 44 (2 18 mm) drill

Idle Orifice Tube Jet size 0276 inch (70 mm)
Idle passage air bleed (in air horn) size 0688 inch (1 75 mm)
(ET1 ET2) Idle restriction in body size 059 inch (1 50 mm)
(ET4) Idle restriction in body size 0629 inch (1 60 mm)

Idle Ports Upper port slot type Length 128 inch (3 251 mm) Width 027 inch (686 mm)
Top of port 088 to 098 (2 235 mm to 2 489 mm) above top edge of valve (in slot)
Lower port size 053 to 057 inch (1 35 to 1 45 mm) diameter (For idle adjustment screw)

Set Idle Adjustment (ET1 ET2) ⅝ to 1⅛ turns open (ET4) ¾ to 1¼ turns open For richer mixture turn screw out Do not idle engine below 450 to 500 r p m motor speed

Vacuum Spark Port (ET1 only) Slot (round end) type size 040 by 110 inch (1 016 by 2 794 mm) Top of port 052 to 058 inch (1 32 to 1 47 mm) above top edge of valve (ET2 ET4) None

Main Metering Jet (ET1) Calibrated to flow 328 to 332 cc per minute
(ET2 ET4) Calibrated to flow 344 to 348 cc per minute Do not gauge for size If in doubt replace with new part

Main Vent Fuel chamber to vent tube well (in air horn) size 063 inch (1 60 mm) diameter In vent tube plug size 0433 (1 10 mm) diameter

Main Vent Tube Side holes 1—0354 (90 mm) diameter 3/32 inch (2 381 mm) from end
1—0354 (90 mm) diameter ⅛ inch (3 175 mm) from end
1—0236 (60 mm) diameter ½ inch (12 70 mm) from end
1—0236 (60 mm) diameter 17/32 inch (13 49 mm) from end
1—0157 (40 mm) diameter 1 15/32 inch (37 31 mm) from end

Step Up Jet (ET1) Size 0433 (1 10 mm) diameter
(ET2 ET4) Size 0492 (1 25 mm) diameter

Accelerating Pump Type vacuum operated Stroke non adjustable Pump intake passage ball check seat size 115 to 120 inch (2 93 to 3 05 mm) diameter
Pump discharge passage ball check seat size 062 to 065 inch (1 58 to 1 65 mm) diameter
Pump discharge jet size 0315 inch (80 mm) diameter

Choke Offset butterfly type with poppet valve

FOR GOVERNOR INSTRUCTIONS, SEE FORM 4718F

MOTOR TUNE-UP

Spark Plug Gap	Set Breaker Points	Use Motor Gauge Breaker Points to Open	Set Valves (Hot)	Float Setting	Idle Adjustment Screw Setting
024"-027"	018"-.022"	2° A T D C.	Intake 010" Exhaust 012"	5/64 Inch	(ET1-ET2) ⅝ to 1⅛ Turns Open (ET4) ¾ to 1¼ Turns Open

CARBURETER ADJUSTMENTS

Correct float adjustment is important and should be made in the following way

Place float gauge (No T109-50) across the carbureter body Press float lever down to hold float pin against the bottom of the slot in the body casting Floats should just clear the projections on the gauge If adjustment is necessary, bend lip on float lever toward intake needle to lower level or away from the needle to raise the float level

If motor stalls while idling, set throttle lever adjusting screw so motor runs between 450 and 500 R P M Then set idle adjustment screw (ET1-ET2) ⅝ to 1⅛, (ET4) ¾ to 1¼ turns open from closed position If a vacuum gauge is available, adjust to highest steady gauge reading

Accelerating pump is actuated by the intake manifold vacuum and no adjustment is necessary However be sure the bowl cover gasket and flange gasket seal to prevent any air leaks to the pump vacuum passages

If engine misses when load is suddenly increased remove pump jet and clean with compressed air However it is usually advisable to replace the pump jet, as its cost is nominal (All jets must be seated gasoline tight) This condition may also be due to damaged or worn plunger leather in accelerating pump cylinder or discharge check in discharge passage If plunger is removed from cylinder, use care when installing to avoid damage to plunger leather

Correct air fuel ratio is provided by a balance tube in the air horn The balance tube should be checked each time the carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type, size or condition of air cleaner Should the cleaner become clogged the capacity will be reduced but the air-fuel mixture ratio will not be changed

A fuel filter is incorporated in the carbureter bowl casting It should be cleaned periodically by removing the filter bowl and element (small discs) Soak element in acetone or a mixture of half and half Ethyl Alcohol and Benzol until all foreign material dissolves Then allow to dry CAUTION—do not blow off with compressed air which may damage discs

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PARTS LIST

WHEN SERVICING USE GASKET ASSORTMENT No 191, REPAIR PACKAGE No. 1370A

PART NAMES IN CAPITAL LETTERS LISTED BELOW INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-481S	Body flange assembly (complete with 220 2 governor) (Sup by 1 587S)	
1-527S	Body flange assembly (complete with 220 4 governor) (Sup by 1 587S)	
1-587S	★Body flange assembly (complete with 220 6 governor)	
1A-31	FLANGE GASKET	
3 553S	Throttle lever shaft and arm assembly (ET1 2)	
3 585S	Throttle lever shaft and arm assembly (ET4)	
4-506S	Throttle lever assembly	
4A 96	Throttle shaft pickup dog	
4A 103S	Tnrottle shaft dog assembly	
6 523S	Air horn assembly (ET1 only) (When replacing use 6 549S)	
6 549S	Air horn assembly	
7 105S	Choke valve assembly	
11B 17	PUMP DISCHARGE PASSAGE PLUG	
11B 41	Rivet plug	(4)
11B 69	Rivet plug	
11B 79	Rivet plug	
11B 108	Idle port rivet plug	
11B 138	PUMP JET RIVET PLUG	
11B 186S	Governor primary adjusting screw passage plug assembly	
11B 194	Bowl drain plug	
11B 201S	Governor secondary adjusting screw passage plug assembly	
11B 206S	Needle seat plug assembly	
11B 214S	Filter bowl assembly	
11B 220	HIGH SPEED PASSAGE PLUG	
14 345S	Choke shaft and lever assembly (ET1) (Early production)	
14 357S	Choke shaft and lever assembly (6 549S)	
20 26	Main metering jet gasket	
20-35	Governor primary adj screw plug gasket	
20 36	Governor secondary adj screw plug gasket	
20 51	Step up jet gasket	
20 52	STEP UP PISTON GASKET	
20 70	Needle seat gasket	
20 90	FILTER BOWL GASKET	
20 91	NEEDLE SEAT PLUG GASKET	
21 98S	Float and lever assembly	
24-23	FLOAT LEVER PIN	
25 148S	NEEDLE AND SEAT ASSEMBLY	
30 44	Filter element (optional)	
30 52	Filter element (Sup by 30 55S)	
30 55S	Filter element	
30A 37	Idle adjustment screw	
38A 57S	★Adjusting nut assembly (Stamped No 27)	
39 10	Choke valve attaching screw	(2)
48 73	PUMP JET	
61 84	Idle adjustment screw spring	
61 135	STEP UP PISTON SPRING	
61-144	Pump spring (Cadmium plated)	
61-145	Pump spring (Copper plated) (Sup by 61 144)	
61 157	Plunger spring	
61 299	Choke spring	
61 302	★Friction spring	
61 314S	★Secondary spring assembly	
61 366	★Primary spring (Cadmium plated 041" wire diameter 23 coils)	
61 373	Pump spring (for altitude operation only) (Copper oxide plated)	
62-151S	Choke tube bracket assembly	
63-24	Float lever pin retainer	
63-37	Pump cylinder ball retainer	
63-85	★Secondary adjusting screw retainer	
63-104	Throttle shaft retaining ring	
64-93S	Pump plunger rod spring and piston assembly (Identify by copper plated spring) (Sup by 64 117S)	
64-117S	PUMP PLUNGER SPRING AND ROD ASSEMBLY (Identify by cadmium plated spring)	
64 118S	Plunger rod spring and piston assembly (for altitude operation only) (Identify by copper oxide plated spring)	

Part No	PART NAME	
36-9	Throttle stop screw lock washer (ET1 ET2)	
86-9	Throttle lever clamp screw lock washer	
86-10	Choke bracket attaching screw lock washer	
86-15	Flange stud lock washer	(2)
86-16	Throttle valve screw lock washer (Sup by 86 54)	(2)
86-17	Throttle stop screw lock washer (ET4)	
86-51	Throttle shaft dog lock washer	
86-54	Throttle valve screw lock washer	(2)
101-10	Wire clamp screw	
101-12	Choke bracket clamp screw	
101-38	Choke bracket attaching screw (long)	
101-121	Throttle adjusting screw (ET1 only) (Sup by 101 246)	
101-142S	Choke tube bracket attaching screw and washer assembly	
101-145S	Body flange attaching screw and washer assembly	(2)
101-149S	Throttle shaft housing attaching screw and washer assembly (ET4)	(3)
101-150S	Air horn attaching screw and washer assembly	(3)
101-160S	Cover to governor housing attaching screw and washer assembly	(6)
101-164	Throttle dog clamp screw	
101-199S	Air horn attaching screw and washer assembly (Hex head)	(2)
101-215	★Secondary adjusting screw	
101-216S	Throttle shaft housing attaching screw and washer assembly (ET1 2)	
101-217	Throttle stop screw (ET1 2)	
101-220	★Primary adjusting screw (No 27 1 19/32" long)	
101-231	Throttle shaft dog attaching screw	
101 232	Throttle valve attaching screw	(2)
101-234S	Body flange attaching screw and washer assembly (lower)	
101 244	Throttle lever set screw (ET1) (Sup by 101 248)	
101 246	Tnrottle adjusting screw	
101-248	Throttle lever set screw (headless)	
101-249	Throttle lever clamp screw	
101-257	Throttle stop screw (ET4)	
103 11	Lead shot	(2)
105A-10	Choke tube clamp nut	
105A-13	Flange nut	(2)
105A-28	Throttle shaft dog clamp nut	
116-13	PUMP INTAKE CHECK BALL	
116 18	PUMP DISCHARGE CHECK BALL	
118 60S	Governor housing cover assembly	
121-105	BOWL COVER GASKET	
121-114	BODY FLANGE GASKET	
121-123	Governor housing cover gasket	
121-125	THROTTLE SHAFT HOUSING GASKET (ET1 2)	
121-141	THROTTLE SHAFT HOUSING GASKET (ET4)	
123-47S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
136-55	SPRING WASHER (Between throttle lever and flange) (Sup by 136 124)	
136 82	MAIN VENT PLUG GASKET	
136-105	Throttle lever shaft washer	
136-124	Spring washer (Between throttle lever and flange) (Sup by 63 104)	
145 51S	MAIN VENT TUBE AND PLUG ASSEMBLY	
149-76S	Step up jet assembly (Sup by 149 99S)	
149 99S	STEP UP JET ASSEMBLY	
159 63S	†Main metering jet assembly (four sizes lean)	
159-87S	†Main metering jet assembly (three sizes lean)	
159-89S	†Main metering jet assembly (two sizes lean)	
159-93S	Main metering jet assembly (Sup by 159 94S)	
159 94S	MAIN METERING JET ASSEMBLY	
160-78S	STEP UP PISTON PLATE AND ROD ASSEMBLY	
163-37	Carter Seal	
163-49	★Adjusting nut seal	
170-107S	Throttle shaft housing assembly (ET1 2)	
170-143S	Throttle shaft housing assembly (ET4)	

★Governor parts are of the latest design and must be set to 220 6 specifications (Form 4718F) when used to rebuild 220 2 and 220 4 After rebuilding and calibration is complete stamp 220 6 on cover plate assembly

†Three to six thousand feet altitude use one size lean Six to nine thousand feet altitude use two sizes lean Nine to twelve thousand feet altitude use three sizes lean Twelve thousand feet and higher use four sizes lean

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.

DODGE TRUCK 1946-1947

BB Down-Draft Carbureters With Governor—**EYC1-EYC3**

(E7C1 can be used in place of EYC1-EYC3)

ENGINE NO. SYMBOL T-136

VEHICLE MODEL WJ

Note: Truck Serial Nos. 81850001 and higher. Motor Nos. T-136, 1001 and higher

CARBURETER SPECIFICATIONS

Six Cylinder Engine: 3¾ Inch Bore, 4¼ Inch Stroke

Dimensions: Flange size, 1½ inch S. A. E
Throttle bore, 1-11/16 inch (42.86 mm).
Main venturi, 1-11/32 inch (3.413 mm).

Float Setting: Top of float 5/64 inch (1.98 mm) plus or minus 1/64 inch (.397 mm) below top surface of carbureter body casting.

Vents: Outside: none. Inside balance vent tube .218 inch (5.56 mm) inside diameter.

Gasoline Intake Needle: Triangular, horizontal needle seat hole No 44 (2.18 mm) drill.

Idle Orifice Tube: Jet size, .0276 inch (.70 mm).
Idle passage air bleed (in air horn), size 0688 inch (1.75 mm).
(EYC1) Idle restriction in body, size .059 inch (1.50 mm).
(EYC3) Size .0629 (1.60 mm).

Idle Ports: Upper port: slot type. Length, .128 inch (3.251 mm). Width, 027 inch (.686 mm).
Top of port .088 to .098 (2.235 mm to 2.489 mm) above top edge of valve (in slot).
Lower port size: .053 to .057 inch (1.35 to 1.45 mm) diameter (For idle adjustment screw).

Set Idle Adjustment: (EYC1) ⅝ to 1⅛ turns open, (EYC3) ¾ to 1¼ turns open. For richer mixture turn screw out. Do not idle engine below 450 to 500 r.p.m. motor speed.

Vacuum Spark Port: None

Main Metering Jet: Calibrated to flow 344 to 348 cc per minute Do not gauge for size If in doubt, replace with new part

Main Vent: Fuel chamber to vent tube well (in air horn), size 063 inch (1.60 mm) diameter. In vent tube plug, size 0433 (1.10 mm) diameter.

Main Vent Tube: Side holes. 1—.0354 (.90 mm) diameter 3/32 inch (2.381 mm) from end
1—0354 (.90 mm) diameter, ⅛ inch (3.175 mm) from end
1—0236 (.60 mm) diameter, ½ inch (12.70 mm) from end
1—0236 (.60 mm) diameter, 17/32 inch (13.49 mm) from end
1—.0157 (.40 mm) diameter, 1-15/32 inch (37.31 mm) from end.

Step-Up Jet: Size, 0492 (1.25 mm) diameter

Accelerating Pump: Type, vacuum operated Stroke, non-adjustable. Pump intake passage ball check seat size 115 to 120 inch (2.93 to 3.05 mm) diameter.
Pump discharge passage ball check seat size, 062 to 065 inch (1.58 to 1.65 mm) diameter.
Pump discharge jet, size .0315 inch (.80 mm) diameter

Choke: Offset butterfly type, with poppet valve.

FOR GOVERNOR INSTRUCTIONS, SEE FORM 4718F

MOTOR TUNE-UP

Spark Plug Gap	Set Breaker Points	Use Motor Gauge Breaker Points to Open	Set Valves (Hot)	Float Setting	Idle Adjustment Screw Setting
.025"	.020"	.005" (3° B.T.D.C.)	Intake .010" Exhaust .018"	5/64 Inch	(EYC1) ⅝ to 1⅛ Turns Open (EYC3) ¾ to 1¼ Turns Open

CARBURETER ADJUSTMENTS

Correct float adjustment is important and should be made in the following way

Place float gauge (No T109-50) across the carbureter body Press float lever down to hold float pin against the bottom of the slot in the body casting Floats should just clear the projections on the gauge. If adjustment is necessary, bend lip on float lever toward intake needle to lower level or away from the needle to raise the float level

If motor stalls while idling, set throttle lever adjusting screw so motor runs between 450 and 500 R P M. Then set idle adjustment screw (EYC1) ⅝ to 1⅛, (EYC3) ¾ to 1¼ turns open from closed position If a vacuum gauge is available, adjust to highest steady gauge reading

Accelerating pump is actuated by the intake manifold vacuum and no adjustment is necessary However, be sure the bowl cover gasket and flange gasket seal to prevent any air leaks to the pump vacuum passages.

If engine misses when load is suddenly increased, remove pump jet and clean with compressed air. However, it is usually advisable to replace the pump jet, as its cost is nominal. (All jets must be seated gasoline tight) This condition may also be due to damaged or worn plunger leather in accelerating pump cylinder or discharge check in discharge passage If plunger is removed from cylinder, use care when installing to avoid damage to plunger leather.

Correct air fuel ratio is provided by a 'balance tube" in the air horn The balance tube should be checked each time the carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type, size or condition of air cleaner Should the cleaner become clogged, the capacity will be reduced but the air-fuel mixture ratio will not be changed

A fuel filter is incorporated in the carbureter bowl casting It should be cleaned periodically by removing the filter bowl and element (small discs) Soak element in acetone or a mixture of half and half Ethyl Alcohol and Benzol until all foreign material dissolves Then allow to dry CAUTION—do not blow off with compressed air which may damage discs

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WHEN SERVICING USE GASKET ASSORTMENT No 191, REPAIR PACKAGE No 1370A

PART NAMES IN CAPITAL LETTERS LISTED BELOW INDICATE CONTENTS OF REPAIR PACKAGE

PARTS LIST

Part No	PART NAME	
1-496S	Body flange assembly (complete with 220 9 governor) (Sup by 1 581S)	
1-533S	Body flange assembly (complete with 220 9 governor) (Sup by 1 581S)	
1-581S	★Body flange assembly (complete with 220 21 governor)	
1A-31	FLANGE GASKET	
3 539S	Throttle lever shaft and arm assembly (EYC1)	
3 583S	Throttle lever shaft and arm assembly (EYC3)	
4 491S	Throttle lever assembly	
4A 96	Throttle shaft pickup dog	
6 544S	Air horn assembly (Early production) (Sup by 6 545S)	
6 545S	Air horn assembly	
7-105S	Choke valve assembly	
11B 17	PUMP DISCHARGE PASSAGE PLUG	
11B 41	Rivet plug	(4)
11B 69	Rivet plug	
11B 79	Rivet plug	
11B 108	Idle port rivet plug	
11B 138	PUMP JET RIVET PLUG	
11B 186S	Governor primary adjusting screw passage plug assembly	
11B 194	Bowl drain plug	
11B 201S	Governor secondary adjusting screw passage plug assembly	
11B 206S	Needle seat plug assembly	
11B-214S	Filter bowl assembly	
11B-220	HIGH SPEED PASSAGE PLUG	
14 357S	Choke shaft and lever assembly	
20 26	Main metering jet gasket	
20 35	Governor primary adj screw plug gasket	
20 36	Governor secondary adj screw plug gasket	
20 51	Step up jet gasket	
20 52	STEP UP PISTON GASKET	
20 70	Needle seat gasket	
20 90	FILTER BOWL GASKET	
20 91	NEEDLE SEAT PLUG GASKET	
21 98S	Float and lever assembly	
24 23	FLOAT LEVER PIN	
25 148S	NEEDLE AND SEAT ASSEMBLY	
30 44	Filter element (optional)	
30 52	Filter element (Sup by 30 55S)	
30 55S	Filter element and retainer assembly	
30A 37	Idle adjustment screw	
38A 54S	★Adjusting nut assembly (Stamped No 30)	
39 10	Choke valve attaching screw	(2)
48 73	PUMP JET	
61 84	Idle adjustment screw spring	
61 135	STEP UP PISTON SPRING	
61 144	Pump spring (Cadmium plated)	
61-145	Pump spring (Copper plated) (Sup by 61 144)	
61 157	Plunger spring	
61 299	Choke spring	
61-302	★Friction spring	
61-316S	★Secondary spring assembly	
61-367	★Primary spring (Copper plated 043" wire diameter)	
61 373	Pump spring (for altitude operation only) (Copper oxide plated)	
62 151S	Choke tube bracket assembly	
63 24	Float lever pin retainer	
63 37	Pump cylinder ball retainer	
63 85	★Secondary adjusting screw retainer	
64 93S	Pump plunger rod spring and piston assembly (Identify by copper plated spring) (Sup by 64 117S)	
64 117S	PUMP PLUNGER ROD SPRING AND PISTON ASSEMBLY (Identify by cadmium plated spring)	
64-118S	Plunger rod spring and piston assembly (for altitude operation only) (Identify by copper oxide plated spring)	
86-9	Throttle stop screw lock washer (EYC1)	
86 10	Choke bracket attaching screw lock washer	
86-15	Flange stud lock washer	(2)
86-16	Throttle valve screw lock washer (Sup by 86 54)	(2)
86-17	Throttle stop screw lock washer (EYC3)	
86 51	Throttle shaft dog lock washer	
86-54	Throttle valve screw lock washer	(2)
101-10	Wire clamp screw	
101-12	Choke bracket clamp screw	
101-38	Choke bracket attaching screw (long)	
101-121	Throttle adjusting screw	
101-142S	Choke tube bracket attaching screw and washer assembly	
101-145S	Body flange attaching screw and washer assembly	(2)
101-149S	Throttle shaft housing attaching screw and washer assembly (EYC3)	(3)
101-150S	Air horn attaching screw and washer assembly	(3)
101-160S	Cover to governor housing attaching screw and washer assembly	(6)
101 164	Throttle lever clamp screw	
101-199S	Air horn attaching screw and washer assembly (Hex head)	(2)
101-215	★Secondary adjusting screw	
101-216S	Throttle shaft housing attaching screw and washer assembly (EYC1)	
101 217	Throttle stop screw (EYC1)	
101 231	Throttle shaft dog attaching screw	
101 232	Throttle valve attaching screw	(2)
101-233	★Primary adjusting screw (No 30 1 19/32" long)	
101 234S	Body flange attaching screw and washer assembly (lower)	
101 257	Throttle stop screw (EYC3)	
103 11	Lead shot	(2)
105A 10	Choke tube clamp nut	
105A 13	Flange nut	(2)
105A 28	Throttle lever clamp nut	
116-13	PUMP INTAKE CHECK BALL	
116 18	PUMP DISCHARGE CHECK BALL	
118-59S	Governor housing cover assembly	
121-105	BOWL COVER GASKET	
121-114	BODY FLANGE GASKET	
121-123	Governor housing cover gasket	
121-126	THROTTLE SHAFT HOUSING GASKET (EYC1)	
121-141	THROTTLE SHAFT HOUSING GASKET (EYC3)	
123-47S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
136 55	SPRING WASHER (Between throttle lever and flange)	
136 82	MAIN VENT PLUG GASKET	
136-105	Throttle lever shaft washer	
145 51S	MAIN VENT TUBE AND PLUG ASSEMBLY	
149-99S	STEP UP JET ASSEMBLY	
159-63S	†Main metering jet assembly (four sizes lean)	
159-87S	†Main metering jet assembly (three sizes lean)	
159 89S	†Main metering jet assembly (two sizes lean)	
159-93S	†Main metering jet assembly (one size lean)	
159 94S	MAIN METERING JET ASSEMBLY (Standard)	
160-78S	STEP UP PISTON PLATE AND ROD ASSEMBLY	
163-37	Carter Seal	
163-49	★Adjusting nut seal	
170-107S	Throttle shaft housing assembly (EYC1)	
170-143S	Throttle shaft housing assembly (EYC3)	

†3 000 6 000 feet altitude use one size lean 6 000 9 000 feet altitude use two sizes lean 9 000 12 000 feet altitude use three sizes lean 12 000 feet and higher use four sizes lean

★Governor parts are of the latest design and must be set to 220 21 specifications (Form 4718F) when used to rebuild 220 9 After rebuilding and calibration is complete stamp 220 21 on cover plate assembly

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

DODGE TRUCK 1946-1947

BB DOWN-DRAFT CARBURETERS WITH GOVERNOR—**EYB1-EYB4**

(E7B1 can also be used)

Vehicle Models: WK, WR
Engine Symbol No.: T-135

Note: Truck Serial No. 81785001 and higher. Motor Nos. T-135, 1001 and higher

CARBURETER SPECIFICATIONS

Six Cylinder Engine 3¾ Inch Bore 5 Inch Stroke

Dimensions Flange size 1½ inch S A E
Throttle bore 1 11/16 inch (42 86 mm)
Main venturi 1 11/32 inch (3 413 mm)

Float Setting Top of float 5/64 inch (1 98 mm) plus or minus 1/64 inch (397 mm) below top surface of carbureter body casting

Vents Outside none Inside balance vent tube 218 inch (5 56 mm) inside diameter

Gasoline Intake Needle Triangular horizontal needle seat hole No 44 (2 18 mm) drill

Idle Orifice Tube (EYB1) Jet size 0295 inch (75 mm)
(EYB4) Jet size 0276 inch (70 mm)
Idle passage air bleed (in air horn) size 0688 inch (1 75 mm)
(EYB1) Idle restriction in body size 059 inch (1 50 mm)
(EYB4) Size 0629 inch (1 60 mm)

Idle Ports Upper port slot type Length 128 inch (3 251 mm) Width 027 inch (686 mm)
(EYB1) Top of port 069 inch (1 75 mm) to 079 inch (2 00 mm) above top edge of valve
(EYB4) Top of port 088 to 098 inch (2 235 mm to 2 489 mm) above top edge of valve (in slot)
Lower port size 053 to 057 inch (1 35 to 1 45 mm) diameter (For idle adjustment screw)

Set Idle Adjustment (EYB1) ¼ to ¾ turns open (EYB4) ¾ to 1¼ turns open For richer mixture turn screw out Do not idle engine below 450 to 500 r p m motor speed

Vacuum Spark Port None

Main Metering Jet Calibrated to flow 344 to 348 cc per minute Do not gauge for size If in doubt replace with new part

Main Vent Fuel chamber to vent tube well (in air horn) size 063 inch (1 60 mm) diameter In vent tube plug size 0433 (1 10 mm) diameter

Main Vent Tube Side holes 1—0354 (90 mm) diameter 3/32 inch (2 381 mm) from end
1—0354 (90 mm) diameter ⅛ inch (3 175 mm) from end
1—0236 (60 mm) diameter ½ inch (12 70 mm) from end
1—0236 (60 mm) diameter 17/32 inch (13 49 mm) from end
1—0157 (40 mm) diameter 1 15/32 inch (37 31 mm) from end

Step Up Jet Size 0492 (1 25 mm) diameter

Accelerating Pump Type vacuum operated Stroke non adjustable Pump intake passage ball check seat size 115 to 120 inch (2 93 to 3 05 mm) diameter
Pump discharge passage ball check seat size 062 to 065 inch (1 58 to 1 65 mm) diameter
Pump discharge jet size 0315 inch (80 mm) diameter

Choke Offset butterfly type with poppet valve

FOR GOVERNOR INSTRUCTIONS, SEE FORM 4718F

MOTOR TUNE-UP

Spark Plug Gap	Set Breaker Points	Use Motor Gauge Breaker Points to Open	Set Valves (Hot)	Float Setting	Idle Adjustment Screw Setting
025"	020"	T. D C	Intake 010" Exhaust 018"	5/64 Inch	(EYB1) ¼ t ¾ Turns Open (EYB4) ¾ to 1¼ Turns Open

CARBURETER ADJUSTMENTS

Correct float adjustment is important and should be made in the following way

Place float gauge (No T109-50) across the carbureter body Press float lever down to hold float pin against the bottom of the slot in the body casting Floats should just clear the projections on the gauge If adjustment is necessary, bend lip on float lever toward intake needle to lower level or away from the needle to raise the float level

If motor stalls while idling, set throttle lever adjusting screw so motor runs between 450 and 500 R P M Then set idle adjustment screw (EYB1) ¼ to ¾, (EYB4) ¾ to 1¼ turns open from closed position If a vacuum gauge is available, adjust to highest steady gauge reading

Accelerating pump is actuated by the intake manifold vacuum and no adjustment is necessary However be sure the bowl cover gasket and flange gasket seal to prevent any air leaks to the pump vacuum passages

If engine misses when load is suddenly increased remove pump jet and clean with compressed air However it is usually advisable to replace the pump jet, as its cost is nominal (All jets must be seated gasoline tight) This condition may also be due to damaged or worn plunger leather in accelerating pump cylinder or discharge check in discharge passage If plunger is removed from cylinder, use care when installing to avoid damage to plunger leather

Correct air fuel ratio is provided by a balance tube in the air horn The balance tube should be checked each time the carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type size or condition of air cleaner Should the cleaner become clogged, the capacity will be reduced but the air fuel mixture ratio will not be changed

A fuel filter is incorporated in the carbureter bowl casting It should be cleaned periodically by removing the filter bowl and element (small discs) Soak element in acetone or a mixture of half and half Ethyl Alcohol and Benzol until all foreign material dissolves Then allow to dry CAUTION—do not blow off with compressed air which may damage discs

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PARTS LIST

WHEN SERVICING, USE GASKET ASSORTMENT No 191; REPAIR PACKAGE No 1370A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-500S	Body flange assembly (complete with 220 11 governor) (Sup by 1-578S)	
1-534S	Body flange assembly (complete with 220 15 governor) (Sup by 1 578S)	
1-578S	★Body flange assembly (complete with 220 19 governor)	
1A-31	FLANGE GASKET	
3-539S	Throttle lever shaft and arm assembly (EYB1)	
3-583S	Throttle lever shaft and arm assembly (EYB4)	
4-491S	Throttle lever assembly	
4A-96	Throttle shaft pickup dog	
6-545S	Air horn assembly	
7-105S	Choke valve assembly	
11B-17	PUMP DISCHARGE PASSAGE PLUG	
11B-41	Rivet plug	(4)
11B-69	Rivet plug	
11B-79	Rivet plug	
11B-108	Idle port rivet plug	
11B-138	PUMP JET RIVET PLUG	
11B-186S	Governor primary adjusting screw passage plug assembly	
11B-194	Bowl drain plug	
11B 201S	Governor secondary adjusting screw passage plug assembly	
11B-206S	Needle seat plug assembly	
11B-214S	Filter bowl assembly	
11B-220	HIGH SPEED PASSAGE PLUG	
14-357S	Choke shaft and lever assembly	
20-26	Main metering jet gasket	
20-35	Governor primary adj screw plug gasket	
20-36	Governor secondary adj screw plug gasket	
20 51	Step up jet gasket	
20-52	STEP UP PISTON GASKET	
20-70	Needle seat gasket	
20-90	FILTER BOWL GASKET	
20-91	NEEDLE SEAT PLUG GASKET	
21-98S	Float and lever assembly	
24-23	FLOAT LEVER PIN	
25-148S	NEEDLE AND SEAT ASSEMBLY	
30-44	Filter element (optional)	
30 52	Filter element (Sup by 30 55S)	
30-55S	Filter element	
30A-37	Idle adjustment screw	
38A-57S	★Adjusting nut assembly (Stamped No 27)	
39-10	Choke valve attaching screw	(2)
48-73	PUMP JET	
61-84	Idle adjustment screw spring	
61-135	STEP UP PISTON SPRING	
61-144	Pump spring (Cadmium plated)	
61-145	Pump spring (Copper plated) (Sup by 61 144)	
61-157	Plunger spring	
61-299	Choke spring	
61 302	★Friction spring	
61-308	★Primary spring (Cadmium plated 043" wire diameter 20 coils)	
61-322S	★Secondary spring assembly	
61-373	Pump spring (for altitude operation only) (Copper oxide plated)	
62-151S	Choke tube bracket assembly	
63-24	Float lever pin retainer	
63-37	Pump cylinder ball retainer	
63-85	★Secondary adjusting screw retainer	
63-104	Throttle shaft retaining ring	
64 93S	Pump plunger rod spring and piston assembly (Identify by copper plated spring) (Sup by 64 117S)	
64-117S	PUMP PLUNGER ROD SPRING AND PISTON ASSEMBLY (Identify by cadmium plated spring)	
64-118S	Pump plunger rod spring and piston assembly (for altitude operation only) (Identify by copper oxide plated spring)	
86-9	Throttle stop screw washer (EYB1)	
86-10	Choke bracket attaching screw lock washer	
86-15	Flange stud lock washer	(2)
86-16	Throttle valve screw lock washer (Sup by 86 54)	(2)
86-17	Throttle stop screw lock washer (EYB4)	
86-51	Throttle shaft dog lock washer	
86-54	Throttle valve screw lock washer	(2)
101-10	Wire clamp screw	
101-12	Choke bracket clamp screw	
101-38	Choke bracket attaching screw (long)	
101-121	Throttle adjusting screw	
101-142S	Choke tube bracket attaching screw and washer assembly	
101-145S	Body flange attaching screw and washer assembly	(2)
101-149S	Throttle shaft housing attaching screw and washer assembly (EYB4)	(3)
101-150S	Air horn attaching screw and washer assembly	(3)
101-160S	Cover to governor housing attaching screw	(6)
101-164	Throttle lever clamp screw	
101-199S	Air horn attaching screw and washer assembly (hex head)	(2)
101-215	★Secondary adjusting screw	
101-216S	Throttle shaft housing attaching screw and washer assembly (EYB1)	
101-217	Throttle stop screw (EYB1)	
101-220	★Primary adjusting screw (Stamped No 27)	
101-231	Throttle shaft dog attaching screw	
101-232	Throttle valve attaching screw	(2)
101-234S	Body flange attaching screw and washer assembly (lower)	
101-257	Throttle stop screw (EYB4)	
103-11	Lead shot	(2)
105A-10	Choke tube clamp nut	
105A-13	Flange nut	
105A-28	Throttle lever clamp nut	
116-13	PUMP INTAKE CHECK BALL	
116-18	PUMP DISCHARGE CHECK BALL	
118 59S	Governor cover housing assembly	
121-105	BOWL COVER GASKET	
121-114	BODY FLANGE GASKET	
121-123	Governor housing cover gasket	
121-125	THROTTLE SHAFT HOUSING GASKET (EYB1)	
121-141	THROTTLE SHAFT HOUSING GASKET (EYB4)	
123-47S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY (EYB4)	
123-48S	Idle orifice tube and plug assembly (EYB1)	
136-55	SPRING WASHER (Between throttle lever and flange) (Sup by 136 124)	
136-82	MAIN VENT PLUG GASKET	
136-105	Throttle lever shaft washer	
136-124	Spring washer (Between throttle lever and flange) (Sup by 63 104)	
145-51S	MAIN VENT TUBE AND PLUG ASSEMBLY	
149-99S	STEP UP JET ASSEMBLY	
159-63S	†Main metering jet assembly (four sizes lean)	
159 87S	†Main metering jet assembly (three sizes lean)	
159-89S	†Main metering jet assembly (two sizes lean)	
159-93S	†Main metering jet assembly (one size lean)	
159-94S	MAIN METERING JET ASSEMBLY	
160-78S	STEP UP PISTON PLATE AND ROD ASSEMBLY	
163-37	Carter Seal	
163-49	★Adjusting nut seal	
170-107S	Throttle shaft housing assembly (EYB1)	
170-143S	Throttle shaft housing assembly (EYB4)	

★Governor parts are of the latest design and must be set to 220 19 specifications (Form 4718F) when used to rebuild 220 11 and 220 15 After rebuilding and calibration is complete stamp 220 19 on cover plate assembly

†Three to six thousand feet altitude use one size lean Six to nine thousand feet altitude use two sizes lean Nine to twelve thousand feet altitude use three sizes lean Twelve thousand feet and higher use four sizes lean

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

March, 1947
Revised August, 1950

THE CARTER VELOCITY GOVERNOR

Us d in conjunction with carburet rs EYB1-EYB4-EYC1-EYC3-ET1-ET2-ET4-E7B1-E7C1-E7F1-E7S1

Truck models: Dodge 2½ ton, 3 ton, 4 wheel drive Power Wagon

GOVERNOR ASSEMBLY

1. Cover Plate Lead Seal Plugs
2. Secondary Adjusting Screw Plug
3. Speed Adjusting Screw Plug
4. Lead Car Seals
5. Idle Mixture Adjusting Screw
6. Governor Unit Number
7. Throttle Shaft Housing Assembly
8. Throttle Stop Screw
9. Idle Speed Adjusting Screw

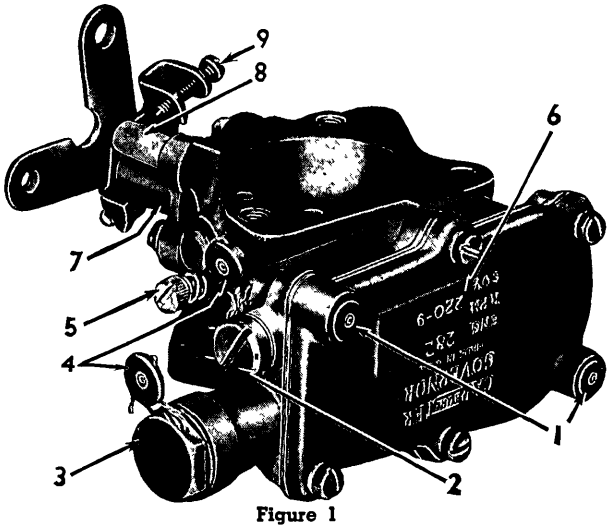


Figure 1

The action of the throttle valve is the same as that in conventional carbureters up to the governed spe d of the engine. The governor therefore, does not affect idle or economy nor does it affect power or acceleration under the speed at which engine is governed.

GOVERNOR ADJUSTMENTS

The governor is properly calibrated when it leaves the factory and should not require any attention, aside from a possible change in the maximum engine speed to satisfy the operator's requirement.

Before any governor adjustment is attempted engine must be tuned to manufacturer's specifications.

Run engine until normal operating temperature is reached. The manifold vacuum at sea level must be at least 16 inches with engine operating at no load, vehicle standing, transmission in neutral (wide open throttle with governor controlling engine speed) and at least 17 inches at idling speed (450-500 R.P.M.) with an allowable reduction of approximately 3½ inches at 5,000 feet above sea level.

To adjust maximum governed engine speed, remove large screw cap and gasket and with an off-set or short screw driver, turn the primary adjusting screw (Figure 2) clockwise to decrease engine speed, and counter-clockwise to increase engine speed.
CAUTION: Do not turn adjusting screw out beyond the end of the governor housing to the extent that it will interfere with the complete tightening of the screw cap. Primary spring can become disengaged from the adjusting screw if screw is turned too far out (do not force).

The maximum governed, no load, engine speed should not exceed 3000 revolutions per minute on the 3 ton trucks, or more than 3200 revolutions per minute on the 2½ ton truck and Power Wagon.

It is desirable to check and set the maximum governed engine speed with the aid of a reliable electric or mechanical tachom t r. If a tachometer is not available, the governor setting can be determined approximately by operating the vehicle at full throttle on a smooth level road surface, no load, in transmission third gear on the 2½ and 3 ton trucks, and transmission second gear on the Power Wagon.

Check the rear axle gear ratio and tire size and refer to the "Speed Chart" (Chart 1 on the 2½ and 3 ton trucks, Chart 2 on the Power Wagon), for the maximum governed miles per hour (M.P.H.) in transmission (third gear on 2½ and 3 ton trucks, second gear on Power Wagon), and adjust the governor if necessary.

CHART No. 1

SPEED CHART (MILES PER HOUR) 2½ TON AND 3 TON TRUCKS
Transmission Third Speed Gear
High Range-Control Button Up for 2 — Speed Rear Axle
AXLE RATIOS

TIRE SIZE	* 6.14	* 6.32	* 6.53	* 6.64	* 6.67	6.8	6.83	* 7.13	7.2	7.4	7.8	8.15	8.2	8.53	8.85	9.18	9.55	
8.25/20	24				22	21			20			18			16			M. P. H.
8.25/20		22		20			20			18			17			15		M. P. H.
9.00/20	25				23	22			21			19			17			M. P. H.
9.00/20		23		21			21			19			17			15		M. P. H.
10.00/20		23		22			21			20			18			16		M. P. H.
10.00/20			22				21	20			19			17			15	M. P. H.
11.00/20			24				23	22			20			18			16	M. P. H.

*High range ratios of the various two speed rear axles.

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CHART No. 2

SPEED CHART 4 WHEEL DRIVE POWER WAGON Transmission in Second Gear		
TIRE SIZE	AXLE RATIO*	M. P. H.
9.00/16	5.83	18
7.50/16	4.89	18
7.50/16	5.83	15

*Rear axle gear ratio is stamped on the bottom of the differential carrier housing.

GOVERNOR CALIBRATIONS

VEHICLE MODEL	ENGINE No. SYMBOL	CARBURETER MODEL	GOVERNOR UNIT No.	"A"	"B"	"C"
WJ	T-136	EYC1	220-9	2-3/16"	14-3/4	23/32"
		EYC3	220-9	2-3/16"	14-3/4	23/32"
B-1-R	T-156	E7C1	220-21	2-3/16"	14-3/4	23/32"
F-1-R	T-156	E7C1	220-21	2-3/16"	14-3/4	23/32"
S-1-R	T-156	E7C1	220-21	2-3/16"	14-3/4	23/32"
B-1-RS	TS-156	E7C1	220-21	2-3/16"	14-3/4	23/32"
WK-WR	T-135	EYB1	220-11	2-7/32"	12-3/4	21/32"
		EYB4	220-15	2-7/32"	11	11/16"
B-1-T	T-158	E7B1	220-19	2-1/4"	11	21/32"
F-1-T	T-158	E7B1	220-19	2-1/4"	11	21/32"
S-1-T	T-158	E7B1	220-19	2-1/4"	11	21/32"
B-1-V	TX-158	E7B1	220-19	2-1/4"	11	21/32"
F-1-V	TX-158	E7B1	220-19	2-1/4"	11	21/32"
S-1-V	TX-158	E7B1	220-19	2-1/4"	11	21/32"
WDX	T-137	ET1	220-2	2-1/4"	14	19/32"
		ET2	220-2	2-1/4"	14	19/32"
		ET4	220-4	2-9/32"	15	5/8"
B-1-PW	T-137	E7F1	220-6	2-9/32"	15	5/8"
F-1-PW	T-137	E7F1	220-6	2-9/32"	15	5/8"
B-1-PW	T-137	E7S1	220-8	2-13/64"	14-3/4	5/8"

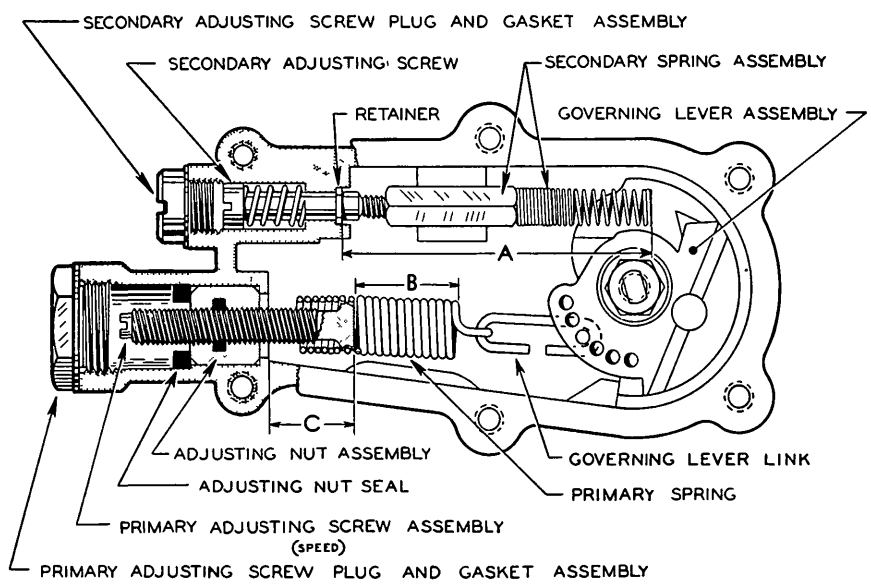


Figure 2

'A" Dimension—Measurement from front of retainer to end of secondary spring

'B" Specification—Number of active spring coils from end of adjusting screw thread to end of spring

"C" Dimension—Measurement from housing boss to end of adjusting screw

GOVERNOR SERVICE INSTRUCTIONS

If governor has been tampered with, or should the adjusting screw be turned out of the primary spring due to faulty adjustment, recalibration will be necessary to insure proper operation This will require removal of the carbureter from the engine
If recalibration is necessary, proceed as follows

1 Determine the governor unit number (stamped on the cover plate and also on housing on later production) and refer to the chart in conjunction with Figure 2 for calibration specifications

2 Remove lead seal plugs from the two depressed screw openings in the governor cover plate by prying out with a small screw driver Remove all retaining screws and cover **Never attempt to remove governing lever assembly from nd f throttle valve shaft.**

3 Remove shaft housing and lever assembly located at end of throttle shaft opposite governor assembly. Before removal be sure to note and mark position of long throttle stop screw for correct reassembly. Never immerse this part in cleaning solvent as this may cause swelling of throttle lever shaft assembly seal

4 Carbon or gum deposits in the throttle shaft bearing races may eventually cause friction and result in sluggish and inac curate governor performance Therefore, it is advisable, before proceeding with recalibration of governor, to squirt some non-corrosive solvent in the narrow space between the throttle shaft and shaft openings in the throttle bore and clean with compressed air Do not use any solvent which might leave a gummy film Never apply lubricating oil to the throttle shaft bearings.

5 Check fit of throttle valve in throttle bore as follows

Hold governor valve open and with long nose pliers disconnect loop of primary spring from the governing lever link. This will allow the throttle valve to close with very little pressure from the secondary spring and makes checking of the throttle valve fit much easier. The throttle valve must not touch the bore of the carbureter flange when in any position except when completely closed. Check the centering of the valve by holding the flange up to a light, closing the valve tightly and looking through the bore. The valve should touch the bore at the idle port and also the point opposite to it The sides of the valve near the throttle shaft **should not touch the bore** and approximately the same clearance should be visible on both sides. If throttle valve is not properly aligned, loosen the two attaching screws, then with the valve in closed position rotate and shift valve with the fingers to obtain proper alignment. Tighten the two screws Connect primary spring to governing lever link **Do not tap throttle valve or throttle shaft when refitting valve.**

6 Remove secondary adjusting screw plug and gasket assembly and check "A" dimension of secondary adjusting screw and spring assembly. Open throttle to make sure that the secondary spring is not in contact with governing lever. Turn secondary screw clockwise to decrease dimension, and counter clockwise to increase dimension
Secondary spring assembly may be removed for replacement by removing retainer while pressing lightly on head of secondary adjusting screw, then backing out screw

Upon reassembly, be sure that retainer is installed in proper slot and not against thread (see Figure 2), and that sec ondary spring compresses without buckling as throttle valve is closed If spring buckles, remove secondary spring assembly and revolve entire spring assembly 1/6 turn and reinstall If necessary, repeat until buckling condition no longer exists **Never remove secondary spring from its holder since this will damage spring.**

7. Check "C" dimension (throttle valve closed) This controls the primary spring tension (First make sure that the adjust ing nut is pressed all the way into casting by tapping with tool T109-185)
Correct 'C" dimension if necessary by turning the **primary adjusting screw,** clockwise to increase dimension counter clockwise to decrease dimension

8 Check "B ' specification This is the number of active coils In order that the number of active coils may easily be counted, hold the throttle valve closed to separate the coils In counting the number of active coils start at the first complete coil from the loop end as shown in Figure 3 The active coils end at the entering edge of the primary adjust ment screw thread as shown in Figure 4

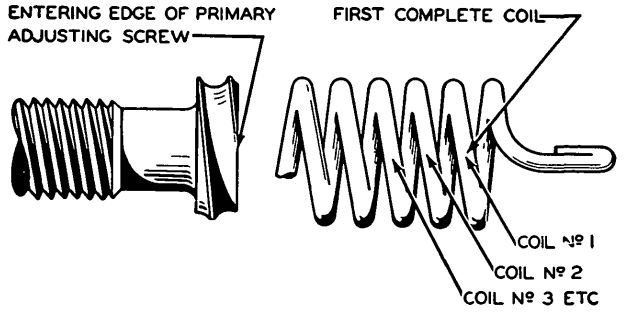


FIGURE 4 FIGURE 3

If the number of active coils **is within** one coil of B' speci fication, insert and drive fiber adjusting nut seal into governor housing (Figure 2) against adjusting nut (A short piece of 1/4 inch pipe may be used for that purpose) If fiber seal is already in place, do not insert another
If the number of active coils **is not within on coil** of "B' specification, indications are that the spring has been tampered with and recalibration with the adjusting nut is necessary

9 Before proceeding with the nut adjustment, check to see if the governor has the fiber adjusting nut seal If it has remove as follows·
Hold throttle valve open, unhook the primary spring from the link, and using a narrow screw driver, turn the primary adjusting screw clockwise until it is out of adjusting nut Place fiber drift inside governor housing against adjusting nut and drive out nut and seal The same method should be followed for removing primary adjusting screws and adjusting nuts for replacement if damaged whether or not governor has a fiber seal

To reassemble primary adjusting screw and adjusting nut assembly, proceed as follows:

Install primary adjusting nut, driving nut against seat in housing with tool No. T109-185 (always use new part to mak certain of tight fit). Start primary adjusting screw in adjusting nut from inside of housing, then turn screw counter clockwise with narrow screw driver until all but a few threads have engaged the nut. Screw will be a tight fit as it will be cutting new threads in adjusting nut fiber insert

Insert tail of primary spring in slot in governor housing, bring against entering edge of adjusting screw and turn screw clockwise until a few coils have been engaged Hook spring to governing lever link

10. If no fiber washer was found or after the fiber washer has been removed, proceed to set the amount of active coils ("B" specification) with the adjusting screw.

    Where a fractional number of coils is required, first adjust to the nearest whole number of coils as described above. Then add or subtract the fractional coil by turning the primary adjusting screw the same fraction of a turn. As an example— if 14-3/4 coils are called for in "B" specification, adjust to obtain exactly 15 active coils. Then turn primary adjusting scr w 1/4 turn or 90° clockwise, thereby reducing the number of active coils to 14-3/4.

    Should the end coil of the primary spring contact the governor housing, or if the primary adjusting screw is turned in so far that the slotted end becomes flush with the adjusting nut assembly before the correct amount of coils is obtained, it will be necessary to adjust the nut. Hold the primary adjusting screw with screw driver so that it cannot turn, while turning th adjusting nut with tool No. T109-185

11. Onc th correct number of active coils has been established with the adjusting screw, set "C" dimension.
    To do this, hold the primary adjusting screw with screw driver **so that it cannot turn,** while turning the adjusting nut with tool T109 185. Turn clockwise to decrease "C" dimension, counter clockwise to increase the dimension When dimension is correct, tap end of wrench with a light hammer to seat adjusting nut, as adjusting nut must be firmly seated, **then r check dimension.** Insert fiber adjusting nut seal as previously explained

12 Inspect throttle shaft pick up dog for wear. If replacing dog, install in proper relation to throttle valve as shown in Figure 5. If dog is tight, do not hammer or tap in place. Draw into place with screw and lock washer.

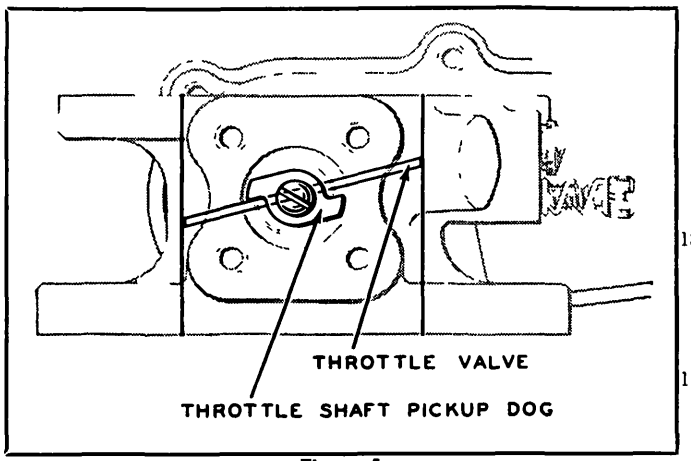


Figure 5

Caution—Excessive tightening may shear screw.

Before installing same or new shaft housing and lever assembly be sure that throttle lever assembly is snug against the shoulder of the flat on the shaft (stub).

Holding throttle valve closed, and throttle lever assembly in open position, install shaft housing and lever assembly and gasket with throttle stop screw in previously marked position.

13. Install governor housing cover and gasket

    While supporting governor housing over edge of bench, place lead shot (Part 103-11) in the two depressed screw openings. Tamp into place and stamp with identifying tool Install adjusting screw plug assemblies.

14. Install carbureter and governor assembly on engine Warm up engine. Hook up tachometer and check maximum governed no load speed. Set with primary adjusting screw to required R P M. or in conformance with speed chart if tachometer is not available.

Should engine surge (continued rapid rise and fall of engine speed) at maximum governed engine speed (no load, transmission in n utral), turn **secondary** adjusting screw counter-clockwise ½ turn at a time until surge is just eliminated. If this adjustment increases the maximum governed engine speed, reduce same by turning the **primary** adjusting screw clockwise until maximum governed engine speed is re-established

15. When final adjustments are completed, install adjusting screw plug assemblies Seal by threading wire through plug and hole in boss in governor housing and crimp lead seal with identifying tool **Both adjustments must be sealed with wir and lead seal.**

RECONDITIONING BEYOND THAT COVERED BY THESE INSTRUCTIONS IS NOT RECOMMENDED AND MAY REQUIRE REPLACEMENT OF THE COMPLETE GOVERNOR AND FLANGE ASSEMBLY.

DODGE TRUCKS 1941-42-46-47

CARBURETER INDEX

Carbureter	Dodge Models
*B6S1	T112-T118-T122
DTA2	T207
DTB1-DTB1R	T112
DTB2-DTB2R	T105-T112
DTB3-DTB3R	T105-T112
ETP2	T209
ETR1-ETR1R	T118-T120-T122

*This carbureter used on motors equipped with small economy manifold

(590S can be used in place of B6S1)

(DTB3R can be used in place of DTA2-DTB1-1R-2-2R-3)

(ETR1R can be used in place of ETR1-ETP2)

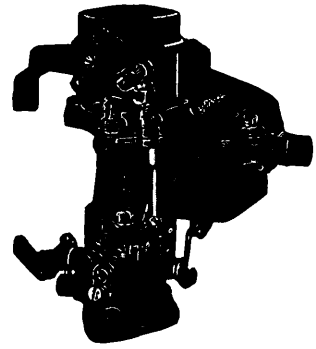
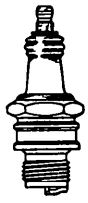


Figure shows 1941 Carbureter, No ETR1R

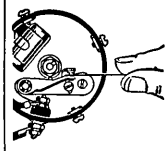
MOTOR TUNE-UP — BE ACCURATE!

CAUTION Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



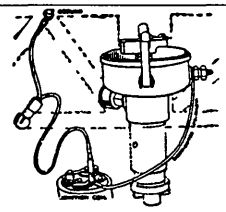
SPARK PLUG GAP

.025"



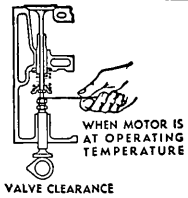
BREAKER POINTS

.020"



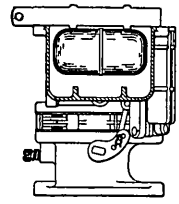
IGNITION TIMING

(See Chart Below)



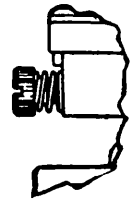
SET VALVES
With Motor at Operating Temperature

(See Chart Below)



FLOAT LEVEL (Remove Gasket)

5/64"



SET IDLE ADJUSTMENT SCREW

B6S1—½ to 1½
All Others—½ to 1¼
Turns Open

IGNITION TIMING		SET VALVES	
Models T105-T112 T118-T120-T122-T207	T.D.C.	T105-T112-T207	Int. .008" Exh. .010"
Model T209	1° B.T.D.C.	T118-T120-T122-T209	Int .008" Exh .012"

CARBURETER ADJUSTMENTS

If carbureter loads up after considerable service, check float level Wear on lip of float lever will raise float level Before adjusting float, be sure lever pin plug is firmly seated Reset float level by bending lip of float lever away from needle to raise level, or bending lip towards needle to lower float level Bend vertical lip of float only.

If motor stalls while idling, set throttle lever adjusting screw so motor runs approximately 300 rpm. Then set idle adjustment screw as instructed above If these adjustments do not correct the trouble, remove idle orifice tube and plug assembly and clean with compressed air.

If acceleration is not satisfactory, remove pump jet and clean with compressed air Also examine pump link setting Pump link has three holes giving short, medium and long strokes If link is set to short stroke, reset to give longer stroke to pump piston. In hot weather high altitudes, or when high test gasoline is used, connect pump link in inner hole, giving shorter stroke

Pump Adjustment: Remove air horn assembly, back out throttle adjustment screw, and place pump operating link in center of throttle shaft arm Adjustment can be made by bending horizontal portion of pump lifter link, so that top of pump plunger shaft contacts lip of indicator on pump stroke gauge T109-117S Correct travel is 24/64" on DTA2-DTB1-DTB1R-DTB2-DTB2R-DTB3-DTB3R, 19/64" on B6S1, and 26/64" on ETP2-ETR1-ETR1R

Maximum economy is secured only when breaker points, spark plugs, valves and motor timing are set to manufacturer's specifications After motor is properly tuned, the following should also be done to insure satisfactory performance and economy

(a) Float level must be set as above

(b) Step-up rod in step-up jet must seat and move freely. When reassembling, jet must be screwed in tight against seat

(c) Step-up piston in body casting should not bind and must be free of dirt

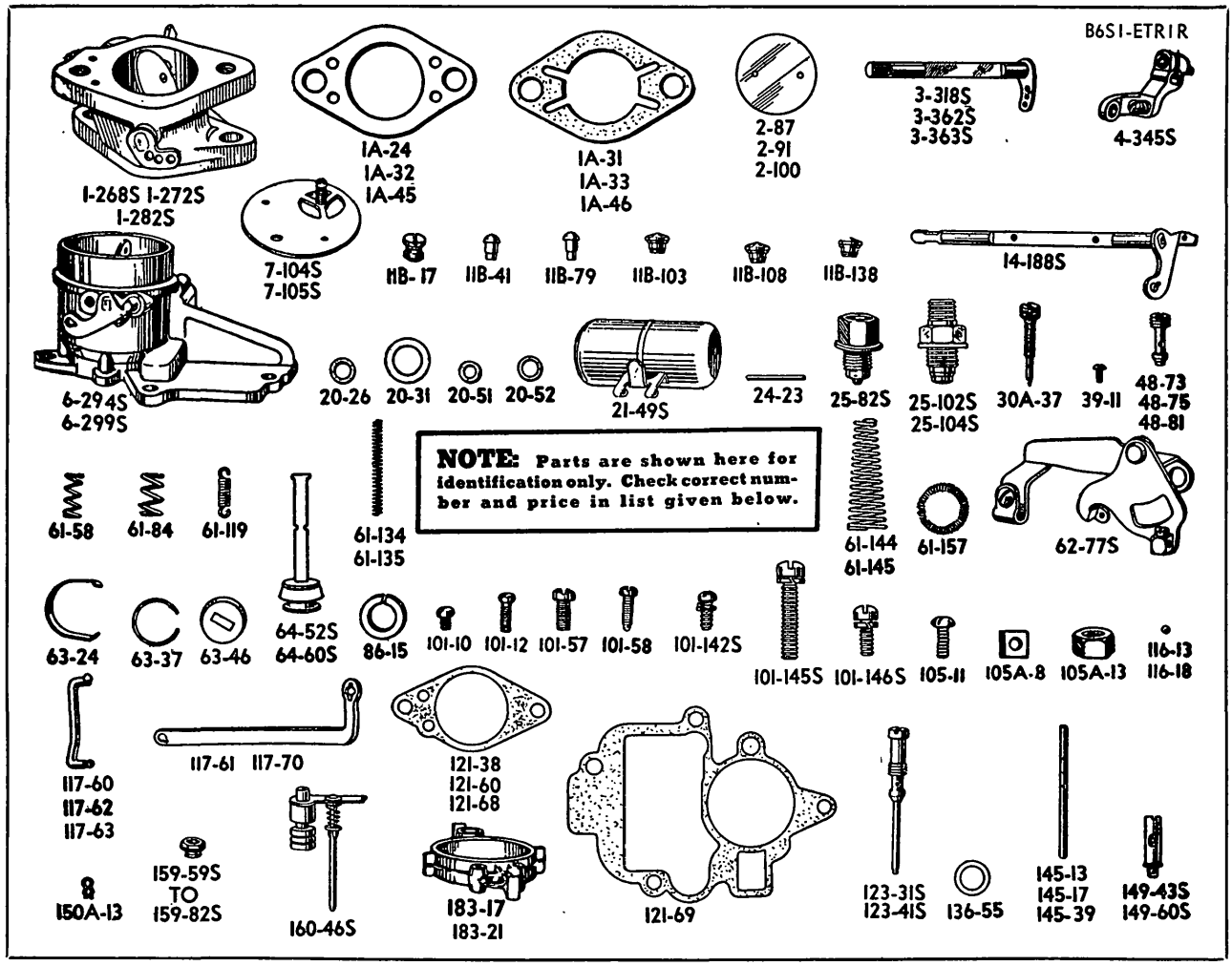
(d) Main metering jet can be replaced with leaner than standard metering jets, for altitude

Caution Do not attempt to gauge metering jets with drills These jets have been flow-tested to insure correct fuel flow.

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1941-42-46-47 DODGE TRUCKS

PART NUMBERS IN BOLD TYPE, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

PART NAME	B6S1	DTA2	DTB1-DTB1R DTB2-DTB2R DTB3-DTB3R	ETP2	ETR1-ETR1R
Repair Parts Package		1014E	{1314C (DTB1) 1014E (DTB1R)	1021D	1021D (ETR1R)
Repair Parts Package					1313C (ETR1)
Repair Parts Package			{1335C (DTB2-B2R-B3-B3R)		
Gasket Assortment		136	136	137A	137A
Body flange assembly	1-282S	1-268S	1-268S	1-272S	1-272S
Flange gasket (With gov.)	1A-32	1A-45	1A-45	1A-24	**1A-24**
Flange gasket (Without gov.)	1A-33	**1A-46**	**1A-46**	**1A-31**	**1A-31**
Throttle valve	2-91	2-100	2-100	2-87	2-87
Throttle shaft and arm ass'y	3-318S	3-362S	†3-449S *(3-362S)*	3-363S	3-363S
Throttle lever assembly	4-345S	4-345S		4-345S	4-345S
Throttle lever assembly			†4-431S *(4-345S)*		
Air horn assembly	6-294S	6-294S	6-562S *(6-294S)*	6-299S	6-299S
Choke valve assembly	7-104S	7-104S	7-151S *(7-104S)*	7-105S	7-105S
Pump check plug	11B-17	11B-17	11B-17	11B-17	**11B-17**
Rivet plug	11B-41	11B-41	11B-41	11B-41	**11B-41**
Rivet plug	2 11B-79	2 11B-79	2 11B-79	2 11B-79	**2 11B-79**
Idle port rivet plug	11B-108	**11B-108**	**11B-108**	**11B-108**	**11B-108**
Pump jet rivet plug	11B-138	**11B-138**	**11B-138**	**11B-138**	**11B-138**
Main vent tube rivet plug	11B-220 *(11B-103)*	**11B-220** *(11B-103)*	**11B-220** *(11B-103)*	**11B-220** *(11B-103)*	**11B-220** *(11B-103)*
Choke control lever assembly	14-188S	14-188S	14-188S	14-188S	14-188S
Main metering jet gasket	20-26	20-26	20-26	20-26	20-26
Needle seat gasket	20-31	20-31	20-31	20-31	20-31
Step-up jet gasket	20-51	20-51	20-51	20-51	20-51
Step-up piston gasket	20-52	**20-52**	**20-52**	**20-52**	**20-52**
Float and lever assembly	21-49S	21-49S	21-49S	21-49S	21-49S
Float lever pin	24-23	24-23	24-23	24-23	**24-23**

†When replacing these parts, 3-449S and 4-431S or 3-362S and 4-345S must be used together.

PART NAME	B6S1	DTA2	DTB1-DTB1R DTB2-DTB2R DTB3-DTB3R	ETP2	ETR1-ETR1R
Needle and seat assembly	25-104S	**25-82S**	**25-102S-DTB1-B2-B3** **25-82S-DTB1R B2R-B3R**	**25-82S**	**25-82S-ETR1R** **25-102S-ETR1**
Idle adjustment screw	30A-37	30A-37	30A-37	30A-37	30A-37
Valve attaching screw	439-11	439-11	439-11	439-11	**439-11**
Pump jet	48-81	**48-73**	**48-73**	**48-75**	**48-75**
Throttle lever adjusting screw spring	61-58	61-58	61-58	61-58	61-386 *(61-58)*
Idle adjustment screw spring	61-84	61-84	61-84	61-84	61-84
Choke pull back spring	61-119	61-119	61-119	61-119	**61-119**
Step-up piston spring	61-134	**61-135**	**61-135**	**61-135**	**61-135**
Pump spring	61-144	**61-144**	**61-144**	**61-145**	**61-145**
Plunger spring	61-157	61-157	61-157	61-157	61-157
Choke tube bracket assembly	62-77S	62-77S	62-77S	62-77S	62-77S
Float lever pin retainer	63-24	**63-24**	**63-24**	**63-24**	**63-24**
Pump retainer ring	63-37	**63-37**	**63-37**	**63-37**	**63-37**
Pump spring retainer	63-46	63-46	63-46	63-46	63-46
Plunger and rod assembly	64-52S	**64-60S**	**64-60S**	**64-60S**	**64-60S**
Flange stud lock washer	2 86-15	2 86-15	2 86-15	2 86-15	2 86-15
Choke bracket screw and washer assembly	101-142S	101-142S	101-142S	101-142S	101-142S
Wire clamp screw	101-10	101-10	101-10	101-10	101-10
Throttle lever clamp screw	101-12	101-12	101-164 *(101-12)*	101-12	101-12
Body flange screw and washer assembly	2 101-57	2 101-145S	2 101-145S	2 101-145S	**2 101-145S**
Air horn screw and washer assembly	4 101-150S *(4 101-146S)*	4 101-150S *(4 101-146S)*	4 101-150S *(4 101-146S)*	4 101-150S *(4 101-146S)*	**4 101-150S** *(4 101-146S)*
Throttle adjusting screw	101-58	101-58	101-279 *(101-163)*	101-58	101-276 *(101-58)*
Tube clamp screw	105-11	105-11	105-11	105-11	105-11
Choke tube clamp nut	105A-8	105A-8	105A-8	105A-8	105A-8
Flange stud nut	2 105A-13	2 105A-13	2 105A-13	2 105A-13	2 105A-13
Throttle lever clamp screw nut			105A-28		
Pump cylinder ball	116-13	**116-13**	**116-13**	**116-13**	**116-13**
Pump check ball	116-18	**116-18**	**116-18**	**116-18**	**116-18**
Pump link	117-63	**117-60**	**117-60**	**117-62**	**117-62**
Pump lifter link	117-61	**117-70**	**117-70**	**117-70**	117-70
Body flange gasket	121-60	**2 121-68**	**2 121-68**	**2 121-38**	**2 121-38**
Body gasket	121-69	**121-69**	**121-69**	**121-69**	**121-69**
Idle orifice tube and plug ass'y	123-41S				
Idle orifice tube and plug ass'y		**123-31S**	**123-31S**	**123-31S**	**123-31S**
Throttle centering spring washer		136-55	136-55	136-55	136-55
Main vent tube	145-39	**145-17**	**145-17**	**145-13**	**145-13**
Step-up jet assembly	149-60S	**149-43S**	**149-43S**	**149-43S**	**149-43S**
Pin spring	150A-13	**150A-13**	**150A-13**	**150A-13**	**150A-13**
Gas line connection			**156-29 (DTB2-B2R)**		156-29 (ETR1R)
Main metering jet assembly—Standard	159-70S	**159-61S**	**159-61S (DTB1-B1R)** **159-76S (DTB2-B2R-B3-B3R)**	**159-59S**	**159-59S**
Main metering jet assembly—1 size lean		159-66S	159-66S	159-61S	159-61S
Main metering jet assembly—2 sizes lean		159-82S	159-82S	159-66S	159-66S
Main metering jet assembly—3 sizes lean				159-64S	159-64S
Step-up piston, plate and rod assembly	160-46S	**160-46S**	**160-46S**	**160-46S**	**160-46S**
Insulator		183-21	183-21	183-64 *(183-17)*	183-64 *(183-17)*

NOTE: Small figures preceding part numbers indicate number of pieces used in carbureter.

Parts in parenthesis (in small italic type) are superseded by the part number shown above them.

ENGINE BORE AND STROKE

Model T105-T112—3 1/8" x 4 3/8"
Model T118-T120—3 3/8" x 4 1/4"
Model T122 —3 3/8" x 4 1/4"
Model T207 —3 1/4" x 4 3/8"
Model T209—3 3/8" x 4 1/2"

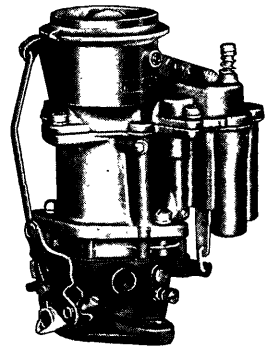
CARBURETER SPECIFICATIONS

	B6S1	DTA2-DTB1-DTB1R DTB2-DTB2R DTB3-DTB3R	ETR1-ETR1R
DIMENSIONS:			
Flange size—S.A.E.	1 1/4"	1 1/2"	1 1/2"
Throttle bore	1 5/32" (29.37 mm)	1 9/16" (39.69 mm)	1 11/16" (42.86 mm)
Main venturi	1 3/32" (27.78 mm)	1 1/4" (31.75 mm)	1 9/32" (32.54 mm)
FLOAT SETTING	5/64" (1.98 mm)	5/64" (1.98 mm)	5/64" (1.98 mm)
BOWL VENT:			
Inside (Balanced Vent)—Size	.218" (5.54 mm)	.218" (5.54 mm)	.218" (5.54 mm)
GASOLINE INTAKE NEEDLE:			
Triangular, Horizontal. Hole in needle seat. Drill size	No. 48 (1.93 mm) Dr.	No. 44 (2.18 mm) Dr.	No. 44 (2.18 mm) Dr.
IDLE ORIFICE TUBE:			
Jet size	.0276" (.70 mm)	.0276" (.70 mm)	.0276" (.70 mm)
Idle air bleed (in body), Size	.05315" (1.35 mm) (in idle tube plug)	.067" (1.70 mm)	.063" (1.60 mm)
Idle restriction (in body), Size	.061" (1.55 mm)	.054"-.055" (1.37-1.40 mm)	.049" (1.25 mm)
IDLE PORTS (Keyhole Type):			
Upper port—length		.160" (4.06 mm)	.128" (3.25 mm)
Upper port—width		.030" (.76 mm)	.027" (.69 mm)
Upper port—diam. hole at top		.045" (1.14 mm)	.063" (1.60 mm)
Top of port above edge of valve		.118"-.122" (3.00-3.10 mm) (early production) .128"-.132" (3.251-3.350 mm) (late production)	.088"-.092" (2.24-2.34 mm)
Lower port (for idle adjusting screw)		.053"-.057" (1.35-1.45 mm)	.053"-.057" (1.35-1.45 mm)
IDLE PORTS (Slot Type):			
Upper port—length	.170" (4.32 mm)		
Upper port—width	.030" (.76 mm)		
Top of port above edge of valve	.130"-.134" (3.302-3.404 mm)		
Lower port (for idle adjustment screw)	.0669" (1.70 mm)		
SET IDLE ADJUSTMENT SCREW:			
Turns open	1/2 to 1 1/2	1/2 to 1 1/4	1/2 to 1 1/4
MAIN METERING JET:			
C.C. flow per minute	168 to 172	264 to 268 (DTB2) 254 to 258 (Others)	268 to 272
VENT TUBE: Through diffuser (air bleed inside bowl), Size	.0315" (.80 mm)	.0315" (.80 mm)	.0315" (.80 mm)
MAIN VENT TUBE: Side holes: (2 holes .0354" [.90 mm] from end)		5/16" (7.94 mm)	5/16" (7.94 mm)
(2 holes .0354" [.90 mm] from end)		1" (25.40 mm)	1" (25.40 mm)
(2 holes .0354" [.90 mm] from end)		1 1/2" (38.10 mm)	
MAIN VENT TUBE:			
Hole in end drill size	.0236" (.60 mm)		
7 side holes on one side spaced 3/16" (4.76 mm), 1st hole 5/8" (15.88 mm) from end. Drill size	.0197" (.50 mm)		
7 side holes on opposite side spaced 3/16" (4.76 mm), 1st hole 17/32" (13.49 mm) from end, drill size	.0197" (.50 mm)		
STEP-UP JET: Drill size	.0236" (.60 mm)	No. 63 (.94 mm) Dr.	No. 63 (.94 mm) Dr.
ACCELERATING PUMP: Delayed Action Type—			
Seasonal adjustment			
Pump intake size	.115"-.120" (2.92-3.05 mm)	.115"-.120" (2.92-3.05 mm)	.115"-.120" (2.92-3.05 mm)
Pump discharge—restriction (under ball check), Size	.062"-.065" (1.58-1.65 mm)	.062"-.065" (1.58-1.65 mm)	.062"-.065" (1.58-1.65 mm)
Pump jet—discharge size	.0236" (.60 mm)	.0315" (.80 mm)	.0374" (.95 mm)
PUMP ADJUSTMENT	19/64" (7.54 mm)	24/64" (9.52 mm)	26/64" (10.32 mm)
VACUUM SPARK PORT:			
Horizontal slot (round end) type. Size	.040" x .110" (1.02 x 2.79 mm)	.040" x .110" (1.02 x 2.79 mm)	.040" x .110" (1.02 x 2.79 mm)
Bottom of port, distance above valve	.035"-.041" (.89-1.04 mm)	.003"-.009" (.076-.229 mm) (early production) .021"-.027" (.533-.685 mm) (late production)	.035"-.041" (.89-1.04 mm)

CARTER CARBURETOR CORPORATION, ST. LOUIS, MO., U. S. A.

CAR SERIAL NUMBERS
30750676 and higher

MOTOR SERIAL NUMBERS
106398 and higher



Casting No. 515 on face of flange.

DODGE MODEL "D-24" 1946

B-B DOWN-DRAFT CARBURETER—**MODEL D6J1**

CARBURETER SPECIFICATIONS

For Dodge Six Cylinder Engine: 3¼ Inch Bore, 4⅝ Inch Stroke

Dimensions: Flange size, 1½ inch S. A. E.
Throttle bore, 1-9/16 inch (39.69 mm).
Main venturi, 1¼ inch (31.75 mm) I. D.

Float Setting: Top of float 5/64 inch (1.98 mm) plus or minus 1/64 inch (.397 mm) below top of surface of carbureter body casting.

Vents: Outside, none. Inside balance vent .218 inch (5.54 mm) diameter.

Gasoline Intake Needle: Triangular, horizontal. No. 44 (.086 inch) (2.18 mm) drill in needle seat.

Idle Orifice Tube: Jet size, .0295 inch (.75 mm). Idle passage air bleed (in body), size .067 inch (1.70 mm). Idle restriction in body, size .054 to .055 inch (1.37 to 1.39 mm) diameter.

Idle Ports: Upper port, keyhole type; length .160 inch (4.06 mm); width, .030 inch (.76 mm); .045 inch (1.14 mm) diameter hole at top.
Top of port located .118 to .122 inch (3.00 to 3.10 mm) (early production) and .128 to .132 inch (3.25 to 3.35 mm) (late production), above top edge of valve.
Lower port: (For Idle Adjustment Screw) Size, .053 to .057 inch (1.35 to 1.45 mm) diameter.

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture, turn screw out. Do not idle engine below 300 r.p.m. or 6 miles per hour.

Main Metering Jet: Calibrated to flow 254 to 258 cc per minute. (Do not gauge for size. If in doubt, replace with new part.)

Main Vent: Through diffuser (air bleed inside bowl) size .0315 inch (.80 mm) drill.

Main Vent Tube: Side holes, 6—.0354 inch diameter.

Step-Up Jet: No. 63 (.94 mm) drill size.

Accelerating Pump: Type, delayed action, seasonal adjustment. Summer setting (inner hole, short stroke). Intermediate setting (center hole). Winter setting (outer hole, long stroke). Pump intake passage, ball check seat, size .115 to .120 inch (2.93 to 3.05 mm) diameter.
Pump discharge passage; restriction (under ball check), size .062 to .065 inch (1.58 to 1.65 mm) diameter in body.
Pump (discharge) jet, size .0276 inch (.70 mm) drill.

Pump Adjustment: 24/64" (9.52 mm) plunger travel (center hole). Use gauge No. T109-117S.

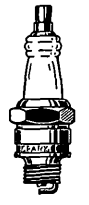
Choke: Butterfly type, with poppet valve. Inter-connected to open throttle valve to fast idle position when choke is used.

Slow Closing Throttle: Dash pot with discharge (by-pass), size .0197 (.5 mm) drill, through plunger shaft.

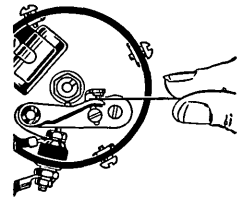
Vacuum Spark Port: Slot (round end) type. Size .040 by .110 inch (1.016 to 2.794 mm). Bottom of port .003 to .009 inch (.076 to .229 mm) or .019 to .025 inch (.482 to .635 mm) (early production); .021 to .027 inch (.533 to .686 mm) (late production), above top edge of valve.

Motor Tune-Up—Be Accurate! Always Use Feeler Gauges!

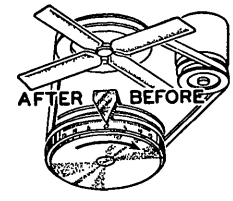
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter



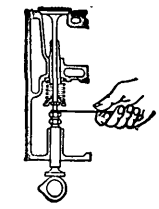
Spark Plug Gap .030"



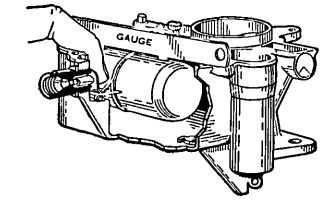
Breaker Point Setting .020"



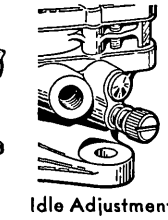
Ignition Timing Breaker Points to Open: Top Dead Center



Valve Setting (Hot) Intake .007"-.009" Exhaust .007"-.009"



Float Setting (Use Gauge) 5/64 Inch



Idle Adjustment Screw Setting ½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

If carbureter loads up after considerable service, check float level. Wear on lip of float lever will raise float level. Before adjusting float, be sure float lever pin is firmly seated. Reset float level by bending lip of float lever away from needle to raise level, or bend lip toward needle to lower float level. Bend vertical lip of float only.

If motor stalls while idling, set throttle lever adjusting screw so motor runs approximately 300 RPM, then set idle adjustment screw to specifications. If these adjustments do not correct the trouble, remove idle orifice tube and plug assembly. Clean tube and passages with compressed air.

If acceleration is not satisfactory, remove pump jet and clean with compressed air. However, it is usually advisable to replace the pump jet, as its cost is nominal. All jets must be seated gasoline tight. Poor acceleration may be due to damaged or worn plunger leather in accelerating pump, sediment in pump cylinder or clogged intake ball check at bottom of pump cylinder and discharge ball check in discharge passage. If plunger is removed from cylinder, use care in installing to avoid damage to plunger leather.

Correct air fuel ratio is provided by a "balance tube" in the air horn. The balance tube should be checked each time the carbureter is serviced to see that the passage is open. The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type, size or condition of air cleaner. Should the cleaner become clogged, the capacity will be reduced but the air-fuel mixture ratio will not be materially altered.

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CARBURETER
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MARCA REGISTRADA

PRINTED IN U.S.A.

Excessive richness above 50 miles per hour may be caused by a clogged main vent tube After removal of rivet plug beneath float bowl with tool No T109-43, main vent tube can be removed and a new tube inserted with tool No. T109-195. Care must be exercised in inserting new tube which must seat tightly. Use new rivet to complete the installation.

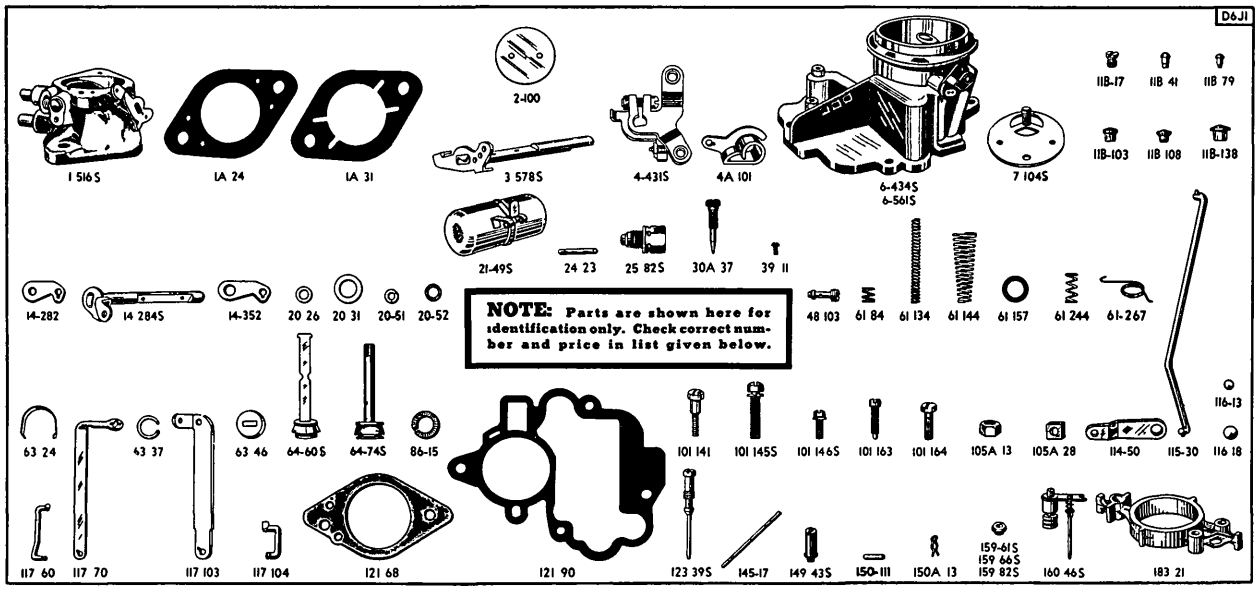
Pump Adjustment: Remove air horn assembly, back out throttle adjusting screw and locate pump link in center hole of the throttle shaft arm Place base of pump travel gauge T109-117S on top edge of body casting at pump cylinder so that lip of pump travel gauge extends over top of plunger shaft. With throttle valve seated, turn knurled nut of gauge until finger rests on top of plunger shaft Take indicated reading and repeat with the throttle wide open and pump plunger pressed to bottom of cylinder. Difference in readings obtained should be "24" (24/64" plunger travel) Adjustment can be made by bending horizontal portion of pump lifter link

Dash-Pot Adjustment: Engines operating in connection with fluid couplings frequently tend to stall during rapid deceleration unless the throttle closes slowly Slow throttle movement is necessary only the last part of the closing The dash-pot or decelerating pump acts as a snubber to the throttle, allowing fast movement to almost closed position, then slow closing from that point to the idle position.

When the throttle is released, the throttle valve closes rapidly until throttle shaft arm contacts the dash-pot pick-up arm. Then the dash-pot plunger must be pushed to the bottom of the cylinder before the throttle can close. A ball check located in the lower end of the plunger shaft seals the larger upper opening and the gasoline must leave the cylinder through the small metered hole in lower part of the shaft

This reduces the rate at which plunger can be forced to the bottom of the cylinder making the last part of the throttle closing very slow **The adjusting screw** (in top of bowl cover) **should be opened five full turns from closed position** for average conditions Under extreme driving conditions greater openings may be necessary, although extreme dash-pot action will affect gear changes, and not enough action will allow engine to stall

Be sure plunger leather is soft and pliable and effects a good seal against the cylinder wall



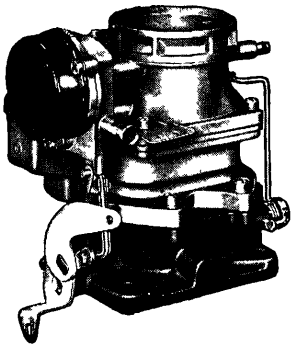
DODGE CARBURETER No. D6J1—1946

WHEN SERVICING, USE GASKET ASSORTMENT No. 215, REPAIR PACKAGE No. 1368
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME
1-516S	Body flange assembly
1A-24	Flange gasket—for use with governor (Sup. by 1A-45)
1A-31	Flange gasket—for use without governor (Sup by 1A-46)
1A-45	Flange gasket—for use with governor
1A-46	FLANGE GASKET—FOR USE WITHOUT GOVERNOR
2-100	Throttle valve
3-578S	Throttle shaft and arm assembly
4-431S	Throttle lever assembly
4A-101	Fast idle cam
6-434S	Air horn assembly (Sup by 6-561S)
6-561S	Air horn assembly
7-104S	Choke valve assembly (Sup by 7-151S)
7-151S	Choke valve assembly
11B-17	Pump check passage plug
11B-41	Rivet passage plug
11B-79	Rivet passage plug (2)
11B-103	Main vent tube rivet plug (Sup by 11B-220)
11B-108	IDLE PORT RIVET PLUG
11B-138	PUMP JET RIVET PLUG
11B-220	MAIN VENT TUBE RIVET PLUG
14-282	Choke lever (loose) (Sup by 14 352)
14-352	Choke lever (loose)
14-284S	Choke lever and shaft assembly
20-26	Main metering jet gasket
20-31	Needle seat gasket
20-51	Step up jet gasket
20-52	STEP-UP PISTON GASKET
21-49S	Float and lever assembly
24-23	FLOAT LEVER PIN
25-82S	NEEDLE AND SEAT ASSEMBLY
30A-37	Idle adjustment screw
39-11	VALVE ATTACHING SCREW (4)
48-103	PUMP JET
61-84	Idle adjustment screw spring
61-134	STEP-UP PISTON SPRING
61-144	PUMP SPRING
61-157	Plunger spring (2)
61-244	Dash-pot adjustment screw spring
61-267	Dash-pot arm spring (Sup by 61-372)
61-372	Dash-pot arm spring
63-24	FLOAT LEVER PIN RETAINER
63-37	PUMP CYLINDER BALL RETAINER
63-46	Spring retainer
64-60S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49-120)
64-74S	Dash pot plunger and rod assembly (Identify by Shaft No 49-130)
86-15	Flange stud lock washer (2)
101-141	Dash pot adjustment screw
101-145S	Body flange attaching screw and washer assembly (2)
101-146S	Air horn attaching screw and washer assy. (Sup by 101-150S) (4)
101-150S	Air horn attaching screw and washer assy (4)
101-163	Throttle adjusting screw (Sup. by 101-279)
101-164	Throttle lever clamp screw
101-279	Throttle lever adjusting screw .
105A-13	Flange nut (2)
105A-28	Throttle lever clamp nut
114-50	Dash pot pick up arm
115-30	FAST IDLE ROD
116-13	PUMP CYLINDER BALL
116-18	PUMP CHECK BALL
117-60	PUMP LINK
117-70	PUMP LIFTER
117-103	Dash pot lifter link
117-104	Dash pot connector link
121-68	BODY FLANGE GASKET (2)
121-90	BODY GASKET
123-39S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY
145-17	MAIN VENT TUBE
149-43S	STEP UP JET ASSEMBLY
150-111	Dash-pot pin
150A-13	PIN SPRING (2)
159-61S	MAIN METERING JET ASSEMBLY
159-66S	Main metering jet assembly—1 size lean
159-82S	Main metering jet assembly—2 sizes lean
160-46S	STEP UP PISTON PLATE AND ROD ASSEMBLY
183-21	Insulator

NOTE· Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

MODELS
2901, 2902, 2904
and
3001, 3002, 3004



Casting No 1049 on Face of Flange

FEDERAL TRUCK
1954

WGD Dual Down-Draft Climatic® Control **Carbureter No. 2042S**

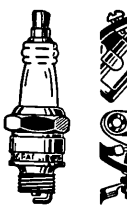
CARBURETER SPECIFICATIONS

For Hercules 6 Cylinder Engine 4 Inch Bore, 4¼ Inch Stroke (2901 2 4)
For Hercules 6 Cylirder Engine 4 Inch Bore 4½ Inch Stroke (3001 2 4)

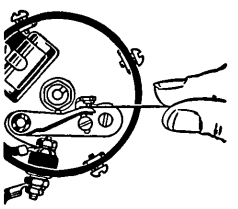
Dimensions Flange size 1¼ inch dual 4 bolt type
Primary venturi 11/32 inch I D
Secondary venturi 21/32 inch I D
Main venturi 1 3/16 inch I D
Float Level See Adjustments
Vents Outside none Inside balance vent tube above choke valve
Gasoline Intake Size No 38 (1015 inch) drill in needle seat
Low Speed Jet Tube Jet size No 67 (032 inch) drill By pass in air horn size No 56 (0465 inch) drill Economizer in air horn size No 63 (037 inch) drill Idle bleed in body size No 55 (054 inch) drill
Idle Port Upper port slot type length 130 inch, width 030 inch
Idle Port Opening Top of port 079 to 085 inch above upper edge of valve with valve tightly closed
Lower Port (For Idle Adjustment Screw) Size 0615 to 0655 inch diameter
Set Idle Adjustment Screw 1 to 2 turns open For richer mixture turn screw out Do not idle engine below 400 r p m
Nozzle Nozzle is installed permanently DO NOT REMOVE Anti percolating well jet size No 60 (040 inch) drill
Metering Rod (Vacumeter Type) Economy step 0705 inch diameter Middle step tapers to 053 inch diameter Power step 045 inch diameter
Metering Rod Jet Size 096 inch diameter
Metering Rod Setting See Adjustments
Accelerating Pump Discharge jet (twin) size No 68 (031 inch) drill Intake ball check seat size 100 inch diameter Discharge needle seat size No 50 (070 inch) drill Pump jet air bleed passage to outside 1/8 inch drill
Pump Adjustment See Adjustments
Choke Carter Climatic® Control—set on index Butterfly type offset valve Choke heat suction hole in piston housing size No 36 (1065 inch) drill

Motor Tune-Up—Be Accurate!

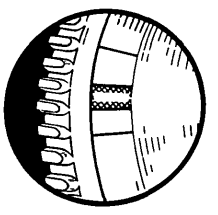
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



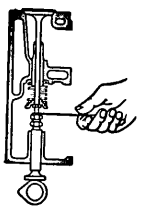
Spark Plug
Gap
025"



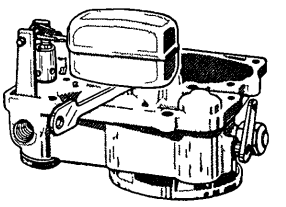
Breaker Point
Setting
020"



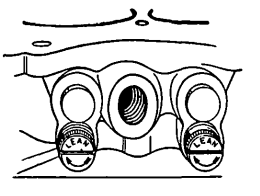
Ignition Timing
Breaker Points to Open
5° to 7° B T D C
(or Road Set for
Light Detonation)



Valve Setting
(Hot)
Intake 010"
Exhaust 010"



Float Setting
See Adjustments



Idle Adjustment
Screw Setting
1 to 2
Turns Open

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT With bowl cover gasket removed bowl cover inverted and needle seated, there should be ¼ inch (gauge T109-31) between top of float and bowl cover Adjust by bending float arm
PUMP ADJUSTMENT Back out throttle lever set screw until throttle valves seat in bores of carbureter Place Universal pump travel gauge T109-117S inverted on edge of dust cover boss of bowl cover Turn knurled nut of gauge until finger on gauge just touches top of plunger shaft Number indicated on gauge should be '35' Adjust by bending throttle connector rod at upper angle Optional Adjustment The distance from the dust cover boss to the top of the plunger shaft should be 3/8 inch Adjust as mentioned above
METERING ROD ADJUSTMENT The metering rods must be adjusted after the pump adjustment No metering rod gauges are necessary procedure is as follows with the throttle lever set screw backed out and throttle valves seated in bores of carbureter, press down on vacumeter link until metering rods bottom in casting With rods held in this position revolve metering rod arm until lip contacts vacumeter link Hold in place and carefully tighten metering rod arm set screw

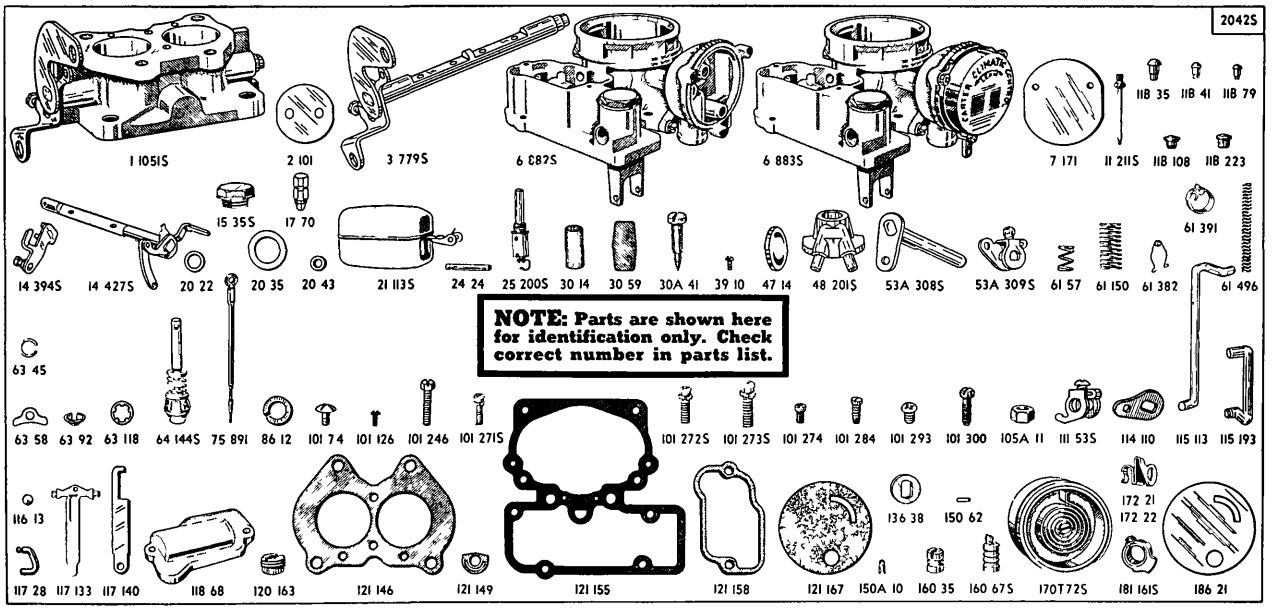
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FAST IDLE ADJUSTMENT. With the thermostatic coil housing gasket and baffle plate removed, crack throttle valves and hold choke valve closed Then close throttle There should now be 024- 031 inch (gauge T109-189 may be used) clearance between throttle valve and bore of carbureter (side opposite idle port) Adjust by bending the choke connector rod at lower angle

UNLOADER ADJUSTMENT: Must be made after fast idle adjustment Hold throttle valve wide open and close choke valve as far as possible without forcing, there should now be 7/64 inch (gauge T109-36 may be used) clearance between upper edge of choke valve and inner wall of air horn Adjust by bending arm on choke trip lever (tool T109-214)



Federal Truck—1954—Carbureter No. 2042S

WHEN SERVICING, USE GASKET ASSORTMENT No 196

Part No	PART NAME	
1-1051S	Body flange assembly	
2-101	Throttle valve	(2)
3-779S	Throttle shaft and lever assembly	
6-882S	Air horn assembly	
6-883S	Air horn and Climatic® control assembly	
7-171	Choke valve	
11-211S	Low speed jet assembly	(2)
11B-35	Rivet plug	(3)
11B-41	Rivet plug	(3)
11B-79	Rivet plug	
11B-108	Idle port rivet plug	(2)
11B-223	Nozzle passage rivet plug	(2)
14-394S	Choke trip lever and pin assembly	
14-427S	Choke piston lever link and shaft assembly	
15-35S	Strainer nut assembly	
17-70	Pump check needle	
20-22	Needle seat gasket	
20-35	Bowl strainer gasket	
20-43	Piston housing gasket	
21-113S	Float and lever assembly (Sup by 21 172S)	
21-172S	Float and lever assembly	
24-24	Float lever pin	
25-200S	Needle and seat assembly	
30-14	Bowl cover strainer	
30-59	Strainer	
30A-41	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
47-14	Welsh plug	
48-201S	Pump jet and housing assembly	
53A-308S	Pump operating lever and countershaft assembly	
53A-309S	Pump arm and screw assembly	
61-57	Idle adjustment screw spring	(2)
61-150	Pump spring (lower)	
61-382	Metering rod spring	
61-391	Fast idle cam spring	
61-496	Vacuum piston spring	
63 45	Pump check ball retainer ring	
63-58	Coil housing retainer	(3)
63-92	Pump spring retainer	
63-118	Throttle shaft retaining ring	

Part No.	PART NAME	
64-144S	Pump plunger rod spring and retainer assembly	
75-891	Metering rod—standard	(2)
86-12	Flange stud lock washer	(4)
101-74	Throttle shaft arm attaching screw	
101-126	Throttle valve attaching screw	(4)
101-246	Throttle lever adjusting screw	
101 271S	Dust cover attaching screw and washer assembly	(2)
101-272S	Air horn attaching screw and washer assembly	(8)
101-273S	Body flange attaching screw and washer assembly	(4)
101 274	Coil housing attaching screw	(3)
101-284	Piston housing attaching screw	(3)
101 293	Metering rod and pump arm clamp screw	(2)
101-300	Pump jet housing attaching screw	
105A-11	Flange stud nut	(4)
111-53S	Metering rod arm and screw assembly	
114-110	Throttle shaft arm	
115-113	Throttle connector rod	
115-193	Choke connector rod	
116 13	Pump intake check ball	
117-28	Pump connector link	
117-133	Vacumeter piston link	
117-140	Fast idle link	
118 68	Dust cover	
120 160	Metering rod jet	(2)
121-146	Body flange gasket	
121-149	Pump jet gasket (Sup by 121 241)	
121-155	Air horn gaskot	
121-158	Dust cover gasket	
121-167	Coil housing gasket	
121-241	Pump jet housing gasket	
136-38	Throttle shaft washer	
150 62	Choke piston pin	
150A-10	Pin spring	(2)
160-35	Choke piston	
160 67S	Vacuum piston and pin assembly	
170T72S	Thermostatic coil and housing assembly	
172-21	Choke connector rod retainer	
172-22	Throttle connector rod retainer	(2)
181-161S	Fast idle cam assembly	
186-21	Choke baffle plate	

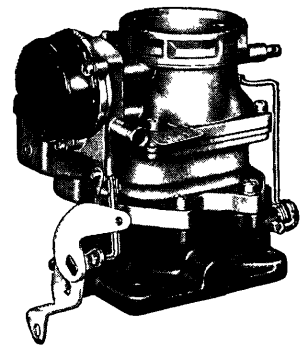
NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST LOUIS MO U S A

FEDERAL TRUCK 956S
November, 1952
Revised April 1957

MODELS

1800T and 2500T



Casting No 904 on Face of Flange

FEDERAL TRUCK 1952-1954

WGD Dual Down-Draft Climatic® Control **Carbureter No. 956S**

CARBURETER SPECIFICATIONS

For Hercules JXB 6 Cylinder Engine 3⅝ Inch Bore, 4¼ Inch Stroke (1800T)
For Hercules JXC 6 Cylinder Engine 3¾ Inch Bore, 4¼ Inch Stroke (2500T)

Dimensions Flange size 1¼ inch dual 4 bolt type
Primary venturi 11/32 inch I D
Secondary venturi 21/32 inch I D
Main venturi 1 3/16 inch I D

Float Level See Adjustments

Vents Outside none Inside balance vent tube above choke valve

Gasoline Intake Square needle with needle pull clip Seat size No 38 (1015 inch) drill

Low Speed Jet Tube Jet size No 65 (035 inch) drill
By pass size No 55 (054 inch) drill
Economizer size No 62 (038 inch) drill
Idle bleed size No 55 (054 inch) drill

Idle Ports Upper port slot type length 130 inch Width 030 inch

Idle Port Opening 079 to 085 inch above upper edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw) Size 0615 to 0655 inch diameter

Set Idle Adjustment Screw ¾ to 1¾ turns open For richer mixture turn screw out Do not idle engine below 380 R P M

Nozzle Nozzle is installed permanently **DO NOT REMOVE**

Metering Rod (Vacumeter Type) Economy step 073 inch diameter Middle step tapers to 061 inch diameter Power step 044 inch diameter (These rods are designed with stabilizing flats on economy step)

Metering Rod Jet 095 inch diameter

Metering Rod Setting See Adjustments

Accelerating Pump Discharge jet (twin) size No 68 drill Intake ball check seat size 100 inch diameter Discharge needle seat size No 50 (070 inch) drill

Pump Adjustment See Adjustments

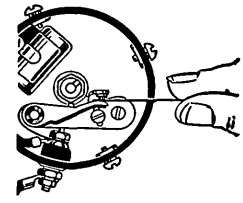
Choke Carter Climatic® Control—set on index Butterfly type offset valve Choke heat suction hole in body size No 36 drill

Motor Tune-Up—Be Accurate!

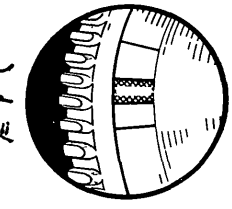
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



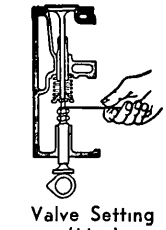
Spark Plug Gap 025"



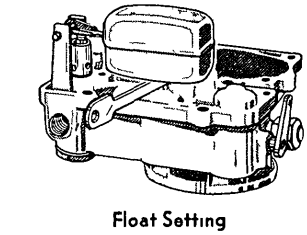
Breaker Point Setting 020"



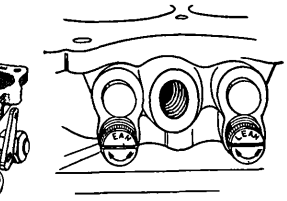
Ignition Timing Breaker Points to Open 6° B T D C



Valve Setting (Hot)
Intake 008" (1952)
010" (1953-54)
Exhaust 010"



Float Setting ¼ Inch (Use Gauge T109 31)



Idle Adjustment Screw Setting ¾ to 1¾ Turns Open

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT With bowl cover gasket removed bowl cover inverted and needle seated there should be ¼ inch (gauge T109-31) between top of float and bowl cover Adjust by bending float arm

PUMP ADJUSTMENT Back out throttle lever set screw until throttle valves seat in bores of carbureter Place Universal pump travel gauge T109-117S inverted on edge of dust cover boss of bowl cover Turn knurled nut of gauge until finger on gauge just touches top of plunger shaft Number indicated on gauge should be "35 Adjust by bending throttle connector rod at upper angle Optional Adjustment The distance from the dust cover boss to the top of the plunger shaft should be 3/8 inch Adjust as mentioned above

METERING ROD ADJUSTMENT The metering rods must be adjusted after the pump adjustment No metering rod

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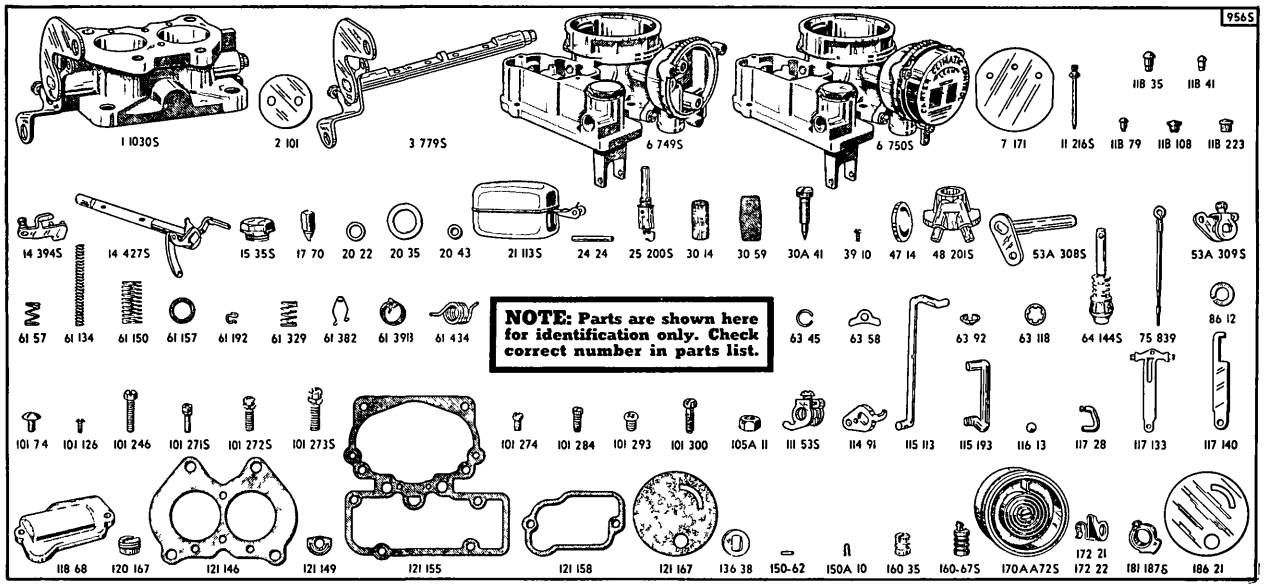
CARBURETER
TRADE MARK REG U S PAT OFF
MARCA REGISTRADA

PRINTED IN U.S.A.

gauges are necessary, procedure is as follows with the throttle lever set screw backed out and throttle valves seated in bores of carbureter, press down on vacumeter link until metering rods bottom in casting With rods held in this position, revolve metering rod arm until lip contacts vacumeter link Hold in place and carefully tighten metering rod arm set screw

FAST IDLE ADJUSTMENT: With the thermostatic coil housing, gasket and baffle plate removed, crack throttle valve and hold choke valve closed Then close throttle There should now be .015 inch clearance (gauge T109-44) between throttle valve and bore of carbureter (side opposite idle port) Adjust by bending the choke connector rod at lower angle

UNLOADER ADJUSTMENT: Must be made after fast idle adjustment Hold throttle valve wide open and close choke valve as far as possible without forcing, there should now be 5/32 inch (gauge T109-154) clearance between upper edge of choke valve and inner wall of air horn Adjust by bending arm on choke trip lever (tool T109-214).



Federal Truck Carbureter No. 956S—1952-54

WHEN SERVICING, USE GASKET ASSORTMENT No. 196

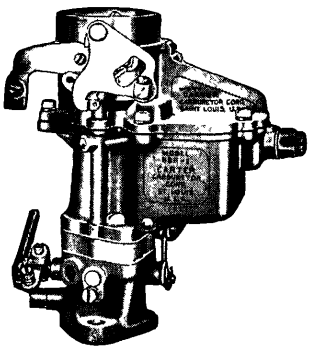
Part No	PART NAME	
1-905S	Body flange assembly (Sup by 1-1030S)	
1-1030S	Body flange assembly	
2-101	Throttle valve	(2)
3-779S	Throttle shaft and lever assembly	
6-749S	Air horn assembly	
6-750S	Air horn and Climatic® control assembly	
7-171	Choke valve	
11-216S	Low speed jet assembly	(2)
11B-35	Rivet plug	(3)
11B-41	Rivet plug	(3)
11B-79	Rivet plug	
11B-108	Idle port rivet plug	(2)
11B-223	Nozzle passage rivet plug	(2)
14-394S	Choke trip lever and pin assembly	
14-427S	Choke piston lever link and shaft assembly	
15-35S	Strainer nut assembly	
17-70	Pump check needle	
20-22	Needle seat gasket	
20-35	Bowl strainer gasket	
20-43	Piston housing gasket	
21-113S	Float and lever assembly (Sup by 21 172S)	
21-172S	Float and lever assembly	
24-24	Float lever pin	
25-200S	Needle and seat assembly	
30-14	Bowl cover strainer	
30-59	Strainer	
30A-41	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
47-14	Welsh plug	
48-201S	Pump jet and housing assembly	
53A-308S	Pump operating lever and countershaft assembly	
53A-309S	Pump arm and screw assembly	
61-57	Idle adjustment screw lock spring	(2)
61-134	Vacuum piston spring	
61-150	Lower pump spring	
61-157	Plunger spring	
61-192	Needle pull clip	
61-329	Upper pump spring	
61-382	Metering rod spring	
61-391	Fast idle cam spring	
61-434	Throttle shaft arm spring	
63-45	Pump check ball retainer ring	
63-58	Coil housing retainer	(3)
63-92	Pump spring retainer	
63-118	Throttle shaft retaining ring	

Part No.	PART NAME	
63-149	Pump spring retainer (Sup by 63 92)	
64-144S	Plunger rod spring and retainer assembly	
75-839	Metering rod—standard	(2)
75-883	Metering rod—1 size lean	(2)
75-884	Metering rod—2 sizes lean	(2)
86-12	Flange stud lock washer	(4)
101-74	Throttle shaft arm attaching screw	
101-126	Throttle valve attaching screw	(4)
101-246	Throttle lever adjustment screw	
101-271S	Dust cover attaching screw and washer assembly	(2)
101-272S	Air horn attaching screw and washer assembly	(8)
101-273S	Body flange attaching screw and washer assembly	(4)
101-274	Coil housing attaching screw	(3)
101-284	Piston housing attaching screw	(3)
101-293	Metering rod arm clamp screw	(2)
101-300	Pump jet housing attaching screw	
105A-11	Flange stud nut	(4)
111-53S	Metering rod arm and screw assembly	
114-91	Throttle shaft arm	
115-113	Throttle connector rod	
115-193	Choke connector rod	
116-13	Pump intake check ball	
117-28	Pump connector link	
117-133	Vacumeter piston link	
117-140	Fast idle link	
118-68	Dust cover	
120-167	Metering rod jet	(2)
121-146	Body flange gasket	
121-149	Pump jet gasket (Sup by 121 241)	
121-155	Air horn gasket	
121-158	Dust cover gasket	
121-167	Coil housing gasket	
121-241	Pump jet housing assembly	
136-38	Throttle shaft washer	
150-62	Choke piston pin	
150A-10	Pin spring	(2)
160-35	Choke piston	
160-67S	Vacuum piston and pin assembly	
170AA72S	Thermostatic coil and housing assembly	
172-21	Choke connector rod retainer	
172-22	Throttle connector rod retainer	(2)
181-187S	Fast idle cam assembly	
186-21	Choke baffle plate	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.

MOTOR SERIAL NUMBERS
105292 and higher

CAR SERIAL NUMBERS
121022 and higher



FEDERAL TRUCK
MODELS
16M-M2-18M-M2-25M-M2-29M-M2-MA
1944-1949
1801T-2T-2501T-2T-2901T-2T-4T-3001T
1950
1800-2500
1951-52

BB DOWN-DRAFT **CARBURETER 588S**

CARBURETER SPECIFICATIONS

For Hercules JXE-3—6 Cylinder Engine—3½ inch Bore, 4¼ inch Stroke
For Hercules JXB—6 Cylinder Engine—3-5/8 inch Bore, 4¼ inch Stroke
For Hercules JXD—6 Cylinder Engine—4 inch Bore, 4¼ inch Stroke

Dimensions: Flange size, 1½ inch S. A. E.
Throttle bore, 1-11/16 inch.
Main venturi, 1-11/32 inch.

Float Setting: Top of float 5/64 inch, plus or minus 1/64 inch below top surface of carbureter body casting.

Vents: Outside: none. Inside, balance vent. .218 inch diameter.

Gasoline Intake Needle: Triangular, horizontal No. 38 drill in needle seat.

Idle Orifice Tube: Jet size, .0276 inch (early production); .031 inch (late production).
Idle passage air bleed (in body) size .063 inch.
Restriction (in body) size .052-.054 inch (early production); .054-.056 inch (late production).

Idle Ports: Upper port, keyhole type; length .128 inch. Width .027 inch, .063 inch diameter hole at top. Top of port located .088 to .092 inch above top edge of valve.
Lower port size, .053 to .057 inch diameter. (For idle adjustment screw.)

Set Idle Adjustment Screw: 1 to 1¾ turns open. For richer mixture, turn screw out. Do not idle engine below 375 r.p.m.

Vacuum Spark Port: None.

Main Metering Jet: Calibrated to flow 312 to 316 cc per minute. Do not gauge for size. If in doubt, replace with new part.

Main Vents: Through diffuser (air bleed inside bowl) size, .0315 inch.

Accelerating Jets: 2—.0354 drill approximately 5/16 inch from end.
2—.0354 drill approximately 1 inch from end.

Step-up Jet: .0413 inch (1.05 mm) drill.

Accelerating Pump: Type, delayed action. Stroke, summer setting (inner hole, short stroke). Intermediate setting (center hole). Winter setting (outer hole, long stroke). Pump intake passage ball check seat, size .115 to .120 inch diameter. Pump discharge passage: Restriction (under ball check) size .062 to .065 inch diameter in body. Pump (discharge) jet, size .0374 inch (.95 mm) drill.

Pump Setting: 26/64 inch plunger travel (full throttle position) medium hole.

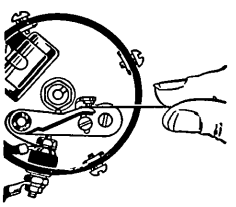
Choke: Butterfly type, with poppet valve.

Motor Tune-Up—Be Accurate!

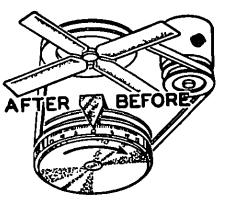
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



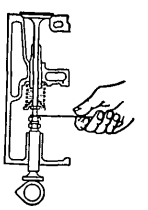
Spark Plug Gap .025"



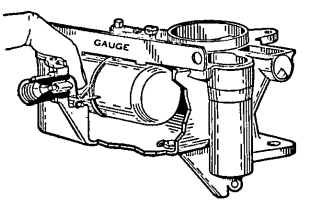
Breaker Point Setting .020"



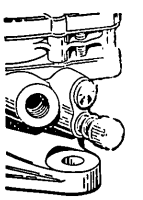
Ignition Timing Breaker Points to Open: 5° B. T. D. C.



Valve Setting (Hot) Intake .008" Exhaust .010"



Float Setting 5/64 Inch (Use Gauge T109-50)



Idle Adjustment Screw Setting 1 to 1¾ Turns Open

CARBURETER ADJUSTMENTS

If carbureter loads up after considerable service, check float level. Wear on lip of float lever will raise float level. Before adjusting float, be sure float lever pin is firmly seated. Reset float level by bending lip of float lever away from needle to raise level, or bend lip toward needle to lower float level. Bend vertical lip of float only.

If motor stalls while idling, set throttle lever adjusting screw so motor runs approximately 300 r. p. m. Then set idle adjustment screw to specifications. If these adjustments do not correct the trouble, remove idle orifice tube and plug assembly. Clean tube and passages with compressed air.

If acceleration is not satisfactory, remove pump jet and clean with compressed air. However, it is usually advisable to replace the pump jet, as its cost is nominal. All jets must be seated gasoline tight. Poor acceleration may be due to damaged or worn plunger leather in accelerating pump, sediment in pump cylinder or clogged intake ball check at bottom of pump cylinder and discharge ball check in discharge passage. If plunger is removed from cylinder, use care in installing to avoid damage to plunger leather.

Correct air fuel ratio is provided by a "balance tube" in the air horn. The balance tube should be checked each time the carbureter is serviced to see that the passage is open. The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type, size or condition of air cleaner. Should the cleaner become clogged, the capacity will be reduced but the air-fuel mixture ratio will not be changed.

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CARBURETER
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Excessive richness above 50 miles per hour may be caused by a clogged main vent tube After removal of rivet plug beneath float bowl with tool No T109-43, main vent tube can be removed and a new tube inserted with tool No T109-195 Care must be exercised in inserting new tube which must seat tightly Use new rivet to complete the installation

Pump adjustment. Remove air horn assembly, back out throttle adjustment screw, and place pump operating link in center hole of throttle shaft arm Adjustment can be made by bending horizontal portion of pump connector link, so that top of pump plunger shaft contacts lip of indicator on pump stroke gauge T109-117S Correct travel is 26/64"

Pump stroke adjustable for high or low temperature Set to longest stroke for cold weather, shorter stroke for hot weather driving

Maximum economy and performance are secured only when breaker points, spark plugs, valves and motor timing are set to manufacturer s specifications After motor is properly tuned, the following should also be done to insure satisfactory performance and economy

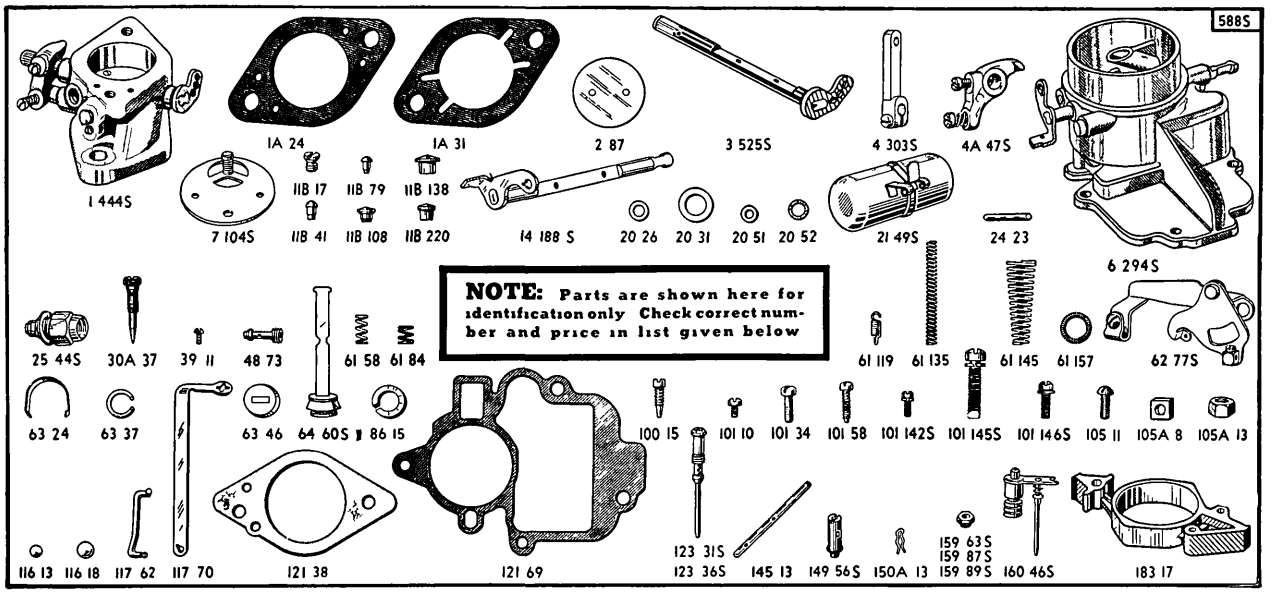
(a) Float level must be set as above

(b) Step-up rod in step-up jet must seat and move freely When reassembling jet must be screwed in tight against seat

(c) Step-up piston in body casting should not bind and must be free of dirt

(d) Main metering jet can be replaced with leaner than standard metering jets for altitude

Caution. Do not attempt to gauge metering jets with drills These jets have been flow-tested to insure correct fuel flow



Federal Truck Carbureter No. 588S—1944-1952

WHEN SERVICING, USE GASKET ASSORTMENT No. 137A

Part No.	PART NAME	
1-444S	Body flange assembly	
1A-24	Flange gasket (use with governor)	
1A-31	Flange gasket (use without governor)	
2-87	Throttle valve	
3-525S	Throttle shaft and arm assembly	
4-303S	Throttle lever assembly (Sup by 4-590S)	
4-590S	Throttle lever assembly	
4A-47S	Throttle shaft dog assembly (Sup by 4A-55S)	
4A-55S	Fast idle cam	
6-294S	Air horn assembly	
7-104S	Choke valve assembly	
11B-17	Pump discharge passage plug	
11B-41	Rivet plug	
11B-79	Rivet plug	(2)
11B-103	Main vent tube rivet plug (Sup by 11B-220)	
11B-108	Idle port rivet plug	
11B-138	Pump jet rivet plug	
11B-220	Main vent tube rivet plug	
14-188S	Choke control lever and shaft assembly	
20-26	Main metering jet gasket	
20-31	Needle seat gasket	
20 51	Step-up jet gasket	
20-52	Step-up piston gasket	
21-49S	Float and lever assembly	
24-23	Float lever pin	
25-44S	Needle and seat assembly	
30A-37	Idle adjustment screw	
39-11	Choke and throttle valve attaching screw	(4)
48-75	Pump jet	
61-58	Throttle lever adjusting screw spring	
61-84	Idle adjustment screw spring	
61-119	Choke pull-back spring	
61-135	Step-up piston spring	
61-145	Pump spring	
61-157	Plunger spring	
62-77S	Choke tube bracket assembly	
63-24	Float lever pin retainer	

Part No.	PART NAME	
63-37	Pump retainer ring	
63-46	Pump spring retainer	
64-60S	Plunger and rod assembly (Identify by shaft No 49-120)	
86-15	Flange stud lock washer	(2)
100-15	Throttle shaft dog headless screw	
101-10	Wire clamp screw	
101-34	Throttle lever clamp screw	
101-58	Throttle adjusting screw	
101-142S	Choke bracket screw and washer assembly	
101-145S	Body flange screw and washer assembly	(2)
101-146S	Air horn screw and washer assembly (Sup by 101-150S)	
101-150S	Air horn attaching screw and washer assembly	(4)
105-11	Tube clamp screw	
105-12	Throttle lever clamp screw (Sup by 101-34)	
105A-8	Tube clamp nut	
105A-13	Flange stud nut	(2)
116-13	Pump intake check ball	
116-18	Pump discharge check ball	
117-62	Pump operating link	
117-70	Pump connector link	
121-38	Body flange gasket	(2)
121-69	Body gasket	
123-31S	Idle orifice tube and plug assembly (Sup by 123-36S)	
123-36S	Idle orifice tube and plug assembly	
145-13	Main vent tube	
149-56S	Step-up jet assembly	
150A-13	Pin spring	
159-63S	Main metering jet assembly (2 sizes lean)	
159-87S	Main metering jet assembly (1 size lean)	
159-89S	Main metering jet assembly (Standard)	-
160-46S	Step-up piston, plate and rod assembly	-
183-17	Insulator (Sup by 183-64)	-
183-64	Insulator	-

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

FEDERAL TRUCK – 1950

MODEL 1500T

BBR1 DOWN-DRAFT CARBURETER—**No. 841S**

CARBURETER SPECIFICATIONS

For Hercules QXLD Six Cylinder Engine 3 7/16 Inch Bore 4¼ Inch Stroke

Dimensions Flange size 1¼ inch S A E
Throttle bore 1 7/16 inch (36 51 mm)
Main ventur 1¼ inch (31 75 mm)

Float Setting Top of float 5/64 inch (1 98 mm) below top surface of carbureter body casting Plus or minus 1/64 inch (397 mm)

Bowl Vent Outside size 3/16 inch (4 76 mm) diameter

Gasoline Intake Needle Triangular horizontal No 44 (2 18 mm) drill in needle seat

Idle Orifice Tube Jet size 0276 inch (70 mm) Idle passage air bleed (in body) size 067 inch (1 70 mm) diameter Restriction in body size 051 to 052 inch (1 30 to 1 32 mm) diameter

Idle Ports Upper port keyhole type length 160 inch (4 06 mm) width 030 inch (76 mm) 045 inch (1 14 mm) diameter hole at top Top of port located 118 to 122 inch (3 00 to 3 10 mm) above top of valve Lower port size 053 to 057 inch (1 35 to 1 45 mm) diameter (For idle adjustment screw)

Set Idle Adjustment Screw ½ to 1½ turns open For richer mixture turn screw out Do not idle engine below 350 r p m

Main Metering Jet Calibrated to flow 248 to 252 cc per minute (Do not gauge for size If in doubt replace with new part)

Main Vent Through diffuser (air bleed inside bowl) size 0315 inch (80 mm) drill

Main Vent Tube Side holes
1—No 76 (020 inch) (508 mm) diameter 11/16 inch (17 46 mm) from end
1—No 73 (024 inch) (610 mm) diameter 1 3/16 inch (30 16 mm) from end
1—No 70 (028 inch) (712 mm) diameter 1 5/16 inch (33 34 mm) from end
1—No 70 (028 inch) (712 mm) diameter 1 27/64 inch (38 10 mm) from end
1—No 70 (028 inch) (712 mm) diameter 1½ inch (38 10 mm) from end
1—No 68 (031 inch) (812 mm) diameter 1 39/64 inch (40 88 mm) from end
1—No 68 (031 inch) (812 mm) diameter 1 11/16 inch (42 86 mm) from end

Step Up Jet 0394 inch (1 00 mm) drill size

Accelerating Pump Type delayed action Stroke summer setting (inner hole short stroke) Intermediate setting (center hole) Winter setting (outer hole long stroke) Pump intake passage ball check seat size 115 to 120 inch (2 92 to 3 05 mm) diameter Pump discharge passage restriction (under ball check) size 062 to 065 inch (1 58 to 1 65 mm) diameter in body Pump (discharge) jet size 0236 inch (60 mm)

Pump Adjustment 38/64 inch plunger travel with pump link in medium stroke hole

Choke Butterfly type with poppet valve

Vacuum Spark Port Horizontal round end type size 040 by 110 (1 016 by 2 794 mm) Top of port 035 to 041 inch (89 to 1 04 mm) above top edge of valve

MOTOR TUNE-UP

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open	Valve Setting (Hot)	Float Setting 5/64 Inch	Idle Adjustment Screw Setting
025"	018"	T D C	Intake 008" Exhaust 010"	±1/64 Inch	½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

If carbureter loads up after considerable service check float level Wear on lip of float lever will raise float level Before adjusting float be sure float lever pin is firmly seated Reset float level by bending lip of float lever away from needle to raise level, or bend lip toward needle to lower float level Bend vertical lip of float only

If motor stalls while idling, set throttle lever adjusting screw so motor runs approximately 350 r p m Then set idle adjustment screw to specifications If these adjustments do not correct the trouble remove idle orifice tube and plug assembly Clean tube and passages with compressed air

If acceleration is not satisfactory, remove pump jet and clean with compressed air However it is usually advisable to replace the pump jet, as its cost is nominal All jets must be seated gasoline tight Poor acceleration may be due to damaged or worn plunger leather in accelerating pump sediment in pump cylinder or clogged intake ball check at bottom of pump cylinder and discharge ball check in discharge passage If plunger is removed from cylinder use care in installing to avoid damage to plunger leather

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Correct air fuel ratio is provided by a balance tube in the air horn The balance tube should be checked each time the carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of types size or condition of air cleaner Should the cleaner become clogged the capacity will be reduced but the air-fuel mixture ratio will not be changed

Excessive richness above 50 miles per hour may be caused by a clogged main vent tube After removal of rivet plug beneath float bowl with tool No T109-43 main vent tube can be removed and a new tube inserted with tool No T109-195 Care must be exercised in inserting new tube which must seat tightly Use new rivet to complete the installation

Pump Adjustment Remove air horn assembly, back out throttle adjustment screw, and place pump operating link in center hole of throttle shaft arm Adjustment can be made by bending horizontal portion of pump connector link, so that top of pump plunger shaft contacts lip of indicator on pump stroke gauge T109-117S Correct travel is 38/64

Pump stroke adjustable for high or low temperature Set to longest stroke for cold weather, shorter stroke for hot weather driving

Maximum economy and performance are secured only when breaker points spark plugs, valves and motor timing are set to manufacturer s specifications After motor is properly tuned, the following should also be done to insure satisfactory performance and economy

(a) Float level must be set as above

(b) Step-up rod in step-up jet must seat and move freely When reassembling jet must be screwed in tight against seat

(c) Step-up piston in body casting should not bind and must be free of dirt

(d) Main metering jet can be replaced with leaner than standard metering jets for altitude

CAUTION Do not attempt to gauge metering jets with drills These jets have been flow-tested to insure correct fuel flow

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PARTS LIST

WHEN SERVICING, USE GASKET ASSORTMENT No 121

Part No	PART NAME	
1-234S	Body flange assembly	
1A 23	Flange gasket—for use with governor	
1A-30	Flange gasket—for use without governor	
2-86	Throttle valve	
3-338S	Throttle shaft and arm assembly	
4-590S	Throttle lever assembly	
4A-47S	Fast idle cam assembly (Sup by 4A 55S)	
4A-55S	Throttle shaft dog assembly	
6-230S	Air horn assembly	
7-105S	Choke valve assembly	
11B-17	Screw passage plug	
11B-33	Spark port passage plug	
11B-41	Rivet plug	
11B-79	Rivet plug	(2)
11B-108	Idle port rivet plug	
11B-220	Rivet plug	
14-210S	Choke control lever and shaft assembly	
20-26	Metering jet gasket	
20-31	Needle seat gasket	
20-51	Step up jet gasket	
20-52	Step up piston gasket	
21-49S	Float and lever assembly	
24-23	Float lever pin	
25-48S	Needle and seat assembly	
30A-37	Idle adjustment screw	
39-11	Valve attaching screw	(4)
48 77S	Pump jet assembly	
61-58	Throttle lever adjusting screw spring	
61-72	Choke pull back spring	
61 84	Idle adjustment screw spring	
61-134	Step up piston spring	
61-144	Pump spring (cadmium plated)	
61-157	Plunger spring	
61-173	Pump check spring	

Part No.	PART NAME	
62-87S	Choke tube bracket assembly	
63-24	Float lever pin retainer	
63-37	Pump retainer ring	
64-49S	Plunger and rod assembly (Identify by shaft No 49 104)	
100-15	Throttle shaft screw	
101-10	Wire clamp screw	
101-12	Clamp screw	
101-34	Throttle lever screw	
101-58	Throttle adjusting screw	
101-142S	Choke bracket attaching screw and washer assembly	
101 145S	Body flange attaching screw and washer assembly	(2)
101-150S	Air horn attaching screw and washer assembly	(4)
105A-10	Choke tube clamp nut	
116 13	Pump intake check ball	
116 18	Pump discharge check ball	
117-60	Pump operating link	
117-61	Pump connector link	
121 37	Body flange gasket	(2)
121-49	Body gasket	
123-31S	Idle orifice tube and plug assembly	
145-29	Main vent tube	
149-62S	Step up jet assembly	
150A-10	Pin spring	
159-58S	Main metering jet assembly—standard	
159-60S	Main metering jet assembly—1 size lean	
159-64S	Main metering jet assembly—2 sizes lean	
159-65S	Main metering jet assembly—3 sizes lean	
159-84U	Unitized Package (Consists of 159 60S and 159 64S)	
159-85U	Unitized Package (Consists of 159 64S and 159-65S)	
160-46S	Step up piston plate and rod assembly	
183-16	Insulator	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

CARBURETER
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CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

FERGUSON 2612S
March, 1957
Revised July, 1957

FERGUSON TRACTOR

MODELS
TO-35, F-40, MH-50
and MHF-202

UT UPDRAFT **CARBURETER No. 2612S**

CARBURETER SPECIFICATIONS

For Ferguson 4 Cylinder 134 Cu. In. Engine: Vacuum at Idle Approximately 22 Inches

Dimensions: Flange size 1 inch S A E
Throttle bore 1-1/16 inch
Main venturi, 13/16 inch

Vents: Outside none Inside (2)

Gasoline Intake Needle: Size No 50 (.070 inch) drill in needle seat

Idle Jet: Jet, plug in flange body, size No 65 (.035 inch) drill
Lower bleed size No 60 (.040 inch) drill (Cannot gauge)
Upper bleed size No 65 (.035 inch) drill
Economizer No 60 (.040 inch) drill

Idle Port Lower port slot type length .050 inch, width .030 inch

Idle Port Opening: Bottom of port .044 to .048 inch below lower edge of valve

Upper Port (For Idle Adjustment Screw): Size No 60 (.040 inch) drill

Set Idle Adjustment Screw: 1/4 to 1 1/4 turns open For richer mixture, turn screw out Do not idle engine below 450 r p m

High Speed Adjustment Screw: 3/4 to 1 1/2 turns open

Nozzle: Inside diameter No 32 (.116 inch) drill
Accelerating Jets 1 No 62 (.038 inch), 1 No 70 (.028 inch) drill

Air Bleed to Nozzle: (Thru plug) size No 72 (.025 inch) drill

Choke: Manual—Butterfly type with pressure relief (poppet) valve

Vacuum Spark Port: None

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open:	Valve Setting (Hot)	Float Setting	Idle Adjustment Screw Setting
.025"	.018" to .024"	30° B.T.D.C.	Intake .009"-.011" Exhaust .011"-.013"	11/64" (Plus or Minus 1/64")	1/4 to 1 1/4 Turns Open Idle Engine at 450 R.P.M.

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: With throttle body inverted and gasket removed there should be 11/64 inch clearance (plus or minus 1/64 inch) between machined surface of throttle body and seam of float (both sides) To adjust bend lip on float lever

IDLE ADJUSTMENT Set throttle lever adjusting screw until motor runs approximately 450 r p m Then set idle adjustment screw for highest steady vacuum gauge reading or smoothest engine operation Correct setting will be found between 1/4 to 1 1/4 turns open

HIGH SPEED ADJUSTMENT: With hand throttle wide open and engine operating 2000 r p m (governed speed) adjust high speed adjusting needle until smoothest engine operation is obtained This setting will be found between 3/4 to 1 1/2 turns open.

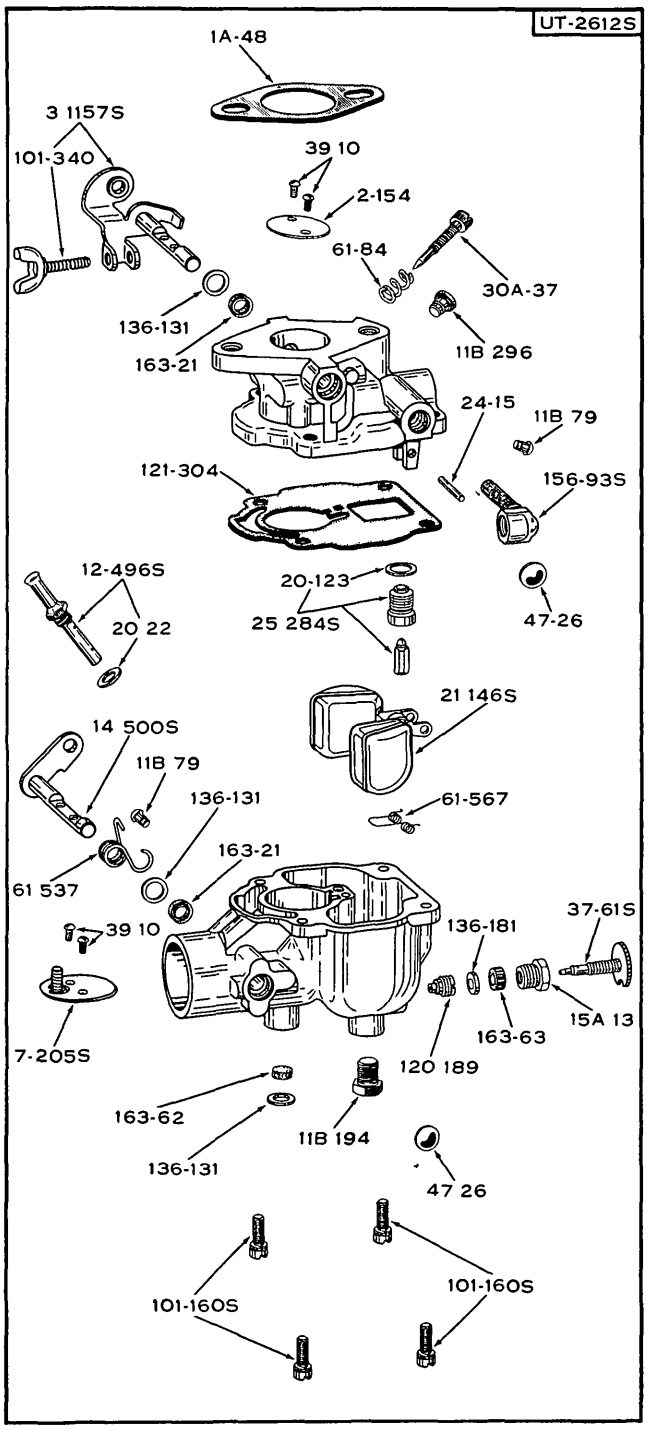
MAXIMUM PERFORMANCE: Can be secured only when breaker points spark plugs, valves and motor timing are set to manufacturer s specifications

If carbureter does not respond to the above adjustments disassemble clean all parts in carbureter cleaner rinse and blow out all passages with compressed air Replace all worn or damaged parts Always use new gaskets See Form No 3525 for complete overhaul procedure

Ferguson—Carbureter No. 2612S

WHEN SERVICING, USE GASKET ASSORTMENT No. 312; REPAIR PACKAGE No. 1922N

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE



NOTE· **Parts are shown above for identification only. Check correct number in parts list.**

Part No.	PART NAME	
1-1478S	—Body flange assembly (discontinued for service)	
1A-48	FLANGE GASKET	
2-154	Throttle valve	
3-1157S	—THROTTLE SHAFT AND LEVER ASSEMBLY	
7-205S	Choke valve assembly	
11B-79	Rivet plug (early prod)	
11B-194	Bowl drain plug	
11B-296	IDLE PORT RIVET PLUG	
12-496S	—Nozzle assembly	
14-500S	Choke shaft and lever assembly	
15A-13	High speed needle packing nut	
20-22	NOZZLE GASKET	
20-123	Needle seat gasket	
21-164S	Float and lever assembly	
24-15	FLOAT LEVER PIN	
25-284S	NEEDLE AND SEAT ASSEMBLY	
30A-37	Idle adjustment screw	
37-61S	HIGH SPEED ADJUSTING NEEDLE ASSEMBLY	
39-10	CHOKE AND THROTTLE VALVE ATTACHING SCREW	(4)
47-26	Welsh plug	(2)
61-84	Idle adjustment screw spring	
61-537	Choke lever spring	
61-567	—Float lever bracket spring	
101-160S	Body attaching screw and washer assembly	(4)
101-340	Throttle adjusting screw	
103-14	Lead shot (late prod)	
120-189	METERING JET	
121-304	—BODY GASKET	
136-131	AIR HORN CHOKE AND THROTTLE SHAFT DUST SEAL RETAINER	(3)
136-181	High speed adjusting screw washer	
156-93S	Elbow and strainer assembly	
163-21	CHOKE AND THROTTLE SHAFT DUST SEAL	(2)
163-62	AIR HORN SEAL	
163-63	MAIN METERING SCREW PACKING	

—Parts so marked are new and listed for the first time

NOTE **Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.**

FERGUSON TRACTOR

MODELS MH-50, F-40

UT UPDRAFT **CARBURETER No. 2418S**

CARBURETER SPECIFICATIONS

For Ferguson 4 Cylinder Engine 3-5/16 Inch Bore, 3⅞ Inch Stroke

Dimensions Flange size 1 inch S A E
Throttle bore 1 3/16 inch
Main venturi 13/16 inch

Vents Outside none Inside (2)

Gasoline Intake Needle Size No 50 (.070 inch) drill in needle seat.

Idle Jet Jet plug size No 66 (.033 inch) drill
Lower bleed size No 55 (.052 inch) drill
Economizer No 59 (.041 inch) drill

Idle Port Lower port slot type length .079 to .081 inch width .029 to .031 inch

Idle Port Opening Bottom of port .060 to .064 inch below lower edge of valve

Upper Port (For Idle Adjustment Screw) Size .038 to .042 inch diameter

Set Idle Adjustment Screw ½ to 1½ turns open For richer mixture turn screw out Do not idle engine below 400 r p m

Main Metering Jet Adjustable See adjustments

Nozzle Inside diameter No 32 (.116 inch) drill
Accelerating Jets 2 No 64 (.036 inch) drill

Air Bleed to Nozzle (Thru plug) size No 72 (.025 inch) drill

Choke Manual—Butterfly type with pressure relief (poppet) valve

Vacuum Spark Port None

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter

Spark Plug Gap .025"	Breaker Point Setting .020"	Ignition Timing Breaker Points to Open 30° B T D C. at 2000 R P.M	Valve Setting (Cold) Intake .011" Exhaust .013"	Float Setting 11/64" (Plus or minus 1/64 Inch)	Idle Adjustment Screw Setting ½ to 1½ Turns Open Idle engine at 400 R.P.M.

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CARBURETER ADJUSTMENTS

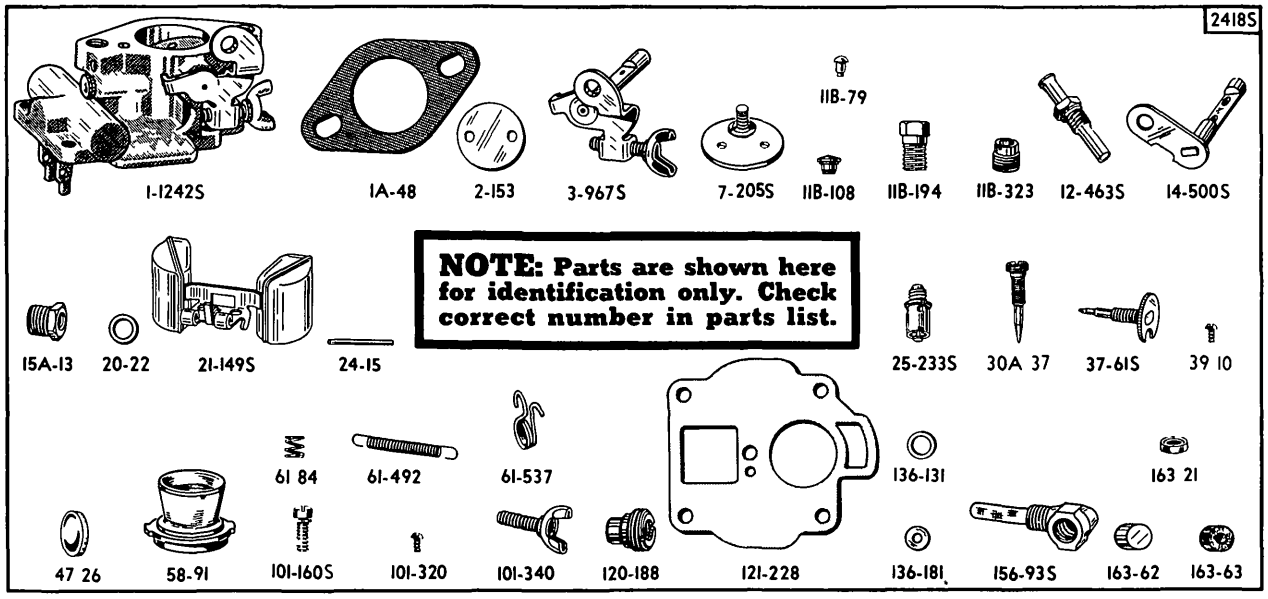
FLOAT ADJUSTMENT With throttle body inverted and gasket removed there should be 11/64 inch clearance (plus or minus 1/64 inch) between machined surface of throttle body and seam of float (both sides) To adjust bend lip on float lever

IDLE ADJUSTMENT Set throttle lever adjusting screw until motor runs approximately 400 r p m Then set idle adjustment screw for highest steady vacuum gauge reading or smoothest engine operation Correct setting will be found between 1/2 to 1 1/2 turns open

HIGH SPEED ADJUSTMENT With hand throttle wide open and engine operating 2000 r p m (governed speed) adjust high speed adjusting needle until smoothest engine operation is obtained This setting will be found between 3/4 to 1 1/2 turns open

MAXIMUM PERFORMANCE Can be secured only when breaker points spark plugs valves and motor timing are set to manufacturer s specifications

If carbureter does not respond to the above adjustments disassemble clean all parts in carbureter cleaner rinse and blow out all passages with compressed air Replace all worn or damaged parts Always use new gaskets See Form No 3525 for complete overhaul procedure



Ferguson—1956—Carbureter No. 2418S

WHEN SERVICING USE GASKET ASSORTMENT No. 259, REPAIR PACKAGE No. 1840

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part N .	PART NAME	
1-1242S	Throttle body assembly	
1A-48	FLANGE GASKET	
2-153	Throttle valve	
3-967S	THROTTLE SHAFT AND LEVER ASSEMBLY	
7-205S	Choke valve assembly	
11B-79	Rivet plug	
11B-108	IDLE PORT RIVET PLUG	
11B-194	Bowl drain plug	
11B-323	LOW SPEED JET PLUG	
12-463S	Nozzle assembly	
14-500S	Choke shaft and lever assembly	
15A-13	High speed needle packing nut	
20-22	NOZZLE AND NEEDLE SEAT GASKET	(2)
21-149S	Float and lever assembly	
24-15	FLOAT LEVER PIN	
25-233S	NEEDLE AND SEAT ASSEMBLY	
30A-37	Idle adjustment screw	
37-61S	HIGH SPEED ADJUSTING NEEDLE ASSEMBLY	

Part No.	PART NAME	
39-10	Choke valve attaching screw	(2)
47-26	Welsh plug	(2)
58-91	Venturi	
61-84	Idle adjustment screw spring	
61-492	Float lever bracket spring	
61-537	Choke lever spring	
101-160S	Body attaching screw and washer assembly	(4)
101-320	THROTTLE VALVE ATTACHING SCREW	(2)
101-340	Throttle adjusting screw	
120-188	METERING JET	
121-228	BODY GASKET	
136-131	AIR HORN CHOKE AND THROTTLE SHAFT DUST SEAL RETAINER	(3)
136-181	High speed adjusting screw washer	
156-93S	Elbow and strainer assembly	
163-21	CHOKE AND THROTTLE SHAFT DUST SEAL	(2)
163-62	AIR HORN SEAL	
163-63	MAIN METERING SCREW PACKING	

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown only one is used

FERGUSON TRACTOR

MODELS MH-50, F-40

UT UPDRAFT **CARBURETER No. 2418S**

CARBURETER SPECIFICATIONS

For Ferguson 4 Cylinder Engine 3-5/16 Inch Bore, 3⅞ Inch Stroke

Dimensions Flange size 1 inch S A E
Throttle bore 1 3/16 inch
Main venturi 13/16 inch

Vents Outside none Inside (2)

Gasoline Intake Needle Size No 50 (.070 inch) drill in needle seat

Idle Jet Jet plug size No 66 (.033 inch) drill
Lower bleed size No 55 (.052 inch) drill
Economizer No 59 (.041 inch) drill

Idle Port Lower port slot type length .079 to .081 inch width .029 to .031 inch

Idle Port Opening Bottom of port .060 to .064 inch below lower edge of valve

Upper Port (For Idle Adjustment Screw) Size .038 to .042 inch diameter

Set Idle Adjustment Screw ½ to 1½ turns open For richer mixture turn screw out Do not idle engine below 400 r p m

Main Metering Jet Adjustable See adjustments

Nozzle Inside diameter No 32 (.116 inch) drill
Accelerating Jets 2 No 64 (.036 inch) drill

Air Bleed to Nozzle (Thru plug) size No 72 (.025 inch) drill

Choke Manual—Butterfly type with pressure relief (poppet) valve

Vacuum Spark Port None

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter

Spark Plug Gap .025"	Breaker Point Setting .020"	Ignition Timing Breaker Points to Open 30° B T D. C at 2000 R.P.M.	Valve Setting (Cold) Intake .011" Exhaust .013"	Float Setting 11/64" (Plus or minus 1/64 Inch)	Idle Adjustment Screw Setting ½ to 1½ Turns Open Idle engine at 400 R.P M.

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CARBURETER ADJUSTMENTS

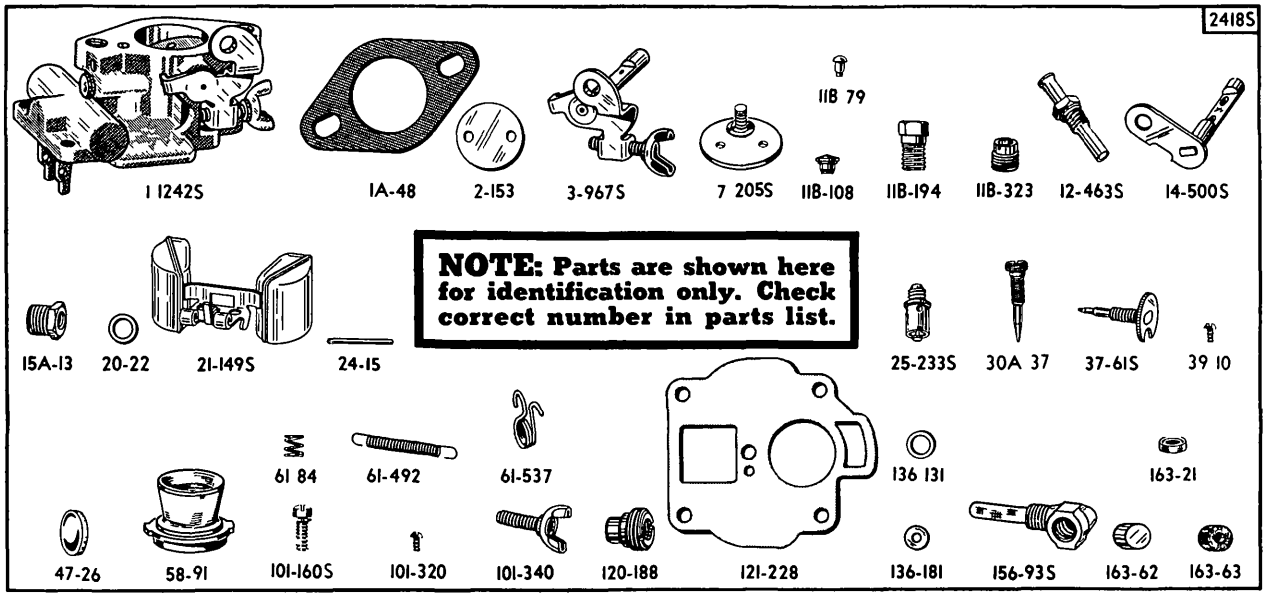
FLOAT ADJUSTMENT With throttle body inverted and gasket removed there should be 11/64 inch clearance (plus or minus 1/64 inch) between machined surface of throttle body and seam of float (both sides) To adjust bend lip on float lever

IDLE ADJUSTMENT Set throttle lever adjusting screw until motor runs approximately 400 r p m Then set idle adjustment screw for highest steady vacuum gauge reading or smoothest engine operation Correct setting will be found between 1/2 to 1 1/2 turns open

HIGH SPEED ADJUSTMENT With hand throttle wide open and engine operating 2000 r p m (governed speed) adjust high speed adjusting needle until smoothest engine operation is obtained This setting will be found between 3/4 to 1 1/2 turns open

MAXIMUM PERFORMANCE Can be secured only when breaker points spark plugs valves and motor timing are set to manufacturer s specifications

If carbureter does not respond to the above adjustments disassemble clean all parts in carbureter cleaner rinse and blow out all passages with compressed air Replace all worn or damaged parts Always use new gaskets See Form No 3525 for complete overhaul procedure



Ferguson—1956—Carbureter No. 2418S

WHEN SERVICING, USE GASKET ASSORTMENT No. 259, REPAIR PACKAGE No. 1840

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part N .	PART NAME	
1-1242S	Throttle body assembly	...
1A-48	FLANGE GASKET	
2-153	Throttle valve	..
3-967S	THROTTLE SHAFT AND LEVER ASSEMBLY	
7-205S	Choke valve assembly	
11B-79	Rivet plug	
11B-108	IDLE PORT RIVET PLUG	
11B-194	Bowl drain plug	
11B-323	LOW SPEED JET PLUG	
12-463S	Nozzle assembly	
14-500S	Choke shaft and lever assembly	
15A-13	High speed needle packing nut	
20-22	NOZZLE AND NEEDLE SEAT GASKET	(2)
21-149S	Float and lever assembly	
24-15	FLOAT LEVER PIN	
25-233S	NEEDLE AND SEAT ASSEMBLY	
30A-37	Idle adjustment screw	
37-61S	HIGH SPEED ADJUSTING NEEDLE ASSEMBLY	

Part No.	PART NAME	
39-10	Choke valve attaching screw	(2)
47-26	Welsh plug	(2)
58-91	Venturi	
61-84	Idle adjustment screw spring	
61-492	Float lever bracket spring	
61-537	Choke lever spring	
101-160S	Body attaching screw and washer assembly	(4)
101-320	THROTTLE VALVE ATTACHING SCREW	(2)
101-340	Throttle adjusting screw	
120-188	METERING JET	
121-228	BODY GASKET	
136-131	AIR HORN CHOKE AND THROTTLE SHAFT DUST SEAL RETAINER	(3)
136-181	High speed adjusting screw washer	
156-93S	Elbow and strainer assembly	
163-21	CHOKE AND THROTTLE SHAFT DUST SEAL	(2)
163-62	AIR HORN SEAL	
163-63	MAIN METERING SCREW PACKING	

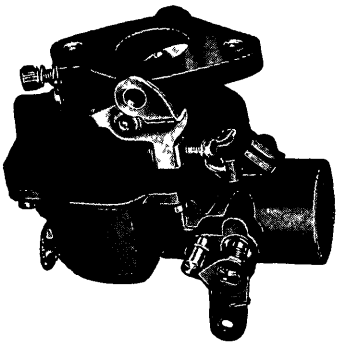
NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, nly one is used

Form 5042D

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

FERGUSON TRACTOR 997S-2223S-2402S-2709S
April, 1954
Revised December, 1958

MODELS
(997S-2709S)
"TO-30" Tractor
(2223S-2402S)
"TO-35" Tractor
and
"A-HO-60" Stationary
Power Plant



FERGUSON TRACTOR

UT UPDRAFT CARBURETERS Nos. 997S-2223S-2402S-2709S

CARBURETER SPECIFICATIONS

For Ferguson 4 Cylinder Engine: 3¼ Inch Bore, 3⅞ Inch Stroke (997S-2709S)
For Ferguson 4 Cylinder Engine: 3-5/16 Inch Bore, 3⅞ Inch Stroke (2223S-2402S)

Dimensions: Flange size, 1 inch S. A. E.
Throttle bore, (997S-2709S) 1-1/16 inch, (2223S-2402S) 1-3/16 inch.
Main venturi, (997S-2709S) 23/32 inch, (2223S-2402S) 13/16 inch.

Float Setting: See Adjustments.

Vents: Outside, none. Inside, balance vent, one 7/32 inch and one No. 8 (.199 inch) drill.

Gasoline Intake Needle: Size No. 50 (.070 inch) drill in needle seat.

Idle Jet: Jet tube (997S-2709S) plug (2223S-2402S) size, No. 66 (.033 inch) drill.
Lower bleed: (997S-2709S) size No. 60 (.040 inch) drill, (2223S-2402S) No. 55 (.052 inch) drill
Upper bleed: (997S-2709S) size No. 65 (.035 inch) drill (2223S-2402S) none.
Economizer. (997S-2709S) No. 61 (.039 inch) drill. (2223S-2402S) No. 59 (.041 inch) drill.

Idle Port: Lower port, slot type, length (997S-2709S) .049 to .051 inch, (2223S-2402S) .079 to .081 inch; width .029 to .031 inch.

Idle Port Opening: Bottom of port (997S-2709S) 044 to 048 inch (2223S-2402S) .060 to .064 inch below lower edge of valve.

Upper Port (For Idle Adjustment Screw): Size .038 to .042 inch diameter.

Set Idle Adjustment Screw: ¼ to 1½ turns open. For richer mixture, turn screw out. Do not idle engine below 400 r.p.m.

Main Metering Jet: Adjustable. See adjustments.

Nozzle: Inside diameter (997S-2709S) No 42 (.0935 inch) (2223S-2402S) No. 37 (.104 inch) drill
Accelerating Jets: (997S-2709S 4 (2223S-2402S) 2 No. 64 (.036 inch) drill.

Air Bleed to Nozzle: (Thru plug) size (997S-2709S) No. 53 (.0595 inch (2223S-2402S) No. 57 (.043 inch) drill.

Choke: Manual—Butterfly type, with pressure relief (poppet) valve.

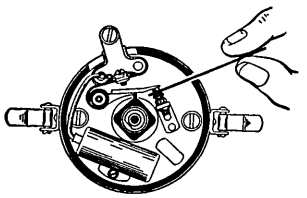
Vacuum Spark Port: None.

Motor Tune-Up—Be Accurate!

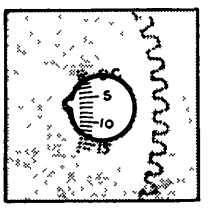
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



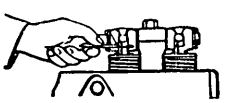
Spark Plug
Gap
.023"-.028"



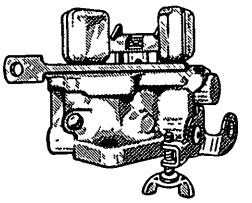
Breaker Point
Setting
.018"-.024"



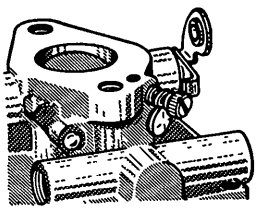
Ignition Timing
Breaker Points to Open:
6° B.T.D.C.
at 400 RPM



Valve Setting (Cold)
(997S-2709S)
Intake .010"-.013"
Exhaust .010"-.013"
(2223S-2402S)
Intake .014"
Exhaust .014"



Float Setting
(997S) 17/64"
(2223S) 11/64"
± 1/64"



Idle Adjustment
Screw Setting
¼ to 1½
Turns Open

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CARBURETER ADJUSTMENTS

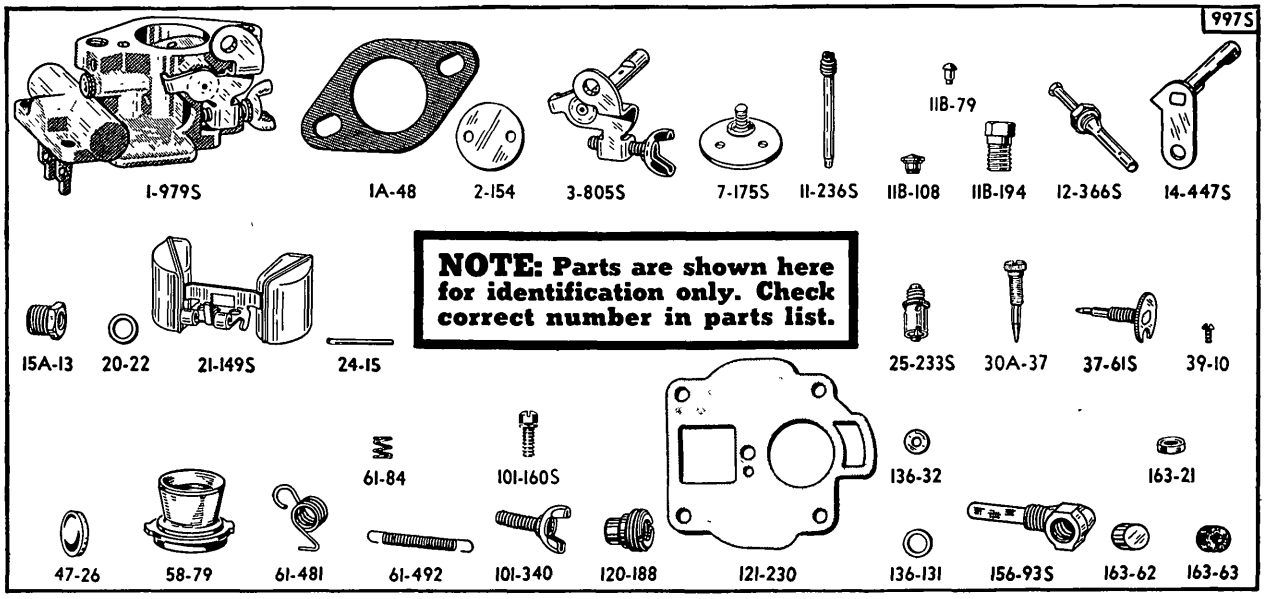
FLOAT ADJUSTMENT: With throttle body inverted and gasket removed, there should be (997S-2709S) 17/64, (2223S-2402S) 11/64 inch clearance (plus or minus 1/64 inch) between machined surface of throttle body and seam of float (both sides). To adjust, bend lip on float lever.

IDLE ADJUSTMENT: Set throttle lever adjusting screw until motor runs approximately 400 r.p.m. Then set idle adjustment screw for highest steady vacuum gauge reading or smoothest engine operation. Correct setting will be found between ¼ to 1½ turns open.

HIGH SPEED ADJUSTMENT: With hand throttle wide open and engine operating 2000 r.p.m. (governed speed), adjust high speed adjusting needle until smoothest engine operation is obtained. This setting will be found between ¾ to 1½ turns open.

MAXIMUM PERFORMANCE: Can be secured only when breaker points, spark plugs, valves and motor timing are set to manufacturer's specifications.

If carbureter does not respond to the above adjustments, disassemble, clean all parts in carbureter cleaner, rinse and blow out all passages with compressed air. Replace all worn or damaged parts. Always use new gaskets. See form No. 3525 for complete overhaul procedure.



Ferguson Tractor — Carbureters Nos. 997S-2223S-2402S-2709S

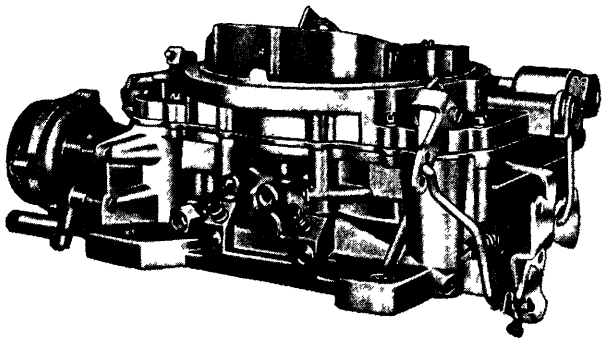
WHEN SERVICING, USE GASKET ASSORTMENT No. 239 (997S), GASKET ASSORTMENT No. 259 (2223S); REPAIR PACKAGE No. 1782A (2223S)

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME
1-979S	Throttle body assembly (997S)
1-1242S	Throttle body assembly (2223S)
1A-48	FLANGE GASKET
2-153	Throttle valve (2223S-2402S)
2-154	Throttle valve (997S-2709S)
3-805S	Throttle shaft and lever assembly (997S)
3-967S	THROTTLE SHAFT AND LEVER ASSEMBLY (2223S)
3-1157S	Throttle shaft and lever assembly (2709S)
3-1179S	Throttle shaft and lever assembly (2402S)
7-175S	Choke valve assembly (997S-2709S)
7-205S	Choke valve assembly (2223S-2402S)
11-236S	Low speed jet assembly (997S-2709S)
11B-79	Rivet plug
11B-108	IDLE PORT RIVET PLUG (997S-2223S)
11B-194	Bowl drain plug
11B-323	LOW SPEED JET PLUG (2223S-2402S)
11B-296	Idle port rivet plug (2402S-2709S)
12-366S	Nozzle assembly (997S-2709S)
12-432S	Nozzle assembly (2223S-2402S)
14-447S	Choke shaft and lever assembly (997S-2709S)
14-500S	Choke shaft and lever assembly (2223S-2402S)
15A-13	High speed needle packing nut
20-22	NOZZLE GASKET (2)
20-123	Needle seat gasket (2402S-2709S)
21-149S	Float and lever assembly (997S-2223S)
21-164S	Float and lever assembly (2402S-2709S)
24-15	FLOAT LEVER PIN
25-233S	NEEDLE AND SEAT ASSEMBLY (997S-2223S)
25-284S	Needle and seat assembly (2402S-2709S)
30A-37	Idle adjustment screw

Part No.	PART NAME
37-61S	HIGH SPEED ADJUSTING NEEDLE ASSEMBLY
39-10	THROTTLE AND CHOKE VALVE ATTACHING SCREW (997S-2709S (2223S-2402S (2)
47-26	Welsh plug (2)
58-79	Venturi (997S)
58-91	Venturi (2223S)
61-84	Idle adjustment screw spring
61-481	Choke lever spring (997S-2709S)
61-492	Float lever bracket spring (997S-2223S)
61-537	Choke lever spring (2223S-2402S)
61-567	Float lever bracket spring (2402S-2709S)
101-160S	Body attaching screw and washer assembly (4)
101-320	THROTTLE VALVE ATTACHING SCREW (2223S-2402S) (2)
101-340	Throttle adjusting screw
103-14	Lead shot
120-188	Metering jet (997S-2709S)
120-208	METERING JET (2223S-2402S)
121-228	BODY GASKET (2223S)
121-230	Body gasket (997S)
121-304	Body gasket (2402S-2709S)
136-32	High speed adjusting screw washer (997S) (Sup. by 136-181)
136-131	AIR HORN, CHOKE AND THROTTLE SHAFT DUST SEAL RETAINER (3)
136-181	High speed adjusting screw washer
156-93S	Elbow and strainer assembly
163-21	CHOKE AND THROTTLE SHAFT DUST SEAL (2)
163-62	AIR HORN SEAL
163-63	MAIN METERING SCREW PACKING

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.



FORD
THUNDERBIRD
1959

AFB Four-Bore Down-Draft Climatic® Control **Carbureter No. 2853S**

CARBURETER SPECIFICATIONS

For Ford 8 Cylinder 430 Cu. In. Engine: Vacuum at Idle 17-18 Inches

Dimensions: Flange four-bore—4 bolt type
Throttle bore primary 1-9/16 inch, secondary, 1 11/16 inch I D
Primary venturi size primary side, 7/16 inch secondary, 11/32 inch I D
Main venturi size, primary side, 1-3/16 inch, secondary side 1-9/16 inch I D

Vents: Inside (2) in air horn: Outside (2) in air horn

Low Speed Circuit: (Primary side only)
Jet, size No 67 (.032 inch) drill
By-pass, size .057 inch diameter
Economizer, size No 56 (.0465 inch) drill
Idle bleed, size No 54 (.055 inch) drill
Idle port slot type length .220 inch, width .030 inch

Idle Port Opening: .152 to .158 inch above top edge of valve with valve tightly closed.

Lower Port: (For idle adjustment screw), size .0635 inch diameter

Set Idle Adjustment Screw: 1½ to 2½ turns open For richer mixture turn screw out Idle engine at 450 R P M for Auto Trans in Drive Range

Main Nozzle: Installed permanently DO NOT REMOVE Anti-percolator bleed primary, (tube in venturi assembly) size No 70 (.028 inch) drill Secondary (drilled hole in venturi assembly) size No 57 (.043 inch) drill
Under strut bleed primary side only size No 42 (.0935 inch) drill

Main Vent Tube: (In venturi assembly) Side holes primary I—size No 40 (.060 inch) drill secondary no side holes

Secondary Initial Discharge: (In venturi assembly, secondary side only)
Pick up tube, size No 56 (.0465 inch) drill
Air bleed size No 60 (.040 inch) drill
Discharge port (upper) size No 53 (.0595 inch) (lower) size, No 60 (.040 inch) drill

Accelerating Pump: Discharge jet (twin) primary side only size No 70 (.028 inch) drill Intake disc check (screw plug) size 115 to 120 inch diameter Disc check bleed size .016" to .020" Discharge needle seat, size .070 inch diameter

Choke: Carter Climatic® Control set on index Butterfly type—offset choke valve primary side only Choke heat suction hole restriction in body size No 45 (.082 inch) drill

Vacuum Spark Port: Horizontal slot (round end) .055 x .130 inch Top of port .015 to .025 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap	Breaker Point Setting	Ignition Timing	Float Setting	Idle Adjustment Screw Setting
.032"-.036"	.014"-.016"	Breaker Points to Open: 6° B.T.D.C. At Vibration Damper	3/16 Inch (Use Gauge T109-28)	1½ to 2½ Auto. Trans. 450 R.P.M. in Drive Range

NOTE: These cars are equipped with Hydraulic Valve Lifters—No Adjustment.

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CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3780

FLOAT ALIGNMENT: Side of floats, parallel to edge of casting. Minimum clearance between lever and air horn lugs without binding. To adjust, bend float lever.

FLOAT LEVEL: 3/16 inch (Gauge T109-28) plus or minus 1/64 inch between top of floats at outer end and air horn gasket. To adjust, bend float lever.

FLOAT DROP: 23/32 inch plus or minus 1/16 inch between top of floats at outer end and air horn gasket. To adjust, bend stop tabs on float brackets.

PUMP: 17/32 inch from the top of the bowl cover to the top of the plunger shaft with throttle connector rod in inner hole (long stroke) of pump arm.

CHOKE PISTON LEVER ADJUSTMENT: 3/32 inch (Gauge T109-125) between choke lever and stop in piston housing with choke held closed. To adjust, take slack out of linkage by setting counter shaft lever.

FAST IDLE LINKAGE ADJUSTMENT: With slight clearance between lug on fast idle cam and stop on flange casting, and inner countershaft lever contacting lug on outer conutershaft lever align index mark on cam with adjusting screw. To adjust, bend fast idle connector rod. It may be necessary to bend stop lug on fast idle cam.

FAST IDLE THROTTLE VALVE CLEARANCE: .030 inch (Gauge T109-29) between lower edge of valve and bore with adjusting screw on index mark of cam.

FAST IDLE ON CAR: 550 R.P.M. hot engine—with fast idle screw on lowest (last) step of cam.

UNLOADER: 1/8 inch (Gauge T109-36) between upper edge of choke valve and inner wall of air horn. To adjust, bend unloader arm on throttle lever.

SECONDARY THROTTLE LEVER ADJUSTMENT: 1. Block choke valve wide open. 2. with 15/32 inch between lower edge of primary valve and bore (opposite idle port) secondary valves should just start to open. To adjust, bend throttle operating rod. NOTE: At wide open throttle primary and secondary valves will reach vertical position. 3. With primary and secondary throttle valves in tightly closed position there should be .010″ to .030″ (Gauge T109-29) between positive closing secondary shoe and cam on primary throttle lever. To adjust, bend shoe on secondary lever.

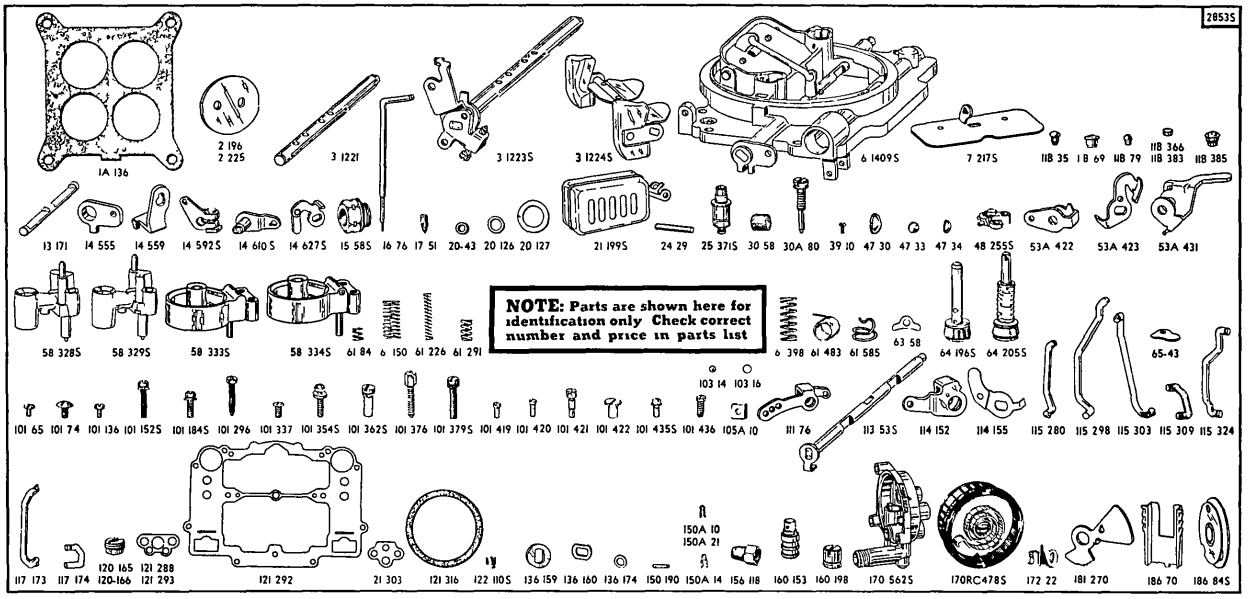
DASH POT: 1. 1/8 inch from the top of the bowl cover to the top of the plunger shaft with primary valves tightly closed. To adjust, bend the flat portion of the dash pot lever. Check to be sure dash pot lever does not contact bowl cover attaching screw. 2. 7/16 inch from the top of the bowl cover to the top of the plunger shaft with primary valves wide open. To adjust, bend stop lug on flat lever. Check to be sure plunger shaft operates without sticking in hole in bowl cover.

TOOLS REQUIRED FOR SERVICING CARBURETERS

T109-28	3/16″ Float gauge	T109-22	Bending Tool
T109-29	.020″ Wire gauge	T109-213	Bending Tool
T109-36	1/8″ Unloader gauge	T109-214	Bending Tool

T109-125 3/32″ Unloader gauge (Used for choke piston lever adj.)

CARBURETER
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Ford—1959—Carbureter No. 2853S

WHEN SERVICING USE GASKET ASSORTMENT No 328, RE-CARBURETION KIT No 1974N

PART NAMES IN CAPITAL LETTERS LISTED BELOW INDICATE CONTENTS OF RE CARBURETION KIT

Part No.	PART NAME	
1A-136	—FLANGE GASKET	
2-196	Secondary throttle valve	(2)
2-225	—Primary throttle valve	(2)
3-1221	—Secondary throttle shaft	
3-1223S	—Primary throttle shaft and lever assembly	
3-1224S	—Auxiliary throttle shaft valve and weight assembly	
6-1409S	—Air horn assembly	
7-217S	Choke valve and lever assembly	
11B-35	Rivet plug	
11B-69	Rivet plug	(2)
11B-79	Rivet plug	(2)
11B-366	Lead plug	(2)
11B-383	Lead plug	(2)
11B-385	Idle port and fuel passage plug	(3)
13-171	Choke shaft	
14-555	Inside countershaft lever	
14-559	Countershaft lever (to choke valve)	
14-592S	Countershaft lever screw and nut assembly	
14-610S	Choke lever and shaft assembly (piston housing)	
14-627S	—Choke piston link and lever assembly	
15-58S	Fuel inlet fitting assembly	
16-76	—STEP UP ROD—STANDARD 0665" x 053"	(2)
17-51	Pump discharge check needle	
20-43	Piston housing gasket	
20-126	Needle seat gasket	(2)
20-127	Fuel inlet fitting gasket	
21 199S	—Float and lever assembly	(2)
24-29	Float lever pin	(2)
25-371S	—NEEDLE AND SEAT ASSEMBLY (1015")	(2)
30-58	Fuel inlet strainer	
30A 80	Idle adjustment screw	(2)

Part No	PART NAME	
39-10	Choke valve attaching screw	(2)
47-30	Piston housing welsh plug	
47-33	Venturi welsh plug	(4)
47-34	Spark port welsh plug	
48-255S	Pump jet housing	
53A-422	Dash pot arm (outer)	
53A-423	Secondary throttle operating lever	
53A-431	Dash pot arm (inner)	
58-328S	—Primary venturi assembly (choke side)	
58-329S	—Primary venturi assembly (pump side)	
58-333S	—Secondary venturi assembly (choke side)	
58-334S	—Secondary venturi assembly (pump side)	
61-84	Idle adjustment screw spring	(2)
61-150	Dash pot return spring	
61-226	STEP UP PISTON SPRING	(2)
61-291	Throttle lever adjusting screw spring	
61-398	Pump spring (lower)	
61 483	Secondary throttle return spring	
61-585	Step up rod retaining spring	(2)
63-58	Coil housing retainer	(3)
64-196S	DASH POT PLUNGER ROD AND CHECK ASSEMBLY	
64-205S	PUMP PLUNGER ROD AND SPRING ASSEMBLY	
65-43	Step up piston cover plate	(2)
101-65	Piston housing choke shaft lever attaching screw	
101-74	Throttle shaft lever attaching screw	(2)
101-136	Coil housing attaching screw	(3)
101-152S	Air horn attaching screw and washer assembly	(2)
101-184S	Pump jet housing attaching screw and washer assembly	(2)
101-296	Fast idle adjustment screw	

Part No.	PART NAME	
101-337	Countershaft lever attaching screw	
101-354S	Countershaft lever clamp screw and washer assembly	
101-362S	Air horn attaching screw and washer assembly	(8)
101-376	Throttle lever adjusting screw	
101-379S	Venturi attaching screw and washer assembly	(8)
101-419	Secondary throttle valve attaching screw	(4)
101-420	Primary throttle valve attaching screw	(4)
101-421	Pump arm attaching screw	
101-422	Fast idle cam attaching screw	
101-435S	Step up piston cover plate attaching screw and washer assembly	(2)
101-436	Piston housing attaching screw	(3)
103-14	Lead shot (180" dia)	
103-16	Lead shot (200" dia)	
105A-10	Countershaft lever clamp screw nut	
111-76	Pump arm	
113-53S	—Countershaft and lever assembly	
114-152	Primary throttle shaft arm (inner)	
114-155	—Primary throttle shaft arm (outer)	
115-280	Fast idle connector rod	
115-298	Throttle connector rod	
115-303	Choke connector rod	
115-309	Throttle operating rod	
115-324	—Dash pot connector rod	
117-173	Choke valve connector link	
117-174	Pump connector link	
120-165	Secondary metering jet (086")	(2)
120-166	PRIMARY METERING JET (0935")	(2)
121-288	PRIMARY VENTURI CLUSTER GASKET	(2)
121-292	AIR HORN GASKET	
121-293	SECONDARY VENTURI CLUSTER GASKET	(2)
121-303	PUMP JET HOUSING GASKET	
121-316	COIL HOUSING GASKET	
122 110S	—Pump intake disk check assembly	
136-159	Primary throttle shaft washer	
136-160	Secondary throttle shaft washer	
136-174	Throttle lever adjusting screw washer	
150-190	Choke piston pin	
150A-10	Pin spring	(6)
150A-14	Pin spring	
150A-21	Pin spring	
156-118	Spark fitting	
160 153	Step up piston	(2)
160-198	—Choke piston	
170-562S	Piston housing and plug assembly	
170RC-478S	—Thermostatic coil and housing assembly	
172-22	Throttle connector rod retainer	
181 270	—Fast idle cam	
186 70	Fuel bowl baffle	(2)
186-84S	—Choke baffle plate assembly	

—Parts so marked are new and listed for the first time

NOTE Figures in parentheses indicate number of pieces used in one carburetor Where no figure is shown only one is used.

CARBURETER
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Form 3780
November, 1958

CARTER CARBURETOR

DIVISION OF ACF INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

File Under F rd

CARTER MODEL AFB CARBURETOR FOR FORD
(SERVICE ADJUSTMENT PROCEDURE)

NOTE: The parts and specification pages referred to are catalog pages. These pages can be obtained from Carter-Carburetor, Catalog Department, St. Louis (7), Missouri. Specify the carbureter number found on the base of carbureter, when requesting specification pages.

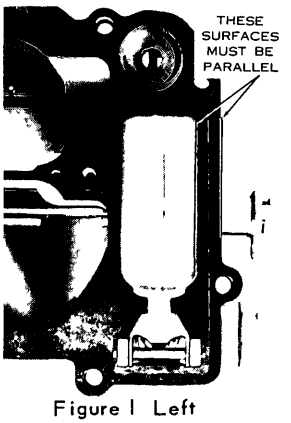


Figure 1 Left

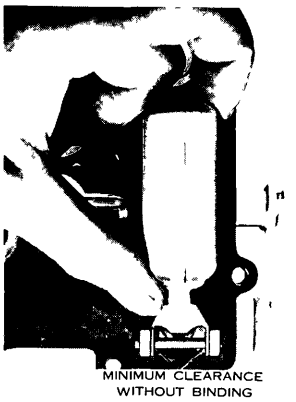
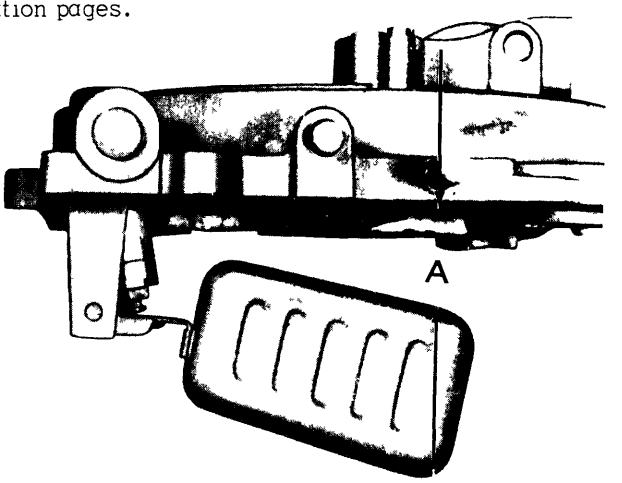


Figure 1 Right



FLOAT ALIGNMENT ADJUSTMENT (Fig. 1):

1. Sight down the side of the float shell to determine if the side of the float is parallel to the outer edge of the air horn casting. TO ADJUST: Bend float lever by applying pressure to the end of the float shell with the fingers while supporting the float lever with the thumb.

CAUTION: To avoid damaging the float, apply only enough pressure to bend float lever.

2. After aligning float, remove as much clearance as possible between arms of float lever and lugs on air horn by bending the float lever. Arms of float lever should be as parallel to the inner surfaces of lugs on air horn as possible.

   Floats must operate freely without excess clearance on its hinge pin.

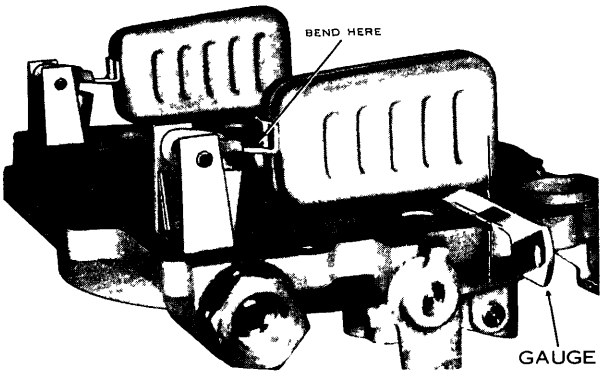


Figure 2

FLOAT LEVEL ADJUSTMENT (Fig. 2):

With air horn inverted, bowl cover gasket in place and needle seated, there should be the clearance as listed on carburetor sp cification page betwe n outer nd of float and air horn gasket. To adjust, bend float arm. Adjust both floats. Rech ck float alignment.

FLOAT DROP ADJUSTMENT (Fig. 3):

With bowl cover held in upright positi n and measuring from outer end of float, the distance (A) betwe n top of floats and bowl cover gasket should b as list d on specification page. To adjust, bend stop tabs on float brackets.

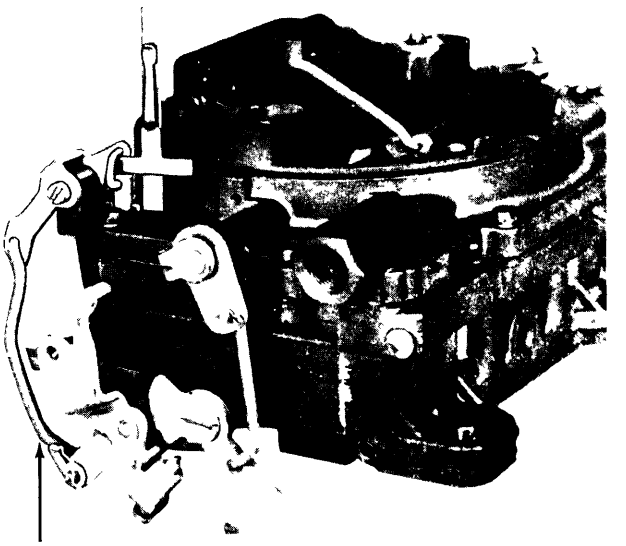


Figure 4

PUMP ADJUSTMENT (Fig. 4):

1. Back out idle speed screw until throttle valv s s at in bores of carburetor. NOTE: Be sure chok is wide open so fast idle cam does not hold throttle valve open.
2. With throttle connector rod in inner hole (long strok) of pump arm, the distance from the top of the bowl cover to the top of the plunger shaft should b as specified on carburetor sp cificati n page.
3. Adjust by bending throttle connector rod at lower angl (use to l T109-213).

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CARBURETER

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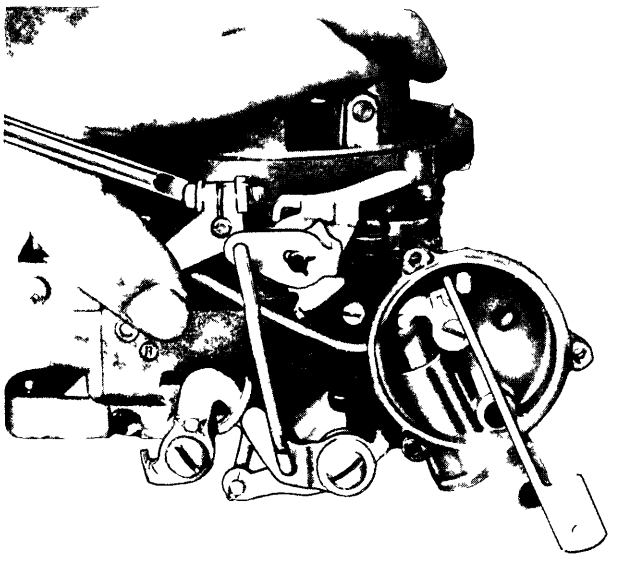


Figure 5

CHOKE PISTON LEVER ADJUSTMENT (Fig. 5):

Loosen countershaft lever clamp screw. Take end play out of countershaft, and hold choke valve tightly closed. Take slack out of linkage by pressing countershaft lever towards closed position with gauge in place between choke lever and stop in piston housing. Hold in place and tighten clamp screw.

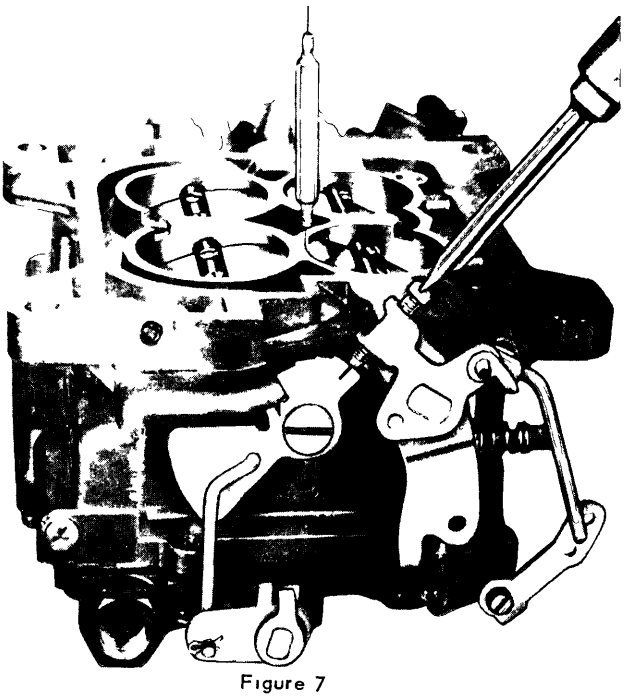


Figure 7

FAST IDLE THROTTLE VALVE CLEARANCE ADJUSTMENT (Fig. 7):

With choke valve tightly closed, tighten fast idle adjusting screw (on index mark of cam) until the clearance between throttle valve and bore of carbureter, side opposite idle port, is as listed on carbureter specification page.

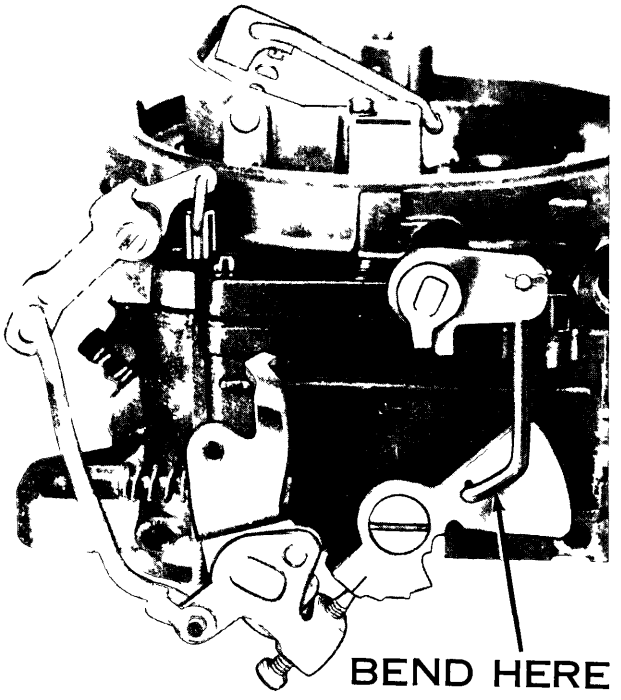


Figure 6

FAST IDLE LINKAGE ADJUSTMENT (Fig. 6):

With choke valve tightly closed and lug on outer choke shaft lever contacting stop on inner choke shaft lever align center of fast idle screw with index mark on cam. To adjust, bend fast idle connector rod. (Use tool T109-213).

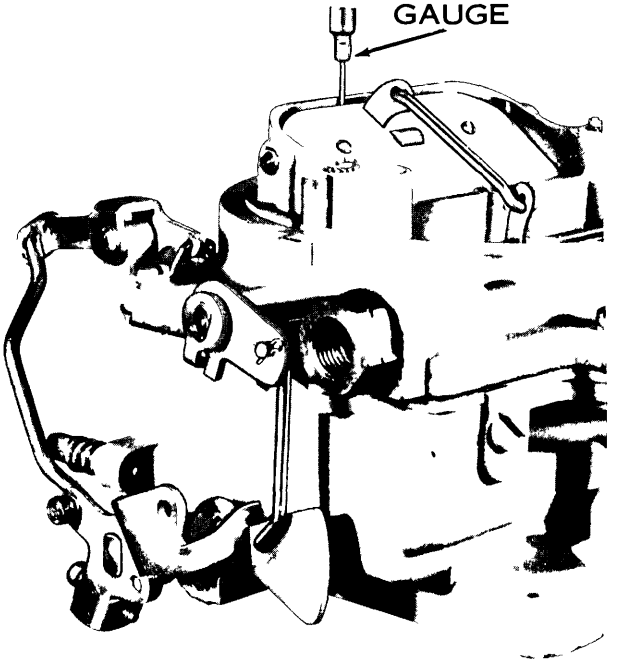


Figure 8

UNLOADER ADJUSTMENT (Fig. 8):

With throttle wide open there should be the clearance as listed on carbureter specification page between upper edge of choke valve and inner wall of air horn. To adjust, bend unloader lip on throttle shaft lever. (Use tool T109-214).

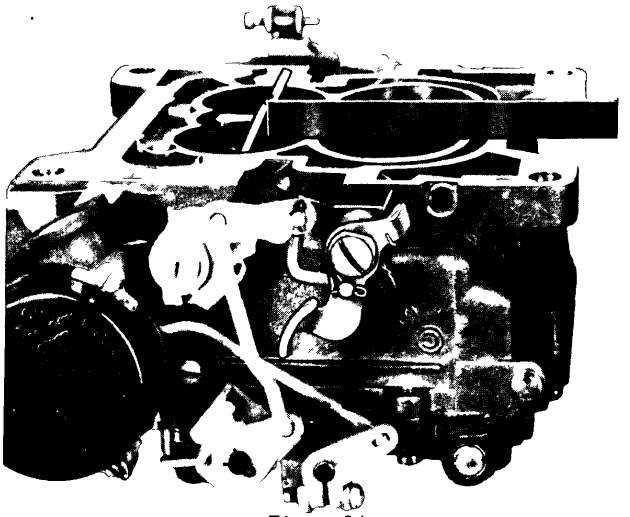


Figure 9A

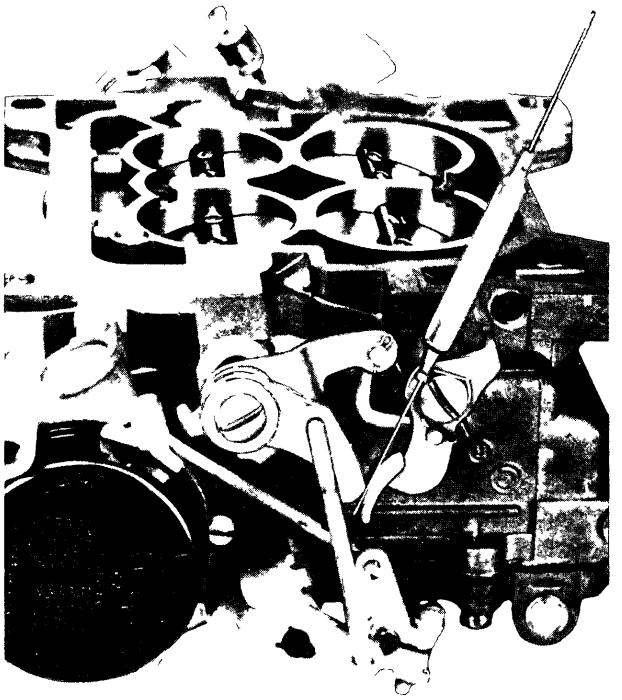


Figure 9B

SECONDARY THROTTLE LEVER ADJUSTMENT (Figs. 9A and 9B):

1. Block choke valve wide open.
2. Secondary throttle valves should just start to open when primary throttle valves are opened to the clearance as listed on specification page between lower edge of valve and bore (opposite idle port). To adjust, bend throttle operating rod. (Use bending tool T109-213). (See Fig. 9A) NOTE: Primary and secondary throttl valv s should reach wide pen p sition, full vertical, at the same time.
3. With primary and secondary throttl valves in tightly closed position, th r should b the cl arance as list d on specification page between positiv closing shoes on primary and s condary throttle levers. To adjust, bend shoe on secondary lev r. (S Fig. 9B).

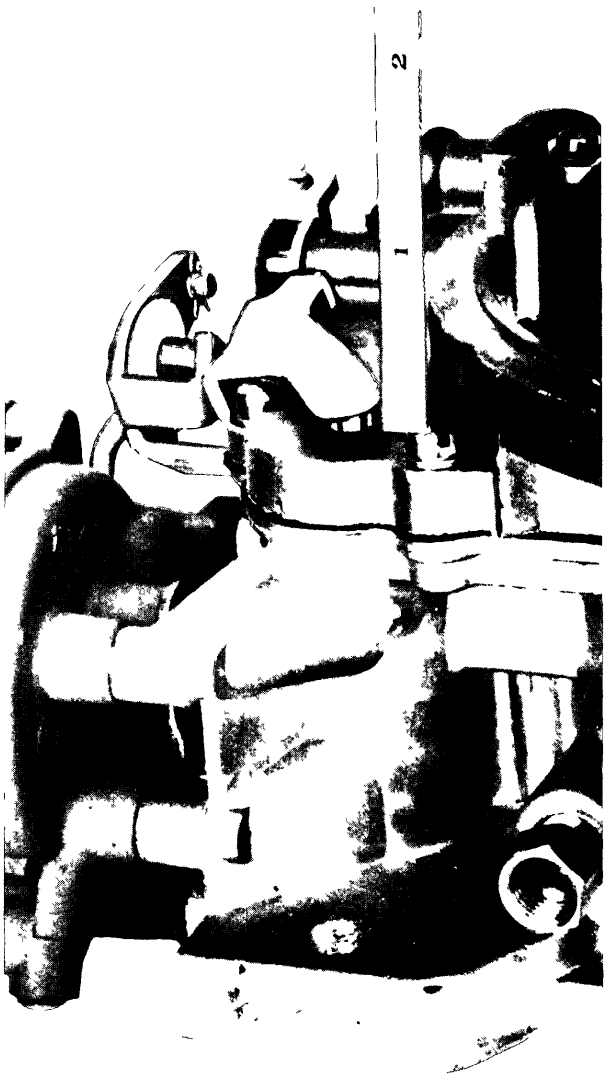


Figure 10

DASH POT ADJUSTMENT (Fig. 10):

1. With primary valves tightly closed there should be the distance as listed on specification page between the top surface of the bowl cover and the top of the plunger shaft. To adjust, bend the flat portion of the dash pot lever. Check to be sure dash pot l ver does not contact bowl cover attaching screw.
2. With primary valves wide open there should b the distance as listed on specification page between the top surface of the bowl cover and the top of the plunger shaft. To adjust, bend stop lug on dash pot lever. (Use bending tool T109-22). Check to be sure plunger shaft operates without sticking in hol in bowl cover.

NOTE: S e last page for pertinent service information.

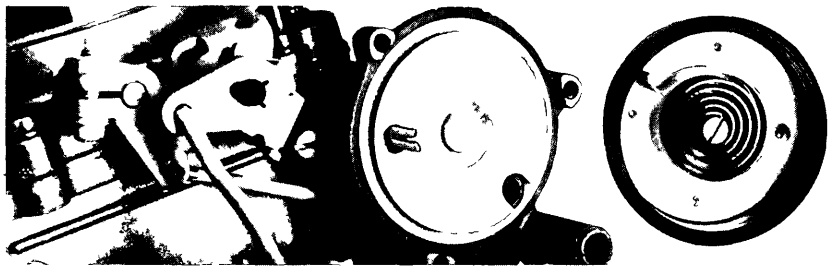


Figure 11

FIGURE 11:

After choke baffl plate assembly has been properly installed as shown in Fig. 11 install gasket and coil housing with the lip on the coil spring installed in the slot of the piston lever.

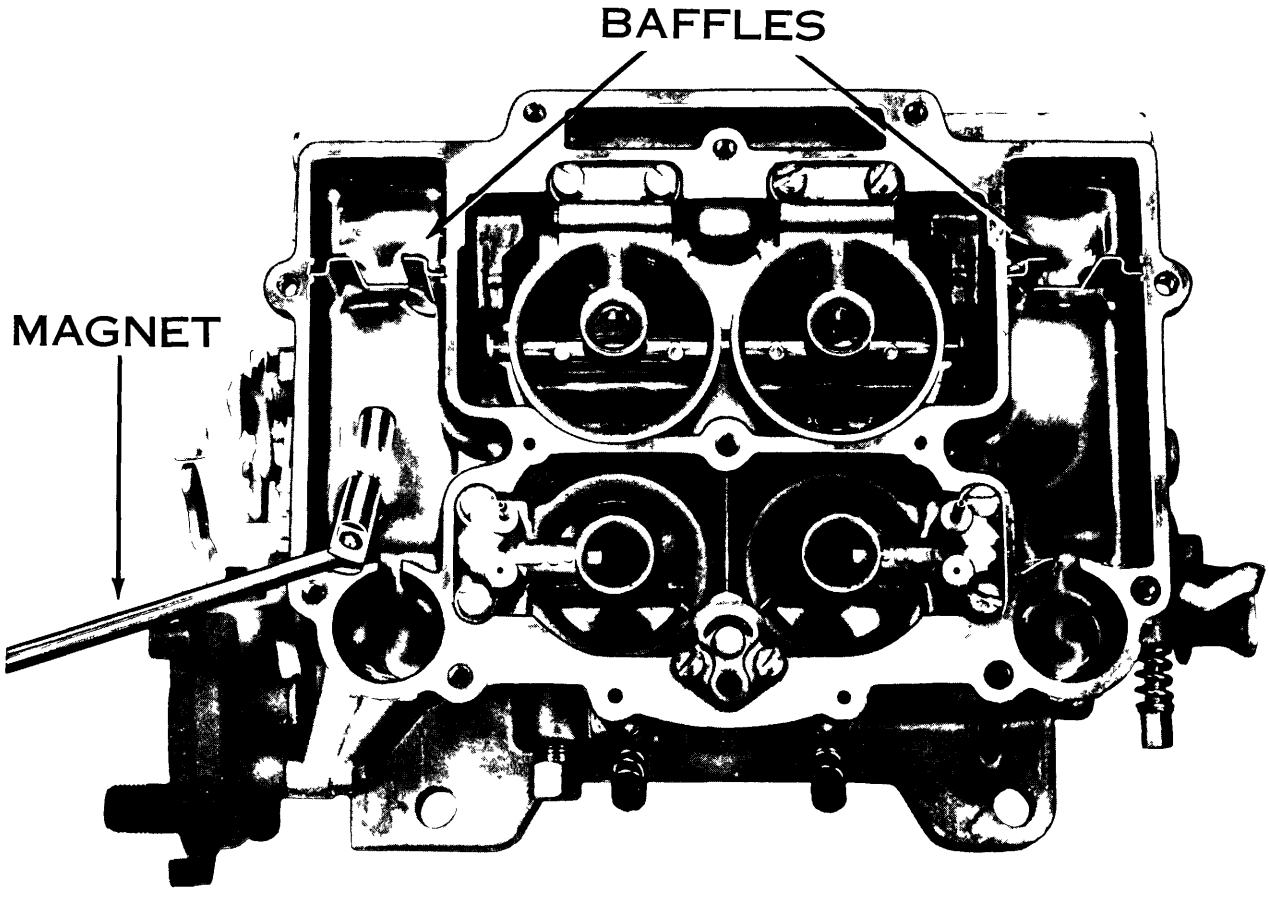


Figure 12

FIGURE 12:

Flooding, stumble on acceleration and other performance complaints are, in many instances, caused by the presence of dirt, water or other foreign matter in the carbureter. To aid in diagnosing the cause of the complaint, the carbureter should be carefully removed from the engine without draining the fuel from the bowl. The contents of the fuel bowl may then be examined for contamination as the carbureter is disassembled.

Ch ck the fuel in the bowl for contamination by dirt, water, gum or other foreign matter. A magnet moved through the fuel in the bowl will pick up and identify any iron oxide dust that may have caused intake needle and seat leakage.

Inspect gasketed surfaces between body and air horn. Small nicks or burrs should be smoothed down to eliminate air or fuel leakage. B especially particular when inspecting the top surface of the inner wall of the bowl around the vacuum piston passage. A poor seal at this location may contribute to a "cutting-out" on turns complaint.

Install fuel baffles as shown (Fig. 12) to prevent damage of floats.

Fill the carbureter bowl with clean fuel before installing on the manifold. This will help prev nt dirt trapp d in th fuel syst m from being dislodged by th free flow of fuel as the carburet r is primed. The operation of the floats and intake needle and seats may be checked under pressure if a fuel pump is used at th b nch to fill the carbureter bowl. Operate the throttle several times and visually check the discharg from th pump j ts.

Befor installing the carbureter, hold chok valve op n and turn the idle sp d scr w until it just contacts the throttle lever, then ½ a turn mor to op n the throttle valv s enough to k p the engine running, until the idle mixture and final R.P.M. adjustment can be made.

CARTER CARBURETOR

DIVISION OF acf INDUSTRIES
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GENERAL BULLETIN

CARBURETER CONTRACT ACCOUNTS
FACTORY, P.I. AND P.C.T. GRADUATES

BULLETIN NO. 3 Ford

DATE February 17, 1958

SUBJECT: 1958 Ford V8-Slow Opening Of The Automatic Choke AFB-2640SA (4 Bore) Carbureter

A new climatic control thermostatic coil and housing assembly 170AD-478S has been released to permit the choke to open more quickly during the warm-up period. The coil housing gasket has been changed to a soft cork material to assure an air tight seal. The part number of the new gasket is 121-316. Carbureters using the new housing and gasket will be identified as 2640SC. The 170AD-478S coil is set two notches lean.

Manifold vacuum draws warm choke air through the idle bleeds in the low speed circuit to reduce carbureter icing. If a cold engine is started and allowed to warm-up at idle speed the choke valve may not open fully using either the new or old coil. This is due to the small volume of choke air passing through the idle bleeds and relatively low temperatures in the exhaust manifold stove. When the car is driven during the warm-up period the velocity of the choke air and the temperature in the manifold stove will increase opening the choke. Because of the design of the choke valve and air horn, the last few degrees of choke valve travel to the open position has no effect on the fuel mixture.

To be sure the choke is up to standard:

1. Idle the engine at 500 RPM in drive with an automatic transmission, 600 RPM in neutral with a standard transmission. Sufficient idle RPM is important to assure sufficient choke air flow. Check the vacuum at the choke hot air inlet on the carbureter. If it is below 2" of vacuum check for air leakage

   a. Between the coil housing and piston housing.
   b. Between the choke shaft and piston housing.
   c. Around the welsh plug in piston housing.
   d. Around a loose piston housing attaching screw.
   e. Between piston housing and carbureter body due to a missing gasket at the vacuum passage.

2. Check the manifold stove for cold air leaks, particularly at the four corners of the steel plate forming the top of the stove.

(over)

3. Check the fast idle adjustment by rotating the cam until the last step is under the adjusting screw. An engine at full operating temperature should then idle at 650 RPM in neutral.

An initial shipment to Carter Central Distributors is underway on parts 170AD-478S and 121-316.

Carter warranty is not involved.

V. F. Thompson
Manager, Distribution Sales

RJM: dg

cc: Personnel and Extra Copies - Canada and U.S.A.

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FORM C-2914E

CARBURETER
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FORD INTERCEPTOR V-8 and SPECIAL V-8

MODELS "FAIRLANE", "FAIRLANE 500", "CUSTOM", "CUSTOM 300", "STATION WAGON" AND "POLICE INTERCEPTOR" (Optional)

1958

AFB Four-Bore Down-Draft Climatic® Control Carbureters Nos. 2640S-2640SA

CARBURETER SPECIFICATIONS

For Ford 8 Cylinder 352 Cu. In. Engine: Vacuum at Idle 19 Inches

Dimensions: Flange, four bore—4 bolt type
Throttle bore 1 9/16 inch I D
Primary venturi size 7/16 inch I D
Main venturi primary side, 1 1/8 inch I D
Main venturi, secondary side, 1-3/16 inch I D.

Vents: Inside (2) in air horn, Outside (4) in body.

Low Speed Circuit: (Primary side only)
Jet, size No 69 (0292 inch) drill.
By pass, size No 53 (0595 inch) drill
Economizer size No 57 (043 inch) drill
Idle bleed, size No 49 (073 inch) drill
Idle port, slot type, length 180 inch, width 030 inch.

Idle Port Opening: .133 to 140 inch above top edge of valve with valve tightly closed

Lower Port: (For idle adjustment screw), size 065 inch diameter

Set Idle Adjustment Screw: 1/4 to 1 3/4 turns open For richer mixture turn screw out Idle engine at 600 R P M for Std. and O. D, 500 R P M for Auto Trans in neutral

Main Nozzle: Installed permanently DO NOT REMOVE Anti-percolator bleed, primary (tube in venturi assembly) size No 70 (028 inch) drill Secondary, (drilled hole in venturi assembly) size No. 60 (040 inch) drill.

Main Vent Tube: (In venturi assembly) Side holes primary and secondary 1—size No 40 (060 inch) drill

Accelerating Pump: Discharge jet (twin) primary side only size No 70 (028 inch) drill Intake ball check seat (screw plug) size 115 to 120 inch diameter. Discharge needle seat, size 070 inch diameter.

Choke: Carter Climatic® Control set 1 point lean. Butterfly type —offset choke valve, primary side only. Choke heat suction hole, restriction in body size No 43 (089 inch) drill

Vacuum Spark Port: Horizontal slot (round end) 055 x .130 inch Top of port 035 to .045 inch above top edge of valve with valve tightly closed.

Motor Tune-Up — Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open:	Valve Setting (Hot)	Float Setting	Idle Adjustment Screw Setting
.032"-.036"	.014"-.016"	6° B. T. D. C. (Auto. Trans.) 3° B. T. D. C. (Std. & O. D. Trans.) At Vibration Damper	Intake .026" Exhaust .026"	5/16 Inch (Use Gauge T109-107)	1/4 to 1 3/4 Turns Open Auto. Trans. 500 R. P. M. Std. & O. D. Trans. 600 R. P. M.

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CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3694

FLOAT ALIGNMENT: Side of floats, parallel to edge of casting Minimum clearance between lever and air horn lugs without binding To adjust, bend float lever

FLOAT LEVEL: 5/16 inch (Gauge T109-107) between top of floats at outer end and air horn gasket To adjust, bend float lever

FLOAT DROP: 23/32 inch between top of floats at outer end and air horn gasket To adjust, bend stop tabs on float brackets

PUMP: 15/32 inch from the top of the bowl cover to the top of the plunger shaft with throttle connector rod in center hole (medium stroke) of pump arm

COUNTERSHAFT LINKAGE: (1) 086 inch (Gauge T109-215) between choke lever and stop in piston housing with choke held closed To adjust, take slack out of linkage by setting counter shaft lever (2) With slight clearance between lug on fast idle cam and stop on flange casting, and inner countershaft lever contacting lug on outer countershaft lever align index mark on cam with adjusting screw To adjust, bend fast idle connector rod

FAST IDLE THROTTLE VALVE CLEARANCE: 026 inch (Gauge T109-189) between lower edge of valve and bore with adjusting screw on index mark of cam

FAST IDLE ON CAR: 650 R P M hot engine—with fast idle screw on lowest (last) step of cam

UNLOADER: 067 inch (Gauge T109-234) between upper edge of choke valve and inner wall of air horn To adjust bend unloader arm on throttle lever

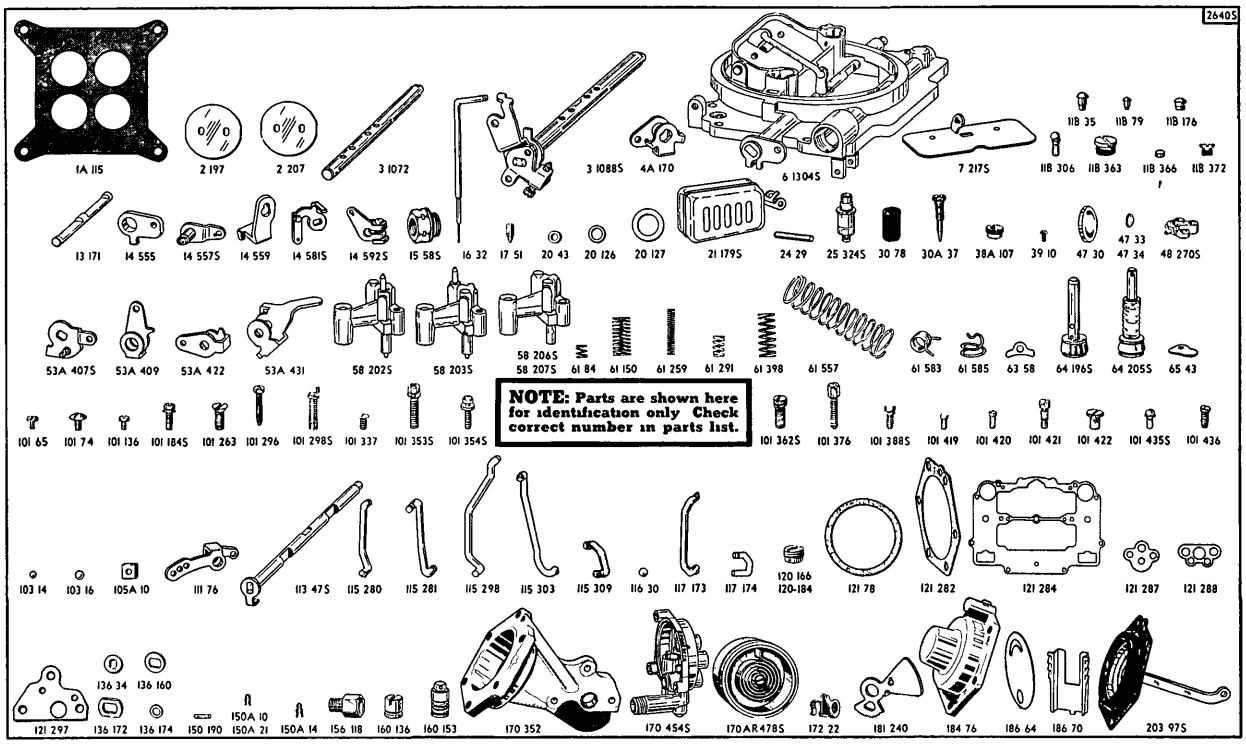
PRIMARY THROTTLE SHAFT DOG: (1) With primary throttle valves in wide open position there should be 020 inch (Gauge T109-29) clearance between edge of secondary valves and bore of carbureter adjacent to primary valves To adjust, bend upper tang on primary throttle shaft dog If clearance cannot be obtained, bend throttle operating rod slightly (2) With primary and secondary valves tightly closed there should be 067 inch (Gauge T109-234) clearance between primary throttle shaft flex spring and lower tang on primary throttle shaft dog To adjust, bend lower tang.

DASH POT: 7/16 inch from top of the bowl cover to the top of the plunger shaft with primary throttle wide open To adjust, bend stop lug on flat lever.

TOOLS REQUIRED FOR SERVICING CARBURETERS:

T109-29	020" Wire gauge	T109-234	.067" Wire gauge
T109-107	5/16" Float gauge	T109-22	Bending tool
T109-189	026" Wire gauge	T109-213	Bending tool
T109-215	086" Wire gauge	T109-214	Bending tool

CARBURETER
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Ford — 1958 — Carbureters Nos. 2640S-2640SA

WHEN SERVICING, USE GASKET ASSORTMENT No. 292; RE-CARBURETION KIT No. 1923N

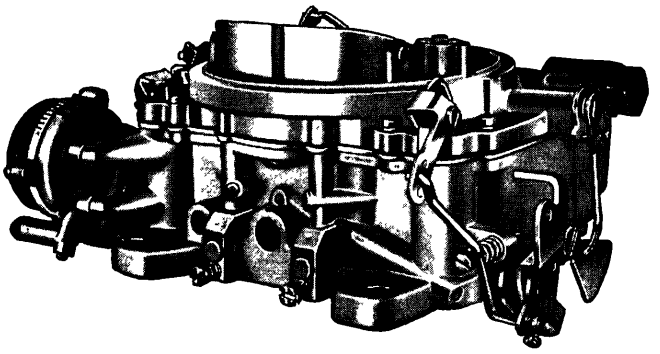
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF RE-CARBURETION KIT

Part No	PART NAME	
1A-115	FLANGE GASKET	
2-197	—Secondary throttle valve	(2)
2-207	—Primary throttle valve	(2)
3-1072	Secondary throttle shaft	
3-1088S	Primary throttle shaft and lever assembly	
4A-170	Primary throttle shaft dog	
6-1304S	Air horn assembly	
7-217S	Choke valve and lever assembly	
11B-35	Rivet plug	
11B-79	Rivet plug	(2)
11B-176	Idle port rivet plug	(2)
11B-306	Fuel passage plug	
11B-363	Pump intake screw plug	
11B-366	Nozzle well rivet plug	(4)
11B-372	Level sight plug	(2)
13-171	Choke shaft	
14-555	Inside countershaft lever	
14-557S	Choke lever and shaft assembly (piston housing)	
14-559	Countershaft lever (to choke valve)	
14-581S	Choke piston link and lever assembly	
14-592S	—Countershaft lever screw and nut assembly	
15-58S	Fuel inlet fitting assembly	
16-14	Step up rod—Standard 0725" x 063" (2640S) (Sup by 16 28)	(2)
16-21	Step up rod—1 size lean 0725" x 066"	(2)
16-22	Step up rod—2 sizes lean 07375" x 068"	(2)
16-28	STEP UP ROD—STANDARD 071" x 0635"	(2)
16-32	Step up rod—standard—070" x 064" (2640S) (Sup by 16 14)	(2)
17-51	Pump discharge check needle	
20-43	Piston housing gasket	
20-126	Needle seat gasket	(2)
20-127	Fuel inlet fitting gasket	
21-179S	Float and lever assembly	(2)
24-29	Float lever pin	(2)
25-324S	Needle and seat assembly (1015") (Sup by 25 343S)	(2)
25-343S	—NEEDLE AND SEAT ASSEMBLY (0935")	(2)
30-78	Fuel inlet strainer	
30A-37	Idle adjustment screw	(2)
38A-107	Pump intake check ball seat	
39-10	Choke valve attaching screw	(2)
47-30	Piston housing welsh plug	
47-31	Venturi welsh plug (Sup by 47-33)	(4)
47-33	Venturi welsh plug	(4)
47-34	Spark port welsh plug	
48-270S	—Pump jet housing	
53A-407S	Secondary throttle operating lever assembly	
53A-409	Primary throttle operating lever	
53A-422	—Dash pot arm (outer)	
53A-431	—Dash pot arm (inner)	
58-202S	Primary venturi assembly (choke side) (2640S) (Sup by 58 242S)	

Part No.	PART NAME	
58-203S	Primary venturi assembly (pump side) (2640S) (Sup by 58 243S)	
58-206S	—Secondary venturi assembly (choke side)	
58-207S	—Secondary venturi assembly (pump side)	
58-242S	—Primary venturi assembly (choke side)	
58-243S	—Primary venturi assembly (pump side)	
61-84	Idle adjustment screw spring	(2)
61-150	Dash pot return spring	
61-259	VACUUM PISTON SPRING	(2)
61-291	Throttle lever adjusting screw spring	
61-398	Pump spring	
61-557	Diaphragm return spring	
61-583	Throttle flex spring	
61-585	Step-up rod retaining spring	(2)
63-58	Coil housing retainer	(3)
64-196S	DASH POT PLUNGER, ROD AND CHECK ASSEMBLY	
64-205S	PUMP PLUNGER ROD AND SPRING ASSEMBLY	
65-43	Step-up piston cover plate	(2)
101-65	Piston housing choke shaft lever attaching screw	
101-74	Throttle shaft lever attaching screw	(2)
101-136	Coil housing attaching screw	(3)
101-184S	Pump jet housing attaching screw and washer assembly	(2)
101-263	Diaphragm housing attaching screw	(3)
101-296	Fast idle adjustment screw	
101-298S	Venturi attaching screw and washer assembly	(8)
101-337	Countershaft lever attaching screw	
101-353S	Air horn attaching screw and washer assembly	(2)
101-354S	Countershaft lever clamp screw and washer assembly	
101-362S	Air horn attaching screw and washer assembly	(8)
101-376	Throttle lever adjusting screw	
101-388S	Diaphragm housing cover attaching screw and washer assembly	(6)
101-419	Secondary throttle valve attaching screw	(4)
101-420	Primary throttle valve attaching screw	(4)
101-421	Pump arm attaching screw	
101-422	Fast idle cam attaching screw	
101-435S	Step up piston cover plate attaching screw and washer assembly	(2)
101-436	Piston housing attaching screw	(3)
103-14	Lead shot (early prod)	
103-15	Lead shot (late prod)	
103-16	Lead shot	(2)
105A-10	Countershaft lever clamp screw nut	
111-76	Pump arm	
113-47S	Countershaft and lever assembly	
115-280	Fast idle connector rod	
115-281	Dash pot connector rod	
115-298	Throttle connector rod	
115-303	—Choke connector rod	
115-309	—Throttle operating rod	
116-30	Pump intake check ball	
117-173	Choke valve connector link	
117-174	Pump connector link	
120-166	PRIMARY METERING JET (.0935")	(2)
120-184	Secondary metering jet (.059")	(2)
121-78	COIL HOUSING GASKET	
121-282	Gasket (Diaphragm to lower housing)	
121-284	AIR HORN GASKET	
121-287	PUMP JET HOUSING GASKET	
121-288	VENTURI CLUSTER GASKET	(4)
121-297	Diaphragm housing to flange gasket	
136-34	Choke piston lever retaining washer	
136-160	Secondary throttle shaft washer	
136-172	Primary throttle shaft washer	
136-174	Throttle lever adjusting screw washer	
150-190	Choke piston pin	
150A-10	Pin spring	(7)
150A-14	Pin spring	
150A-21	Pin spring	
156-118	—Spark fitting	
160-136	—Choke piston	
160-153	Step up piston	(2)
170-352	Diaphragm housing	
170-454S	Piston housing and plug assembly	
170AR-478S	—Thermostatic coil and housing assembly	
172-22	Throttle connector rod retainer	
181-240	Fast idle cam	
184-76	Diaphragm housing cap	
186-64	Choke baffle plate	
186-70	Fuel bowl baffle	(2)
203-97S	Secondary throttle shaft diaphragm assembly	

—Parts so marked are new and listed for the first time

NOTE: Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used



FORD "V-8"

MODELS
"FAIRLANE", "FAIRLANE 500", "CUSTOMLINE", "CUSTOMLINE 300", "STATION WAGON" AND "POLICE INTERCEPTOR" (Optional)

1957

(312 Cu. In. Engine)

AFB Four-Bore Down-Draft Climatic® Control **Carbureters Nos. 2441S-2441SA**

CARBURETER SPECIFICATIONS

For Ford 8 Cylinder Engine: 3.80 Inch Bore, 3.44 Inch Stroke

Dimensions: Flange, four bore—4 bolt type.
Throttle bore 1-7/16 inch I. D.
Primary venturi size, 11/32 inch I. D.
Main Venturi 1-1/16 inch I. D.

Vents: Inside (2) in air horn; Outside (4) in body.

Gasoline Intake: Size No. 38 (.1015 inch) drill hole in needle seat.

Low Speed Jet Tube: (In venturi assembly, primary side only).
Jet, size No. 68 (.031 inch) drill.
By-pass, size No. 53 (.0595 inch) drill.
Economizer, size (.049 inch) diameter.
Idle bleed, size No. 51 (.067 inch) drill.

Idle Port: (Upper) slot type. Primary, length .230 inch; width .030 inch. Secondary, none.

Idle Port Opening: Primary, .187 to .193 inch above top edge of valve with valve tightly closed. Secondary, none.

Lower Port: Primary (for idle adjustment screw), size early prod. .0635 inch, intermediate prod. .065 inch, late prod. .076 inch.

Set Idle Adjustment Screw: 1/2 to 1 1/2 turns open. For rich mixture turn screw out. Idle engine between 475 to 500 r.p.m (all trans.) in neutral.

Main Nozzle: Installed permanently. DO NOT REMOVE. Anti percolator bleed, primary, (tube in venturi assembly) size No 71 (.026 inch) drill. Secondary, (drilled hole in venturi assembly) size No. 60 (.040 inch) drill.

Step-Up Rod: (Vacumeter type) see parts list for size.

Metering Jet: Primary, size .0935 inch diameter (for step-up rod).
Secondary, size .0635 inch diameter (no step-up rod).

Accelerating Pump: Discharge jet (twin) primary side only size No. 68 (.031 inch) drill. Intake ball check seat (screw plug) size .115 to .120 inch diameter. Discharge needle seat size .070 inch diameter.

Choke: Carter Climatic® Control set 1 point rich. Butterfly type—offset choke valve, primary side only. Choke heat suction hole, restriction in body size No. 38 (.1015 inch), late prod. No. 44 (.086 inch) drill.

Vacuum Spark Port: Horizontal slot (round end) .055 x .130 inch. Top of port .040 to .050 inch above top edge of valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open:	Valve Setting (Hot)	Float Setting	Idle Adjustment Screw Setting
.032"-.036"	.014"-.016"	6° B. T. D. C. At Vibration Damper	Intake .019" Exhaust .019"	5/32 Inch (Use Gauge T109-154)	1/2 to 1 1/2 Turns Open 475 to 500 R.P.M. In Neutral

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CARBURETER
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CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3694

FLOAT ALIGNMENT: Side of floats parallel to edge of casting. Minimum clearance between lever and air horn lugs without binding. To adjust, bend float lever.

FLOAT LEVEL: 5/32 inch (Gauge T109-154) between top of floats at outer end and air horn gasket. To adjust, bend float lever.

FLOAT DROP: 23/32 inch between top of floats at outer end and air horn gasket. To adjust, bend stop tabs on floats brackets.

PUMP: 15/32 inch from the top of the bowl cover to the top of the plunger shaft with throttle connector rod in center hole (medium stroke) of pump arm.

COUNTERSHAFT LINKAGE: (1) .086 inch (Gauge T109-215) between choke lever and stop in piston housing with choke held closed. To adjust, take slack out of linkage by setting counter shaft lever.

(2) .010 inch (Gauge T109-200) between lug on outer countershaft lever and stop on inner countershaft lever. To adjust, bend lug on outer countershaft lever.

Optional adjustment (late prod.) with slight clearance between lug on fast idle cam and stop on flange casting, and inner countershaft lever contacting lug on outer countershaft lever align index mark on cam with adjusting screw. To adjust bend fast idle connector rod.

FAST IDLE THROTTLE VALVE CLEARANCE: .020 inch (Gauge T109-29) between lower edge of valve and bore with adjusting screw on high step of cam.
FAST IDLE ON CAR: 1800 to 2000 R.P.M. hot engine —*with fast idle screw on high step of cam.*

UNLOADER: .067 inch (Gauge T109-234) between upper edge of choke valve and inner wall of air horn. To adjust, bend unloader arm on throttle lever.

PRIMARY THROTTLE SHAFT DOG: (1) With primary throttle valves in wide open position there should be .015 inch (Gauge T109-44) clearance between edge of secondary valves and bore of carbureter adjacent to primary valves. To adjust, bend upper tang on primary throttle shaft dog. If clearance cannot be obtained, bend throttle operating rod slightly.

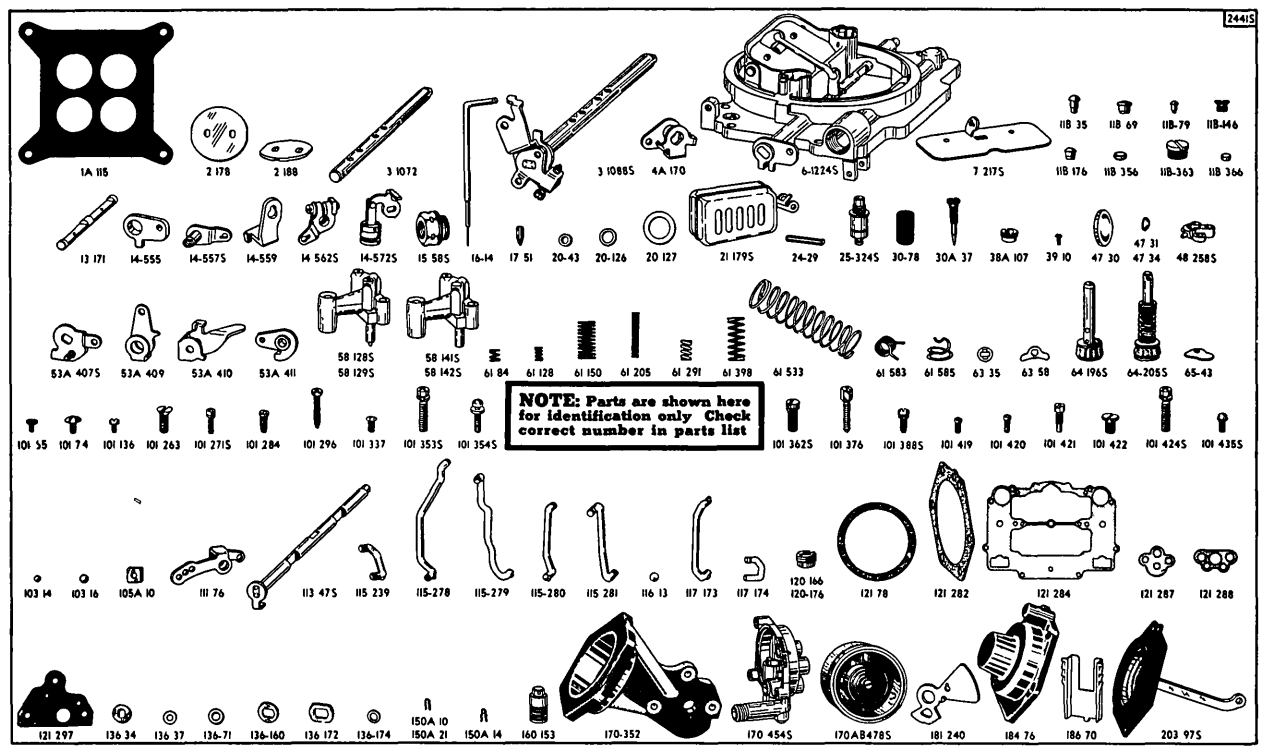
(2) With primary and secondary valves tightly closed there should be .067 inch (Gauge T109-234) clearance between primary throttle shaft flex spring and lower tang on primary throttle shaft dog. To adjust, bend lower tang.

DASH POT: 7/16 inch from top of the bowl cover to the top of the plunger shaft with primary throttle wide open. To adjust, bend stop lug on flat lever.

TOOLS REQUIRED FOR SERVICING CARBURETER:

T109-29	.020" Wire gauge	T109-234	.067" Wire gauge
T109-44	.015" Wire gauge	T109-22	Bending tool
T109-154	5/32" Float gauge	T109-213	Bending tool
T109-200	.010" Wire gauge	T109-214	Bending tool
T109-215	.086" Wire gauge		

CARBURETER
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Ford—1957—Carbureters Nos. 2441S-2441SA

WHEN SERVICING, USE GASKET ASSORTMENT No. 292; REPAIR PACKAGE No 1851

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1A-115	FLANGE GASKET	
2-178	Secondary throttle valve	(2)
2-188	Primary throttle valve	(2)
3-1072	Secondary throttle shaft	
3-1088S	Primary throttle shaft and lever assembly	
4A-170	Primary throttle shaft dog	
6-1224S	†Air horn assembly (2441S) (Sup by 6 1304S)	
6-1304S	Air horn assembly	
7-217S	Choke valve and lever assembly	
11B-35	Rivet plug	
11B-69	Fuel passage plug (Sup by 11B 306)	
11B-79	Rivet plug	(2)
11B-146	Level sight plug (Sup by 11B 372)	
11B-176	Idle port rivet plug	(2)
11B-306	Fuel passage plug	
11B-356	Secondary throttle shaft plug	
11B-363	PUMP INTAKE SCREW PLUG	
11B-366	Nozzle well rivet plug	(4)
11B-372	Level sight plug	(2)
13-171	Choke shaft	
14-555	Inside countershaft lever	
14-557S	Choke lever and shaft assembly (piston housing)	
14-559	Countershaft lever (to choke valve)	
14-562S	Countershaft lever screw and nut assembly	
14-572S	Choke piston lever link and pin assembly (Sup by 14 581S 150 190 160 166)	
14-581S	Choke piston link and lever assembly	
15-58S	Fuel inlet fitting assembly	

Part No.	PART NAME	
16-14	Step up rod 0725" x 063" (Sup by 16 28)	(2)
16-21	Step up rod 0725" x 066" 1 size lean	(2)
16-22	Step up rod 07375" x 068" 2 sizes lean	(2)
16-28	STEP UP ROD 071" x 0635"	(2)
16-53U	Step up rod and jet unit (consists of 2—16 22 and 2—120 186) (for altitude use)	
17-51	PUMP DISCHARGE CHECK NEEDLE	
20-43	PISTON HOUSING GASKET	
20-126	Needle seat gasket	(2)
20-127	FUEL INLET FITTING GASKET	
21-179S	Float and lever assembly	(2)
24-29	Float lever pin	(2)
25-324S	NEEDLE AND SEAT ASSEMBLY	(2)
30 78	FUEL INLET STRAINER	
30A-37	Idle adjustment screw	(2)
38A-107	PUMP INTAKE CHECK BALL SEAT	
39-10	Choke valve attaching screw	(2)
47-30	Piston housing welsh plug	
47-31	Venturi welsh plug (Sup by 47 33)	(4)
47-33	Venturi welsh plug	(4)
47-34	Spark port welsh plug	
48-258S	Pump jet housing	
53A-407S	Secondary throttle operating lever assembly	
53A-409	Primary throttle operating lever	
53A-410	Dash pot arm (inner)	
53A-411	Dash pot arm (outer)	
58-128S	†Primary venturi assembly (choke side) (2441S) (Sup by 58 170S and 6 1304S)	
58-129S	†Primary venturi assembly (pump side) (2441S) (Sup by 58 171S and 6 1304S)	
58-141S	Secondary venturi assembly (pump side)	

Part N .	PART NAME	
58-142S	Secondary venturi assembly (choke side)	
58-170S	Primary venturi assembly (choke side) (Sup by 58 179S)	
58-171S	Primary venturi assembly (pump side) (Sup by 58 180S)	
58-179S	Primary venturi assembly (choke side)	
58-180S	Primary venturi assembly (pump side)	
61-84	Idle adjustment screw spring	(2)
61-128	THROTTLE CONNECTOR ROD SPRING (Use with 115 278)	
61-150	DASH POT RETURN SPRING	
61 205	Vacuum piston spring (Sup by 61 259)	(2)
61-259	VACUUM PISTON SPRING	(2)
61-291	Throttle lever adjusting screw spring	
61-398	PUMP SPRING	
61-533	Diaphragm return spring	
61-583	Throttle flex spring	
61-585	STEP UP ROD RETAINING SPRING	(2)
63-35	THROTTLE CONNECTOR ROD RETAINER (Use with 115 278)	
63-58	Coil housing retainer	(3)
64-196S	DASH POT PLUNGER ROD AND CHECK ASSEMBLY	
64-205S	PUMP PLUNGER ROD AND SPRING ASSEMBLY	
65-43	Step up piston cover plate	(2)
101-65	Piston housing choke shaft lever attaching screw	
101-74	Throttle shaft lever attaching screw	(2)
101-136	Coil housing attaching screw	(3)
101-184S	Pump jet housing attaching screw and washer assembly	(2)
101-263	Diaphragm housing attaching screw	(3)
101-271S	Pump jet housing attaching screw and washer assembly (Sup by 101 184S)	(2)
101-284	Piston housing attaching screw (Sup by 101 436)	(3)
101-296	Fast idle adjustment screw	
101-337	Countershaft lever attaching screw	
101-353S	Air horn attaching screw and washer assembly	(2)
101-354S	Countershaft lever clamp screw and washer assembly	
101-362S	Air horn attaching screw and washer assembly	(8)
101-376	Throttle lever adjusting screw	
101-388S	Diaphragm housing cover attaching screw and washer assembly	(6)
101-419	Secondary throttle valve attaching screw	(4)
101-420	Primary throttle valve attaching screw	(4)
101-421	Pump arm attaching screw	
101-422	Fast idle cam attaching screw	
101-424S	Venturi attaching screw and washer assembly	(8)

Part No	PART NAME	
101-435S	Step up piston cover plate attaching screw and washer assembly	(2)
101 436	Piston housing attaching screw	(3)
103 14	Lead shot	
103-16	Lead shot	(2)
105A 10	Countershaft lever clamp screw nut	
111 76	Pump arm	
113-47S	Countershaft and lever assembly	
115-239	Throttle operating rod (Sup by 115 309)	
115 278	THROTTLE CONNECTOR ROD (Sup by 115 298 and 172 22)	
115-279	Choke connector rod	
115-280	Fast idle connector rod	
115-281	Dash pot connector rod	
115-298	Throttle connector rod	
115-309	Throttle operating rod	
116 13	PUMP INTAKE CHECK BALL	
117-173	Choke valve connector link	
117-174	PUMP CONNECTOR LINK	
120-166	PRIMARY METERING JET	(2)
120-176	SECONDARY METERING JET	(2)
121-78	COIL HOUSING GASKET	
121-282	GASKET (DIAPHRAGM TO LOWER HOUSING)	
121 284	AIR HORN GASKET	
121-287	PUMP JET HOUSING GASKET	
121-288	VENTURI CLUSTER GASKET	(4)
121-297	DIAPHRAGM HOUSING TO FLANGE GASKET	
136 34	Choke piston lever retaining washer	
136-37	Throttle operating rod washer (Use with 115 239)	(4)
136 71	Dash pot lever retaining washer	
136 160	Secondary throttle shaft washer	
136-172	Primary throttle shaft washer	
136 174	Throttle lever adjusting screw washer	
150-190	Choke piston pin (Use with 14 581S)	
150A-10	PIN SPRING	(7)
150A-14	PIN SPRING	
150A 21	Step up piston	(2)
156 118	Spark fitting	
160-153	PIN SPRING	
160-166	Choke piston (Use with 14 581S)	
170-352	Diaphragm housing	
170-454S	Piston housing and plug assembly	
170AB-478S	Thermostatic coil and housing assembly	
172-22	Throttle connector rod retainer (Use with 115 298)	
181-240	Fast idle cam	
184-76	Diaphragm housing cap	
186-70	Fuel bowl baffle	(2)
203-97S	Secondary throttle shaft diaphragm assembly	

† 244IS used on limited production

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

Form 3694
October, 1956

CARTER CARBURETOR

DIVISION OF ACF INDUSTRIES INCORPORATED
ST LOUIS, MO., U. S. A.

File Under Ford

CARTER MODEL AFB CARBURETER FOR FORD (SERVICE ADJUSTMENT PROCEDURE)

NOTE: The parts and specification pages referred to are catalog pages. These pages can be obtained from Carter-Carburetor, Catalog Department, St. Louis (7), Missouri. Specify the carbureter number found on the base of carbureter, when requesting specification pages.

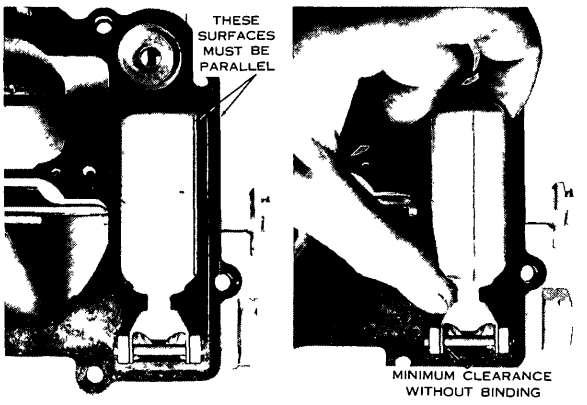


Figure 1

FLOAT ALIGNMENT ADJUSTMENT (Fig. 1)

1. Sight down the side of the float shell to determine if the side of the float is parallel to the outer edge of the air horn casting. TO ADJUST: Bend float lever by applying pressure to the end of the float shell with the fingers while supporting the float lever with the thumb.

   CAUTION: To avoid damaging the float, apply only enough pressure to bend float lever.

2. After aligning float, remove as much clearance as possible between arms of float lever and lugs on air horn by bending the float lever. Arms of float lever should be as parallel to the inner surfaces of lugs on air horn as possible.

   Floats must operate freely without excess clearance on its hinge pin.

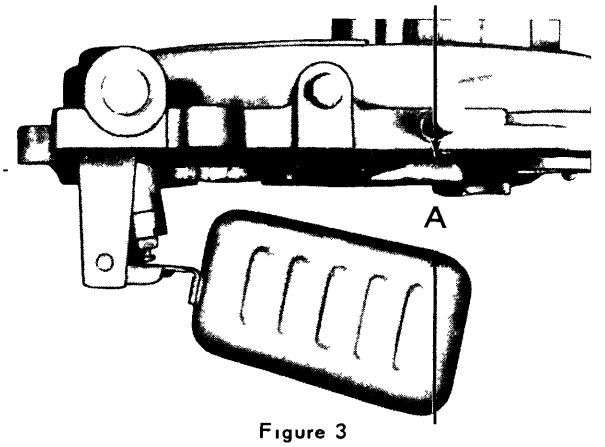


Figure 3

FLOAT DROP ADJUSTMENT (Fig. 3):

With bowl cover held in upright position and measuring from outer end of float, the distance (A) betw en top of floats and bowl cover gask t should be as listed on specification page. To adjust, bend stop tabs on float brackets.

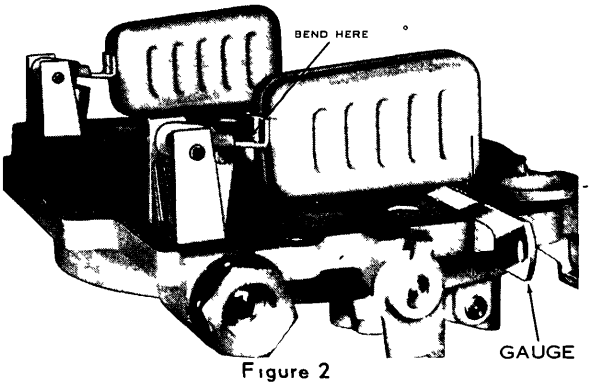


Figure 2

FLOAT LEVEL ADJUSTMENT (Fig. 2):

With air horn inverted, bowl cover gasket in place and needle seated, there should be the clearance as listed on carburetor specification page between outer end of float and air horn gasket. To adjust, bend float arm. Adjust both floats. Recheck float alignment.

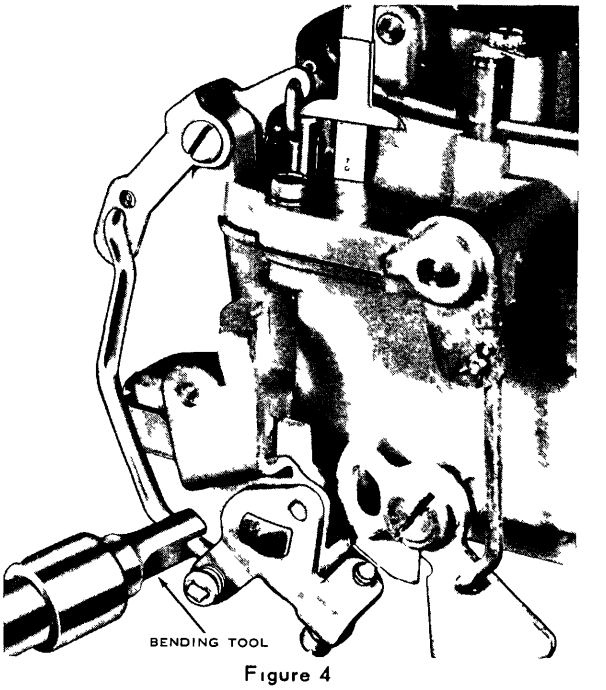


Figure 4

PUMP ADJUSTMENT (Fig. 4)

1. Back out idle speed screw until throttl valves seat in bores of carburetor. NOTE: Be sure choke is wide open so fast idle cam does not hold throttle valve open.
2. With throttle c nnector rod in center hole (medium stroke) of pump arm, the distance from the top of the bowl cover to the top f th plunger shaft should be as sp cified on carburetor specification page.
3. Adjust by bending throttle connector rod at lower angle (use tool T109-213).

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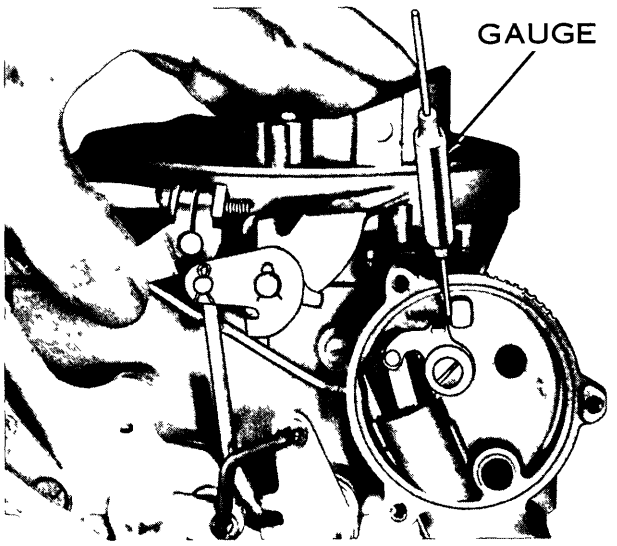


Figure 5A

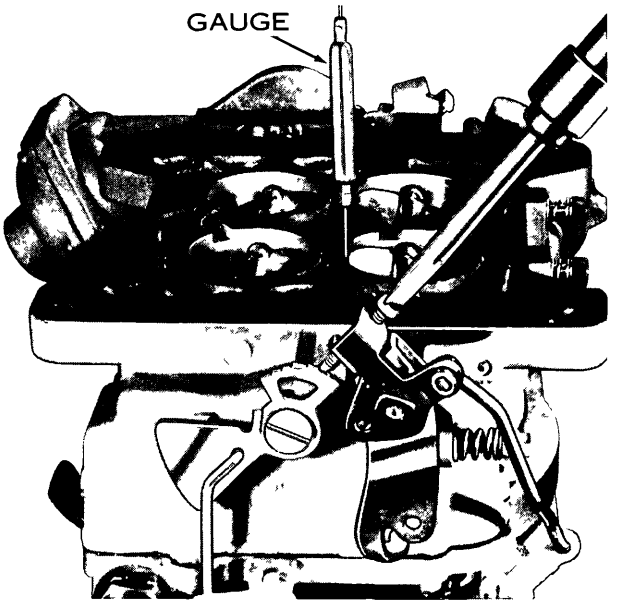


Figure 6

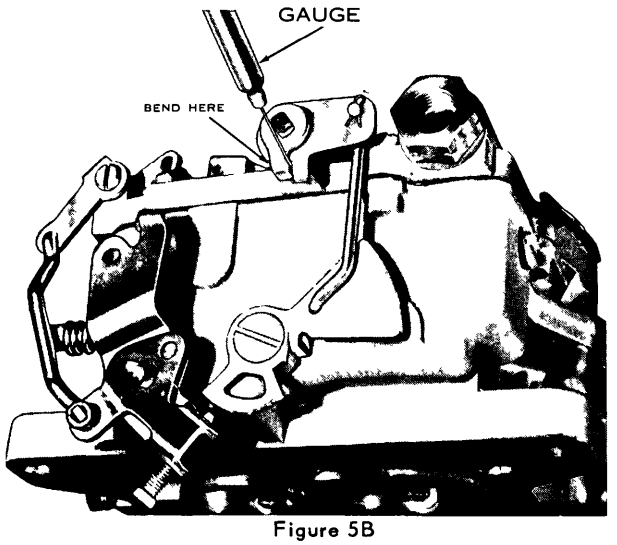


Figure 5B

COUNTERSHAFT LINKAGE ADJUSTMENT (Figs. 5A & 5B):

1. Loosen countershaft lever clamp screw. Take end play out of countershaft, and hold choke valve tightly closed. Take slack out of linkage by pressing countershaft lever towards closed position with gauge in place between choke lever and stop in piston housing. Hold in place and tighten clamp screw. (Fig. 5A)
2. A. Hold choke valve tighly closed.
   B. Hold fast idle cam against stop on casting.
   C. The clearance between lug on outer countershaft lever and stop on inner countershaft lever should be as listed on carburetor specification page. TO ADJUST: Bend lug on outer countershaft lever. (Use tool T109-214) (Fig. 5B)

FAST IDLE THROTTLE VALVE CLEARANCE ADJUSTMENT (Fig. 6):

With choke valve tightly closed, tighten fast idle adjusting screw (on high step of cam) until there is the clearance as listed on carburetor specification page between throttle valve and bore of carburetor, side opposite idle port.

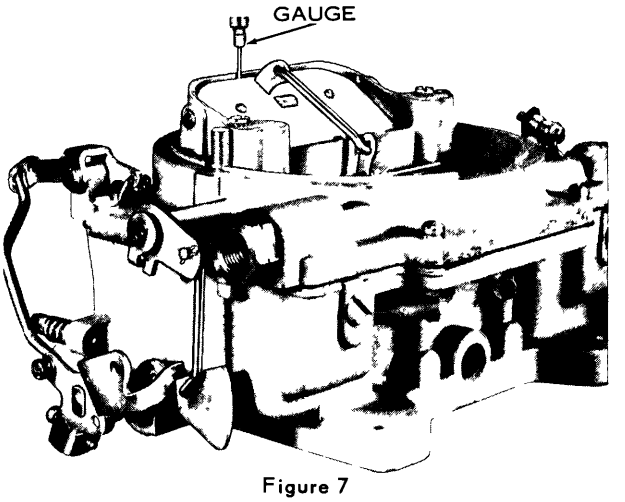


Figure 7

UNLOADER ADJUSTMENT (Fig. 7):

With throttle wide open the rear should be the clearance as listed on carburetor specification page between upper edge of choke valve and inner wall of air horn. To adjust, bend unloader lip on throttle shaft lever. (Use tool T109-214)

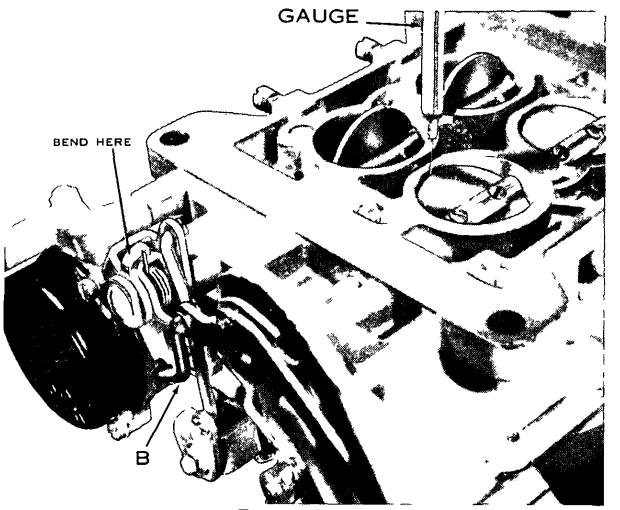


Figure 8A

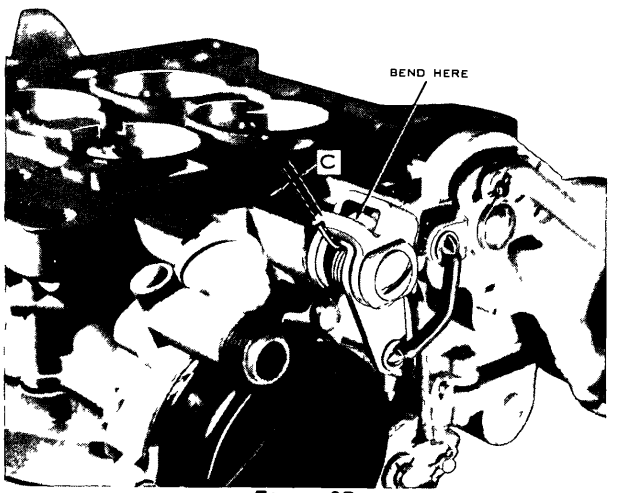


Figure 8B

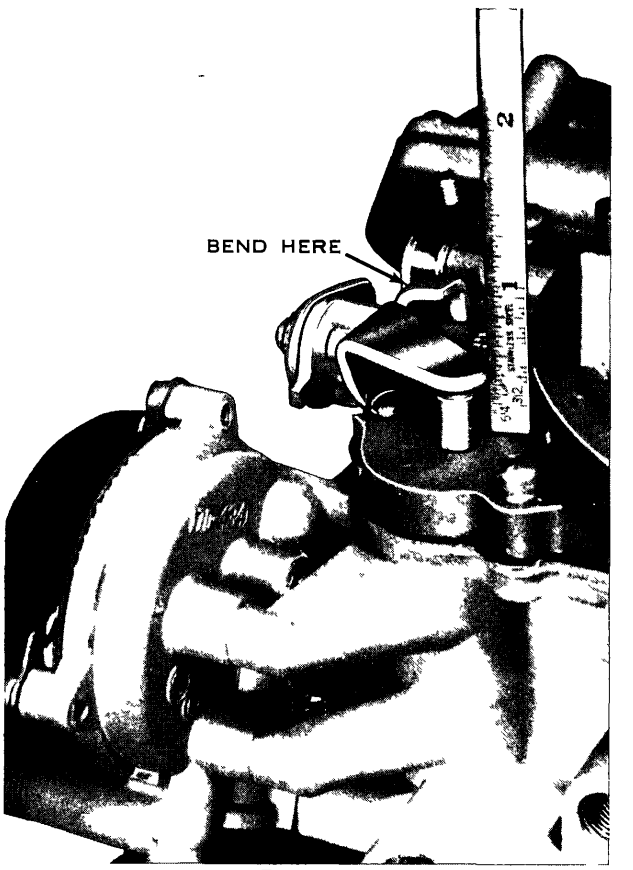


Figure 9

DASH POT ADJUSTMENT (Fig. 9):

With primary throttle valves in wide open position there should be the distance as listed on specification page between the top surface of the bowl cover and the top of the plunger shaft. To adjust, bend lug. (Use bending tool T109-22)

PRIMARY THROTTLE SHAFT DOG ADJUSTMENT (Figs. 8A & 8B):

1. With primary throttle valves in wide open position there should be the clearance as listed on specification page between edge of secondary valves and bore of carburetor adjacent to primary valves. To adjust, bend tang. (Use bending tool T109-213). If proper clearance between secondary valves and bore cannot be obtained, bend throttle operating rod (B) (Fig. 8A).

2. With primary and secondary throttle valves in tightly closed position there should be the clearance (C) between primary throttle shaft flex spring and tang as listed on specification page. To adjust, bend tang. (Use bending tool T109-213) (Fig. 8B)

NOTE: See last page for pertinent service information.

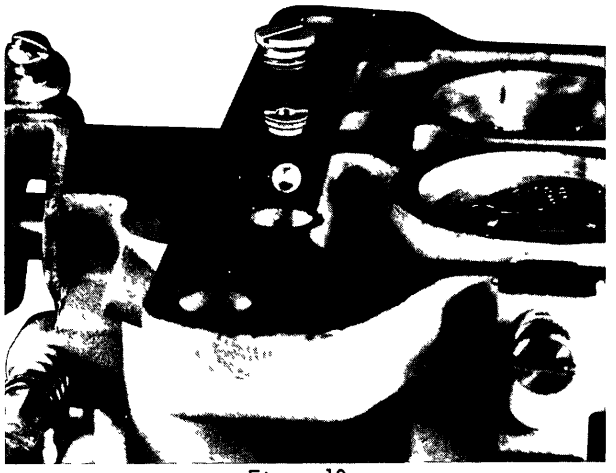


Figure 10

(Fig. 10)

Pump intake check ball, seat and screw plug are removed by inverting carbureter and removing from lower side of flange.

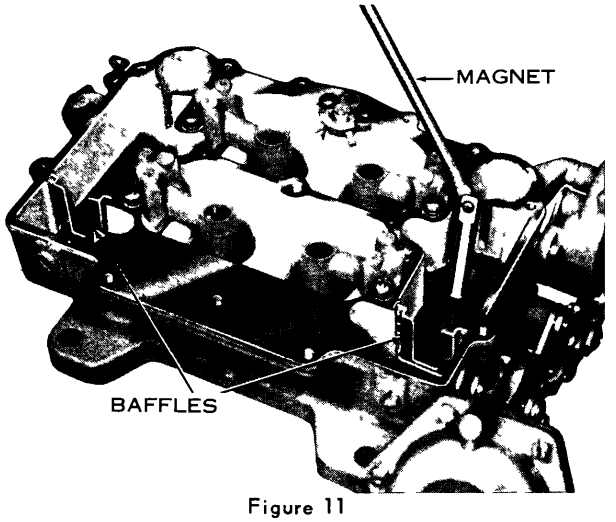


Figure 11

(Fig. 11)

Flooding, stumble on acceleration and other performance complaints are, in many instances, caused by the presence of dirt, water or other foreign matter in the carbureter. To aid in diagnosing the cause of the complaint, the carbureter should be carefully removed from the engine without draining the fuel from the bowl. The contents of the fuel bowl may then be examined for contamination as the carbureter is disassembled.

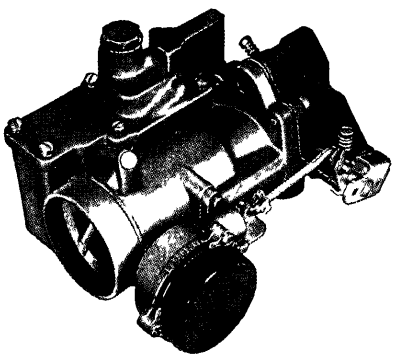
Check the fuel in the bowl for contamination by dirt, water, gum or other foreign matter. A magnet moved through the fuel in the bowl will pick up and identify any iron oxide dust that may have caused intake needle and seat leakage. (See Fig. 11.)

Inspect gasketed surfaces between body and air horn. Small nicks or burrs should be smoothed down to eliminate air or fuel leakage. Be especially particular when inspecting the top surface of the inner wall of the bowl around the vacuum piston passage. A poor seal at this location may contribute to a "cutting-out" on turns complaint.

Install fuel baffles as shown (Fig. 11) to prevent damage to floats.

Fill the carbureter bowl with clean fuel before installing on the manifold. This will help prevent dirt trapped in the fuel system from being dislodged by the free flow of fuel as the carbureter is primed. The operation of the floats and intake needle and seats may be checked under pressure if a fuel pump is used at the bench to fill the carbureter bowl. Operate the throttle several times and visually check the discharge from the pump jets.

Before installing the carbureter, hold choke valve open and turn the idle speed screw until it just contacts the throttle lever, then 1/2 of a turn more to open the throttle valves enough to keep the engine running until the idle mixture and final R.P.M. adjustment can be made.



GRAY MARINE

"FIREBALL 8" MODELS 135 and 170 1959

(Use 2618S with 120-158 to replace 2935S for service.)

YH Horizontal Climatic® Control **Carbureter No. 2935S**

CARBURETER SPECIFICATIONS

For Gray Marine 8 Cylinder 250 Cu. In. Engines: Vacuum at Idle 18 Inches

Dimensions: Flange size 1¼ inch 3 bolt
Primary venturi 11/32 inch I D
Secondary venturi, 11/16 inch I D
Main venturi 1-5/16 inch I D

Vents: Outside, none Inside balance vent tube to air horn ahead of choke valve

Gasoline Intake: Spring loaded needle Size No 48 (076 inch) drill hole in needle seat

Low Speed Jet Tube: Jet size No 69 (0292 inch) drill
By pass in body size No 56 (0465 inch) drill
Economizer, size (051 inch) diameter

Idle Port: Upper port slot type length 162 inch Width 030 inch

Idle Port Opening: Top of port 124 to 128 inch above top edge of valve with valve tightly closed Lower port size 0615 to 0655 inch diameter (for idle adjusting screw)

Set Idle Adjustment Screw: ¼ to 1¾ turns open For richer mixture, turn screw out Do not idle engine below 500 r p m (in neutral)

Main Nozzle: In primary venturi DO NOT REMOVE Anti-percolating jet (in tube) to nozzle size No 70 (028 inch) drill

Accelerating Pump: Diaphragm type vacuum and mechanically operated Discharge (pump) jet size No 70 (028 inch) drill Intake ball check (in diaphragm housing) seat size 115 120 inch diameter Discharge needle check (in body) seat size 092 inch diameter Vacuum passage restriction (in body) size No 46 (081 inch) drill Vacuum bleed (to throttle bore) size No 65 (035 inch) drill

Choke: Carter Climatic® Control set on index Butterfly type, offset choke valve Choke heat suction hole in piston housing size No 42 (0935 inch) drill

Vacuum Spark Port. Slot type Size 125 by 041 inch Bottom of horizontal port 026 to 036 inch above top edge of valve in closed position

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .016"	Ignition Timing Breaker Points to Open: 15° B. T. D. C. At Flywheel	Valve Setting (Hot) Intake .016" Exhaust .018"	Float Setting 9/16 Inch (Use gauge T109-84)	Idle Adjustment Screw Setting ¼ to 1¾ Turns Open Idle Engine at 500 R.P.M.

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: With gasket removed, bowl cover assembly inverted and float resting on pin in seated needle, the distance from the bowl cover to the top of float should be 9/16 inch (gauge T109-84) Do not depress float lip against spring loaded pin in needle, but let float rest on its own weight Adjust by bending float lever Float setting must be checked with bowl cover held at eye height in a level position

FLOAT DROP: With bowl cover assembly held in upright position, the distance between bottom of float (at free end) and bowl cover should be 2⅜" Adjust by bending stop tab on float arm

METERING ROD ADJUSTMENT: This adjustment is important and should be checked each time the carbureter is reassembled Insert gauge (T109-104) in place of metering rod, seating tapered end of gauge in metering rod jet Hold gauge vertical to insure seating in jet With throttle valve tightly closed, press down on diaphragm shaft until metering rod arm contacts lifter link at diaphragm stem With diaphragm shaft held in this position, metering rod pin must rest lightly on metering rod gauge To adjust, bend metering rod arm Use bending tool T109-22

ACCELERATING PUMP: If acceleration is not satisfactory, remove pump housing, intake rivet plug and ball check

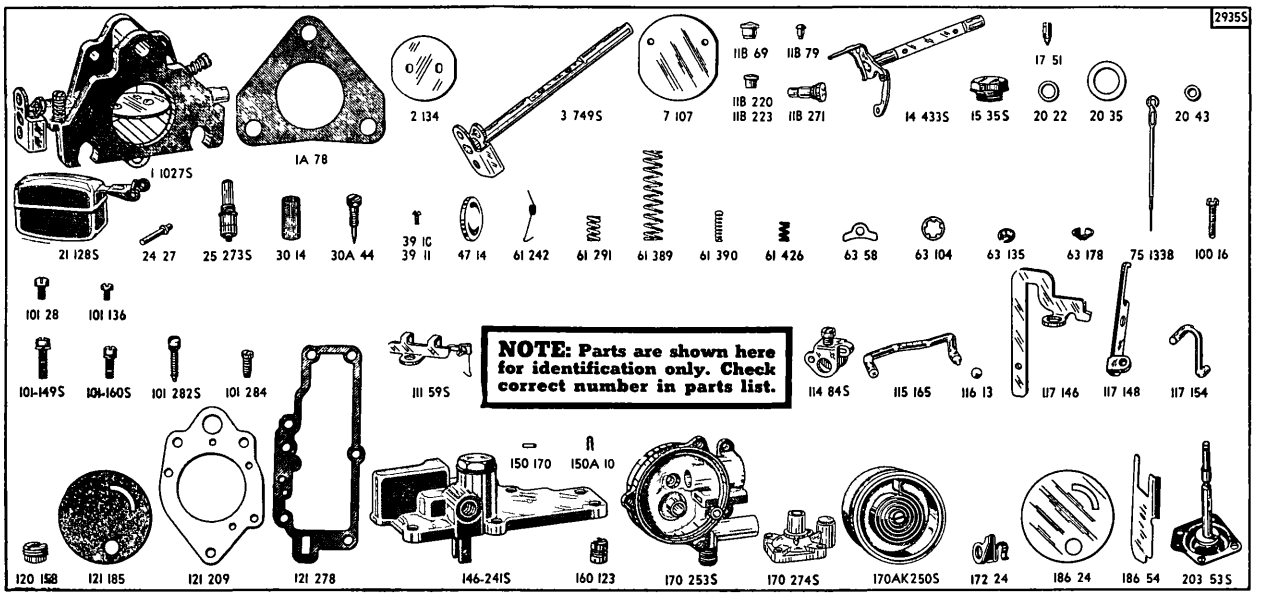
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Examine diaphragm for wear or damage Be sure intake check ball and discharge check needle seats are not clogged with lint or foreign matter Intake ball check and discharge needle must seat, as a leak at these points will result in poor acceleration Inspect and replace all worn parts, clean and blow out all passages with compressed air Pump jet is permanently installed do not remove

UNLOADER ADJUSTMENT. This adjustment must be made after fast idle adjustment Hold throttle valve in wide open position and close choke valve as far as possible without forcing There should be 5/64 inch clearance between lower edge of choke valve (vent tube side) and inner wall of air horn (gauge T109-85) Adjust by bending choke shaft unloader arm (Use bending tool T109 105)



Gray Marine—1959—Carbureter No. 2935S

WHEN SERVICING USE GASKET ASSORTMENT No 284A

Part No	PART NAME	
1-1027S	Body flange assembly	
1A-78	Flange gasket	
2-134	Throttle valve	
3-749S	Throttle shaft and lever assembly	
7-107	Choke valve	
11B-69	Rivet plug	
11B-79	Rivet plug	(3)
11B-220	Rivet plug	
11B-223	Rivet plug	
11B-271	Idle port rivet plug	
14-433S	Choke piston lever link and shaft assembly	
15-35S	Strainer nut assembly	
17-51	Pump check needle	
20-22	Needle seat gasket	
20-35	Bowl strainer gasket	
20-43	Piston housing gasket	
21-128S	Float and lever assembly	
24-27	Float lever pin	
25-273S	Needle pin spring and seat assembly	
30-14	Bowl strainer gauze	
30A-44	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	Throttle valve attaching screw	(2)
47-14	Welsh plug	
61-242	Metering rod spring	
61-291	Throttle lever adjusting screw spring	
61-389	Pump diaphragm spring	
61-390	Upper pump spring	
61-426	Idle adjustment screw spring	
63-58	Coil housing retainer	(3)
63-104	Throttle shaft retaining ring	
63-135	Upper pump spring retainer	

Part No	PART NAME	
63-178	Diaphragm spring retainer	
75-1338	Metering rod—standard .050" x .039"	
100-16	Throttle lever adjusting screw	
101-28	Throttle shaft arm attaching screw	
101-136	Coil housing attaching screw	(3)
101-149S	Body flange attaching screw and washer assembly	(3)
101-160S	Bowl cover attaching screw and washer assembly	(6)
101-282S	Diaphragm housing attaching screw and washer assembly	(4)
101-284	Piston housing attaching screw	(3)
111-59S	Metering rod arm assembly	
114-84S	Throttle shaft arm assembly	
115-165	Choke connector rod	
116-13	Pump intake check ball	
117-146	Pump lifter link	
117-148	Fast idle link	
117-154	Throttle shaft arm connector link	
120-158	Metering rod jet (.082")	
121-185	Coil housing gasket	
121-209	Body flange gasket	
121-278	Body gasket	
146-241S	Bowl cover and strainer assembly	
150-170	Choke piston pin	
150A-10	Pin spring	
160-123	Choke piston	
170-253S	Piston housing and plug assembly	
170-274S	Pump diaphragm housing assembly	
170AK-250S	Thermostatic coil and housing assembly	
172-24	Choke connector rod retainer	
186-24	Coil housing baffle plate	
186-54	Fuel bowl baffle plate	
203-53S	Pump diaphragm assembly	

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

GRAY MARINE

MODELS

4-52 (586S), 226 (638S)

SEA SCOUT 91 (640S)

620 (2035S)

BB1 UP-DRAFT CARBURETERS **Nos. 586S-638S-640S-2035S**

CARBURETER SPECIFICATIONS

For Four-Cylinder Engine Model 4-52 3-7/16 Inch Bore, 4 3/8 Inch Stroke
For Four-Cylinder Engine Model 91 2 7/8 Inch Bore, 3 1/2 Inch Stroke
For Six-Cylinder Engine Model 226· 3-5/16 Inch Bore, 4 3/8 Inch Stroke
For Four-Cylinder Engine Model 620 3-3/16 Inch Bore, 4 3/8 Inch Stroke

Dimensions Flange size 1 1/2 inch
Throttle bore 1 1/2 inch
Main venturi (586S) 15/16 inch I D (638S 2035S) 1 1/16 inch I D (640S) 13/16 inch I D
Air bleed through venturi to idle passage (586S 640S 2035S) 0669 inch (638S) 076 inch diameter

Float Setting Top of float (586S) 1/16 to 1/32 inch (638S 2035S) 7/64 inch (640S) 5/32 inch below top surface of lower body

Vent Balance vent tube (in air horn) size 7/32 inch diameter

Gasoline Intake Size No 44 (086 inch) drill in needle seat

Idle Jet Tube Jet size 0236 inch diameter

Idle Port Lower port size 062 to 064 inch diameter

Idle Port Opening Top of port located 005 to 009 inch below lower edge of valve with valve tightly closed

Upper Port (For Idle Adjustment Screw) Size 053 to 057 inch diameter

Set Idle Adjustment Screw (586S) 1/4 to 1 turn open
(638S) 1/8 to 5/8 turn open
(640S) 1/2 to 1 turn open
(2035S) 1/4 to 3/4 turn open
For richer mixture turn screw out Do not idle engine below 400 r p m

Main Metering Screw Adjustable (586S) 1 to 2 turns open
(640S) 1/2 to 1 1/2 turns open
(638S 2035S) 1 1/4 to 2 1/4 turns open

Nozzle Size No 33 (113 inch) drill

Accelerating Jets 2— 038 inch drill—1/16 inch from shoulder
2— 038 inch drill—3/8 inch from shoulder
2— 038 inch drill—23/32 inch from shoulder
(586S 640S 2035S) 2— 038 inch drill—1 1/16 inch from shoulder
(638S) 2— 063 inch drill—1 1/16 inch from shoulder

Air Bleed to Nozzle Vent tube size (586S 2035S) 048 inch (638S 640S) 052 inch diameter

Step Up Jet Power orifice size (586S) 0315 inch (638S) 045 inch (640S) 0275 inch (2035S) 0465 inch diameter

Accelerating Pump Pump intake ball check size 1/8 inch Pump discharge retainer in pump valve cage assembly size 0635 inch diameter
Inner hole—short stroke
Outer hole—long stroke

Choke Manual butterfly type with pressure relief poppet valve

Vacuum Spark Port Size 029 inch diameter

MOTOR TUNE-UP

Spark Plug Gap	Breaker Point Setting	Ignition Timing	Valve Setting	
586S-638S-2035S 025"	020 Inch	T D C	Intake (586S 638S-2035S)	014"
640S 035"			(640S)	012"
			Exhaust (586S-2035S)	014"
			(638S)	017"
			(640S)	012"

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Gray Marine—Carbureters Nos. 586S-638S-640S-2035S

WHEN SERVICING, USE GASKET ASSORTMENT No 170B (586S-640S-2035S), REPAIR PACKAGE No 1350 (586S)

PART NAMES IN CAPITAL LETTERS, LISTED BELOW INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1A-41	FLANGE GASKET (586S 640S 2035S)	
1A-46	Flange gasket (638S)	
2-117	Throttle valve	
3-514	Throttle shaft (586S 638S)	
3-586	Throttle shaft (640S 2035S)	
4-484S	Throttle lever assembly	
7-136S	Choke valve assembly	
11B-12	RIVET PLUG	
11B-19	Plug	
11B-26	Rivet plug	(2)
11B-31	IDLE HOLE PLUG	
11B-189	Step up piston screw plug	
12-283	Nozzle (586S 640S 2035S)	
12-296	Nozzle (638S)	
13 29	Choke shaft stub	
13-89	Choke shaft	
14-332S	Choke lever assembly	
20-30	NOZZLE GASKET	
20-31	Needle seat gasket	
20-32	METERING SCREW GASKET	
20-82	VENTURI GASKET—UPPER	
20-83	VENTURI GASKET—LOWER	
21-49S	Float and lever assembly	
24-18S	FLOAT LEVER PIN AND PLUG ASSEMBLY	
25-48S	NEEDLE SEAT ASSEMBLY	
30A-35	Idle adjustment screw	
32-12	Pump rod gasket	
49-87	STEP UP PUSH ROD	
51-20	Pump collar	
52-16	Pump sleeve	
53A-71S	Pump arm assembly (638S)	
53A-272S	Pump arm assembly (586S) (Sup by 53A 71S)	
53A-285S	Pump arm assembly (640S 2035S)	
58-76	Venturi (638S 2035S)	
58-77	Venturi (586S)	
58-78	Venturi (640S)	
61-57	Idle adjustment screw spring	
61-58	Throttle lever adjusting screw spring	
61-59	PUMP SPRING (586S 2035S)	
61-60	STEP UP PISTON SPRING	
61-61	Step up spring	
61-275	Choke lever spring	
61-145	Pump spring (638S 640S)	
62-143S	Tube clamp assembly	
63-54	Packing retainer	
65-19	Plunger shaft seal cover plate	(2)
86-10	Lock washer	
86-15	Flarge stud lock washer	(2)
100-15	Screw	
101-10	Wire clamp screw	
101-30	CHOKE VALVE ATTACHING SCREW	(2)
101-32	PUMP LINK SCREW	
101-34	Throttle lever clamp screw	
101-39	THROTTLE VALVE SCREW	(2)
101-58	Throttle lever adjusting screw (586S 638S)	
101-84	Throttle lever adjusting screw (640S 2035S)	
101-142S	CHOKE BRACKET AND PUMP RETAINER ATTACHING SCREW AND WASHER ASSEMBLY	(3)
101-151S	Body attaching screw and washer assembly	(3)
105-11	Tube clamp screw	
105-12	Choke lever clamp screw	
105A-8	Tube clamp nut	(2)
105A-13	Flange stud nut	(2)
116-13	Step up check ball	
117-96	Pump link	
121-13	BODY GASKET	
123-16	IDLE ORIFICE TUBE	
123-45	Idle passage tube	
136-21	FLOAT PIN PLUG WASHER	
145-43	VENT TUBE (538S 2035S)	
145-71	Vent tube (638S 640S)	
149-13S	CHECK VALVE CAGE ASSEMBLY	
149-21S	STEP UP VALVE CAGE ASSEMBLY (586S)	
149-30S	Step up valve cage assembly (640S)	
149-35S	Step up valve cage assembly (638S)	
149-65S	PUMP VALVE CAGE ASSEMBLY (586S 640S 2035S)	
149-86S	Pump valve cage assembly (638S)	
149-100S	Step up valve cage assembly (2035S)	
150-26	PUMP COLLAR PIN	
159-43S	Adjustable main metering screw and needle assembly (640S)	
159-106S	Adjustable main metering screw and needle assembly (586S 638S 2035S)	
160-10	Pump piston	
160-11	STEP UP PISTON	
161-11S	Pump rod plate and rod assembly	
162-13	Power orifice (586S)	
162-16	Power orifice (640S)	
162-20	Power orifice (638S)	
162-25	Power orifice (2035S)	
163-10	Adjustable needle packing	
163-12	PUMP LINK FELT PACKING	

NOTE· Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

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HUDSON "V-8" "HORNET SPECIAL" 1956

NASH "V-8" "AMBASSADOR SPECIAL" 1956

RAMBLER "V-8" 1957

WGD Dual Down-Draft Climatic® Control **Carbureters Nos. 2352S-2352SA**

CARBURETER SPECIFICATIONS

For Hudson-Nash 8 Cylinder Engine: 3½ Inch Bore, 3 Inch Stroke

Dimensions. Flange size, 1¼ inch dual 4 bolt type
Primary venturi 11/32 inch I D
Secondary venturi, 21/32 inch I D
Main venturi, 1-3/16 inch I D

Vent. Outside none Inside balance vent tube above choke valve

Gasoline Intake. Size No 35 (110 inch) drill in needle seat

Low Speed Jet Tube: Jet size No 66 (033 inch) drill By pass in bowl cover size No 54 (055 inch) drill Economizer, in bowl cover size No 56 (0465 inch) drill Idle bleed in bowl cover size No 54 (055 inch) drill

Idle Port: Upper slot type, length 160 inch width 030 inch

Idle Port Opening 109 to 115 inch above top edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw): Size 065 to 069 inch diameter

Set Idle Adjustment Screw: 1 to 2 turns open For richer mixture turn screw out Do not idle engine below 450 to 500 R P M. (Automatic Trans—In Neutral), 500 to 550 R P M (Standard and Overdrive Trans) For cars with air conditioning set idle at 500 R P M with compressor in operation

Nozzle: Nozzle is installed permanently DO NOT REMOVE Anti percolating well bleed, size No 71 (026 inch) drill

Metering Rod (Vacumeter Type): See parts list for size

Metering Rod Jet· Size 086 inch diameter

Accelerating Pump Discharge jet (twin) size No 72 (025 inch) drill Intake ball check, in plunger shaft Discharge (needle seat) size No 50 (070 inch) drill

Choke Carter Climatic® Control—set on index, butterfly type offset valve Choke heat suction hole in piston housing size No 42 (0935 inch) drill

Vacuum Spark Port Horizontal slot (round end) 040 x 130 inch Bottom of port to be 018 to 024 inch above upper edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting 016"	Ignition Timing Breaker Points to Open 5° B. T. D. C. At Vibration Damper	Float Setting 7/32 Inch (Use Gauge T109-106)	Idle Adjustment Screw Setting 1 to 2 Auto. Trans. 450 to 500 R.P.M. Std. & O'Drive 500 to 550 R.P.M.

NOTE· These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT.

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: With bowl cover gasket removed, bowl cover inverted and needle seated, there should be 7/32 inch (gauge T109 106) between top of float and bowl cover Adjust by bending float arm

PUMP ADJUSTMENT: Back out throttle lever set screw until throttle valves seat in bores of carbureter Hold straight edge across top of dust cover at pump arm The flat on top of pump arm should be parallel to straight edge Adjust by bending throttle connector rod at upper angle Use bending tool T109 213

METERING ROD ADJUSTMENT: The metering rods must be adjusted after the pump adjustment No metering rod gauges are necessary, procedure is as follows· With the throttle lever set screw backed out and throttle valves seated in bores of carbureter, press down on vacumeter link until metering rods bottom in casting With rods held in this position, revolve metering rod arm until lip contacts vacumeter link Hold in place and carefully tighten metering rod arm set screw

FAST IDLE ADJUSTMENT: With the thermostatic coil housing gasket and baffle plate removed, crack throttle valve and hold choke valve closed Then close throttle There should now be 023 inch clearance (gauge T109-189) between throttle valve and bore of carbureter (side opposite idle port). Adjust by bending the choke connector rod at lower angle

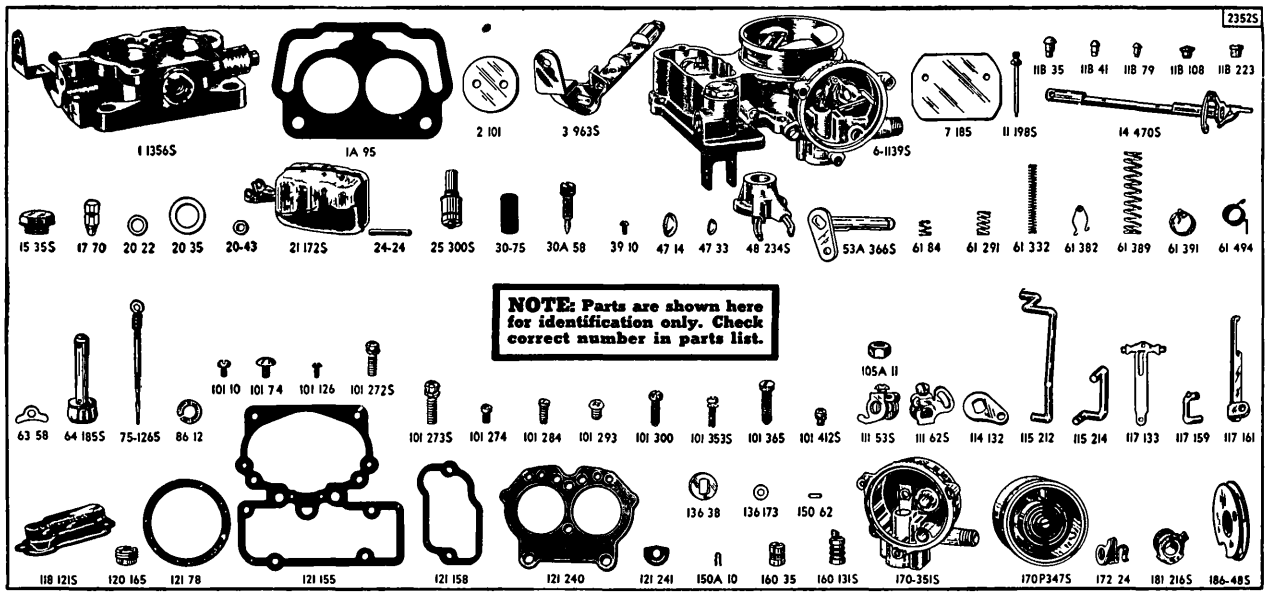
FAST IDLE ON CAR· 1700 to 1800 (Hot)

UNLOADER ADJUSTMENT: This adjustment must be made after fast idle adjustment Hold throttle valve in wide open position and close choke valve as far as possible without forcing There should be 3/16 inch (gauge T109-28) clearance between upper edge of choke valve and inner wall of air horn Adjust by bending choke shaft unloader arm (Use bending tool T109-213.)

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Hudson-Nash "V-8"—1956—Carbureters Nos. 2352S-2352SA

WHEN SERVICING, USE GASKET ASSORTMENT No. 289; REPAIR PACKAGE No. 1843 (2352S)
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1356S	Body flange assembly	
1A-95	FLANGE GASKET	
2-101	Throttle valve	(2)
3-963S	Throttle shaft and lever assembly	
6-1139S	Air horn assembly	
7-185	Choke valve	
11-198S	LOW SPEED JET ASSEMBLY	(2)
11B-35	Rivet plug	(3)
11B-41	Rivet plug	
11B-79	Rivet plug	(3)
11B-108	Idle port rivet plug	(2)
11B-223	Nozzle passage rivet plug	(2)
14-470S	Choke piston lever link and shaft assembly	
15-35S	Strainer nut assembly	
17-70	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	
20-35	BOWL STRAINER GASKET	
20-43	PISTON HOUSING GASKET	
21-172S	Float and lever assembly	
24-24	Float lever pin	
25-300S	NEEDLE AND SEAT ASSEMBLY	
30-75	BOWL COVER STRAINER	
30A-58	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
47-14	Piston housing welsh plug	
47-33	Spark port welsh plug	
48-234S	Pump jet and housing assembly	
53A-366S	Pump operating lever and countershaft assembly	
61-84	Idle adjustment screw spring	(2)
61-291	Throttle adjusting screw spring	
61-332	VACUUM PISTON SPRING	
61-382	METERING ROD SPRING	
61-389	UPPER PUMP SPRING (2352S) (Sup by 61-413)	
61-391	Fast idle cam spring	
61-413	Upper pump spring	
61-494	Countershaft spring	
63-58	Coil housing retainer	(3)
64-181S	Pump plunger, rod and retainer assembly	
64-185S	PLUNGER ROD AND CHECK ASSEMBLY (2352S) (Sup by 64-181S)	
75-1265	Metering rod—Std 0605" x 056" x 040" (Sup by 75-1285)	(2)
75-1285	METERING ROD—STD 0625' x 059' x 047'	(2)
75-1310	Metering rod—1 size lean 0645" x 0625" x 050"	(2)
75-1311	Metering rod—2 sizes lean 066" x 064" x 053"	(2)
86-12	Flange stud lock washer	(4)
101-10	Pump arm clamp screw	
101-74	Throttle shaft arm attaching screw	
101-126	Throttle valve attaching screw	(4)
101-272S	Air horn attaching screw and washer assembly	(8)
101-273S	Body flange attaching screw and washer assembly	(2)
101-274	Coil housing attaching screw	(3)
101-284	Piston housing attaching screw	(3)
101-293	Metering rod arm clamp screw	
101-300	Pump jet housing attaching screw	
101-353S	Body flange attaching screw and washer assembly	(2)
101-365	Throttle lever adjusting screw	
101-412S	Dust cover attaching screw and washer assembly	(2)
105A-11	Flange stud nut	(4)
111-53S	Metering rod arm and screw assembly	
111-62S	Pump arm and screw assembly	
114-132	Throttle shaft arm	
115-212	THROTTLE CONNECTOR ROD	
115-214	Choke connector rod	
117-133	Vacumeter piston link	
117-159	Pump connector link	
117-161	Fast idle link	
118-121S	Dust cover assembly (with vapor vent valve)	
120-165	METERING ROD JET	(2)
121-78	COIL HOUSING GASKET	
121-155	AIR HORN GASKET	
121-158	DUST COVER GASKET	
121-240	BODY FLANGE GASKET	
121-241	PUMP JET HOUSING GASKET	
136-38	Throttle shaft washer	
136-173	Pump connector link washer	(2)
150-62	Choke piston pin	
150A-10	Pin spring	(2)
160-35	Choke piston	
160-131S	Vacuum piston and pin assembly	
170-351S	Piston housing and plug assembly	
170P-347S	Thermostatic coil and housing assembly	
172-24	Choke and throttle connector rod retainer	(3)
181-216S	Fast idle cam assembly	
186-48S	Choke baffle plate assembly	

NOTE. Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

CARTER CARBURETOR

DIVISION OF ACF INDUSTRIES
INCORPORATED
ST. LOUIS 7, MO., U.S.A.

GENERAL BULLETIN

ALL CARBURETER ACCOUNTS

BULLETIN NO. 11 NASH-HUDSON

DATE September 28, 1956

SUBJECT: 1956 RAMBLER, CARTER AS-2349S
CARBURETER - REPAIR KIT 1816
NEEDLE AND SEAT CHANGE

Late production AS-2349S carbureters use the 25-313S needle and seat assembly. This change was made to provide more consistent float and intake needle operation, and to eliminate possibility of interference between the float lever and the needle seat, or the carbureter casting.

The parts and service specification page for the AS-2349S originally specified the 25-48S needle and seat assembly. Repair parts package 1816 for servicing this unit contains the 25-48S needle and seat.

It is important that the 25-313S needle and seat be used when servicing this model carbureter.

All repair parts packages No. 1816 in field stocks should be changed over to the 25-313S needle and seat. When this change is made, the repair parts package should be marked 1816A. The price does not change.

Please order an adequate quantity of 25-313S needle and seat and 1816A repair parts package labels for this change-over. 25-48S is a fast moving item. Those removed should be placed in loose parts stock.

V. F. Thompson
Service Manager

VFT/bk
cc - Personnel and extra copies - Canada and U.S.A.

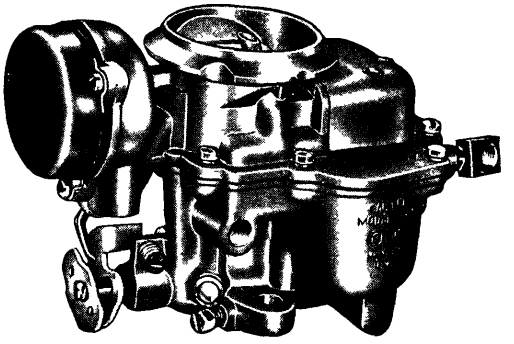
IMPORTANT: THIS BULLETIN CONTAINS INFORMATION OF VALUE TO YOU AND WAS PREPARED AT CONSIDERABLE EXPENSE TO BE OF SERVICE TO YOU FAILURE TO USE THIS INFORMATION MAY COST YOU MONEY. WE SUGGEST THAT YOU ISSUE COPIES OF IT TO THOSE OF YOUR STAFF INTERESTED, SO THAT THEY CAN BE FILED IN REGULAR CARTER SALES AND SERVICE MANUAL.

FORM C-2914E

CARBURETER
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MODEL
"5610"



RAMBLER SIX
1956
HUDSON-NASH

AS Down-Draft Climatic® Control **Carbureter No. 2349S**

CARBURETER SPECIFICATIONS

For Hudson-Nash 6 Cylinder Engine: 3⅛ Inch Bore, 4¼ Inch Stroke

Dimensions: Flange size, 1½ inch S A E
Throttle bore, 1-9/16 inch I D
Primary venturi, ⅜ inch I D
Main venturi, 1¼ inch I D

Vents: Outside, none Inside balance vent to air horn above valve

Gasoline Intake: Horizontal needle Size No 44 (086 inch) drill in needle seat

Low Speed Jet Tube: Jet size No 70 (028 inch) drill By-pass (2), in idle tube plug, size No 58 (042 inch) drill
Economizer size 053 inch diameter Idle bleed in body, size No 66 (033 inch) drill

Idle Port: Upper port, slot type length 065 inch width 030 inch

Idle Port Opening: Top of port 058 to 062 inch above top edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw): Size No 52 (0635 inch) drill Auxiliary idle feed No 52 (0635 inch) drill

Set Idle Adjustment Screw: ¼ to 1½ turns open For richer mixture, turn screw out Do not idle engine below 475 R P M (Automatic Trans), 550 R P M (Standard and Overdrive Trans).

Main Nozzle: Nozzle is installed permanently DO NOT REMOVE Anti-percolator jet tube off center in plug size No 60 (040 inch) drill

Power Jet: Size 076 inch diameter

Power Jet Rod: Size Economy step 074 inch diameter, power step, 059 inch diameter

Metering Rod: 062 inch diameter

Metering Rod Jet: 098 inch diameter

Accelerating Pump: Pressure type mechanically operated Pump jet size No 70 (028 inch) drill Intake, disk check seat (in plunger assembly) size No 40 (098 inch) drill Discharge ball check seat (in body) size No 42 (0935 inch) drill

Choke: Carter Climatic® Control, set one point lean Offset butterfly type Choke heat suction hole in air horn size No 36 (1065 inch) drill.

Vacuum Spark Port. Round type, 052 inch diameter Top of port to be 033 to 043 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .030"	Breaker Point Setting .020"	Ignition Timing Breaker Points to Open. T. D. C. At Vibration Damper	Valve Setting (Hot) Intake .012" Exhaust .016"	Float Setting ¼ Inch (Use Gauge T109-282)	Idle Adjustment Screw Setting ¼ to 1½ Auto. Trans. 475 R.P.M. Std. & O'Drive 550 R.P.M.

CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3662

Float ¼" (Gauge T109-282) from top of each float (at free end) to top of casting
To adjust Bend float lip
After float adjustment has been made there should be 010" to 015" clearance between overlapping tangs on float levers
To adjust bend long tang on left hand float

Pump Pump arm on lifter link should parallel top of casting
To adjust Bend pump arm

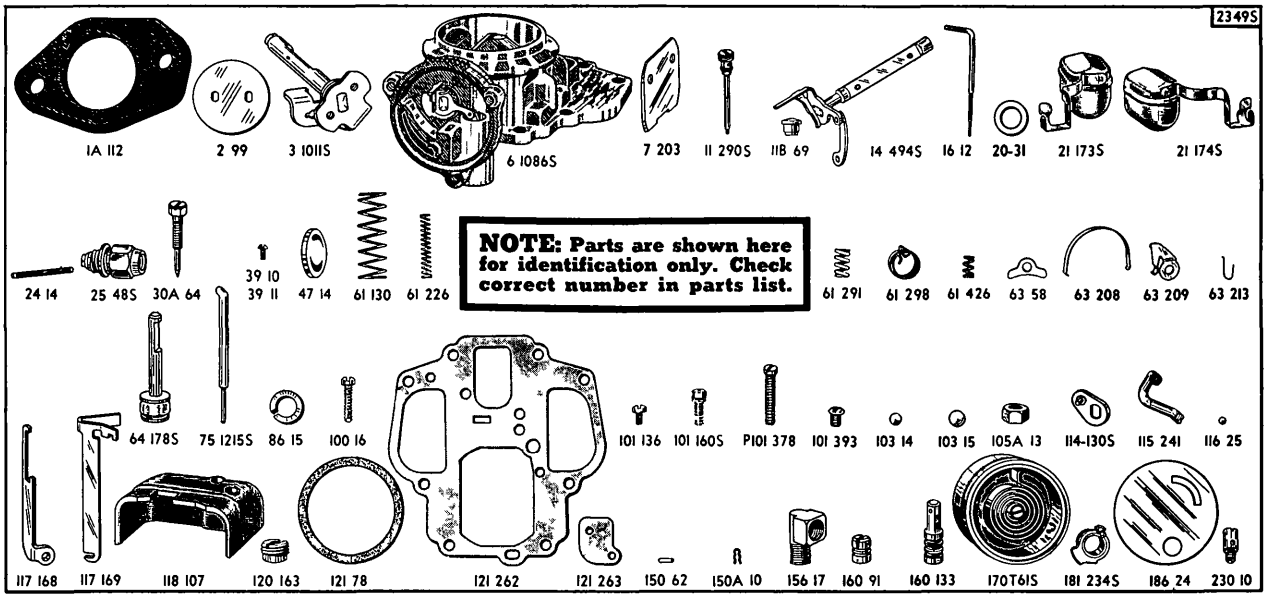
Metering Rod: Rod should just bottom at wide open throttle
To adjust Bend metering rod arm.

Fast Idle: 043" (Gauge T109-158 may be used) between lower edge of valve and bore with fast idle link on high step of cam
To adjust Bend choke connector rod

Unloader: 3/16" (Gauge T109 28) between top edge of valve and inner wall of air horn
To adjust Bend arm on choke trip lever

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Hudson-Nash 6—1956—Carbureter No. 2349S

WHEN SERVICING USE GASKET ASSORTMENT No 276, REPAIR PACKAGE No. 1816

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

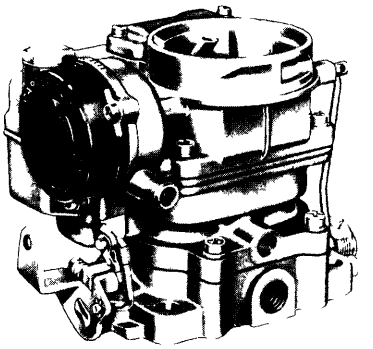
Part No	PART NAME	
1A-112	FLANGE GASKET	
2-99	Throttle valve	
3-1011S	Throttle shaft and lever assembly	
6-1086S	Air horn assembly	
7-203	Choke valve	
11-290S	LOW SPEED JET ASSEMBLY	
11B-69	Spark port rivet plug	
14-494S	Choke piston lever link and shaft assembly	
16-12	POWER JET ROD	
20-31	Needle seat gasket	
21-173S	Float and lever assembly (Right Hand)	
21-174S	Float and lever assembly (Left Hand)	
21-175S	Float lever and pin assembly (Sup by 21 173S and 21 174S)	
24-14	Float lever pin	
25 48S	Needle and seat assembly (Sup by 25 313S)	
25-313S	—NEEDLE AND SEAT ASSEMBLY	
30A-64	Idle adjustment screw	
39-10	CHOKE VALVE ATTACHING SCREW	(2)
39-11	Throttle valve attaching screw	(2)
47-14	Welsh plug	
61-130	Pump spring	
61-226	STEP UP PISTON SPRING	
61-291	Throttle lever adjusting screw spring	
61-298	Fast idle cam spring	
61-426	Idle adjustment screw spring	
63-58	Coil housing retainer	(3)
63-208	FLOAT LEVER PIN RETAINER	
63 209	METERING ROD RETAINER	
63-213	DISCHARGE BALL CHECK RETAINER	
64 178S	PUMP PLUNGER ROD AND CHECK ASSEMBLY	
75-1215S	METERING ROD ASSEMBLY (Sup by 75 1319)	
75-1308U	—Metering rod and power jet rod unit—1 size lean (Consists of 1—75 1304S and 1—16 13)	
75 1309U	—Metering rod and power jet rod unit—2 sizes lean (Consists of 1—75 1305S and 1—16 13)	

Part No.	PART NAME	
75-1319	—Metering rod	
86-15	Flange stud lock washer	(2)
100-16	Throttle lever adjusting screw (Sup by 101 365)	
101-136	Coil housing attaching screw	(3)
101-160S	Air horn attaching screw and washer assembly	(9)
101-365	Throttle lever adjusting screw	
P101-378	Dust cover screw	(2)
101 393	Throttle shaft screw	
103-14	Lead shot	(2)
103-15	Lead shot	
105A-13	Flange stud nut	(2)
114-130S	Throttle shaft arm and pin assembly	
115-241	Choke connector rod	
116-25	PUMP DISCHARGE CHECK BALL	
117-168	Fast idle link	
117 169	Pump lifter link	
118-107	Dust cover	
120-163	METERING ROD JET	
121-78	COIL HOUSING GASKET	
121 262	BODY GASKET	
121-263	DUST COVER GASKET	
150-62	Choke piston pin	
150A-10	PIN SPRING	
156-17	Elbow	
160-91	Choke piston	
160 133	Step up piston	
170T-61S	Thermostatic coil and housing assembly	
181-234S	Fast idle cam assembly	
186-24	Choke baffle plate	
230-10	POWER JET	

—Parts so marked are new and listed for the first time

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown nly one is used

MODELS
"35580"
&
"35680"



HUDSON "V-8" HORNET 1955-1956

WGD Dual Down-Draft Climatic® Control **Carbureters Nos. 2231S-2231SA**

CARBURETER SPECIFICATIONS

For Hudson 8 Cylinder Engine: 3-13/16 Inch Bore, 3½ Inch Stroke

Dimensions Flange size 1¼ inch dual, 4 bolt type
Primary venturi 11/32 inch I D
Secondary venturi 21/32 inch I D
Main venturi 1 3/16 inch I D

Float Level: See adjustments

Vent: Outside none Inside balance vent tube above choke valve

Gasoline Intake: Size No 42 (0935 inch) drill in needle seat

Low Speed Jet Tube: Jet size No 69 (0292 inch) drill
By pass in bowl cover size No 56 (0465 inch) drill
Economizer in bowl cover size No 55 (052 inch) drill
Idle bleed in bowl cover, size No 53 (0595 inch) drill

Idle Port: Upper slot type length 160 inch, width 030 inch

Idle Port Opening: 109 to 115 inch above top edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw): Size, 065 to 069 inch diameter

Set Idle Adjustment Screw: ½ to 1½ turns open For richer mixture turn screw out Do not idle engine below 450 RPM in neutral

Nozzle: Nozzle is installed permanently DO NOT REMOVE Anti percolating well jet size No 70 (028 inch) drill

Metering Rod (Vacumeter Type): Economy step 0665 inch diameter Power step 040 inch diameter These rods designed with idle stabilizing flats on economy step

Metering Rod Jet. Size 089 inch diameter

Metering Rod Setting: See adjustments

Accelerating Pump. Discharge jet (twin) size No 72 (025 inch) drill
Intake ball check in plunger shaft
Discharge (needle seat) size No 50 (070 inch) drill

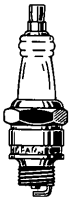
Pump Adjustment: See adjustments

Choke. Carter Climatic® Control—set one point rich butterfly type offset valve Choke heat suction hole in piston housing size No 42 (0935 inch) drill

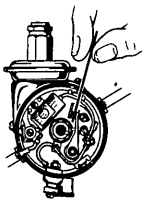
Vacuum Spark Port: Horizontal slot (round end) 040 x 130 inch Bottom of port to be (2231S) 038 to 044 inch, (2231SA) 018 to 024 inch above upper edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



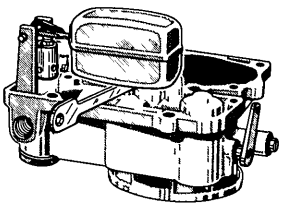
Spark Plug Gap .035"



Breaker Point Setting .016"



Ignition Timing Breaker Points to Open: 5° B.T.D.C.



Float Setting See Adjustments

Idle Adjustment Screw ~~Setting~~ ½ to 1½ Turns Open Idle engine at 450 R.P.M. in neutral.

NOTE. These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

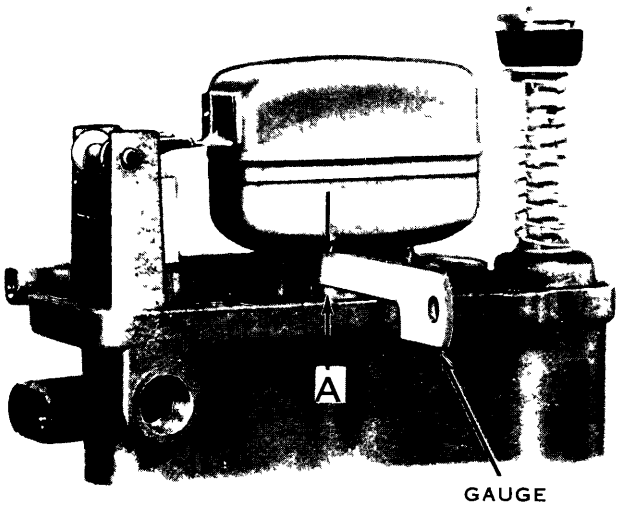


Figure 1
Float Adjustment

FLOAT ADJUSTMENT (Fig. 1):

With bowl cover gasket removed, bowl cover inverted and needle seated, there should be 1/4 inch (A) (gauge T109-31) between top of float and bowl cover Adjust by bending float arm

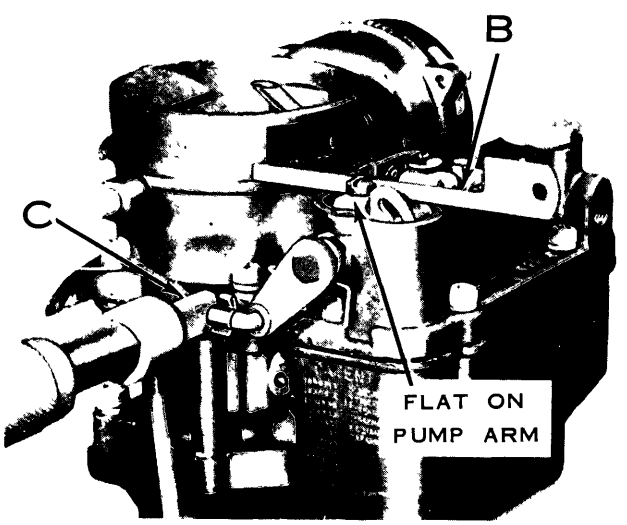


Figure 2
Pump Adjustment

PUMP ADJUSTMENT (Fig. 2):

Back out throttle lever set screw until throttle valves seat in bores of carbureter Hold straight edge (B) across top of dust cover at pump arm. The flat on top of pump arm should be parallel to straight edge Adjust by bending throttle connector rod at upper angle (C). Use bending tool T109-213.

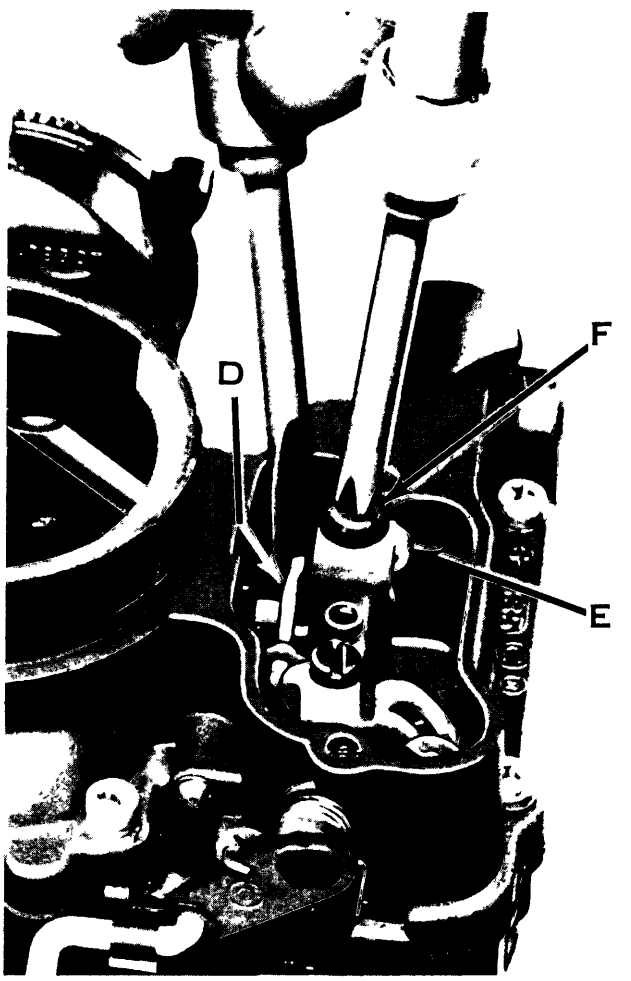


Figure 3
Metering Rod Adjustment

METERING ROD ADJUSTMENT (Fig. 3):

The metering rods must be adjusted after the pump adjustment No metering rod gauges are necessary: procedure is as follows With the throttle lever set screw backed out and throttle valves seated in bores of carbureter, press down on vacumeter link (D) until metering rods bottom in casting With rods held in this position, revolve metering rod arm (E) until lip contacts vacumeter link. Hold in place and carefully tighten metering rod arm set screw (F).

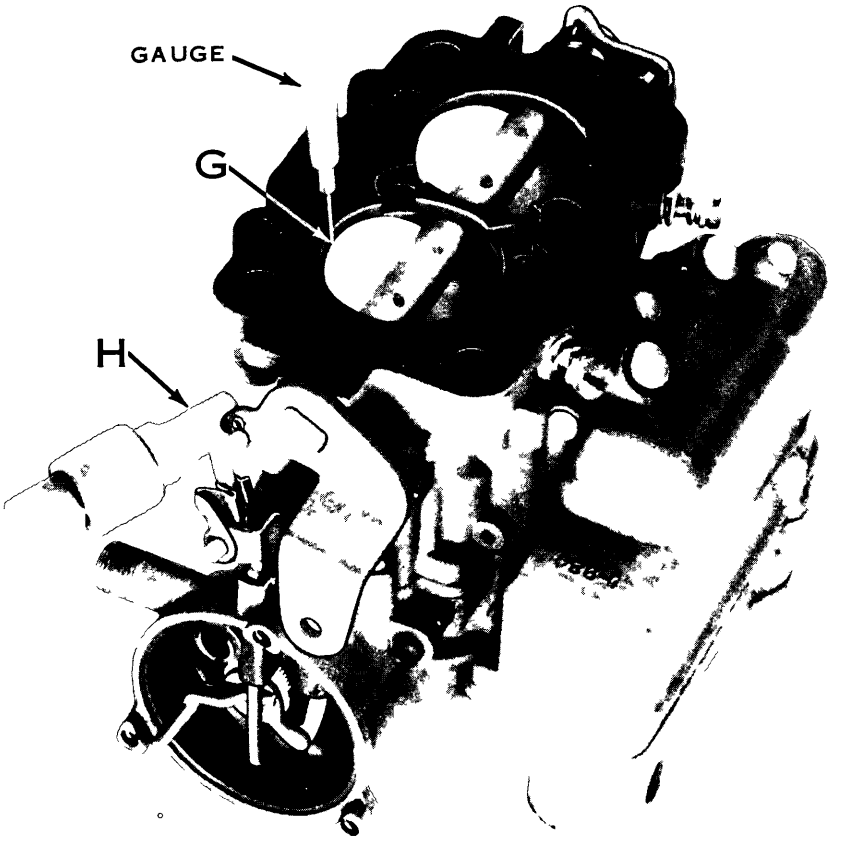


Figure 4
Fast Idle Adjustment

FAST IDLE ADJUSTMENT (Fig 4)

With the thermostatic coil housing gasket and baffle plate removed crack throttle valve and hold choke valve closed Then close throttle There should now be 030 inch clearance (G) (gauge T109 29) between throttle valve and bore of carbureter (side opposite idle port) Adjust by bending the choke connector rod at lower angle (H)

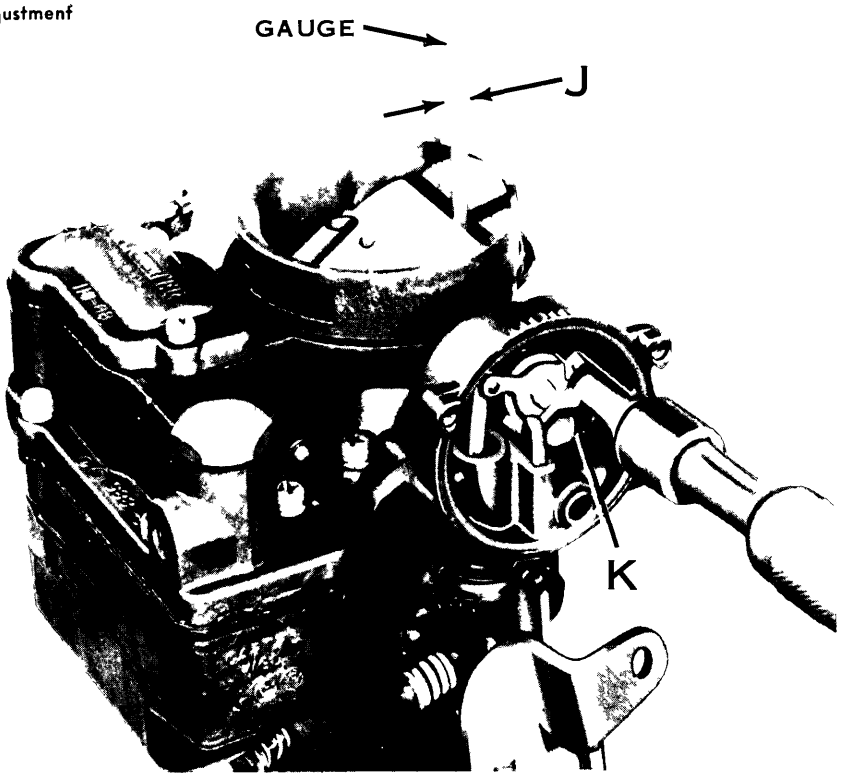
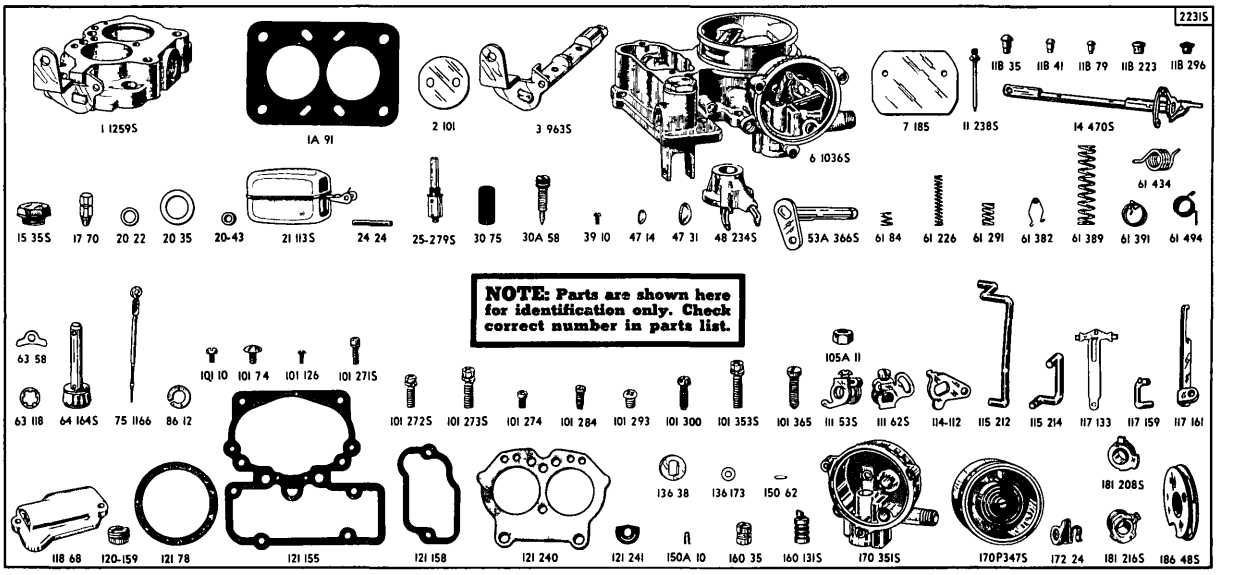


Figure 5
Unloader Adjustment

UNLOADER ADJUSTMENT (Fig 5)

This adjustment must be made after fast idle adjustment Hold throttle valve in wide open position and close choke valve as far as possible without forcing There should be 3/16 inch (gauge T109 28) clearance (J) between upper edge of choke valve and inner wall of air horn Adjust by bending choke shaft unloader arm (K) (Use bending tool T109 213)



Hudson 8—1955-1956—Carbureters Nos. 2231S-2231SA

WHEN SERVICING, USE GASKET ASSORTMENT No. 249, REPAIR PACKAGE No. 1802A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1259S	Body flange assembly (2231S) (Sup by 1 1394S)	
1-1394S	Body flange assembly	
1A-91	FLANGE GASKET	
2-101	Throttle valve	(2)
3-963S	Throttle shaft and lever assembly	
6 1036S	Air horn assembly	
7-185	Choke valve	
11-238S	LOW SPEED JET ASSEMBLY	(2)
11B-35	Rivet plug	(3)
11B-41	Rivet plug	(3)
11B-79	Rivet plug	
11B-223	Nozzle passage rivet plug	(2)
11B-296	IDLE PORT RIVET PLUG	(2)
14-470S	Choke piston lever link and shaft assembly	
15-35S	Strainer nut assembly	
17-70	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	
20-35	BOWL STRAINER GASKET	
20-43	Piston housing gasket	
21-113S	Float and lever assembly (2231S) (Sup by 21 172S)	
21-172S	Float and lever assembly	
24-24	Float lever pin	
25-279S	NEEDLE AND SEAT ASSEMBLY (Sup by 25 322S)	
25-322S	Needle and seat assembly	
30-75	BOWL COVER STRAINER	
30A-58	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
47-14	Piston housing welsh plug	
47-31	Spark port welsh plug	
48-234S	Pump jet and housing assembly	
53A-366S	Pump operating lever and countershaft assembly	
61-84	Idle adjustment screw spring	(2)
61-226	Vacuum piston spring (Sup by 61 332)	
61-291	Throttle adjusting screw spring	
61-332	VACUUM PISTON SPRING	
61-382	METERING ROD SPRING	
61-389	UPPER PUMP SPRING	
61-391	Fast idle cam spring	
61-434	Throttle return spring	
61-494	Countershaft spring	
63-58	Coil housing retainer	(3)
63-118	Throttle shaft retaining ring	
64-164S	Plunger rod and check assembly (Sup by 64 185S)	
64-185S	PLUNGER ROD AND CHECK ASSEMBLY	
75-1166	METERING ROD—STANDARD	(2)
75-1191	Metering rod—1 size lean	(2)
75-1192	Metering rod—2 sizes lean	(2)
75-1271U	Unitized package (Consists of 1—61 332 and 2—75 1166)	
86-12	Flange stud lock washer	(4)

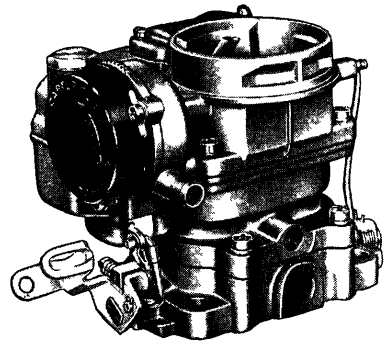
Part No.	PART NAME	
101-10	Pump arm clamp screw	
101-74	Throttle shaft arm attaching screw	
101-126	Throttle valve attaching screw	(4)
101-271S	Dust cover attaching screw and washer assembly (Use with 118 68)	(2)
101-272S	Air horn attaching screw and washer assembly	(8)
101-273S	Body flange attaching screw and washer assembly	(2)
101-274	Coil housing attaching screw	(3)
101-284	Piston housing attaching screw	(3)
101-293	Metering rod arm clamp screw	
101-300	Pump jet housing attaching screw	
101-353S	Body flange attaching screw and washer assembly	(2)
101-365	Throttle lever adjustment screw	
101-412S	Dust cover attaching screw and washer assembly (Use with 118 121S with vapor vent valve)	(2)
105A-11	Flange stud nut	(4)
111-53S	Metering rod arm and screw assembly	
111-62S	Pump arm and screw assembly	
114-112	THROTTLE SHAFT ARM	
115-212	THROTTLE CONNECTOR ROD	
115-214	Choke connector rod	
117-133	Vacumeter piston link	
117-159	Pump connector link	
117-161	Fast idle link	
118-68	Dust cover (Sup by 118 121S)	
118-121S	Dust cover assembly (with vapor vent valve)	
118-122U	Unitized package (Consists of (2) 101 412S and (1) 118 121S)	
120-159	METERING ROD JET	(2)
121-78	COIL HOUSING GASKET	
121-155	AIR HORN GASKET	
121-158	DUST COVER GASKET	
121-240	BODY FLANGE GASKET	
121-241	PUMP JET HOUSING GASKET	
136-38	Throttle shaft washer	
136-173	Pump connector link washer	(2)
150-62	Choke piston pin	
150A-10	Pin spring	(2)
160-35	Choke piston	
160-131S	Vacuum piston and pin assembly	
170-351S	Piston housing and plug assembly	
170P347S	Thermostatic coil and housing assembly	
172-24	CHOKE AND THROTTLE CONNECTOR ROD RETAINER	(3)
181-214S	Fast idle cam assembly (Sup by 181 216S)	
181-216S	Fast idle cam assembly	
186-48S	Choke baffle plate assembly	

NOTE Figures in parentheses indicate number f pieces used in ne carbureter. Where no figure is shown, only one is used.

Model Numbers

"35560"—1955

"35660"—1956



HUDSON "HORNET" 1955-1956

WGD Dual Down-Draft Climatic® Control **Carbureter No. 2252S**

CARBURETER SPECIFICATIONS

For Hudson 6 Cylinder Engine 3 8125 Inch Bore 4 500 Inch Stroke

Dimensions Flange size 1¼ inch dual 4 bolt type
Primary venturi 11/32 inch I D
Secondary venturi 21/32 inch I D
Main venturi 1 3/16 inch I D

Float Level See adjustments

Vents Outside none Inside balance vent tube above choke valve

Gasoline Intake Size No 42 (0935 inch) drill in needle seat

Low Speed Jet Tube Jet size No 67 (032 inch) drill
By pass in bowl cover size No 53 (0595 inch) drill
Economizer in bowl cover size 0453 inch diameter
Idle bleed in bowl cover size No 53 (0595 inch) drill

Idle Port Upper slot type length 167 inch width 030 inch

Idle Port Opening 112 to 118 inch above top edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw) Size 065 to 069 inch diameter

Set Idle Adjustment Screw 1¾ to 2¾ turns open For richer mixture turn screw out Do not idle engine below 490 R P M (automatic trans in neutral) 540 R P M (std trans) 575 R P M (overdrive trans)

Nozzle Nozzle is installed permanently DO NOT REMOVE Anti percolating well jet size No 71 (026 inch) drill

Metering Rod (Vacumeter Type) Economy step 063 inch diameter Middle step tapers to 060 inch diameter Power step 052 inch diameter These rods designed with idle stabilizing flats on economy step

Metering Rod Jet Size 086 inch diameter

Metering Rod Setting See adjustments

Accelerating Pump Discharge jet (twin) size No 70 (028 inch) drill
Pump jet air bleed passage to outside ⅛ inch drill
Intake ball check in plunger shaft
D scharge (needle seat) size No 50 (070 inch) drill

Pump Adjustment See adjustments

Choke Carter Climatic® Control—set on index Butterfly type offset valve Choke heat suction hole in piston housing size No 42 (0935 inch) drill

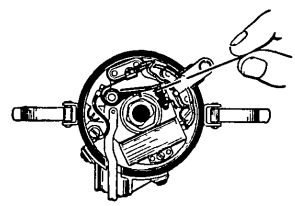
Vacuum Spark Port Horizontal slot (round end) 045 x 110 inch Top of port to be 028 inch above upper edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

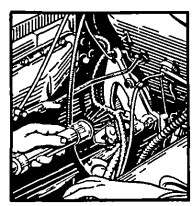
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



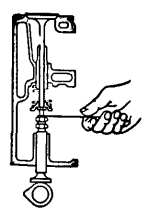
Spark Plug Gap 032"



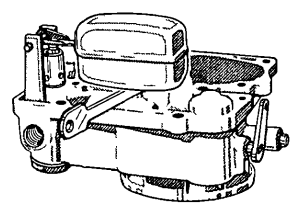
Breaker Point Setting 020"



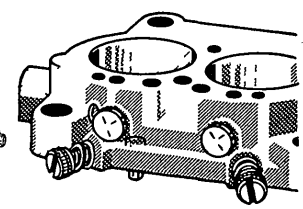
Ignition Timing Breaker Points to Open T. D. C



Valve Setting (Hot)
Intake 008"
Exhaust 010"



Float Setting (See Adjustments)



Idle Adjustment Screw Setting 1¾ to 2¾ Turns Open

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CARBURETER ADJUSTMENTS

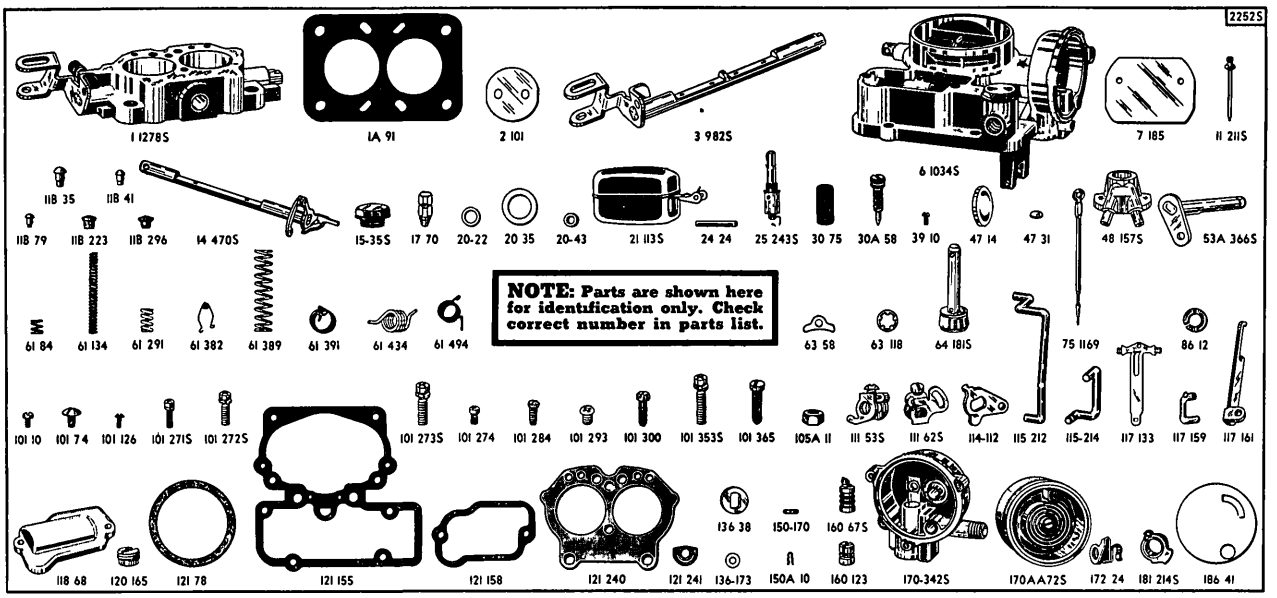
Float Adjustment With bowl cover gasket removed, bowl cover inverted and needle seated there should be ¼ inch (gauge T109-31) between top of float and bowl cover Adjust by bending float arm

Pump Adjustment Back out throttle lever set screw until throttle valves seat in bores of carbureter Hold straight edge across top of dust cover boss at pump arm The flat on top of pump arm should be parallel to straight edge Adjust by bending throttle connector rod at upper angle Use bending tool T109-213

Metering Rod Adjustment The metering rods must be adjusted after the pump adjustment No metering rod gauges are necessary procedure is as follows With the throttle lever set screw backed out and throttle valves seated in bores of carbureter press down on vacumeter link until metering rods bottom in casting With rods held in this position, revolve metering rod arm until lip contacts vacumeter link Hold in place and carefully tighten metering rod arm set screw

Fast Idle Adjustment With the thermostatic coil housing gasket and baffle plate removed, crack throttle valve and hold choke valve closed Then close throttle There should now be 030 inch clearance (gauge T109-29) between throttle valve and bore of carbureter (side opposite idle port) Adjust by bending the choke connector rod at lower angle

Unloader Adjustment This adjustment must be made after fast idle adjustment Hold throttle valve in wide open position and close choke valve as far as possible without forcing There should be 7/32 inch (gauge T109-106) clearance between upper edge of choke valve and inner wall of air horn Adjust by bending choke shaft unloader arm (use bending tool T109-105)



Hudson—1955-1956—Carbureter No. 2252S

WHEN SERVICING, USE GASKET ASSORTMENT No. 249

Part No.	PART NAME	
1-1278S	Body flange assembly	
1A-91	Flange gasket	
2-101	Throttle valve	(2)
3-982S	Throttle shaft and lever assembly	
6-1034S	Air horn assembly	
7-185	Choke valve	
11-211S	Low speed jet assembly	(2)
11B-35	Rivet plug	(3)
11B-41	Rivet plug	
11B-79	Rivet plug	(3)
11B-223	Nozzle passage rivet plug	(2)
11B 296	Idle port rivet plug	(2)
14-470S	Choke piston lever, link and shaft assembly	
15-35S	Strainer nut assembly	
17-70	Pump check needle	
20-22	Needle seat gasket	
20-35	Bowl strainer gasket	
20-43	Piston housing gasket	
21-113S	Float and lever assembly	
24-24	Float lever pin	
25-243S	Needle and seat assembly	
30 75	Bowl cover strainer	
30A-58	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
47-14	Piston housing welsh plug	
47-31	Spark port welsh plug	
48-157S	Pump jet and housing assembly	
53A-366S	Pump operating lever and countershaft assembly	
61-84	Idle adjustment screw spring	(2)
61 134	Vacuum piston spring	
61-291	Throttle adjusting screw spring	
61-382	Metering rod spring	
61-389	Pump spring (upper)	
61-391	Fast idle cam spring	
61-434	Throttle return spring	
61-494	Countershaft spring	
63-58	Coil housing retainer	(3)
63-118	Throttle shaft retaining ring	
64-181S	Plunger rod and check assembly	
75-1169	Metering rod—standard	(2)
75 1193	Metering rod—1 size lean	(2)
75-1194	Metering rod—2 sizes lean	(2)
86-12	Flange stud lock washer	(4)

Part No.	PART NAME	
101-10	Pump arm clamp screw	
101-74	Throttle shaft arm attaching screw	
101-126	Throttle valve attaching screw	(4)
101-271S	Dust cover attaching screw and washer assembly	(2)
101-272S	Air horn attaching screw and washer assembly	(8)
101-273S	Body flange attaching screw and washer assembly	(2)
101-274	Coil housing attaching screw	(3)
101-284	Piston housing attaching screw	(3)
101-293	Metering rod arm clamp screw	
101-300	Pump jet housing screw	
101-353S	Body flange attaching screw and washer assembly	(2)
101-365	Throttle lever adjustment screw	
105A-11	Flange stud nut	(4)
111-53S	Metering rod arm and screw assembly	
111-62S	Pump arm and screw assembly	
114-112	Throttle shaft arm	
115-212	Throttle connector rod	
115-214	Choke connector rod	
117-133	Vacumeter piston link	
117-159	Pump connector link	
117-161	Fast idle link	
118-68	Dust cover	
120-165	Metering rod jet	(2)
121-78	Coil housing gasket	
121-155	Air horn gasket	
121-158	Dust cover gasket	
121-240	Body flange gasket	
121-241	Pump jet housing gasket	
136-38	Throttle shaft washer	
136-173	Pump connector link washer	(2)
150-170	Choke piston pin	
150A-10	Pin spring	(2)
160-67S	Vacuum piston and pin assembly	
160-123	Choke piston	
170-342S	Piston housing and plug assembly	
170AA72S	Thermostatic coil and housing assembly	
172-24	Choke and throttle connector rod retainer	(3)
181-214S	Fast idle cam assembly	
186-41	Choke baffle plate	

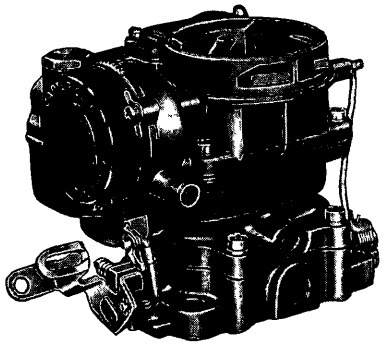
—Parts so marked are new and listed for the first time

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

Model Numbers

"35560"—1955

"35660"—1956



HUDSON "HORNET" 1955-1956

WGD Dual Down-Draft Climatic® Control **Carbureter No. 2252S**

CARBURETER SPECIFICATIONS

For Hudson 6 Cylinder Engine: 3.8125 Inch Bore, 4.500 Inch Stroke

Dimensions: Flange size, 1 1/4 inch dual, 4 bolt type.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 21/32 inch I. D.
Main venturi, 1-3/16 inch I. D.

Float Level: See adjustments.

Vents: Outside, none. Inside, balance vent tube above choke valve.

Gasoline Intake: Size No. 42 (.0935 inch) drill in needle seat.

Low Speed Jet Tube: Jet, size No. 67 (.032 inch) drill.
By pass, in bowl cover, size No. 53 (.0595 inch) drill.
Economizer, in bowl cover, size .0453 inch diameter.
Idle bleed, in bowl cover, size No. 53 (.0595 inch) drill.

Idle Port: Upper, slot type, length .167 inch, width .030 inch.

Idle Port Opening: .112 to .118 inch above top edge of valve with valve tightly closed.

Lower Port (For Idle Adjustment Screw): Size .065 to .069 inch diameter.

Set Idle Adjustment Screw: 1 3/4 to 2 3/4 turns open. For richer mixture turn screw out. Do not idle engine below 490 R.P.M. (automatic trans. in neutral); 540 R.P.M. (std. trans.); 575 R.P.M. (overdrive trans.).

Nozzle: Nozzle is installed permanently. DO NOT REMOVE. Anti-percolating well jet, size No. 71 (.026 inch) drill.

Metering Rod (Vacumeter Type): Economy step, .063 inch diameter. Middle step tapers to .060 inch diameter. Power step .052 inch diameter. These rods designed with idle stabilizing flats on economy step.

Metering Rod Jet: Size .086 inch diameter.

Metering Rod Setting: See adjustments.

Accelerating Pump: Discharge jet (twin) size No. 70 (.028 inch) drill

Pump jet air bleed passage to outside, 1/8 inch drill.
Intake ball check, in plunger shaft.

Discharge (needle seat) size No. 50 (.070 inch) drill.

Pump Adjustment: See adjustments.

Choke: Carter Climatic® Control—set on index. Butterfly type, offset valve. Choke heat suction hole in piston housing, size No. 42 (.0935 inch) drill.

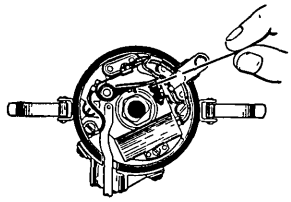
Vacuum Spark Port: Horizontal slot (round end) .045 x .110 inch. Top of port to be .028 inch above upper edge of valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



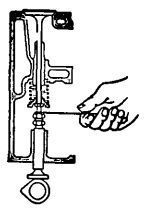
Spark Plug Gap .032"



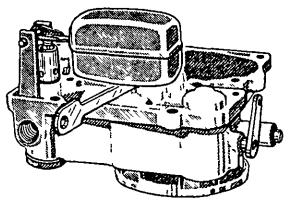
Breaker Point Setting .020"



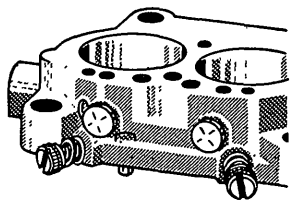
Ignition Timing Breaker Points to Open: T. D. C.



Valve Setting (Hot) Intake .008" Exhaust .010"



Float Setting (See Adjustments)



Idle Adjustment Screw Setting 1 3/4 to 2 3/4 Turns Open

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CARBURETER ADJUSTMENTS

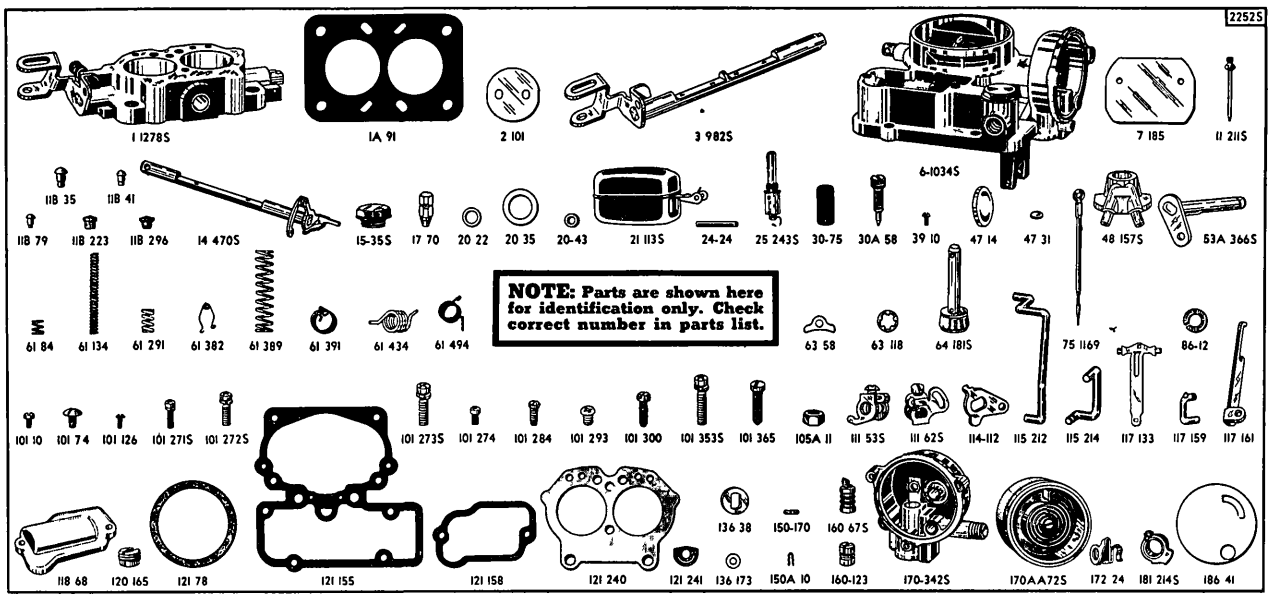
Float Adjustment With bowl cover gasket removed bowl cover inverted and needle seated there should be ¼ inch (gauge T109-31) between top of float and bowl cover Adjust by bending float arm

Pump Adjustment Back out throttle lever set screw until throttle valves seat in bores of carbureter Hold straight edge across top of dust cover boss at pump arm The flat on top of pump arm should be parallel to straight edge Adjust by bending throttle connector rod at upper angle Use bending tool T109-213

Metering Rod Adjustment The metering rods must be adjusted after the pump adjustment No metering rod gauges are necessary procedure is as follows With the throttle lever set screw backed out and throttle valves seated in bores of carbureter press down on vacumeter link until metering rods bottom in casting With rods held in this position, revolve metering rod arm until lip contacts vacumeter link Hold in place and carefully tighten metering rod arm set screw

Fast Idle Adjustment With the thermostatic coil housing gasket and baffle plate removed, crack throttle valve and hold choke valve closed Then close throttle There should now be 030 inch clearance (gauge T109-29) between throttle valve and bore of carbureter (side opposite idle port) Adjust by bending the choke connector rod at lower angle

Unloader Adjustment This adjustment must be made after fast idle adjustment Hold throttle valve in wide open position and close choke valve as far as possible without forcing There should be 7/32 inch (gauge T109-106) clearance between upper edge of choke valve and inner wall of air horn Adjust by bending choke shaft unloader arm (use bending tool T109-105)



Hudson—1955-1956—Carbureter No. 2252S

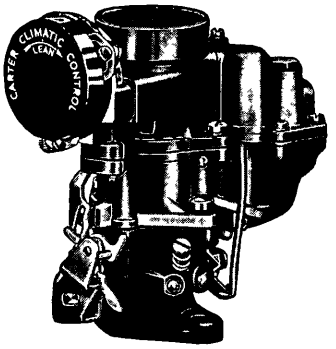
WHEN SERVICING, USE GASKET ASSORTMENT No. 249

Part No.	PART NAME	
1-1278S	Body flange assembly	
1A-91	Flange gasket	
2-101	Throttle valve	(2)
3 982S	Throttle shaft and lever assembly	
6-1034S	Air horn assembly	
7-185	Choke valve	
11-211S	Low speed jet assembly	(2)
11B-35	Rivet plug	(3)
11B-41	Rivet plug	
11B-79	Rivet plug	(3)
11B-223	Nozzle passage rivet plug	(2)
11B-296	Idle port rivet plug	(2)
14-470S	Choke piston lever, link and shaft assembly	
15 35S	Strainer nut assembly	
17-70	Pump check needle	
20-22	Needle seat gasket	
20-35	Bowl strainer gasket	
20-43	Piston housing gasket	
21-113S	Float and lever assembly	
24-24	Float lever pin	
25-243S	Needle and seat assembly	
30 75	Bowl cover strainer	
30A-58	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
47-14	Piston housing welsh plug	
47-31	Spark port welsh plug	
48-157S	Pump jet and housing assembly	
53A 366S	Pump operating lever and countershaft assembly	
61-84	Idle adjustment screw spring	(2)
61 134	Vacuum piston spring	
61-291	Throttle adjusting screw spring	
61 382	Metering rod spring	
61-389	Pump spring (upper)	
61-391	Fast idle cam spring	
61-434	Throttle return spring	
61-494	Countershaft spring	
63-58	Coil housing retainer	(3)
63-118	Throttle shaft retaining ring	
64-181S	Plunger rod and check assembly	
75-1169	Metering rod—standard	(2)
75-1193	Metering rod—1 size lean	(2)
75-1194	Metering rod—2 sizes lean	(2)
86-12	Flange stud lock washer	(4)

Part No.	PART NAME	
101-10	Pump arm clamp screw	
101-74	Throttle shaft arm attaching screw	
101-126	Throttle valve attaching screw	(4)
101-271S	Dust cover attaching screw and washer assembly	(2)
101-272S	Air horn attaching screw and washer assembly	(8)
101-273S	Body flange attaching screw and washer assembly	(2)
101-274	Coil housing attaching screw	(3)
101-284	Piston housing attaching screw	(3)
101-293	Metering rod arm clamp screw	
101-300	Pump jet housing screw	
101-353S	Body flange attaching screw and washer assembly	(2)
101-365	Throttle lever adjustment screw	
105A-11	Flange stud nut	(4)
111-53S	Metering rod arm and screw assembly	
111-62S	Pump arm and screw assembly	
114-112	Throttle shaft arm	
115 212	Throttle connector rod	
115-214	Choke connector rod	
117-133	Vacumeter piston link	
117-159	Pump connector link	
117-161	Fast idle link	
118-68	Dust cover	
120-165	Metering rod jet	(2)
121-78	Coil housing gasket	
121-155	Air horn gasket	
121-158	Dust cover gasket	
121-240	Body flange gasket	
121-241	Pump jet housing gasket	
136-38	Throttle shaft washer	
136-173	Pump connector link washer	(2)
150-170	Choke piston pin	
150A-10	Pin spring	(2)
160-67S	Vacuum piston and pin assembly	
160-123	Choke piston	
170-342S	Piston housing and plug assembly	
170AA72S	Thermostatic coil and housing assembly	
172-24	Choke and throttle connector rod retainer	(3)
181-214S	Fast idle cam assembly	
186-41	Choke baffle plate	

—Parts so marked are new and listed for the first time

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used



Casting No 972 on face of flange

HUDSON

MODELS

1C-JET and 2C-SUPER JET 1953

1D-JET, 2D-SUPER JET and 3D-JET LINER 1954

35540 WASP, 1955 — 35640 WASP, 1956

WA1 Down-Draft Climatic® Control **Carbureters Nos. 2009S-2009SA**

CARBURETER SPECIFICATIONS

For Hudson 6 Cylinder Engine 3 Inch Bore, 4¾ Inch Stroke

Dimensions Flange size 1¼ inch S A E
Primary venturi 11/32 inch I D
Secondary venturi 11/16 inch I D
Main venturi 1⅜ inch I D

Float Level See Adjustments

Vents Outside No 10 (1935 inch) drill Inside None

Gasoline Intake Size No 46 (081 inch) drill in needle seat

Low Speed Jet Tube Jet size No 65 (035 inch) drill By pass size No 53 (0595 inch) drill Economizer size 0545 0555 inch diameter Idle bleed size No 53 (0595 inch) drill

Idle Port Upper Port slot type length 165 inch width 030 inch

Idle Port Opening 120 to 124 inch above top edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw) No 46 (081 inch) drill

Set Idle Adjustment Screw ½ to 1½ turns open For richer mixture turn screw out Idle engine at 500 r p m Hydra Matic—In Drive Range (1953) In neutral (1954 55) 550 r p m Standard Trans 575 r p m (1953 1955) 550 r p m (1954) Overdrive Trans

Main Nozzle Slip nozzle flush type Discharge jet size 110 inch diameter Inner nozzle (seats in slip nozzle) I D No 31 (120 inch) drill

Metering Rod (Vacumeter Type) Economy step 074 inch diameter middle step tapers to 063 inch diameter power step 040 inch diameter

Metering Rod Jet 1015 inch diameter

Metering Rod Setting See Adjustments

Accelerating Pump Discharge jet size No 68 (031 inch) drill Intake ball check seat size No 40 (098 inch) drill Discharge ball check seat size No 32 (116 inch) drill Relief passage (to outside) size No 42 (0935 inch) drill

Pump Adjustment See Adjustments

Choke Carter Climatic® Control set on Index—Butterfly type offset valve Choke heat suction hole in body size No 40 (098 inch) drill

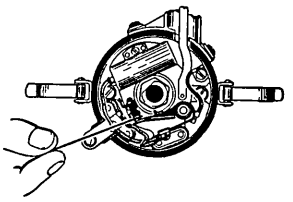
Vacuum Spark Port 051 054 inch diameter Bottom of port 005 to 015 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



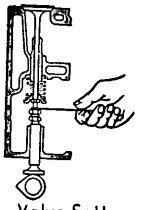
Spark Plug Gap 032"



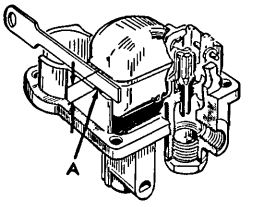
Breaker Point Setting 020"



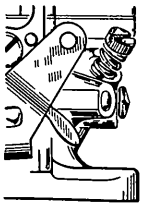
Ignition Timing Breaker Points to Open T D C At Vibration Damper



Valve Setting (Hot) Intake 010" Exhaust 012"



Float Setting See Adjustments



Idle Adjustment Screw Setting ½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT With bowl cover inverted and float resting on seated needle, the distance from the tip on the edge of the bowl cover to the soldered edge of the seam should be ⅛ inch (gauge T109-83 for 2009S) and 7/16 inch (gauge T109-81 for 2009SA) To adjust, bend lip on float arm

PUMP ADJUSTMENT With throttle valve seated and connector link in lower hole (medium stroke), pump plunger should travel 16/64 inch from closed to wide open throttle position Measure pump travel by using Universal pump travel gauge T109-117S Place base of the gauge on ridged portion of bowl cover so that projecting portion of pump gauge rests on top surface of connector link at pump shaft Hold gauge vertical The difference between the numbers shown by index mark on gauge at wide open and closed throttle position should be '16 (16/64 inch) Adjust by bending throttle connector rod at lower angle

METERING ROD ADJUSTMENT Correct setting of metering rod is important and must be made after pump adjustment or when leaner than standard rods are installed Insert gauge (T109-102 for 2009S) or (T109-241 for 2009SA) in place of metering rod, seating tapered end of gauge in metering rod jet Hold gauge vertical to insure seating in jet With throttle valve seated, press down on piston link directly over piston until it contacts the pump arm There should now be less than 005 inch clearance between metering rod pin and shoulder in notch of gauge Gauge must not drag on pin Adjust by bending lip on piston link (use tool T109-105) Remove gauge and install metering rod, disc, pin and spring

ANTI-PERCOLATOR ADJUSTMENT Crack throttle valve 030 inch by placing gauge T109-29 between throttle valve and bore of carbureter (side opposite idle port) Bend rocker arm (use tool T109-105) until there is a clearance of 010 inch between rocker arm lip and pump arm

FAST IDLE ADJUSTMENT With fast idle cam in normal idle position tighten throttle lever adjusting screw until it just seats against cam Hold throttle lever closed and pull cam back until first (or lower) step is against (not on) set screw

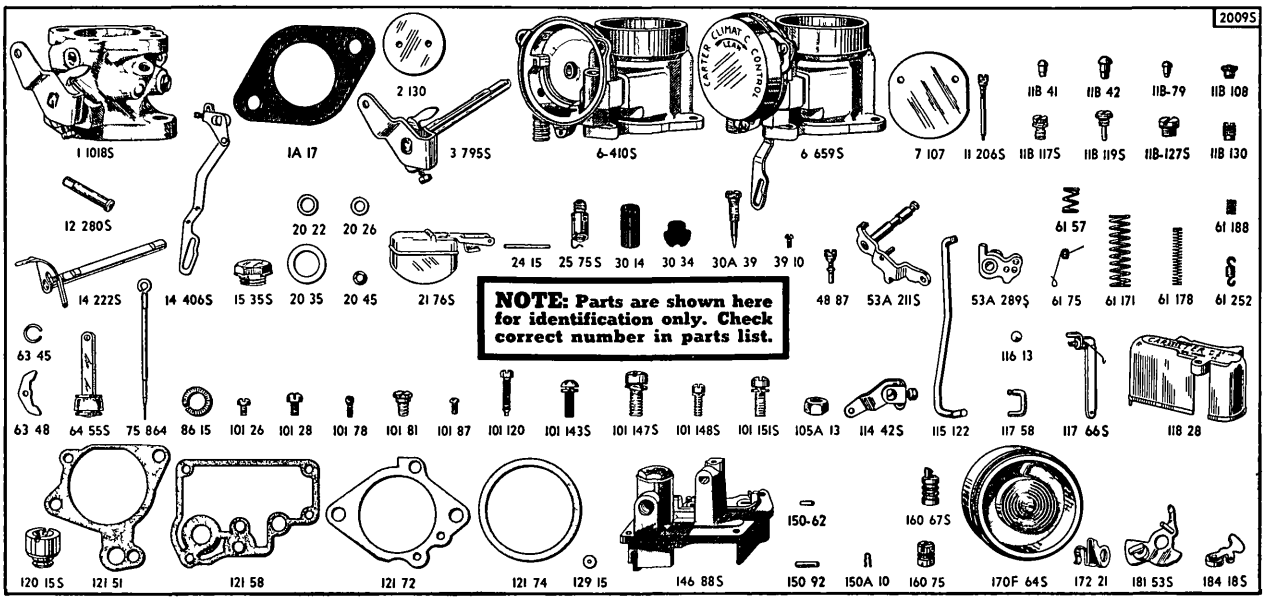
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CARBURETER
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There should now be 5/8 inch clearance (gauge T109-85) between inside wall of air horn and lower edge of choke valve Adjust by bending fast idle link at offset portion (use tool T109-41)

UNLOADER ADJUSTMENT With throttle valve wide open there should be 9/16 inch clearance (gauge T109-84) between lower edge of choke valve and inner wall of air horn Adjust by bending cam on throttle lever (use tool T109-41)



Hudson—1953-1956—Carbureters Nos. 2009S-2009SA

WHEN SERVICING, USE GASKET ASSORTMENT No 139A, REPAIR PACKAGE No. 1736

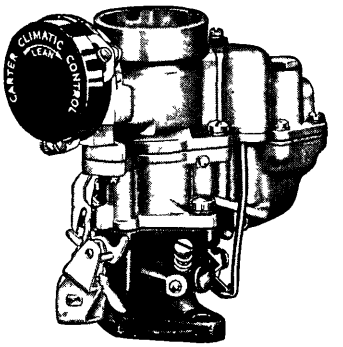
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME
1-1018S	Body flange assembly
1A-17	FLANGE GASKET
2-130	Throttle valve
3-795S	Throttle shaft and lever assembly
6-410S	Air horn assembly
6 659S	Air horn and Climatic® control assembly
7-107	Choke valve
11-206S	LOW SPEED JET ASSEMBLY
11B-41	Rivet plug
11B-42	Rivet plug
11B 79	Rivet plug (5)
11B 108	IDLE PORT RIVET PLUG
11B-117S	Idle plug assembly
11B-119S	Ball retainer screw plug assembly
11B-127S	Pump jet and nozzle plug assembly (2)
11B-130	NOZZLE RETAINER PLUG
12-280S	NOZZLE ASSEMBLY
14-222S	Choke piston lever link and shaft assembly
14 406S	Choke lever screw and link assembly
15-35S	Strainer nut assembly
20 22	Needle seat and plug gasket (3)
20-26	Metering rod jet and plug gasket (3)
20-35	BOWL STRAINER GASKET
20-45	NOZZLE GASKET
21-76S	Float and lever assembly
24-15	Float lever pin
25-75S	NEEDLE AND SEAT ASSEMBLY
30-14	BOWL STRAINER GAUZE
30-34	PUMP STRAINER
30A-39	Idle adjustment screw
39-10	Choke valve attaching screw (2)
48-87	PUMP JET
53A-211S	Pump operating lever and countershaft assembly
53A-289S	Pump arm and collar assembly
61-57	Idle adjustment screw spring
61-75	Metering rod spring
61-171	Pump spring
61-178	Vacuum piston spring (2009S) (Sup by 75 915U)
61-188	Rocker arm spring
61-199	Vacuum piston spring (2009SA)
61-252	Pump operating lever spring
63-45	Ball retainer ring
63-48	Coil housing retainer (3)
64 55S	PLUNGER AND ROD ASSEMBLY
75-864	Metering rod—standard (2009S) (Sup by 75 915U)
75-907	Metering rod—1 size lean (2009S)
75-908	Metering rod—2 sizes lean (2009S)
75-909	Metering rod—3 sizes lean (2009S)
75-914	Metering rod—standard (2009SA)
75-915U	*UNITIZED PACKAGE (CONSISTS OF 1—61 199 1—75 914 1—120 191S AND 1—107 45)
75-920	Metering rod—1 size lean (2009SA)
75-921	Metering rod—2 sizes lean (2009SA)
75-922	Metering rod—3 sizes lean (2009SA)
86-15	Flange stud lock washer (2)
101-26	Coil housing attaching screw (3)
101-28	Throttle shaft arm clamp screw
101-78	Choke lever clamp screw
101-81	Fast idle cam screw
101-87	THROTTLE VALVE ATTACHING SCREW (2)
101-120	Throttle lever adjusting screw
101-143S	Piston housing attaching screw and washer assembly
101-147S	Body flange attaching screw and washer assembly (2)
101-148S	Bowl cover attaching screw and washer assembly (5)
101-151S	Air horn attaching screw and washer assembly (2)
105A-13	Flange stud nut (2)
114-42S	THROTTLE SHAFT ARM AND SCREW ASSEMBLY
115-122	THROTTLE CONNECTOR ROD
116-13	CHECK BALL (2)
117-58	PUMP CONNECTOR LINK
117-66S	Piston link and spring assembly
118-28	Dust cover
120-15S	Metering rod jet assembly (2009S) (Sup by 75 915U)
120-191S	Metering rod jet assembly (2009SA)
121-51	AIR HORN GASKET
121-58	BOWL COVER GASKET
121-72	BODY FLANGE GASKET
121-74	COIL HOUSING GASKET
129-15	Metering rod disk
146-88S	Bowl cover and strainer assembly
150-62	Choke piston pin
150-92	Anti percolator pin
150A-10	Pin spring (3)
160-67S	Vacuum piston and pin assembly
160-75	Choke piston
170F-64S	Thermostatic coil and housing assembly
172-21	THROTTLE CONNECTOR ROD RETAINER
181-53S	Fast idle cam and pin assembly
184-18S	ANTI PERCOLATOR CAP AND ROCKER ARM ASSEMBLY

*75 915U used to convert 2009S carbureter to 2009SA

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

(Two Carbureters Per Engine)



Casting No 1002 on face of flange

HUDSON

1C Jet and 2C Super Jet 1953

1D Jet, 2D Super Jet and 3D Jet Liner 1954

35540 Wasp—1955
35640—1956

WA1 Down-Draft Climatic® Control **Carbureter No. 2013S**

CARBURETER SPECIFICATIONS

For Hudson 6 Cylinder Engine 3 Inch Bore 4¾ Inch Stroke

Dimensions Flange size 1¼ inch S A E
Primary venturi 11/32 inch I D
Secondary venturi 11/16 inch I D
Main venturi 1 5/16 inch I D

Float Level See Adjustments

Vents Outside No 10 (1935 inch) drill Inside None

Gasoline Intake Spring loaded needle Size No 42 (0935 inch) drill in needle seat

Low Speed Jet Tube Jet size No 68 (031 inch) drill By pass size No 53 (0595 inch) drill Economizer size 0545 0555 inch diameter Idle bleed size No 53 (0595 inch) drill

Idle Port Upper Port slot type length 150 inch width 030 inch

Idle Port Opening 103 to 107 inch above top edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw) No 46 (081 inch) drill

Set Idle Adjustment Screw ¾ to 1¾ turns open For richer mixture turn screw out Idle engine at 500 r p m Hydramatic —In Drive Range (1953) In Neutral (1954 55) 550 r p m Standard Trans 575 r p m (1953 1955) 550 r p m (1954) Overdrive Trans

Main Nozzle Slip nozzle flush type Discharge jet size 110 inch diameter Inner nozzle (seats in slip nozzle) I D No 31 (120 inch) drill

Metering Rod (Vacumeter Type) Economy step 073 inch diameter middle step tapers to 067 inch power step 053 inch diameter

Metering Rod Jet 096 inch diameter

Metering Rod Setting See Adjustments

Accelerating Pump Discharge jet size No 68 (031 inch) drill Intake ball check seat size No 40 (098 inch) drill Discharge ball check seat size No 32 (116 inch) drill Relief passage (to outside) size No 42 (0935 inch) drill

Pump Adjustment See Adjustments

Choke Carter Climatic ® Control set one point lean—Butter fly type offset valve Choke heat suction hole in body size No 40 (098 inch) drill

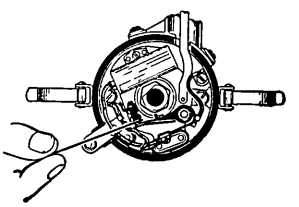
Vacuum Spark Port 051 054 inch diameter Top of port 010 to 020 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

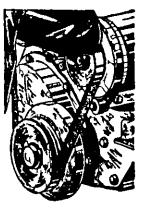
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter.



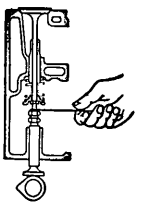
Spark Plug
Gap
032"



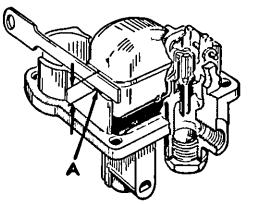
Breaker Point
Setting
020"



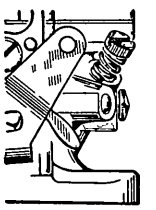
Ignition Timing
Breaker Points to Open
T D C
At Vibration Damper



Valve Setting
(Hot)
Intake 010'
Exhaust 012"



Float Setting
¼ Inch
(Use Gauge T109 31)



Idle Adjustment
Screw Setting
¾ to 1¾
Turns Open

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT With bowl cover inverted and float resting on pin in seated needle the distance from the tip on the edge of the bowl cover to the soldered edge of the seam should be ¼ inch (gauge T109-31) Do not depress float lip against spring loaded pin in needle but let float rest of its own weight To adjust bend lip on float arm Float setting must be checked with the bowl cover held at eye height in a level position

PUMP ADJUSTMENT With throttle valve seated and con nector link in lower hole (medium stroke) pump plunger should travel 16/64 inch from closed to wide open throttle position Measure pump travel by using Universal pump travel gauge T109-117S Place base of the gauge on ridged portion of bowl cover so that projecting portion of pump gauge rests on top surface of connector link at pump shaft Hold gauge vertical The difference between the numbers shown by index mark on gauge at wide open and closed throttle position should be 16 (16/64 inch) Adjust by bending throttle connector rod at lower angle

METERING ROD ADJUSTMENT Correct setting of meter ing rod is important and must be made after pump adjust ment or when leaner than standard rods are installed Insert gauge (tool T109-102) in place of metering rod, seating tapered end of gauge in metering rod jet Hold gauge verti cal to insure seating in jet With throttle valve seated press down on piston link directly over piston until it con tacts the pump arm There should now be less than 005 inch clearance between metering rod pin and shoulder in notch of gauge Gauge must not drag on pin Adjust by bending lip on piston link (use tool T109-105) Remove gauge and install metering rod disc pin and spring

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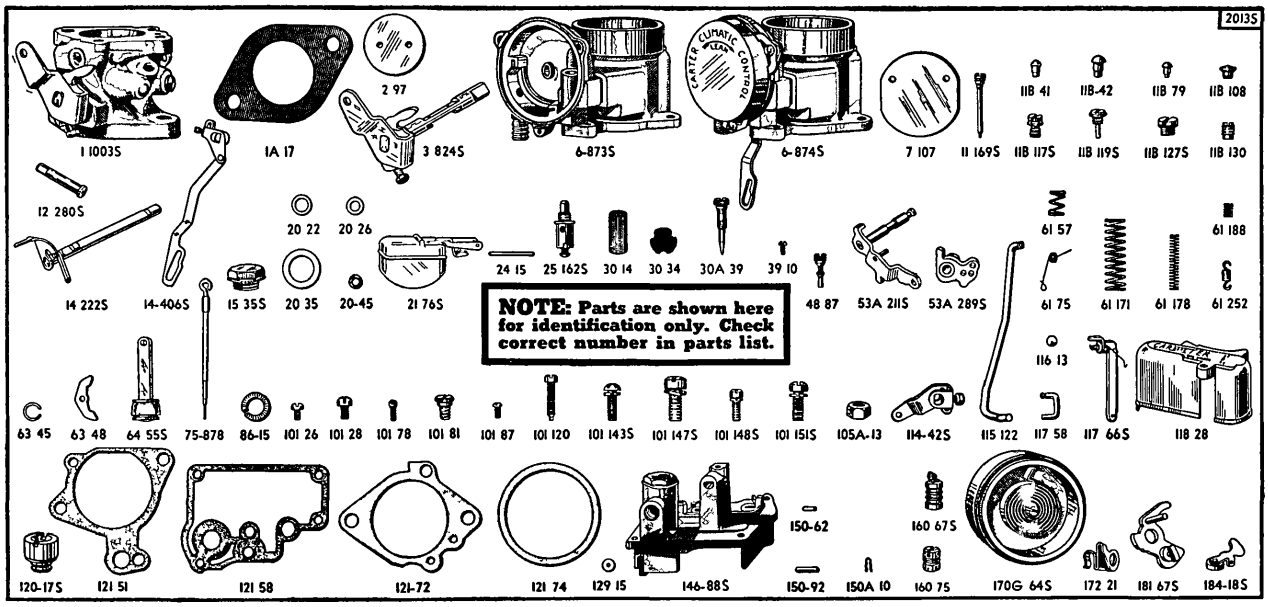
CARBURETER
TRADE MARK REG U S PAT OFF
MARCA REGISTRADA

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ANTI-PERCOLATOR ADJUSTMENT. Crack throttle valve .016 inch by placing gauge T109-44 between throttle valve and bore of carbureter (side opposite idle port) Bend rocker arm (use tool T109-105) until there is a clearance of .010 inch between rocker arm lip and pump arm

FAST IDLE ADJUSTMENT With fast idle cam in normal idle position, tighten throttle lever adjusting screw until it just seats against cam Hold throttle lever closed and pull cam back until first (or lower) step is against (not on) set screw There should now be ½ inch clearance (gauge T109-83) between inside wall of air horn and lower edge of choke valve Adjust by bending fast idle link at offset portion (use tool T109-41)

UNLOADER ADJUSTMENT: With throttle valve wide open there should be 9/16 inch clearance (gauge T109-84) between lower edge of choke valve and inner wall of air horn Adjust by bending cam on throttle lever (use tool T109-41)



Hudson—1953-1957—Carbureter No. 2013S

WHEN SERVICING, USE GASKET ASSORTMENT No 139A; REPAIR PACKAGE No 1737

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1003S	Body flange assembly	
1A-17	FLANGE GASKET	
2-97	Throttle valve	
3-824S	Throttle shaft and lever assembly	
6 873S	Air horn assembly	
6 874S	Air horn and Climatic ® control assembly	
7-107	Choke valve	
11-169S	LOW SPEED JET ASSEMBLY	
11B-41	Rivet plug	
11B 42	Rivet plug	
11B-79	Rivet plug	(5)
11B-108	IDLE PORT RIVET PLUG	
11B-117S	Idle passage plug assembly	
11B-119S	Ball retainer screw plug assembly	
11B-127S	Passage plug assembly	(2)
11B-130	NOZZLE RETAINER PLUG	
12-280S	NOZZLE ASSEMBLY	
14-222S	Choke piston lever link and shaft assembly	
14 406S	Choke lever screw and link assembly	
15-35S	Strainer nut assembly	
20-22	Needle seat and plug gasket	(3)
20-26	Metering rod jet and plug gasket	(3)
20-35	BOWL STRAINER GASKET	
20-45	NOZZLE GASKET	
21-76S	Float and lever assembly	
24-15	Float lever pin	
25-162S	NEEDLE PIN SPRING AND SEAT ASSEMBLY	
30-14	BOWL STRAINER GAUZE	
30-34	PUMP STRAINER	
30A-39	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
48-87	PUMP JET	
53A-211S	Pump operating lever and countershaft assembly	
53A-289S	Pump arm and collar assembly	
61-57	Idle adjustment screw spring	
61-75	Metering rod spring	
61-171	Pump spring	
61-178	VACUUM PISTON SPRING	
61-188	Rocker arm spring	
61-252	Pump operating lever spring	
63-45	Intake check ball retainer ring	
63-48	Coil housing retainer	(3)

Part No.	PART NAME	
64-55S	PLUNGER AND ROD ASSEMBLY (IDENTIFY BY SHAFT No 49 113)	
75-878	METERING ROD—STANDARD	
75-904	Metering rod—1 size lean	
75-905	Metering rod—2 sizes lean	
75-906	Metering rod—3 sizes lean	
75-1137	*Metering rod	
86-15	Flange stud lock washer	(2)
101-26	Coil housing attaching screw	(3)
101-28	Throttle shaft arm clamp screw	
101-78	Choke lever clamp screw	
101-81	Fast idle cam screw	
101-87	THROTTLE VALVE ATTACHING SCREW	(2)
101-120	Throttle lever adjusting screw	
101-143S	Piston housing attaching screw and washer assembly	
101-147S	Body flange attaching screw and washer assembly	(2)
101 148S	Bowl and dust cover attaching screw and washer assembly	(5)
101-151S	Air horn attaching screw and washer assembly	(2)
105A-13	Flange nut	(2)
114-42S	THROTTLE SHAFT ARM AND SCREW ASSEMBLY	
115-122	THROTTLE CONNECTOR ROD	
116-13	PUMP CHECK BALL	(2)
117-58	PUMP CONNECTOR LINK	
117-66S	Piston link and spring assembly	
118-28	Dust cover	
120-17S	METERING ROD JET ASSEMBLY	
121-51	AIR HORN GASKET	
121-58	BOWL COVER GASKET	
121-72	BODY FLANGE GASKET	
121-74	COIL HOUSING GASKET	
129-15	Metering rod disk	
146-88S	Bowl cover and strainer assembly	
150-62	Choke piston pin	
150-92	Anti percolator pin	
150A-10	Pin spring	(3)
160-67S	Vacuum piston and pin assembly	
160-75	Choke piston	
170G64S	Thermostatic coil and housing assembly	
172-21	THROTTLE CONNECTOR ROD RETAINER	
181-67S	Fast idle cam and pin assembly	
184-18S	ANTI PERCOLATOR CAP AND ROCKER ARM ASSEMBLY	

*75 1137 special rod for Sports Car Italia

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

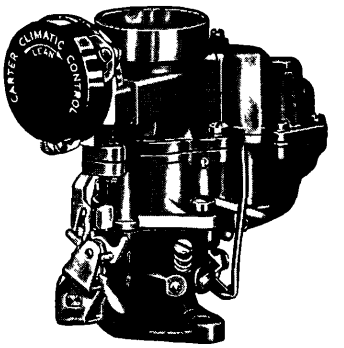
968S—Models 7B, 7C
1952-1953

2113S—Model 7D—1954

Model 35560—1955

Model 35660—1956

(Two Carbureters Per Engine)



Casting No 910 on face of flange

HUDSON
"HORNET"
1952-1956

WA1 Down-Draft Climatic® Control **Carbureters Nos. 968S-2113S**

CARBURETER SPECIFICATIONS

For Hudson 6 Cylinder Engine 3-13/16 Inch Bore, 4½ Inch Stroke

Dimensions Flange size 1½ inch S A E
Primary venturi 11/32 inch I D
Secondary venturi 11/16 inch I D
Main venturi 1⅜ inch I D

Float Level Distance from seam of float (at free end) to tip on lower edge of float chamber cover when needle is seated to be ½ inch

Vents Outside No 10 (1935 inch) drill Inside none

Gasoline Intake Square vertical push pull needle Size No 46 (081 inch) drill hole in needle seat

Low Speed Jet Tube Jet (968S) size No 65 (035 inch) (2113S) size No 66 (033 inch) drill By pass in body size 063 inch diameter Economizer in body size 0545 to 0555 inch diameter Idle bleed in body size No 52 (0635 inch) drill

Idle Port Upper port slot type length 190 inch width 040 inch

Idle Port Opening 178 to 182 inch above valve with valve tightly closed

Idle Screw Seat No 46 (084 inch) drill

Set Idle Adjustment Screw 1¼ to 2¼ turns open For richer mixture turn screw out Do not idle engine below 500 r p m (Hydra Matic—In Drive Range) 550 r p m (Standard and Overdrive Trans)

Main Nozzle (Assembly) Slip nozzle flush type (angle tip) seats in primary venturi at 45° angle Discharge jet size 110 inch diameter Inner nozzle (seats in slip nozzle) I D No 31 (120 inch) drill

Metering Rod (Vacumeter Type) Economy step (968S) 076 inch (2113S) 075 inch diameter Middle step tapers to (968S) 063 inch (2113S) 068 inch diameter Power step (968S) 056 inch (2113S) 059 inch diameter

Metering Rod Jet 1015 inch diameter

Metering Rod Setting Use gauge part No T109 102 (2 468 inches)

Accelerating Pump Pressure type with adjustable stroke Discharge jet Size No 74 (0225 inch) drill Intake ball check seat size No 60 (040 inch) drill Discharge ball check seat size No 32 (116 inch) drill Relief passage (to outside) size No 42 (0935 inch) drill

Pump Adjustment See Adjustments

Choke Carter Climatic® Control set 1 point lean—butterfly type offset valve Choke Heat Suction Hole in body size No 40 (098 inch) drill

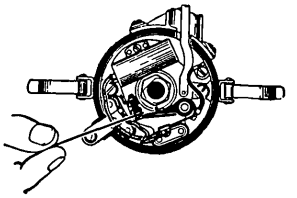
Vacuum Spark Port 054 057 inch diameter Top of port 049 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



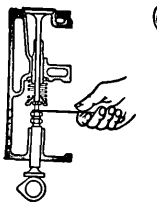
Spark Plug Gap 032"



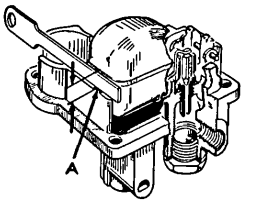
Breaker Point Setting 020"



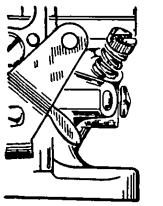
Ignition Timing Breaker Points to Open T D C



Valve Setting (Hot)
Intake 010"
Exhaust 012"



Float Setting
Measure from point "A" to top of float seam ½ Inch (Use Gauge T109-83)



Idle Adjustment Screw Setting 1¼ to 2¼ Turns Open

CARBURETER ADJUSTMENTS

PUMP ADJUSTMENT. With throttle valve seated, and connector link in lower hole (medium stroke), pump plunger should travel 16/64" from closed to wide open throttle position Measure pump travel by using Universal pump travel gauge T109-117S Place base of the gauge on ridged portion of bowl cover so that projecting portion of pump gauge rests on top surface of connector link at pump shaft Hold gauge vertical The difference between the numbers shown by index mark on gauge at wide open and closed throttle position should be "16 (16/64") Adjust by bending throttle connector rod at lower angle

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CARBURETER
TRADE MARK REG U S PAT OFF
MARCA REGISTRADA

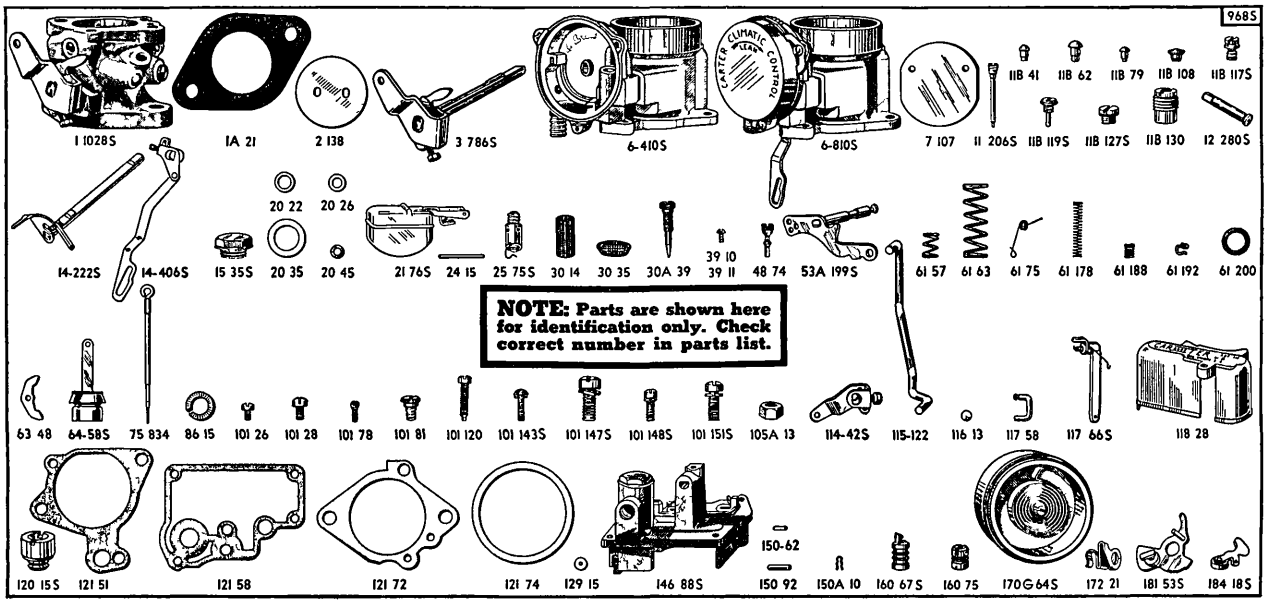
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METERING ROD ADJUSTMENT: Correct setting of metering rod is important and must be made after pump adjustment or when leaner than standard rods are installed Insert gauge (tool T109-102) in place of metering rod seating tapered end of gauge in metering rod jet Hold gauge vertical to insure seating in jet With throttle valve seated, press down on piston link directly over piston until it contacts the pump arm There should now be less than .005" clearance between metering rod pin and shoulder in notch of gauge Gauge must not drag on pin Adjust by bending lip on piston link (use tool T109-105) Remove gauge and install metering rod disc pin and spring

ANTI-PERCOLATOR ADJUSTMENT: Crack throttle valve .016" by placing gauge T109-44 between throttle valve and bore of carbureter (side opposite idle port) Bend rocker arm (use tool T109-105) until there is a clearance of .010" between rocker arm lip and pump arm

FAST IDLE ADJUSTMENT With fast idle cam in normal idle position, tighten throttle lever adjusting screw until it just seats against cam Hold throttle lever closed and pull cam back until first (or lower) step is against (not on) set screw There should now be 5/8" (T109-85) clearance between inside wall of air horn and lower edge of choke valve Adjust by bending fast idle link at offset portion (use tool T109-41)

UNLOADER ADJUSTMENT· With throttle valve wide open there should be 9/16" clearance (gauge T109-84) between lower edge of choke valve and inner wall of air horn Adjust by bending cam on throttle lever (T109-41)



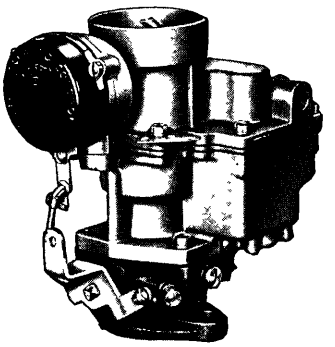
Hudson—1952-1956—Carbureters Nos. 968S-2113S

WHEN SERVICING, USE GASKET ASSORTMENT No. 198 (968S-2113S); REPAIR PACKAGE No. 1723 (968S); No. 1776 (2113S)

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-908S	Body flange assembly (968S) (Sup by 1 1028S)	
1-1028S	Body flange assembly	
1A-21	FLANGE GASKET	
2-138	Throttle valve	
3-786S	Throttle shaft and lever assembly	
6-410S	Air horn assembly	
6-810S	Air horn and Climatic® control assembly	
7-107	Choke valve	
11-206S	LOW SPEED JET ASSEMBLY (968S)	
11-258S	LOW SPEED JET ASSEMBLY (2113S)	
11B-41	Rivet plug	
11B 62	Rivet plug	
11B-79	Rivet plug	(5)
11B-108	IDLE PORT RIVET PLUG	
11B-117S	Idle passage plug assembly	
11B-119S	Ball retainer screw plug assembly	
11B-127S	Passage plug assembly	(2)
11B-130	NOZZLE RETAINER PLUG	
12-280S	NOZZLE ASSEMBLY	
14-222S	Choke piston lever, link and shaft assembly	
14-406S	Choke lever screw and link assembly	
15 35S	Strainer nut assembly	
20-22	Needle seat and plug gasket	(3)
20-26	Metering rod jet and plug gasket	(3)
20-35	BOWL STRAINER GASKET	
20-45	NOZZLE GASKET	
21-76S	Float and lever assembly	
24-15	Float lever pin	
25-75S	NEEDLE AND SEAT ASSEMBLY	
30-14	BOWL STRAINER GAUZE	
30-35	PUMP STRAINER	
30A-39	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	THROTTLE VALVE ATTACHING SCREW	(2)
48-74	PUMP JET	
53A-199S	Pump arm and countershaft assembly	
61-57	Idle adjustment screw spring	
61-63	Pump spring	
61-75	Metering rod spring	
61-178	VACUUM PISTON SPRING	
61-188	Rocker arm spring	
63-48	Coil housing retainer	(3)
64-58S	PLUNGER AND ROD ASSEMBLY	
75-487	Metering rod (special for racing) (968S)	
75-834	METERING ROD—STANDARD (968S)	
75-861	Metering rod—1 size lean (968S)	
75-862	Metering rod—2 sizes lean (968S)	
75-863	Metering rod—3 sizes lean (968S)	
75-955	METERING ROD—STANDARD (2113S)	
75-974	Metering rod—1 size lean (2113S)	
75-975	Metering rod—2 sizes lean (2113S)	
75-976	Metering rod—3 sizes lean (2113S)	
86-15	Flange stud lock washer	(2)
101-26	Coil housing attaching screw	(3)
101-28	Throttle shaft arm clamp screw	
101-78	Choke lever clamp screw	
101-81	Fast idle cam screw	
101-120	Throttle lever adjusting screw	
101-143S	Piston housing attaching screw and washer assembly	
101-147S	Body flange attaching screw and washer assembly	(2)
101-148S	Bowl cover attaching screw and washer assembly	(5)
101-151S	Air horn attaching screw and washer assembly	(2)
105A-13	Flange stud nut	(2)
114-42S	THROTTLE SHAFT ARM AND SCREW ASSEMBLY	
115-122	THROTTLE CONNECTOR ROD	
116-13	PUMP INTAKE AND DISCHARGE CHECK BALL	(2)
117-58	PUMP CONNECTOR LINK	
117-66S	Piston link and spring assembly	
118-28	Dust cover	
120-15S	METERING ROD JET ASSEMBLY	
121-51	AIR HORN GASKET	
121-58	BOWL COVER GASKET	
121-72	BODY FLANGE GASKET	
121-74	COIL HOUSING GASKET	
129-15	Metering rod disk	
146-88S	Bowl cover and strainer assembly	
150-62	Choke piston pin	
150-92	Anti percolator pin	
150A-10	Pin spring	(3)
160-67S	Vacuum piston and pin assembly	
160-75	Choke piston	
170G-64S	Thermostatic coil and housing assembly	
172-21	THROTTLE CONNECTOR ROD RETAINER	
181-53S	Fast idle cam and pin assembly	
184-18S	ANTI PERCOLATOR CAP AND ROCKER ARM ASSEMBLY	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is sh wn, only one is used



HUDSON
RAMBLER SIX
1955

YF Down-Draft Climatic® Control **Carbureter No. 2014S**

CARBURETER SPECIFICATIONS

For Hudson Six Cylinder Engine: 3 1/8 Inch Bore, 4 1/4 Inch Stroke

Dimensions: Flange size, 1 1/4 inch S. A. E.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 11/16 inch I. D.
Main venturi, 1 1/4 inch I. D.

Float Setting: See adjustments.

Vents: Outside, none. Inside, balance vent to air horn above choke valve.

Gasoline Intake: Size No. 46 (.081 inch) drill in needle seat.

Low Speed Jet Tube: Jet, size No. 70 (.028 inch) drill. By-pass in air horn, size No. 55 (.052 inch) drill. Economizer in body, size No. 53 (.0595 inch) drill. Idle bleed in body, size No. 52 (.0635 inch) drill.

Idle Port: Upper port, slot type, length .200 inch; width .030 inch.

Idle Port Opening: Top of port .142 to .146 inch above top edge of valve with valve tightly closed.

Lower Port (For Idle Adjustment Screw): .0615 to .0655 inch diameter.

Set Idle Adjustment Screw: 1/2 to 1 1/2 turns open. For richer mixture turn screw out. Do not idle engine below 550 r.p.m. (Std. and Overdrive trans.); 450 r.p.m. (Hydramatic—in neutral).

Main Nozzle: Nozzle is installed permanently. DO NOT REMOVE. Anti-percolator air bleed, size No. 70 (.028 inch) drill.

Metering Rod: Economy step .078 inch diameter; middle step tapers to .07325 inch diameter; power step .047 inch diameter.

Metering Rod Jet: .102 inch diameter.

Metering Rod Setting: See adjustments.

Accelerating Pump: Diaphragm type, vacuum and mechanically operated. Discharge restriction (in housing), size No. 65 (.035 inch) diameter. Intake ball check seat (in diaphragm housing), size No. 40 (.098 inch) drill. Discharge ball check seat (in diaphragm housing), size No. 32 (.116 inch) drill. Vacuum restriction (in flange), size No. 55 (.052 inch) drill. Vacuum passage (diaphragm bleed), size No. 65 (.035 inch) drill.

Pump Adjustment: None.

Choke: Carter Climatic® Control, set one point lean, offset butterfly type. Choke heat suction hole in body, size No. 46 (.081 inch) drill.

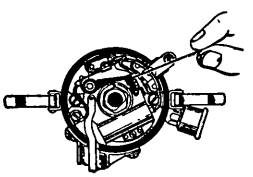
Vacuum Spark Port: Round type, size .040 inch diameter. Bottom of port .021 to .029 inch above top edge of valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

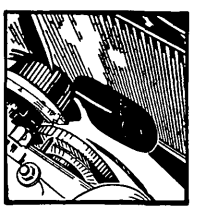
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



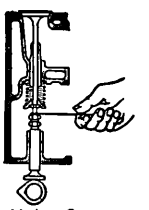
Spark Plug Gap .030"



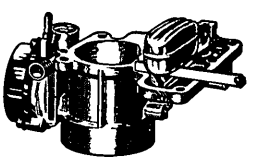
Breaker Point Setting .020"



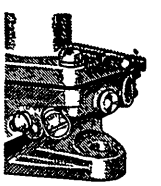
Ignition Timing Breaker Points to Open: 4° A. T. D. C.



Valve Setting (Hot) Intake .015" Exhaust .015"



Float Setting 1/2 Inch



Idle Adjustment Screw Setting 1/2 to 1 1/2 Turns Open

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: With gasket removed, bowl cover assembly inverted, and float resting on seated needle, the distance from the bowl cover to the top of float should be 1/2 inch (gauge T109-83). Adjust by bending lip of float, not float arm.

METERING ROD ADJUSTMENT: This adjustment is important and should be checked each time the carbureter is reassembled or lean rods are installed. With throttle valve seated in bore of carbureter, press down on upper end of diaphragm shaft until diaphragm bottoms in vacuum chamber. (Tool T109-212 may be used to hold diaphragm shaft down while adjusting metering rod.)

Metering rod should contact bottom of metering rod well, and meeting rod arm should contact lifter link between

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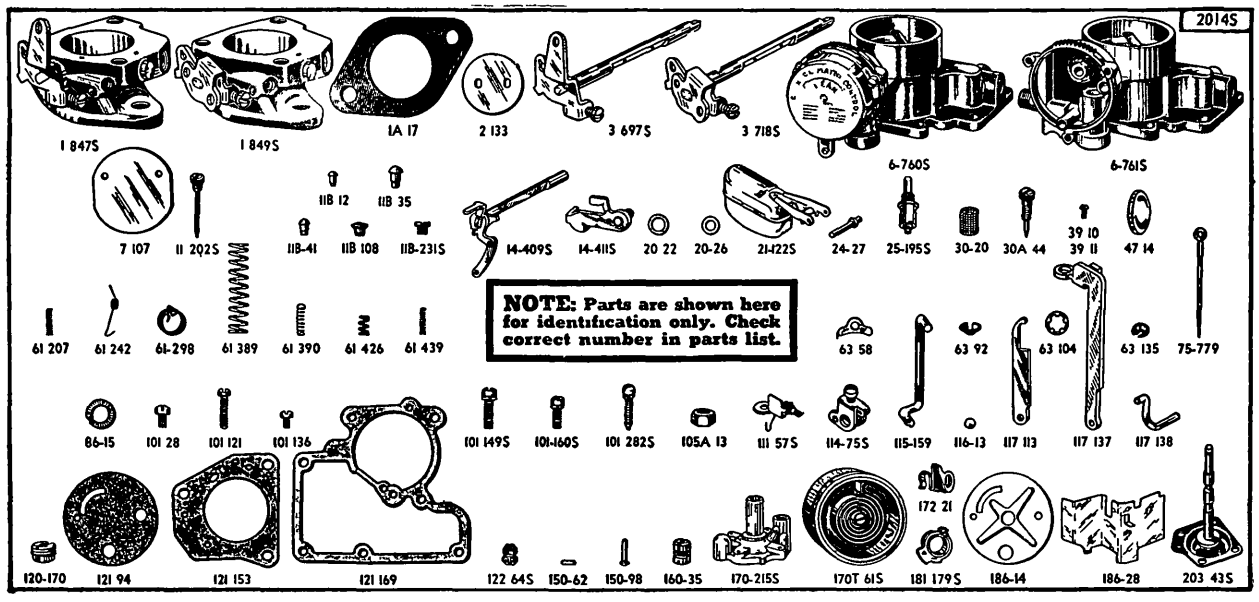
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springs and at supporting lug Adjust by bending lip up or down

ACCELERATING PUMP If acceleration is not satisfactory remove pump housing, intake check assembly and discharge check ball and spring Examine diaphragm for wear or damage Be sure intake screen intake check and discharge check are not clogged with lint or foreign matter Discharge check ball must seat as a leak at this point will result in poor acceleration, inspect and replace all worn parts, clean and blow out all passages with compressed air

FAST IDLE ADJUSTMENT. Remove thermostatic coil housing, gasket and baffle plate Crack throttle valve, and hold choke valve fully closed, then close throttle This will allow fast idle cam to revolve to fast idle position With choke valve held tightly closed and slight tension on throttle lever, there should now be 054 inch clearance (gauge T109-193) between throttle valve and bore of carbureter (side opposite idle port) Adjust by bending connector link at lower angle Use bendnig tool T109-213

UNLOADER ADJUSTMENT This adjustment must be made after fast idle adjustment Hold throttle valve in wide open position and close choke valve as far as possible without forcing There should be 9/32 inch clearance between lower edge af choke valve and inner wall of air horn (gauge T109-126) Adjust by bending arm on choke trip lever (Use tool T109-214)



Hudson 6—1955—Carbureter No. 2014S

WHEN SERVICING, USE GASKET ASSORTMENT No. 216, REPAIR PACKAGE No 1590A

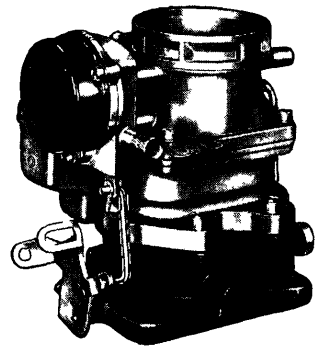
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-847S	Body flange assembly	
1A-17	FLANGE GASKET	
2-133	Throttle valve	
3-697S	Throttle shaft and lever assembly	
6-858S	Air horn and Climatic® control assembly	
6-859S	Air horn assembly	
7-107	Choke valve	
11-202S	LOW SPEED JET ASSEMBLY	
11B-12	Flange passage plug	
11B-35	Nozzle passage rivet plug	
11B-41	Rivet plug	
11B-108	IDLE PORT RIVET PLUG	
11B-231S	Ball retainer screw plug assembly	
14-409S	Choke piston lever and shaft assembly	
14-411S	Choke trip lever and pin assembly	
20-22	Needle seat gasket	
20-26	Ball retainer screw plug gasket	
20 114	Diaphragm housing attaching screw gasket	
21-117S	Float and lever assembly	
24-27	Float lever pin	
25-189S	NEEDLE AND SEAT ASSEMBLY	
30-20	PUMP INTAKE STRAINER	
30A-44	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	THROTTLE VALVE ATTACHING SCREW	(2)
47-14	Welsh plug	
61-242	Metering rod spring	
61-298	Fast idle cam spring	
61-389	PUMP DIAPHRAGM SPRING	
61-390	Upper pump spring	
61-426	Idle adjustment screw spring	
61-439	PUMP DISCHARGE SPRING	
61-451	†Pump diaphragm spring	
63-58	Coil housing retainer	(3)
63-92	DIAPHRAGM SPRING RETAINER	
63-104	THROTTLE SHAFT RETAINING RING	
63-135	UPPER PUMP SPRING RETAINER	
75-779	METERING ROD STANDARD	

Part No	PART NAME	
75-793	Metering rod 1 size lean	
75-794	†Metering rod 2 sizes lean	
75-802U	Unitized package (Consists of 1—75 793 and 1—75 794)	
86-15	Flange stud lock washer	(2)
101-28	Throttle shaft arm attaching screw	
101-58	Diaphragm housing attaching screw	
101-121	Throttle lever adjustment screw	
101-136	Coil housing attaching screw	(3)
101-149S	Body flange attaching screw and washer assembly	(3)
101-160S	Air horn attaching screw and washer assembly	(7)
101-282S	Diaphragm housing attaching screw and washer assembly	(3)
105A-13	Flange nut	(2)
111-57S	Metering rod arm assembly	
114-75S	THROTTLE SHAFT ARM ASSEMBLY	
115-159	Choke connector rod	
116-13	PUMP CHECK BALL	
117-113	Fast idle link	
117-137	PUMP LIFTER LINK	
117-138	PUMP CONNECTOR LINK	
120-170	METERING ROD JET	
121-94	THERMOSTATIC COIL HOUSING GASKET	
121-153	BODY FLANGE GASKET	
121-169	BOWL COVER AND AIR HORN GASKET	
122-64S	INTAKE BALL CHECK ASSEMBLY	
150 62	Choke piston pin	
156-17	Fuel line elbow	
160-106	Choke piston	
170-215S	Pump diaphragm housing assembly	
170T-61S	Thermostatic coil and housing assembly	
172-21	Throttle connector rod retainer	
181-179S	Fast idle cam assembly	
186-14	Coil housing baffle plate	
186-45	Fuel bowl baffle plate	
203-43S	PUMP DIAPHRAGM ASSEMBLY	

†For use at 5000 Ft Altitude

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used



Casting No. 771 on face of flange.

HUDSON

"HORNET"—Model 7D
"SUPER WASP"—Model 5D
1954

(776S can also be used.)

WGD Dual Down-Draft Climatic® Control Carbureter No. 2115S

CARBURETER SPECIFICATIONS

For Hudson (7D) 6 Cylinder Engine: 3-13/16 Inch Bore, 4½ Inch Stroke
For Hudson (5D) 6 Cylinder Engine: 3-9/16 Bore, 4⅜ Inch Stroke

Dimensions Flange size 1¼ inch dual, 4 bolt type Primary venturi 11/32 inch I D Secondary venturi, 21/32 inch I D Main venturi, 1 3/16 inch I D

Float Level: See adjustments

Vents. Inside None Outside size No 10 (1935 inch) drill

Gasoline Intake: Size No 42 (0935 inch) drill in needle seat

Low Speed Jet Tube. Jet, size No 68 (031 inch) drill By-pass in air horn, size No 55 (052 inch) drill Economizer in air horn size 045 inch diameter Idle bleed in air horn size No 56 (0465 inch) drill

Idle Port. Upper slot type, length 200 inch, width 030 inch

Idle Port Opening· 157 to 163 inch above upper edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw): Size 0615 to 0655 inch diameter

Set Idle Adjustment Screw ¾ to 1¾ turns open For richer mixture turn screw out Do not idle engine below 500 r p m (Hydra-Matic In Drive Range). 550 r p m (standard and over drive Trans)

Main Nozzle: Nozzle is installed permanently DO NOT REMOVE Anti percolating well, jet size No 66 (033 inch) drill

Metering Rod (Vacumeter Type): Economy step 068 inch diameter Middle step tapers to 063 inch diameter Power step 048 inch diameter

Metering Rod Jet Size 089 inch diameter

Metering Rod Setting: See adjustments

Accelerating Pump. Discharge jet (twin) size No 74 (0225 inch) drill Pump jet air bleed passage to outside ⅛ inch drill Intake check ball seat size 100 inch diameter Discharge needle seat size No 50 (070 inch) drill

Pump Adjustment. See adjustments

Choke: Carter Climatic® Control set 2 points lean Butterfly type offset valve Choke heat suction hole in piston housing size No 36 (1065 inch) drill

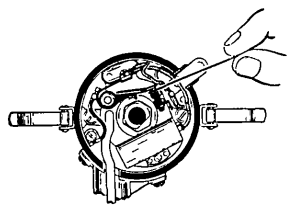
Vacuum Spark Port: Round type 039 to 041 inch diameter Top of port to be 020 to 030 inch above top edge of valve with valve tightly closed.

Motor Tune-Up—Be Accurate! Always Use Feeler Gauges!

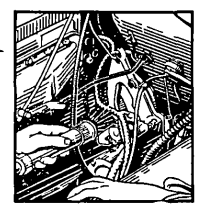
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter



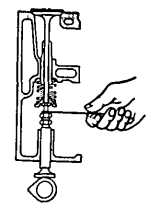
Spark Plug Gap .032"



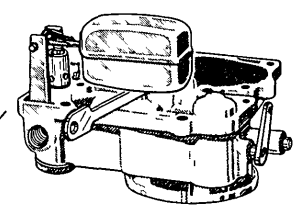
Breaker Point Setting 020"



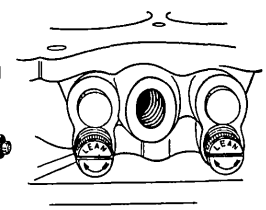
Ignition Timing Breaker Points to Open: T.D C.



Valve Setting (Hot) Intake .008" Exhaust .010"



Float Setting (See Adjustments)



Idle Adjustment Screw Setting ¾ to 1¾ Turns Open

CARBURETER ADJUSTMENTS

Float Adjustment With bowl cover gasket removed bowl cover inverted and needle seated, there should be 3/16 inch (gauge T109 28) between top of float and bowl cover Adjust by bending float arm

Pump Adjustment. Back out throttle lever set screw until throttle valves seat in bores of carbureter Place Universal pump travel gauge T109-117S inverted on edge of dust cover boss of bowl cover Turn knurled nut of gauge until finger on gauge just touches top of

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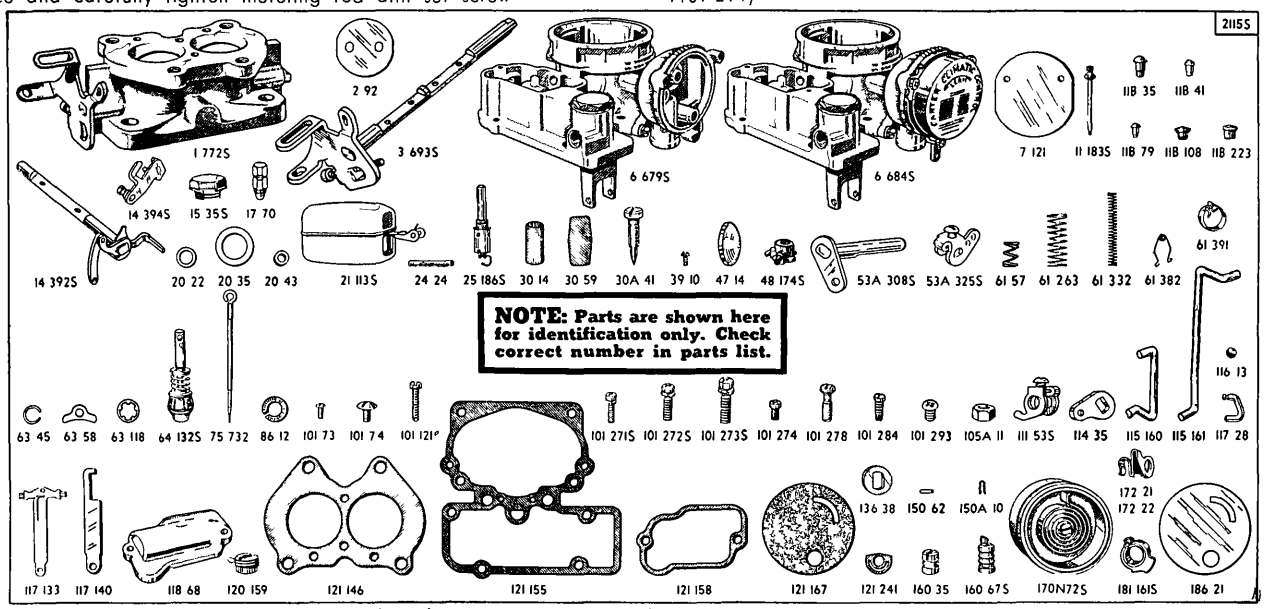
plunger shaft Number indicated on gauge should be '43 Adjust by bending throttle connector rod at upper angle

Optional Adjustment The distance from the dust cover boss to the top of the plunger shaft should be 1/2 inch Adjust as mentioned above

Metering Rod Adjustment The metering rods must be adjusted after the pump adjustment or when leaner than standard rods are installed No metering rod gauges are necessary procedure is as follows With the throttle lever set screw backed out and throttle valves seated in bores of carbureter press down on vacumeter link until metering rods bottom in casting With rods held in this position revolve metering rod arm until lip contacts vacumeter link Hold in place and carefully tighten metering rod arm set screw

Fast Idle Adjustment With the thermostatic coil housing gasket and baffle plate removed crack throttle valve and hold choke valve closed Then close throttle There should now be 026 clearance (gauge T109 189) between throttle valve and bore of carbureter (side opposite idle port) Adjust by bending the choke connector rod at lower angle

Unloader Adjustment Must be made after fast idle adjustment Hold throttle valve wide open and close choke valve as far as possible without forcing there should now be 5/32 inch (gauge T109 154) clearance between upper edge of choke valve and inner wall of air horn Adjust by bending arm on choke trip lever (tool T109 214)



Hudson—1954—Carbureter No. 2115S

WHEN SERVICING, USE GASKET ASSORTMENT No. 196 REPAIR PACKAGE No 1773
PART NAMES IN CAPITAL LETTERS LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-772S	Body flange assembly	
2-92	Throttle valve	(2)
3-693S	Throttle shaft and lever assembly	
6 679S	Air horn assembly	
6-684S	Air horn and Climatic ® control assembly	
7-121	Choke valve	
11-183S	LOW SPEED JET ASSEMBLY	(2)
11B-35	Rivet plug	(3)
11B-41	Rivet plug	(3)
11B-79	Rivet plug	
11B-108	Idle port rivet plug	(2)
11B 223	Nozzle passage rivet plug	(2)
14-392S	Choke piston lever link and shaft assembly	
14-394S	Choke trip lever and pin assembly	
15 35S	Strainer nut assembly	
17-70	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	
20-35	BOWL STRAINER GASKET	
20-43	Piston housing gasket	
21 113S	Float and lever assembly	
24-24	Float lever pin	
25-186S	NEEDLE AND SEAT ASSEMBLY	
30-14	BOWL COVER STRAINER	
30-59	STRAINER	
30A 41	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
47-14	Welsh plug	
48-174S	Pump jet and housing assembly	
53A-308S	Pump operating lever and countershaft assembly	
53A-325S	Pump arm and screw assembly	
61-57	Idle adjustment screw spring	(2)
61-263	PUMP SPRING (LOWER)	
61-332	VACUUM PISTON SPRING	
61-382	METERING ROD SPRING	
61-391	Fast Idle cam spring	
63-45	PUMP CHECK BALL RETAINER RING	
63-58	Coil housing retainer	(3)
63-118	Throttle shaft retaining ring	
64-132S	PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
75-732	METERING ROD—STANDARD	(2)

Part No	PART NAME	
75-741	Metering rod—2 sizes lean	(2)
75-980	Metering rod—1 size lean	(2)
75 981	Metering rod—3 sizes lean	(2)
86 12	Flange stud lock washer	(4)
101-73	Throttle valve attaching screw	(4)
101-74	Throttle shaft arm attaching screw	
101-121	Throttle lever adjustment screw	
101-271S	Dust cover attaching screw and washer assy	(2)
101-272S	Air horn attaching screw and washer assembly	(8)
101-273S	Body flange attaching screw and washer assy	(4)
101-274	Coil housing attaching screw	(3)
101-278	Pump jet housing attaching screw	
101-284	Piston housing attaching screw	(3)
101-293	Metering rod arm clamp screw	(2)
105A-11	Flange stud nut	(4)
111-53S	Metering rod arm and screw assembly	
114-35	THROTTLE SHAFT ARM	
115-160	Choke connector rod	
115-161	THROTTLE CONNECTOR ROD	
116-13	PUMP INTAKE CHECK BALL	
117-28	Pump connector link	
117-133	Vacumeter piston link	
117-140	Fast idle link	
118-68	Dust cover	
120-159	METERING ROD JET	(2)
121-146	BODY FLANGE GASKET	
121-155	AIR HORN GASKET	
121-158	DUST COVER GASKET	
121-167	COIL HOUSING GASKET	
121-241	PUMP JET GASKET	
136-38	Throttle shaft washer	
150-62	Choke piston pin	
150A-10	Pin spring	
160-35	Choke piston	
160-67S	Vacuum piston and pin assembly	
170N72S	Thermostatic coil and housing assembly	
172-21	Throttle connector rod retainer	
172-22	Throttle and choke connector rod retainer	(2)
181-161S	Fast idle cam assembly	
186-21	Choke baffle plate	

NOTE **Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used**

HUDSON 1952-1954

990S
Models 5B, 4C—1952-1953
Model 5C—1953

WASP AND SUPER WASP

2114S
Model 5D—1954

(Two Carbureters Per Engine)

WA1 Down-Draft Climatic® Control **Carbureters Nos. 990S-2114S**

CARBURETER SPECIFICATIONS

For Hudson 6 Cylinder Engine (Models 5B, 5C and 5D): 3-9/16 Inch Bore, 4⅜ Inch Stroke
For Hudson 6 Cylinder Engine (Model 4C): 3-9/16 Inch Bore, 3⅞ Inch Stroke

Dimensions: Flange size, 1¼ inch S. A. E.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 11/16 inch I. D.
Main venturi, 1⅜ inch I. D.

Float Level: Distance from seam of float (at free end) to tip on lower edge of float chamber cover, when needle is seated, to be ½ inch.

Vents: Outside, No. 10 (.1935 inch) drill. Inside, none.

Gasoline Intake: Square vertical push-pull needle. Size No. 46 (.081 inch) drill hole in needle seat.

Low Speed Jet Tube: Jet, size (990S) No. 65 (.035 inch) drill; (2114S) No. 66 (.033 inch) drill. By-pass in body size No. 53 (.0595 inch) drill. Economizer, in body .0545-.0555 inch diameter. Idle bleed, in body, size No. 53 (.0595 inch) drill.

Idle Port: Length .165 inch; width .030 inch.

Idle Port Opening: .120 to .124 inch above valve with valve tightly closed.

Idle Screw Seat: No. 46 (.081 inch) drill.

Set Idle Adjustment Screw: ¾ to 1¾ turns open. For richer mixture turn screw out. Do not idle engine below 500 r.p.m. (Hydra-Matic—in Drive Range); 550 r.p.m. (Standard and Overdrive Trans.).

Main Nozzle: (Assembly) Slip nozzle, flush type, (angle, tip) seats in primary venturi, at 45° angle. Discharge jet size, .110 inch diameter. Inner nozzle (seats in slip nozzle) I. D. No. 31 (.120 inch) drill.

Metering Rod (Vacumeter Type): Economy step (990S) .075 inch; (2114S) .0745 inch diameter. Middle step tapers to (990S) .059 inch; (2114S) .066 inch diameter.
Power step (990S) .055 inch; (2114S) .059 inch diameter.

Metering Rod Jet: .1015 inch diameter.

Metering Rod Setting: Use gauge, part No. T109-102 (2.468 inches).

Accelerating Pump: Pressure type (spring operated lever) with adjustable stroke.
Discharge jet, Size No. 74 (.0225 inch) drill. Intake ball check seat, size No. 60 (.040 inch) drill. Discharge ball check seat, size No. 32 (.116 inch) drill. Relief passage (to outside), size No. 42 (.0935 inch) drill.

Pump Adjustment: See Adjustments.

Choke: Carter Climatic® Control, set 1 point lean—butterfly type, offset valve. Choke Heat Suction Hole, in body, size No. 40 (.098 inch) drill.

Vacuum Spark Port: .051-.054 inch diameter. Top of port .040 inch above top edge of valve.

MOTOR TUNE-UP

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open:	Valve Setting (Hot)	Float Setting	Idle Adjustment Screw Setting
.032"	.020"	T. D. C.	Intake .010" / Exhaust .012" } 1952-53 Intake .008" / Exhaust .010" } 1954	½ Inch (Use Gauge T109-83)	¾ to 1¾ Turns Open

CARBURETER ADJUSTMENTS

PUMP ADJUSTMENT: With throttle valve seated, and connector link in lower hole (medium stroke), pump plunger should travel 16/64" from closed to wide open throttle position. Measure pump travel by using Universal pump travel gauge T109-117S. Place base of the gauge on ridged portion of bowl cover so that projecting portion of pump gauge rests on top surface of connector link at pump shaft. Hold gauge vertical. The difference between the numbers shown by index mark on gauge, at wide open and closed throttle position should be "16" (16/64"). Adjust by bending throttle connector rod at lower angle.

METERING ROD ADJUSTMENT: Correct setting of metering rod is important and must be made after pump adjustment or when leaner than standard rods are installed. Insert gauge (tool T109-102) in place of metering rod, seating tapered end of gauge in metering rod jet. Hold gauge vertical to insure seating in jet. With throttle valve seated, press down on piston link directly over piston until it contacts the pump arm. There should now be less than .005" clearance between metering rod pin and shoulder in notch of gauge. Gauge must not drag on pin. Adjust by bending lip on piston link (use tool T109-105). Remove gauge and install metering rod, disc, pin and spring.

ANTI-PERCOLATOR ADJUSTMENT: Crack throttle valve .020" by placing gauge T109-29 between throttle valve and bore of carbureter (side opposite idle port). Bend rocker arm (use tool T109-105) until there is a clearance of .005" to .015" between rocker arm lip and pump arm.

FAST IDLE ADJUSTMENT: With fast idle cam in normal idle position, tighten throttle lever adjusting screw until it just seats against cam. Hold throttle lever closed and pull cam back until first (or lower) step is against (not on) set screw. There should now be ½" clearance (gauge T109-83) between inside wall of air horn and lower edge of choke valve. Adjust by bending fast idle link at offset portion (use tool T109-41).

UNLOADER ADJUSTMENT: With throttle valve wide open there should be 9/16" clearance (gauge T109-84) between lower edge of choke valve and inner wall of air horn. Adjust by bending cam on throttle lever (use tool T109-41)

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Hudson—1952-1954—Carbureters Nos. 990S-2114S

WHEN SERVICING, USE GASKET ASSORTMENT No 139A, REPAIR PACKAGE No 1790

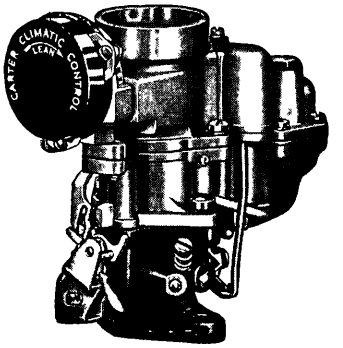
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-971S	Body flange assembly (Sup by 1 1029S) (990S)	
1-1029S	Body flange assembly	
1A-17	FLANGE GASKET	
2-130	Throttle valve	
3 795S	Throttle shaft and lever assembly	
6-410S	Air horn assembly	
6 810S	Air horn and Climatic® control assembly	
7-107	Choke valve	
11-206S	LOW SPEED JET ASSEMBLY (990S)	
11-258S	Low speed jet assembly (2114S)	
11B-41	Nozzle passage rivet plug	
11B-42	Rivet plug	
11B-79	Rivet plug	(5)
11B-108	IDLE PORT RIVET PLUG	-
11B-117S	Idle passage plug assembly	
11B-119S	Ball retainer screw plug assembly	
11B-127S	Passage plug assembly	(2)
11B-130	NOZZLE RETAINER PLUG	
12-280S	NOZZLE ASSEMBLY	
14-222S	Choke piston lever link and shaft assembly	
14-406S	Choke lever screw and link assembly	
15-35S	Strainer nut assembly	
20-22	Needle seat and plug gasket	(3)
20-26	Metering rod jet and plug gasket	(3)
20-35	BOWL STRAINER GASKET	
20-45	NOZZLE GASKET	
21-76S	Float and lever assembly	
24-15	Float lever pin	
25-75S	NEEDLE AND SEAT ASSEMBLY	
30-14	BOWL STRAINER GAUZE	
30-34	PUMP STRAINER	
30A-39	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
48-74	PUMP JET	
53A-211S	Pump operating lever and countershaft assembly	
53A-289S	Pump arm and collar assembly	
61-57	Idle adjustment screw spring	
61-75	Metering rod spring	
61-171	Pump spring	
61-178	VACUUM PISTON SPRING	
61-188	Rocker arm spring	
61-211	Pump operating lever spring	
63-45	Ball retainer ring	

Part N	PART NAME	
63-48	Coil housing retainer	(3)
64-55S	PLUNGER AND ROD ASSEMBLY	
75-851	METERING ROD—STANDARD (990S)	
75-856	Metering rod—1 size lean (990S)	
75-857	Metering rod—2 sizes lean (990S)	
75-858	Meter ng rod—3 sizes lean (990S)	
75-956	Metering rod—standard (2114S)	
75 977	Meter ng rod—1 size lean (2114S)	
75-978	Metering rod—2 sizes lean (2114S)	
75 979	Metering rod—3 sizes lean (2114S)	
86 15	Flange stud lock washer	(2)
101-26	Coil housing attaching screw	(3)
101-28	Throttle shaft arm clamp screw	
101-78	Choke lever clamp screw	
101-81	Fast idle cam screw	
101-87	THROTTLE VALVE ATTACHING SCREW	(2)
101-120	Throttle lever adjusting screw	
101-143S	Piston housing attaching screw and washer assembly	
101-147S	Body flange attaching screw and washer assembly	(2)
101-148S	Bowl cover attaching screw and washer assembly	(5)
101 151S	Air horn attaching screw and washer assembly	(2)
105A-13	Flange stud nut	(2)
114-42S	THROTTLE SHAFT ARM AND SCREW ASSEMBLY	
115-122	THROTTLE CONNECTOR ROD	
116-13	PUMP INTAKE AND DISCHARGE CHECK BALL	
117-58	PUMP CONNECTOR LINK	
117-66S	Piston link and spring assembly	
118-28	Dust cover	
120-15S	METERING ROD JET ASSEMBLY	
121-51	AIR HORN GASKET	
121-58	BOWL COVER GASKET	
121-72	BODY FLANGE GASKET	
121-74	COIL HOUSING GASKET	-
129-15	Metering rod disk	
146-88S	Bowl cover and strainer assembly	
150-62	Choke piston pin	
150-92	Anti percolator pin	-
150A-10	Pin spring	(3)
160-67S	Vacuum piston and pin assembly	
160-75	Choke piston	
170G-64S	Thermostatic coil and housing assembly	
172-21	THROTTLE CONNECTOR ROD RETAINER	-
181-67S	Fast idle cam and pin assembly	
184-18S	ANTI PERCOLATOR CAP AND ROCKER ARM ASSEMBLY	-

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown nly one is used

MODELS
Pacemaker
"500" — 1950
"4A" — 1951
"4B" — 1952
"4C" — 1953
Pacemaker Deluxe
"50A"—1950
Wasp
"4D"—1954



Casting No 682 on face of flange

HUDSON
1950-1954

WA1 Down-Draft Climatic® Control Carbureter—**Model 749S**

CARBURETER SPECIFICATIONS

For Hudson 6 Cylinder Engine 3 9/16 Inch Bore 3⅞ Inch Stroke

Dimensions Flange size 1½ inch S A E
Primary venturi 11/32 inch I D
Secondary venturi 11/16 inch I D
Main venturi 1⅜ inch I D

Float Level Distance from seam of float (at free end) to tip on lower edge of float chamber cover when needle is seated to be ½ inch

Vents Outside No 10 drill Inside none

Gasoline Intake Square vertical needle Size No 46 (.081") drill hole in needle seat

Low Speed Jet Tube Jet size No 65 drill By pass size 1.6 mm drill Economizer in body .0545 .0555 inch diameter Idle bleed size No 52 drill

Idle Port Length .190 inch width .040 inch

Idle Port Opening .136 to .140 inch above valve with valve closed tight

Idle Screw Seat No 46 drill

Set Idle Adjustment Screw ½ to 1½ turns open For richer mixture turn screw out Do not idle engine below 500 r p m (Hydra Matic—In Drive Range) 550 r p m (Standard and Overdrive Trans.)

Main Nozzle (Assembly) Slip nozzle flush type (angle tip) seats in primary venturi at 45° angle Discharge jet size .110 inch diameter Inner nozzle (seats in slip nozzle) I D No 31 (.120") drill

Metering Rod (Vacumeter Type) Economy step .0745 inch diameter middle step tapers to .066 inch power step .040 inch diameter
Length 3 9/64 inches

Metering Rod Jet .1015 inch diameter

Metering Rod Setting Use gauge part No T109 102 (2.468 inches)

Accelerating Pump Pressure type with adjustable stroke Discharge jet size No 72 drill Intake ball check size No 60 drill Discharge ball check size No 32 drill Relief passage (to outside) size No 42 drill

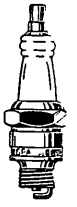
Pump Adjustment 16/64 inch plunger travel (full throttle position) medium stroke Use gauge No T109 117S

Choke Carter Climatic® Control set at index Butterfly type offset valve Choke Heat Suction Hole in body size No 30 drill

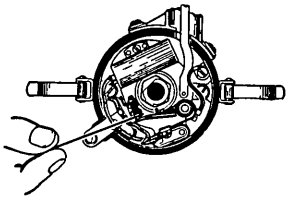
Vacuum Spark Port .054 .057 inch diameter Bottom of port .020 inch above valve

Motor Tune-Up—Be Accurate!

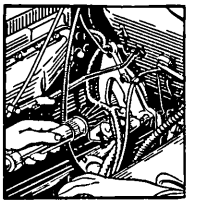
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



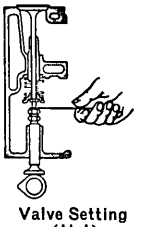
Spark Plug Gap
.032"



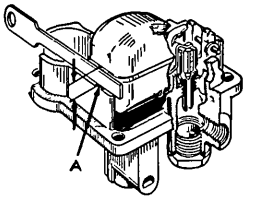
Breaker Point Setting
.020"



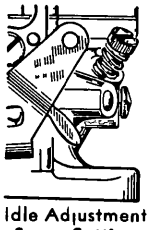
Ignition Timing Breaker Points to Open
T. D. C



Valve Setting (Hot)
Intake
.008" (1950-52, 1954)
.010" (1953)
Exhaust
.010" (1950-52, 1954)
.012" (1953)



Float Setting (Measure from point 'A to top of float seam)
½ Inch



Idle Adjustment Screw Setting
½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

PUMP ADJUSTMENT With throttle valve seated and connector link in lower hole (medium stroke) pump plunger should travel 16/64 from closed to wide open throttle position
Measure pump travel by using Universal pump travel gauge T109 117S Place base of the gauge on ridged portion of bowl cover so that projecting portion of pump gauge rests on top surface of connector link at pump shaft Hold gauge vertical The difference between the numbers shown by index mark on gauge at wide open and closed throttle position should be .16 (16/64")
Adjust by bending throttle connector rod at lower angle

METERING ROD ADJUSTMENT Correct setting of metering rod is important and must be made after pump adjustment or when leaner than standard rods are installed

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CARBURETER
TRADE MARK REG U S PAT OFF
MARCA REGISTRADA

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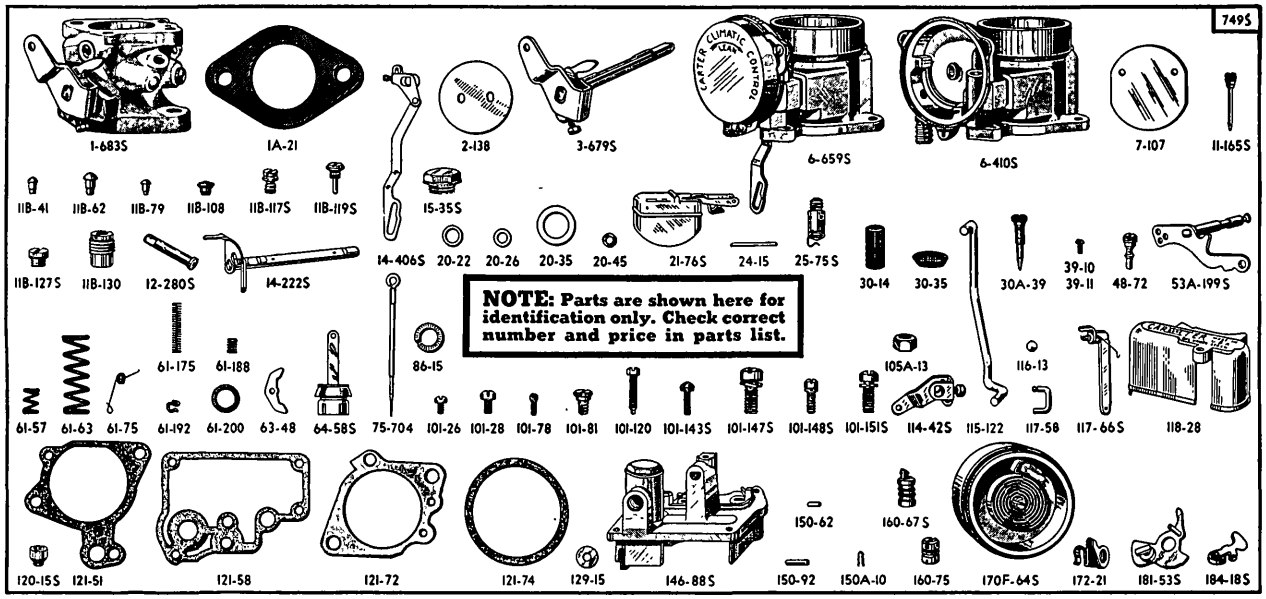
Insert gauge (tool No. T109-102) in place of metering rod, seating tapered end of gauge in metering rod jet. Hold gauge vertical to insure seating in jet. With throttle valve seated, press down on piston link, directly over piston until it contacts the pump arm. There should now be less than .005" clearance between metering rod pin and shoulder in notch of gauge. Gauge must not drag on pin.
Adjust by bending lip on piston link (use tool T109-105) Remove gauge and install metering rod, disc, pin and spring.

ANTI-PERCOLATOR ADJUSTMENT: Crack throttle valve .020" by placing gauge T109-29 between throttle valve and bore of carbureter (side opposite idle port). Bend rocker arm (use tool T109-105) until there is a clearance of .005" to .015" between rocker arm lip and pump arm.

FAST IDLE ADJUSTMENT: With fast idle cam in normal idle position, tighten throttle lever adjusting screw until it just seats against cam. Hold throttle lever closed and pull cam back until first (or lower) step is against (not on) set screw.

There should now be 5/8" clearance between inside wall of air horn and lower edge of choke valve. (Use tool T109-85.) Adjust by bending fast idle link at offset portion (use tool T109-41)

UNLOADER ADJUSTMENT: With throttle valve wide open there should be 7/16" clearance between lower edge of choke valve and inner wall of air horn (T109-80). Adjust by bending cam on throttle lever (T109-41).



Hudson 6—1950-1954—No. 749S

WHEN SERVICING, USE GASKET ASSORTMENT No. 198; REPAIR PACKAGE No. 1535

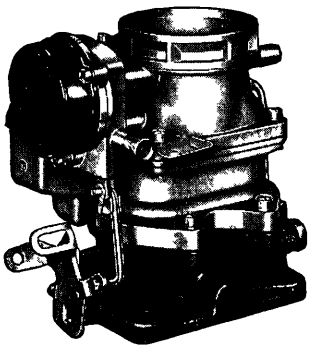
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME
1-683S	Body flange assembly
1A-21	Flange gasket
2-138	Throttle valve
3-679S	Throttle shaft and lever assembly (Sup. by 3-786S)
3-786S	Throttle shaft and lever assembly
6-410S	Air horn and piston housing assembly
6-659S	Air horn assembly
7-107	Choke valve
11-165S	LOW SPEED JET ASSEMBLY
11B-41	Rivet plug
11B-62	Body flange rivet plug
11B-79	Rivet plug (5)
11B-108	Idle port rivet plug
11B-117S	Idle passage plug assembly
11B-119S	Ball retainer screw plug assembly
11B-127S	Passage plug assembly (2)
11B-130	Nozzle retainer plug
12-280S	Nozzle assembly
14-222S	Choke piston lever, link and shaft assembly
14-406S	Choke lever, screw and link assembly
15-35S	Strainer nut assembly
20-22	Gasket (3)
20-26	Gasket (3)
20-35	BOWL STRAINER GASKET
20-45	NOZZLE GASKET
21-76S	Float and lever assembly
24-15	Float lever pin
25-75S	NEEDLE AND SEAT ASSEMBLY
30-14	BOWL STRAINER GAUZE
30-35	PUMP STRAINER
30A-39	Idle adjustment screw
39-10	CHOKE VALVE ATTACHING SCREW (2)
39-11	THROTTLE VALVE ATTACHING SCREW (2)
48-72	PUMP JET
53A-199S	Pump arm and countershaft assembly
61-57	Adjustment screw spring
61-63	Pump spring
61-75	Metering rod spring
61-175	VACUUM PISTON SPRING
61-188	Rocker arm spring
61-192	Needle pull clip
61-200	Plunger spring
63-48	Housing retainer (3)
64-58S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No. 149-108)
75-704	METERING ROD—STANDARD—.0745"-.0745" to .066"-.040"
75-712	Metering rod—1 size lean—.075"-.075" to .0675"-.043"
75-713	Metering rod—2 sizes lean—.0755"-.0755" to .069"-.046"
75-714	Metering rod—3 sizes lean—.076"-.076" to .0705"-.049"
86-15	Flange stud lock washer (2)
101-26	Coil housing attaching screw (3)
101-28	Throttle shaft arm clamp screw
101-78	Choke lever clamp screw
101-81	Fast idle cam screw
101-120	Throttle lever adjusting screw
101-143S	Piston housing attaching screw and washer assembly
101-147S	Body flange attaching screw and washer assembly (2)
101-148S	Bowl cover attaching screw and washer assembly (5)
101-151S	Air horn attaching screw and washer assembly (2)
105A-13	Flange nut (2)
114-42S	THROTTLE SHAFT ARM AND SCREW ASSEMBLY
115-122	THROTTLE CONNECTOR ROD
116-13	PUMP INTAKE AND DISCHARGE CHECK BALL (2)
117-58	PUMP CONNECTOR LINK
117-66S	Piston link and spring assembly
118-28	Dust cover
120-15S	METERING ROD JET ASSEMBLY
121-51	AIR HORN GASKET
121-58	BOWL GASKET
121-72	BODY FLANGE GASKET
121-74	COIL HOUSING GASKET
129-15	Metering rod disk
146-88S	Bowl cover assembly
150-62	Choke piston pin
150-92	Anti-percolator pin
150A-10	PIN SPRING (3)
160-67S	Vacuum piston and pin assembly
160-75	Choke piston
170F-64S	Thermostatic coil and housing assembly
172-21	THROTTLE CONNECTOR ROD RETAINER
181-53S	Fast idle cam and pin assembly
184-18S	ANTI-PERCOLATOR CAP AND ROCKER ARM ASSEMBLY

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

776S
Super 6—501, 5A, 1950-51
Commodore 6—502, 6A, 6B, 1950-52
Hornet 6—7A, 7B, 7C, 1951-53
Wasp—5B, 1952
Super Wasp—5C, 1953

773S
Super 8—503, 1950
Commodore 8—504, 8A, 8B, 1950-52



Cut Shows 776S

HUDSON
SIX CYLINDER
1950-1953
EIGHT CYLINDER
1950-1952
(776S can be used in place of 773S)

WGD Dual Down-Draft Climatic® Control **Carbureters Nos. 773S** (8) - **776S** (6)

CARBURETER SPECIFICATIONS

For Hudson Hornet (776S) 6 Cylinder Engine 3 13/16 Inch Bore 4½ Inch Stroke
For Hudson (776S) 6 Cylinder Engine 3 9/16 Inch Bore 4⅜ Inch Stroke
For Hudson (773S) 8 Cylinder Engine 3 Inch Bore 4½ Inch Stroke

Dimensions Flange size 1¼ inch dual 4 bolt type
Primary venturi 11/32 inch I D
Secondary venturi 21/32 inch I D
Main venturi 1 3/16 inch I D

Float Level Distance from float to bowl cover when needle is seated to be 3/16 inch Use gauge No T109 28

Vents Outside No 10 (1935") drill Inside none

Gasoline Intake Square vertical (push pull) needle Seat size No 42 drill

Low Speed Jet Tube Jet size No 66 (033") drill
By pass size No 55 (052") drill
Economizer size 1 15 mm (045") drill
Idle bleed size No 56 (0465") drill

Idle Ports Upper port slot type length 200 inch Width 030 inch

Idle Port Opening 157 to 163 inch above upper edge of valve with valve closed tight

Lower Port (For Idle Adjustment Screw) Size 0615 to 0655 inch diameter

Set Idle Adjustment Screw ½ to 1 turn open For richer mixture turn screw out Idle engine between 540 560 r p m (Syncro Mesh Trans) 490 510 (Hydra Matic Trans)

Nozzle In primary venturi round end type Inside diameter No 30 drill Nozzle is installed permanently **Do not remove** Anti percolating well jet size No 66 drill

Metering Rod (Vacumeter Type) (773S) Economy step 068 inch diameter Middle step tapers to 063 inch diameter Power step 044 inch diameter (776S) Economy step 067 inch diameter Middle step tapers to 060 inch diameter Power step 045 inch diameter Length 2 59/64 inches

Metering Rod Jet 089 inch diameter

Metering Rod Setting After adjusting for pump stroke set metering rod as follows With throttle tightly closed hold metering rods (assembled on vacumeter link) in maximum down position tighten clamp screw securely with metering rod arm contacting vacumeter link

Accelerating Pump Pressure type delayed action plunger
Discharge jet (twin) size No 74 drill
Pump jet air bleed passage to outside ⅛" drill
Intake ball check size No 40 (098") drill
Discharge (needle seat) size No 50 (070") drill

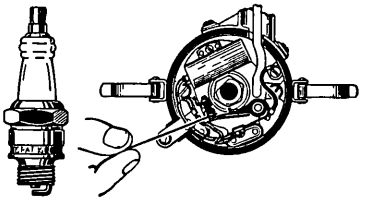
Pump Adjustment 43 as indicated on gauge T109 117S with throttle valves seated in bores of carbureter or ½ inch from top of dust cover boss to top of plunger shaft

Choke Carter Climatic® Control—set on index (773S) set two points lean (776S) Butterfly type offset valve Choke heat suction hole in body size No 36 drill

Vacuum Spark Port 039 to 041 inch diameter Top of port 020 to 030 inch above valve

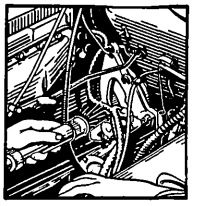
Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter

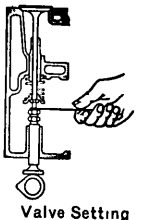


Spark Plug Gap 032"

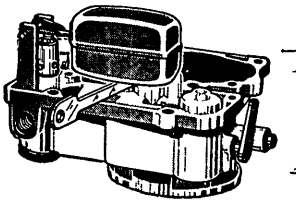
Breaker Point Setting
6 Cyl — 020"
8 Cyl — 017"



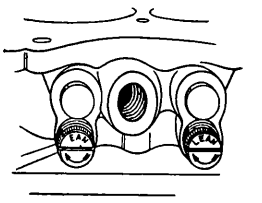
Ignition Timing Breaker Points to Open T D C



Valve Setting (Hot)
Intake 008" (1950 52)
010" (1953)
Exhaust 010" (1950 52)
012 (1953)



Float Setting 3/16 Inch (Use Gauge T109 28)



Idle Adjustment Screw Setting ½ to 1 Turn Open

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CARBURETER
TRADE MARK REG U S PAT OFF
MARCA REGISTRADA

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT (Fig. 1)

With bowl cover gasket removed, bowl cover inverted and needle seated, there should be 3/16 inch (gauge T109-28) between top of float and bowl cover Adjust by bending float arm

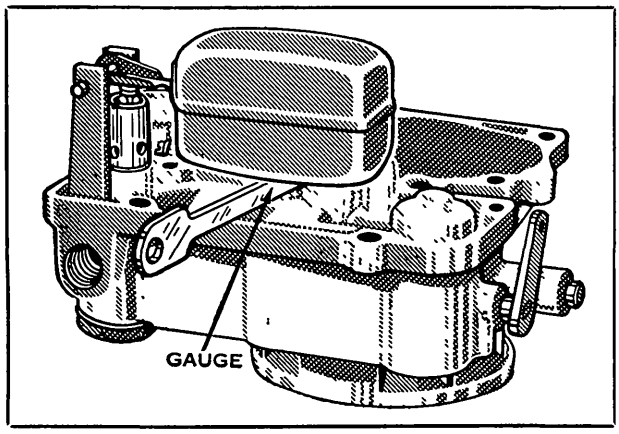


Figure 1
Float Adjustment

PUMP ADJUSTMENT (Fig. 2):

Back out throttle lever set screw until throttle valves seat in bores of carbureter. Place Universal pump travel gauge T109-117S inverted on edge of dust cover boss of bowl cover Turn knurled nut of gauge until finger on gauge just touches top of plunger shaft (A). Number indicated on gauge should be "43" Adjust by bending throttle connector rod at upper angle (B).

Optional Adjustment The distance from the dust cover boss to the top of the plunger shaft should be 1/2 inch (C) Adjust as mentioned above

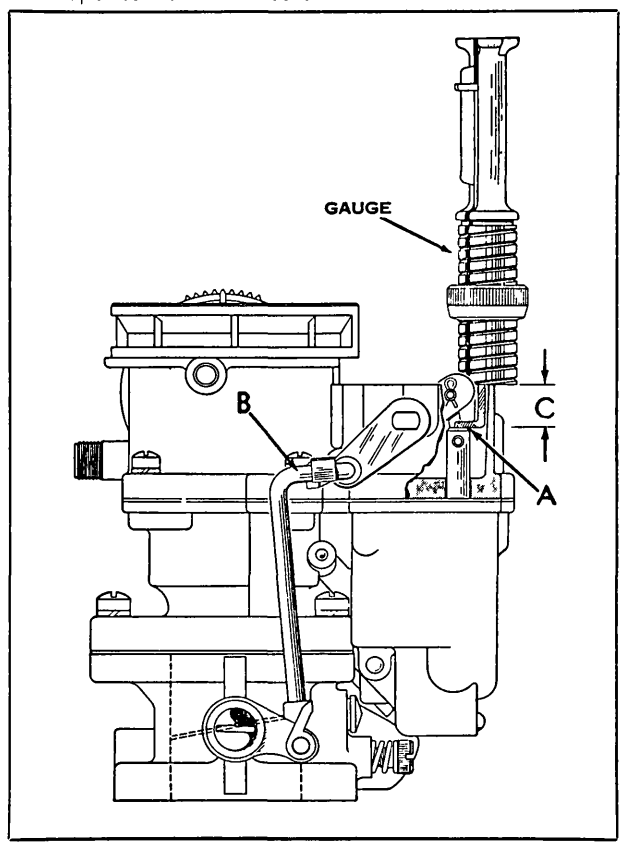


Figure 2
Pump Adjustment

METERING ROD ADJUSTMENT (Fig. 3):

The metering rods must be adjusted after the pump adjustment or when leaner than standard rods are installed No metering rod gauges are necessary, procedure is as follows With the throttle lever set screw backed out and throttle valves seated in bores of carbureter, press down on vacumeter link (D) until metering rods bottom in casting at (E) With rods held in this position, revolve metering rod arm (F) until lip contacts vacumeter link at (G) Hold in place and carefully tighten metering rod arm set screw (H)

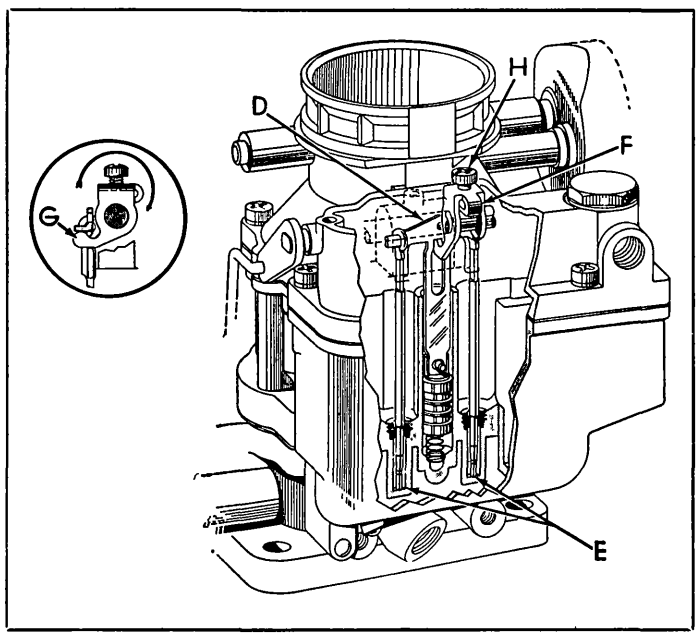


Figure 3
Metering Rod Adjustment

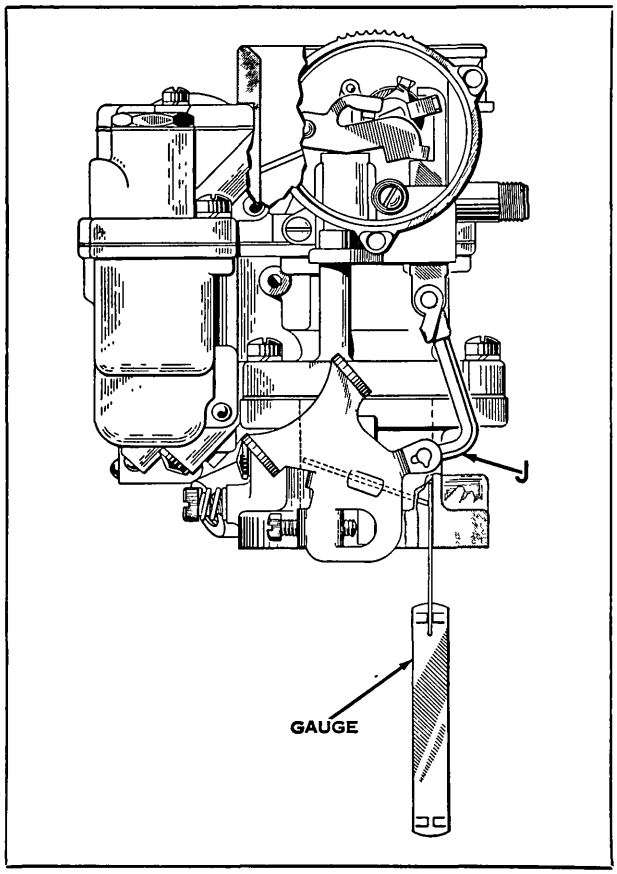


Figure 4
Fast Idle Adjustment

FAST IDLE ADJUSTMENT (Fig. 4):

With the thermostatic coil housing gasket and baffle plate removed, crack throttle valve and hold choke valve closed. Then close throttle. There should now be .026" clearance (gauge T109-189) between throttle valve and bore of carbureter (side opposite idle port). Adjust by bending the choke connector rod at lower angle (J).

UNLOADER ADJUSTMENT (Fig. 5):

Must be made after fast idle adjustment. Hold throttle valve wide open and close choke valve as far as possible without forcing; there should now be 5/32 inch (gauge T109-154) clearance between upper edge of choke valve and inner wall of air horn (K). Adjust by bending arm on choke trip lever (L) (tool T109-187).

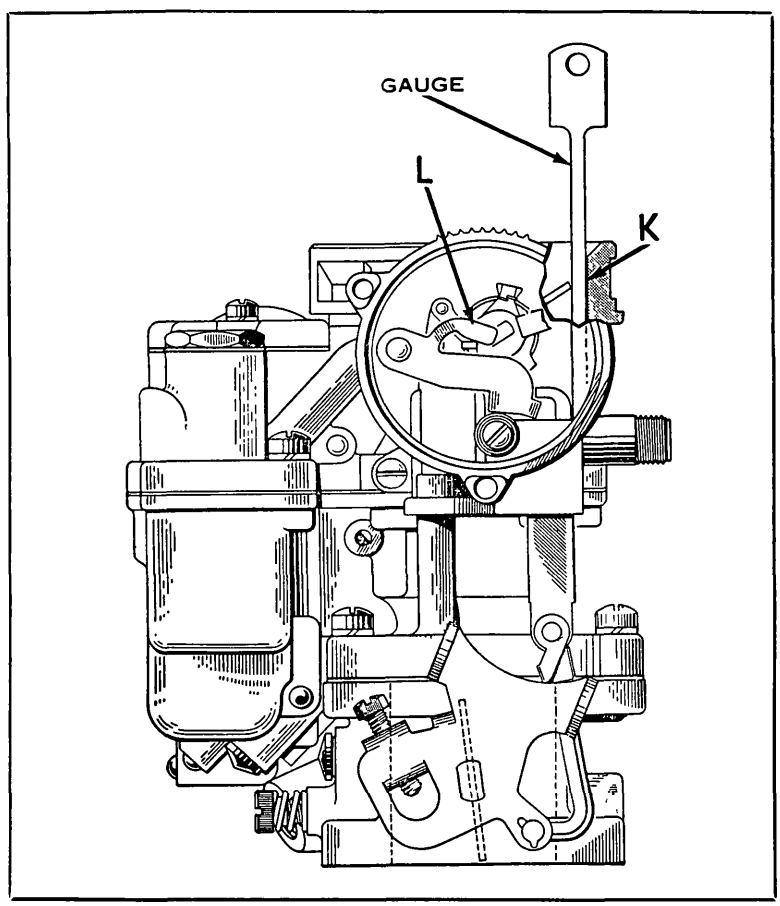
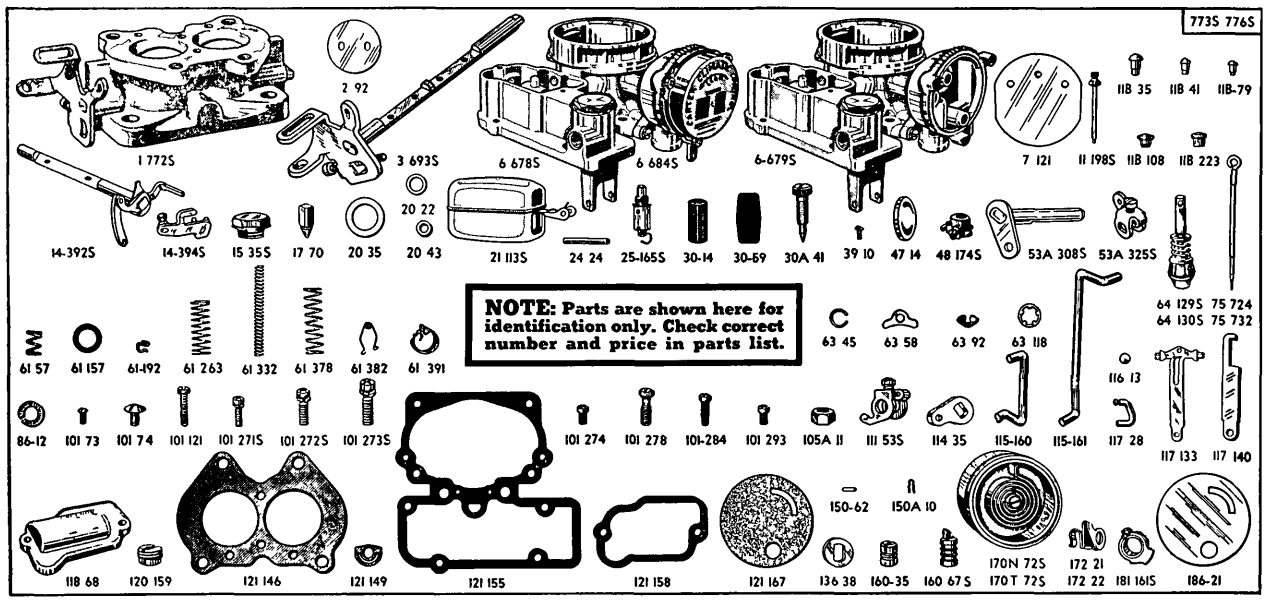


Figure 5
Unloader Adjustment



Hudson—1950-1953—Carbureters Nos. 773S-776S

WHEN SERVICING, USE GASKET ASSORTMENT No 196, REPAIR PACKAGE No 1554A (773S), No. 1555B (776S)

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-772S	Body flange assembly	
2-92	Throttle valve	(2)
3-693S	Throttle shaft and lever assembly	
6-678S	Air horn and Climatic® control assembly (773S)	
6-679S	Air horn and piston housing assembly	
6-684S	Air horn and Climatic® control assembly (776S)	
7-121	Choke valve	
11-198S	LOW SPEED JET ASSEMBLY	(2)
11B-35	Rivet plug	(3)
11B-41	Rivet plug	(3)
11B-79	Rivet plug	
11B-108	IDLE PORT RIVET PLUG	(2)
11B-223	NOZZLE RIVET PASSAGE PLUG	(2)
14 392S	Choke piston lever, link and shaft assembly	
14 394S	Choke trip lever and pin assembly	
15 35S	Strainer nut assembly	
17-70	PUMP CHECK NEEDLE	
20 22	Needle seat gasket	
20 35	BOWL STRAINER GASKET	
20-43	Piston housing gasket	
21 113S	Float and lever assembly (Sup by 21-172S)	
21-172S	Float and lever assembly	
24-24	Float lever pin	
25-165S	Needle and seat assembly (Sup by 25-186S)	
25-186S	NEEDLE AND SEAT ASSEMBLY	
30-14	BOWL COVER STRAINER	
30-59	STRAINER	
30A-41	Idle adjustment screw	(2)
39 10	Choke valve attaching screw	(2)
47-14	Choke cylinder welsh plug	
48-174S	Pump jet and housing assembly	
53A-308S	Pump operating lever and countershaft assembly	
53A-325S	Pump arm and screw assembly	
61-57	Idle adjustment screw lock spring	(2)
61 157	Plunger spring	
61-192	Needle pull clip	
61-263	PUMP SPRING (LOWER)	
61-332	VACUUM PISTON SPRING	
61-378	Pump spring (upper)	
61-382	METERING ROD SPRING	
61-391	Fast idle cam spring	
63-45	PUMP CHECK BALL RETAINER RING	
63 58	Coil housing retainer	(3)
63 92	Pump spring retainer (Sup by 63-149)	
63 118	Throttle shaft retaining ring	
63-149	Pump spring retainer	
64 129S	Plunger rod, spring and retainer assembly (776S) (Sup by 64-132S)	
64-130S	Plunger rod, spring and retainer assembly (773S) (Sup by 64-133S)	
64-132S	PLUNGER ROD SPRING AND RETAINER ASSEMBLY (776S)	
64 133S	PLUNGER ROD SPRING AND RETAINER ASSEMBLY (773S)	
75 724	METERING ROD STANDARD (773S)	(2)

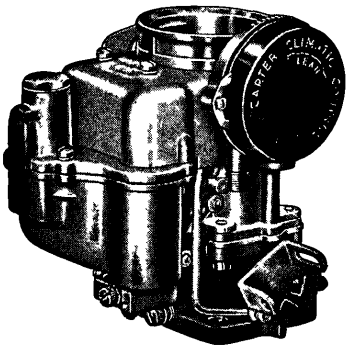
Part No.	PART NAME	
75-732	†Metering rod, 1 size lean (776S)	
75 741	Metering rod, 2 sizes lean (776S)	(2)
75-742	Metering rod, 3 sizes lean (776S)	(2)
75-744	Metering rod, 1 size lean (773S)	(2)
75-745	Metering rod, 2 sizes lean (773S)	(2)
75-746	Metering rod, 3 sizes lean (773S)	(2)
75-754	METERING ROD, STANDARD (776S)	(2)
86-12	Flange stud lock washer	
101-73	Throttle valve attaching screw	(4)
101-74	Throttle shaft arm attaching screw	
101-121	Throttle lever adjustment screw	
101-236	Metering rod arm clamp screw (Sup by 101-293)	(2)
101-271S	Attaching screw and washer assembly	(2)
101-272S	Air horn attaching screw and washer assembly	(8)
101 273S	Body flange attaching screw and washer assembly	(4)
101-274	Coil housing attaching screw	(3)
101-278	Pump jet housing attaching screw	
101 284	Piston housing attaching screw	(3)
101-293	Metering rod arm clamp screw	(2)
105A-11	Flange stud nut	
111-53S	Metering rod arm and screw assembly	
114-35	THROTTLE SHAFT ARM	
115-160	Choke connector rod	
115-161	THROTTLE CONNECTOR ROD	
116-13	PUMP INTAKE CHECK BALL	
117-28	Pump arm link	
117-133	Vacumeter piston link	
117-140	Fast idle link	
118-68	Dust cover	
120-159	METERING ROD JET	(2)
121-146	BODY FLANGE GASKET	
121-149	Pump jet gasket (Sup by 121-241)	
121-155	AIR HORN GASKET	
121-158	DUST COVER GASKET	
121-167	COIL HOUSING GASKET	
121-241	PUMP JET HOUSING GASKET	
136 38	Throttle shaft washer	
150-62	Choke piston pin	
150A-10	Pin spring	
160-35	Choke piston	
160-67S	Vacuum piston and pin assembly	
170N-72S	Thermostatic coil and housing assembly (776S)	
170T-72S	Thermostatic coil and housing assembly (773S)	
172-21	Throttle connector rod retainer	
172-22	THROTTLE AND CHOKE CONNECTOR ROD RETAINER	(2)
181-161S	Fast idle cam assembly	
186-21	Baffle plate	

†Used in early production as standard metering rod for 776S

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

CAR AND MOTOR NUMBERS

"481"—481101 and up
"482"—482101 and up
"483"—483101 and up
"484"—484101 and up
"491"—491101 and up
"492"—492101 and up
"493"—493101 and up
"494"—494101 and up



HUDSON
"481"-"482" SIXES
"483"-"484" EIGHTS
"491"-"492" SIXES
"493"-"494" EIGHTS
1948-1949

Casting No. 542 on face of flange.

WDO Dual Down-Draft Climatic® Cont. Carbs. **Nos. 647S-647SA** (6), **648S** (8)

CARBURETER SPECIFICATIONS

For Hudson 647S-647SA Six Cyl. Engine 3-9/16" Bore, 4⅜" Stroke. For Hudson 648S Eight Cyl. Engine 3" Bore, 4½" Stroke

Dimensions: 1¼ inch dual, 4 bolt flange.
Primary venturi, 11/32 inch I. D
Secondary venturi, 19/32 inch I. D.
Main venturi, 1-3/16 inch I. D.

Float Level: Distance from float to bowl cover, when needle is seated, to be 3/16 inch (647S-647SA), 13/64 inch (648S)

Vents: Outside, No. 10 drill size—four holes. Inside, none

Gasoline Intake: Square vertical needle. Size No. 38 drill hole in needle seat.

Low Speed Jet Tube: (647S-647SA) Jet size, No. 67 drill.
(648S) Jet size, No 68 drill.
(647S) By-pass (plug, 11B-167), size No. 51 drill
(647SA) By-pass (plug, 11B-159), size No. 52 drill.
(648S) By-pass (plug), size No. 54 drill.
Economizer in body, size No. 56 drill.
Idle bleed, size No. 54 drill (early production); No. 56 drill (late production).

Idle Ports: Length, .200 inch; width, .030 inch.

Idle Port Opening: 157 to .163 inch above upper edge of valve with valve closed tight.

Lower Port (For Idle Adjustment Screw): Size, .0615 to 0655 inch diameter.

Set Idle Adjustment Screw: (647S-647SA) 1¼ to 1¾, (648S) 1 to 1½ turns open For richer mixture, turn screw out Do not attempt to idle engine below 550 r p.m. or 8 m p h

Main Nozzle: (647S-647SA) In primary venturi, angle 45°.
Closed tip. Inside diameter No 30 drill.
Upper hole. .028 inch dia. drill on 45° angle.
Lower hole: .0635 inch dia. drill on 60° angle.
(648S) Flush type (angle tip) seats in primary venturi
Discharge, size .0635 inch diameter (early production), size 061 inch (later production)

Metering Rod (Vacumeter Type): (647S-647SA) Economy step, 061 inch diameter, middle step tapers to 0565 inch diameter, power step, .048 inch diameter. Length 2-59/64 inches
(648S) Economy step, .068 inch diameter, middle step tapers to 063 inch diameter, power step, .055 inch diameter (early production), .052 inch diameter (late production) Length 2-59/64 inches.

Metering Rod Jet: .086 inch diameter.

Metering Rod Setting: Use gauge, part No. T109-113 (2 280 inches)

Accelerating Pump: High pressure type (spring operated lever), with adjustable pump stroke
Discharge jets (twin) size, No 74 drill.
Intake ball check, size No 40 drill
Discharge (needle seat), size No. 50 drill
Relief passage (to outside), thru slots in air horn

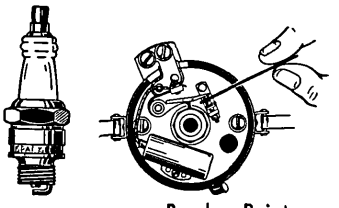
Pump Adjustment. (647S-647SA) 18/64" (648S) 14/64" plunger travel (full throttle position) long stroke. Use gauge No T109-117S

Choke Carter Climatic® Control, (647S-647SA) set 1 point lean, (648S) set on index Butterfly type, offset valve
Choke heat suction hole (in body), size No. 34 (.111 inch) drill

Vacuum Spark Port: 039 to .041 inch diameter. Top of port 012 to 022 inch above valve.

Motor Tune-Up—Be Accurate! Always Use Feeler Gauges!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



Spark Plug Gap .032"

Breaker Point Setting
6 Cyl.—.020"
8 Cyl.—.017"

Ignition Timing
Breaker Points to Open
T. D. C.

Valve Setting
6 Cyl. { Int. .008" Exh. .010"
8 Cyl. { Int. .006" Exh. .008"

Float Setting
3/16 inch (647S-647SA)
13/64 inch (648S)

Idle Adjustment Screw Setting
(647S-647SA)
1¼ to 1¾
(648S) 1 to 1½
Turns Open

CARBURETER ADJUSTMENTS

PUMP ADJUSTMENT: With pump connector link in long stroke (outer hole in pump arm), and throttle adjusting screw backed out, pump plunger should travel 18/64" (647S-647SA), 14/64" (648S) from closed to wide open throttle positions Pump travel should be measured by placing gauge T109-117S on raised portion of bowl cover around the plunger shaft Projecting portion of indicator should be placed on top surface of connector link where it extends through the plunger shaft. The difference between reading at wide open and closed throttle positions should be "18" (647S-647SA), "14" (648S). Adjust by bending throttle connector rod at lower angle

METERING ROD ADJUSTMENT: Must be made when reassembling carbureter or when leaner than standard metering rods are installed. Do not disturb pump adjustment Procedure is as follows:

(a) Back out throttle lever adjustment screw until throttle valves seat. Insert one metering rod gauge T109-113 in place of metering rod. Be sure gauge seats in metering rod jet.
(b) Install metering rod pin and pin spring in vacuum piston link assembly
(c) Press lightly on top of vacuum piston link until lip contacts tongue on anti-percolator arm. There now should be less than .005" clearance between metering rod pin and shoulder in notch of gauge with throttle valve seated.

Adjust by bending tongue on pump arm (Use Tool T109-105). Remove gauge and metering rod pin and install metering rods, discs, spring, pin and pin spring, and hook spring to metering rod Vacuum piston and link must not bind and drag in any position

ANTI-PERCOLATOR ADJUSTMENT: After adjusting pump stroke and metering rods, bend lips on anti-percolator arm so that center of indicator line on anti-percolator valves is flushed with top of anti-percolator plugs. Since there are two anti-percolators on this carbureter, care must be taken so that there is an even adjustment on both anti-percolator valves Be sure throttle valves are seated when making this adjustment

UNLOADER ADJUSTMENT: With throttle valves wide open, distance between upper edge of choke valve and inner wall of air horn should be ¼" (Gauge T109-31). Adjust by bending lip on fast idle connector link. When unloader is adjusted properly, with throttle valve wide open, move choke valve to wide open position and choke valve will lock in open position.

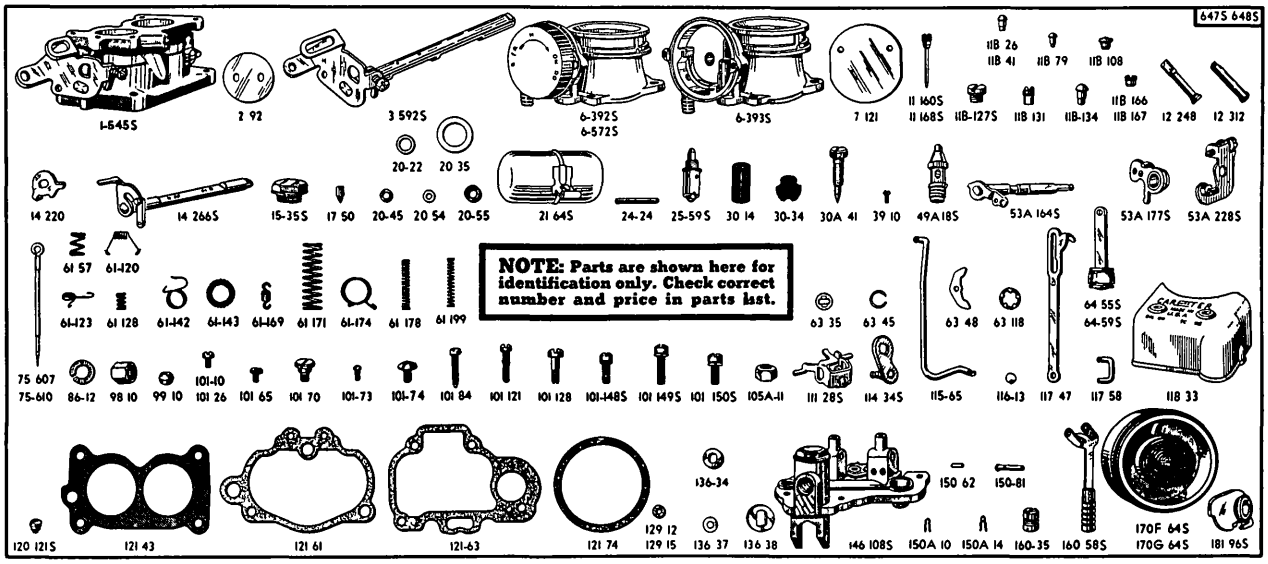
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CARBURETER
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MARCA REGISTRADA

PRINTED IN U.S.A.

FAST IDLE ADJUSTMENT With choke valve tightly closed and fast idle screw on high step of fast idle cam there should be .054" clearance between throttle valves and bores of carbureter (side opposite idle port) Adjust by turning fast idle adjusting screw (on high step of cam) until specified clearance is obtained

FLANGE ASSEMBLY Assemble in the following manner in order to center throttle valves properly and eliminate excessive endplay in the throttle shaft Install throttle shaft and lever assembly and place throttle shaft retaining ring firmly on stub of shaft with prongs extending outward Take out all endplay by pressing retaining ring on shaft as far as possible Then install throttle valves with "c" in circle toward the idle port when viewed from the manifold side To center valves tap lightly holding in place with fingers while tightening screws



Hudson—1948-1949—Nos. 647S-647SA-648S

WHEN SERVICING, USE GASKET ASST. No. 149; REPAIR PACKAGE No 1381B, FOR 647S-647SA; No. 1382A, FOR 648S
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-545S	Body flange assembly	
2-92	Throttle valve	(2)
3-592S	Throttle shaft and lever assembly	
6 392S	Air horn assembly (647S 647SA)	
6-393S	Air horn and pump jet assembly	
6-572S	Air horn assembly (648S)	
7-121	Choke valve	
11-160S	LOW SPEED JET ASSEMBLY (648S)	(2)
11-168S	LOW SPEED JET ASSEMBLY (647S 647SA)	(2)
11B-26	Rivet plug	
11B-41	Rivet plug	(2)
11B-79	Rivet plug	(4)
11B-108	Idle port rivet plug	(2)
11B-127S	Nozzle passage plug assembly	(2)
11B-130	Nozzle retainer plug	(2)
11B-131	Nozzle retainer plug (Sup by 11B 130)	(2)
11B-134	Rivet plug	(2)
11B-159	BY PASS BLEEDER SCREW PLUG (647S 647SA)	(2)
11B-166	BY PASS BLEEDER SCREW PLUG (648S)	(2)
11B-167	By pass bleeder screw plug (Sup by 11B 159)	(2)
12-248	Nozzle (647S 647SA)	(2)
12 312	Nozzle (648S)	(2)
14 220	Choke trip lever	
14 266S	Choke piston lever, link and shaft assembly	
15-35S	Strainer nut assembly	
17-50	PUMP CHECK NEEDLE	
20-22	Needle seat and nozzle plug gasket	(3)
20-35	Bowl strainer gasket	
20-45	NOZZLE GASKET	(2)
20-54	Metering rod jet gasket	(2)
20-55	IDLE PASSAGE GASKET	(8)
21-64S	Float and lever assembly	
24 24	Float lever pin	
25-59S	NEEDLE AND SEAT ASSEMBLY	
30-14	Bowl cover strainer gauze	
30-34	PUMP STRAINER	
30A-41	Idle adjustment screw	(2)
39-10	CHOKE VALVE ATTACHING SCREW	(2)
49A-18S	Anti percolator valve assembly	(2)
53A-164S	Pump operating lever and countershaft assembly	
53A-177S	Pump arm and collar assembly	
53A 228S	Fast idle arm, pin and screw assembly	
61-57	Adjustment screw lock spring	(2)
61-120	Metering rod spring	
61 123	Connector link spring	
61-128	Connector rod spring (Use with 115 65)	
61 142	Fast idle arm spring	
61-143	Plunger spring	
61 169	Pump arm spring	
61 171	Pump spring	
61-174	Fast idle cam spring	
61-178	VACUUM PISTON SPRING (648S)	
61 199	VACUUM PISTON SPRING (647S 647SA)	
63-35	Spring retainer (Use with 115 65)	
63 45	Ball retainer ring	
63-48	Housing retainer	(2)
63-118	Throttle shaft retaining ring	
64 55S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49 113) (647S 647SA)	
64-59S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49 119) (648S)	
75 607	METERING ROD—STANDARD 068" 068' to 063" 052' (648S)	(2)
75 610	Metering rod—Standard 063" 063" to 0565" 048" (Sup by 75 686)	
75 623	Metering rod—1 size lean 0645" 0645" to 0585"- 050" (647S 647SA)	(2)
75-624	Metering rod—2 sizes lean 065"- 065" to 0605"- 052" (647S 647SA)	(2)
75-625	Metering rod—3 sizes lean 065" 065" to 062" 054" (647S 647SA)	(2)
75 627	Metering rod—1 size lean 069" 069" to 0645" 0575" (648S)	(2)
75 628	Metering rod—2 sizes lean 0705" 0705" to 0655" 059" (648S)	(2)
75 629	Metering rod—3 sizes lean 0705" 0705" to 067" 061" (648S)	(2)
75 686	METERING ROD—STANDARD 061" 061" to 0565"- 048" (647S 647SA)	(2)
75-700U	Unitized package (Consists of 2—75 686, 2—11B 159 and 1—107 30)	
86 12	Flange stud lock washer	(4)
98-10	Compression coupling nut	
99-10	Compression coupling cone	
101-10	Metering rod arm clamp screw	
101-26	Coil housing attaching screw	(2)
101-65	Choke shaft attaching screw	
101-70	Fast idle arm attaching screw	
101-73	Throttle valve attaching screw	(4)
101-74	Throttle shaft arm attaching screw	
101-84	Fast idle adjustment screw	
101-121	Throttle lever adjustment screw	
101-128	Air horn attaching screw (Special)	
101-148S	Bowl cover attaching screw and washer assembly	(6)
101-149S	Body flange attaching screw and washer assembly	(4)
101-150S	Air horn attaching screw and washer assembly	(2)
105A-11	Flange stud nut	(4)
111-28S	Anti percolator arm and screw assembly	
114-34S	Throttle shaft arm and pin assembly	
115-65	Throttle connector rod (Sup by 115 135)	
115-135	THROTTLE CONNECTOR ROD	
116-13	PUMP DISCHARGE CHECK BALL	
117-47	Fast idle connector link	
117-58	Pump arm connector link	
118-33	Dust cover	
120-121S	METERING ROD JET ASSEMBLY	(2)
121-43	BODY FLANGE GASKET	
121-61	AIR HORN GASKET	
121-63	BOWL COVER GASKET	
121-74	COIL HOUSING GASKET	
129 12	Metering rod disk (647S 647SA) (Sup by 129 18)	
129-15	Metering rod disk (648S)	(2)
129-18	Metering rod disk (647S 647SA)	(2)
136 34	Choke shaft washer	
136-37	Connector rod washer	
136 38	Throttle shaft washer	
146-108S	Bowl cover assembly	
150 62	Piston pin	
150-81	Metering rod pin	
150A-10	PIN SPRING	(4)
150A-14	COUNTERSHAFT PIN SPRING	
160-35	Choke piston	
160-58S	Vacuum piston and link assembly	
170F-64S	Thermostatic coil and housing assembly (648S)	
170F-64SU	Unitized package (Consists of 1—170F 64S, 3—63 48, 3—101 26, 1—121-74) (648S)	
170G-64S	Thermostatic coil and housing assembly (647S 647SA)	
170G-64SU	Unitized package (Consists of 1—170G 64S, 3—63 48, 3—101 26, 1—121 74) (647S 647SA)	
172 24	THROTTLE CONNECTOR ROD RETAINER (Use with 115 135)	
181-96S	Fast idle cam assembly	

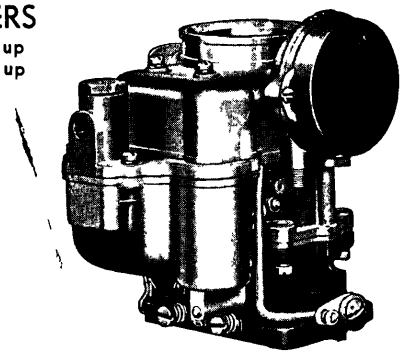
NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.

CARTER CARBURETOR CORPORATION, ST. LOUIS, MO., U. S. A.

CAR AND MOTOR NUMBERS

1941—501S Six —"11-12-13"—2150 and up
1941—502S Eight—"14-15-17"—7293 and up
1942—501S Six — "21"—211324 and up; "22"—221322 and up
1942—502S Eight— "24"—241318 and up; "25"—255755 and up; "27"—271319 and up
1946—501S Six — "51"—31101 and up; "52"—32101 and up; "58"—38101 and up
1946—502S Eight— "53"—33101 and up; "54"—34101 and up
1947—501S Six — "171"—171101 and up; "172"—172101 and up; "178"—178101 and up
1947—502S Eight— "173"—173101 and up; "174"—174101 and up

Note: 501S used on Model 10, 6 cyl. 3"x5" (76.20x127.00 mm) engine.



HUDSON

"11-12-13" Sixes — 1941
"14-15-17" Eights — 1941
"21-22" Sixes — 1942
"24-25-27" Eights — 1942
"51-52-58" Sixes — 1946
"53-54" Eights — 1946
"171-172-178" Sixes — 1947
"173-174" Eights — 1947

Casting numbers on face of flange: 502S, 279; 501S, 286.

WDO Dual Down-Draft Climatic® Control Carbureters—**Models 501S-502S**

CARBURETER SPECIFICATIONS

For Hudson 501S Six Cyl. Engine: 3 Inch Bore, 5 Inch Stroke. For Hudson 502S Eight Cyl. Engine: 3 Inch Bore, 4½ Inch Stroke.

Dimensions: (502S) 1¼ inch dual, 4 bolt flange.
(501S) 1 inch dual 4 bolt flange
(Both) Primary venturi, 11/32 inch I. D.
(502S) Secondary venturi, 19/32 inch I. D.
(501S) Secondary venturi, 21/32 inch I. D
(502S) Main venturi, 1-3/16 inch I D.
(501S) Main venturi, 1-1/16 inch I. D.

Float Level: (Both) Distance from float to bowl cover, when needle is seated, to be ⅛ inch

Vents: (Both) Outside, No. 10 drill size—four holes. Inside, none.

Gasoline Intake: (Both) Square vertical needle Size No. 38 drill hole in needle seat.

Low Speed Jet Tube: (502S) Jet size, No. 69 drill
(501S) Jet size, No. 71 drill.
(Both) By-pass (plug), size No. 51 drill
(501S) Economizer in body, size No. 56 drill (early production). Economizer in body, size No. 1.3 mm (.0512") drill (later production).
(502S) Economizer in body, size No. 56 drill.
(Both) Idle bleed, size No. 54 drill.

Idle Ports: (502S) Length, 175 inch; width, .030 inch
(501S) Length, .150 inch; width, .030 inch.

Idle Port Opening: (502S) .133 to .137 inch above upper edge of valve (early production); .129 to .135 inch above upper edge of valve (late production) with valve closed tight.
(501S) .108 to .112 inch above upper edge of valve with valve closed tight (early production).
(501S) .108 to .114 inch above upper edge of valve with valve closed tight (late production).

Lower Port (For Idle Adjustment Screw): (Both) Size, .0615 to .0655 inch diameter

Set Idle Adjustment Screw: (Both) ½ to 1½ turns open. For richer mixture, turn screw out. Do not attempt to idle engine below 600 r.p.m. or 8 m.p.h.

Main Nozzle: (Both) In primary venturi, angle 45°.
(Both) Closed tip. Inside diameter No. 30 drill.
(Both) Upper hole: No. 70 drill on 45° angle
(502S) Lower hole: No. 52 drill on 60° angle.
(501S) Lower hole: No. 52 drill

Metering Rod (Vacumeter Type): (502S) Economy step, .065 inch diameter (early production), .063 inch diameter (late production); middle step tapers to .0565 inch diameter power step, .044 inch diameter. Length 2-59/64 inches.
(501S) Economy step, .0615 inch diameter; middle step tapers to .057 inch diameter: power step, 047 inch diameter. Length 2-59/64 inches.

Metering Rod Jet: (502S) .086 inch diameter.
(501S) .082 inch diameter

Metering Rod Setting: (Both) Use gauge, part No. T109-113 (2.280 inches).

Accelerating Pump: (Both) High pressure type (spring operated lever), with adjustable pump stroke.
(Both) Discharge jets (twin) size, No. 74 drill.
(Both) Intake ball check, size No. 40 drill.
(Both) Discharge (needle seat), size No. 50 drill

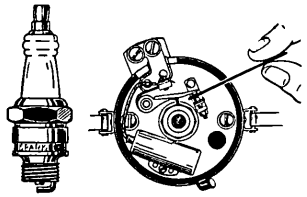
Pump Adjustment: (Both) 18/64 inch plunger travel (full throttle position) long stroke. Use gauge No T109-117S

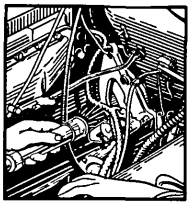
Choke: Carter Climatic® Control, set 1 point lean. Butterfly type, offset valve.
Choke heat suction hole (in body), size No. 34 (.111 inch) drill

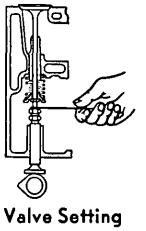
Vacuum Spark Port: (502S) None (501S) .039 to .041 inch diameter. Top of port .029 to .033 inch above valve (early production). Top of port .030 to .040 inch above valve (late production).

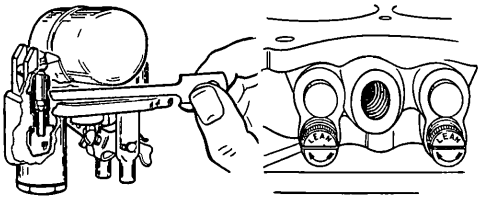
Motor Tune-Up—Be Accurate! Always Use Feeler Gauges!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter









Spark Plug Gap .032"

Breaker Point Setting 6 Cyl.—.020" 8 Cyl.—.017"

Ignition Timing Breaker Points to Open 8 Cyl.—T.D.C. 6 Cyl.—½" B.T.D.C.

Valve Setting
1941-42 Intake .006" Exhaust .008"
1946-47 Intake .010" (6 cyl.) .006" (8 cyl.) Exhaust .012" (6 cyl.) .008" (8 cyl.)

Float Setting ⅛ Inch

Idle Adjustment Screw Setting ½ to 1½ Turns Open

BRIEF CARBURETER ADJUSTMENTS

PUMP ADJUSTMENT: Back out throttle lever adjustment screw until throttle valves seat in bores of carbureter. With pump connector link in outer hole (long stroke) pump plunger should travel 18/64 inch from closed to wide open throttle position Pump stroke can be measured by placing Universal pump stroke gauge T109-117S on raised portion of bowl cover with projecting lip of gauge resting on top surface on connector link where it extends through the plunger shaft. The difference in readings at closed and wide open throttle positions should be "18" (18/64" plunger travel). Adjustment may be made by bending throttle connector rod at lower angle.

METERING ROD ADJUSTMENT: The metering rod adjustment should be made after the pump adjustment and before the anti-percolator adjustment. Back out throttle adjustment screw until throttle valves seat in bore of carbureter. Remove metering rod and metering rod disk. Insert in their place one metering rod gauge T109-113. Be sure gauge seats in metering rod jet Reinstall metering rod pin and pin spring in metering rod arm. Then press lightly on vacuum piston link until pin contacts metering rod gauge. With throttle valve seated bend metering rod lip on anti-percolator arm until there is a clearance of .005" between pin and notch in metering rod gauge Remove pin and metering rod gauge and install metering rods, disks, spring, pin and pin spring and hook metering rod spring on metering rod.

ANTI-PERCOLATOR ADJUSTMENT: This adjustment must be made after pump and metering rod adjustments have been made Do not disturb these adjustments Back out

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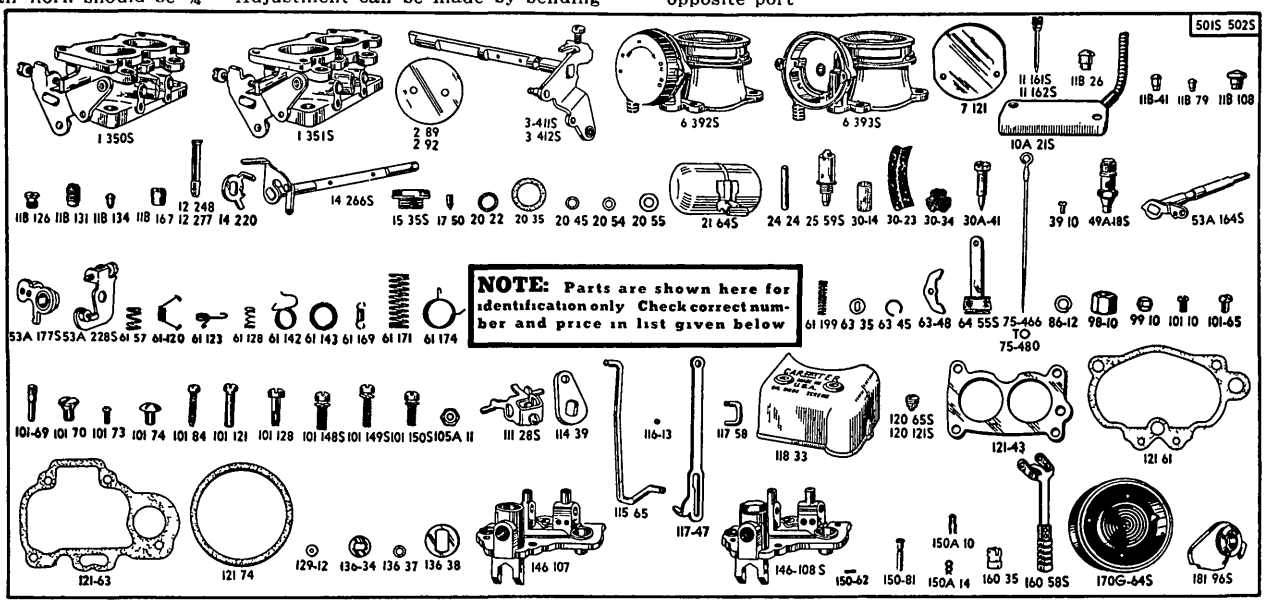
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tnrottle lever adjusting screw so that throttle valves seat in bores of carbureter With throttle valves seated bend lips on anti-percolator arm so that center of indicator line is flush with top of anti-percolator plugs Since there are two anti-percolators on this carbureter, care must be taken so that there is an even adjustment on both anti-percolator valves

UNLOADER ADJUSTMENT: With throttle wide open distance between upper edge of choke valve and inner wall of air horn should be ¼" Adjustment can be made by bending lip on fast idle connector link If unloader is adjusted properly, with throttle wide open, move choke valve wide open and choke valve will be locked in wide open position Closing the throttle will release choke valve Choke trip lever is notched out for this setting

FAST IDLE ADJUSTMENT: With choke valve tightly closed and fast idle screw on upper step of fast idle cam, adjust screw to give 045" opening on 501S, 053" on 502S, between edge of throttle valve and bore of carbureter side opposite port



Hudson—1941-1942-1946-1947—Nos. 501S-502S

WHEN SERVICING, USE GASKET ASSORTMENT No 149, REPAIR PACKAGE No. 1302A FOR 501S, No 1303A FOR 502S
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

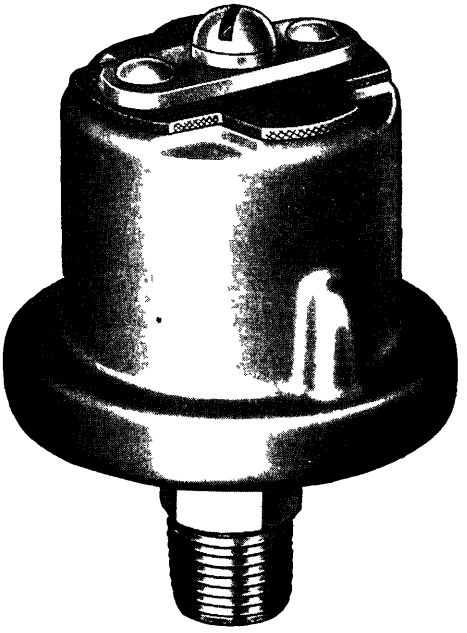
Part No	PART NAME	
1-350S	Body flange assembly (502S)	
1-351S	Body flange assembly (501S)	
2-89	Throttle valve (501S)	(2)
2-92	Throttle valve (502S)	(2)
3-411S	Throttle shaft and lever assembly (502S)	
3-412S	Throttle shaft and lever assembly (501S)	
6-392S	Air horn and Climatic ® control assembly	
6-393S	Air horn and pump jet assembly	
7-121	Choke valve	
10A-21S	Manifold stove assembly (501S)	
11-161S	LOW SPEED JET ASSEMBLY (501S)	(2)
11-162S	LOW SPEED JET ASSEMBLY (502S)	(2)
11B-26	Rivet plug	
11B-41	Rivet plug	(2)
11B-79	Rivet plug	(4)
11B-108	Idle port rivet plug	(2)
11B-126	Nozzle passage plug	(2)
11B-130	Nozzle retainer plug	
11B-131	Nozzle retainer plug (Sup by 11B-130)	(2)
11B-134	Rivet plug	(2)
11B-167	BY-PASS BLEEDER SCREW PLUG	(2)
12-248	Nozzle (502S)	(2)
12-277	Nozzle (501S)	(2)
14-220	Choke trip lever	
14-266S	Choke piston lever, link and shaft assembly	
15-35S	Strainer nut assembly	
17-50	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	
20-35	Bowl strainer gasket	
20-45	NOZZLE GASKET	(2)
20-54	Metering rod jet gasket	(2)
20-55	IDLE PASSAGE GASKET	(3)
21-64S	Float and lever assembly	
24-24	Float lever pin	
25-59S	NEEDLE AND SEAT ASSEMBLY	
30-14	Bowl cover strainer gauze	
30-23	†PISTON HOUSING STRAINER	
30-34	PUMP STRAINER	
30A-41	Idle adjustment screw	(2)
39-10	CHOKE VALVE ATTACHING SCREW	
49A-18S	Anti-percolator valve plug assembly	(2)
53A-164S	Pump operating lever and countershaft assembly	
53A-177S	Pump arm and collar assembly	
53A-228S	Fast idle arm pin and screw assembly	
61-57	Adjustment screw lock spring	(2)
61-120	Metering rod spring	
61-123	Connector link spring	
61-128	Connector rod spring (Use with 115-65)	
61-142	Fast idle arm spring	
61-143	Plunger spring	
61-169	Pump arm spring	
61-171	Pump spring	
61-174	Fast idle cam spring	
61-199	VACUUM PISTON SPRING	
63-45	Ball retainer ring	
63-48	Coil housing retainer	(2)
63-93	Spring retainer (Use with 115-65)	
64-55S	PUMP PLUNGER AND ROD ASSEMBLY (Identify by Shaft No 49-113)	
75-466	Metering rod—Std (502S) (Sup by 75-529)	(2)
75-467	METERING ROD—STANDARD (501S) 0615'- 0615" to 057"- 047	(2)
75-474	Metering rod—1 size lean (501S) 0625"- 0625' to 058 - 048'	(2)
75-475	Metering rod—2 sizes lean (501S) 0635"-.0635" to 059"- 049"	(2)
75-476	Metering rod—3 sizes lean (501S) .0645 - 0645" to 060"- 050"	(2)
75-478	Met rod—1 size lean (502S) (Sup. by 75-480)	(2)
75-479	Met rod—2 sizes lean (502S) (Sup by 75-531)	(2)
75-480	Met rod—3 sizes lean (502S) (Sup by 75-532)	(2)
75-480	Metering rod—1 size lean (Was 3 sizes lean) (502S) 064 - 064 to 058"- 047"	(2)
75-529	METERING ROD—STANDARD (502S) 063'- 063" to 0565"- 044"	(2)
75-531	Metering rod—2 sizes lean (502S) 065"- 065" to 0585"- 048"	(2)
75-532	Metering rod—3 sizes lean (502S) 066"- 066" to 0595"- 049'	(2)
86-12	Flange stud nut	(4)
98-10	Compression coupling nut	
99-10	Compression coupling cone	
101-10	Metering rod arm clamp screw	
101-26	Attaching screw (coil housing)	(2)
101-65	Housing and trip lever attaching screw	
101-69	Throttle centering screw	
101-70	Fast idle arm attaching screw	
101-73	Throttle valve attaching screw	(4)
101-74	Throttle shaft arm attaching screw	
101-84	Fast idle adjustment screw	
101-121	Throttle lever adjustment screw	
101-128	Air horn attaching screw—(special)	
101-148S	Bowl cover screw and washer assembly	(6)
101-149S	Body flange screw and washer assembly	(4)
101-150S	Air horn screw and washer assembly	(2)
105A-11	Flange stud lock washer	(4)
111-28S	Anti-percolator arm and screw assembly	
114-39	Throttle shaft arm	
115-65	Throttle connector rod (Sup by 115-135)	
115-135	THROTTLE CONNECTOR ROD	
116-13	PUMP CHECK BALL	
117-47	Fast idle connector link	
117-58	Pump arm connector link.	
118-33	Dust cover	
120-65S	METERING ROD JET ASSEMBLY (501S)	
120-121S	METERING ROD JET ASSEMBLY (502S)	
121-43	BODY FLANGE GASKET	
121-61	AIR HORN GASKET	
121-63	BOWL COVER GASKET	
121-74	COIL HOUSING GASKET	
129-12	Metering rod disk (Sup. by 129-18)	
129-18	Metering rod disk	(2)
136-34	Choke shaft washer	
136-37	Connector rod washer (Use with 115-65)	
136-38	Throttle shaft washer	
146-108S	Bowl cover and strainer assembly	
150-62	Piston pin	
150-81	Metering rod pin	
150A-10	PIN SPRING	(4)
150A-14	COUNTERSHAFT PIN SPRING	
160 35	Choke piston	
160 58S	Vacuum piston and link assembly	
170G-64S	Thermostatic coil and housing assembly	
170G-64SU	Unitized package (Consists of 1 170G-64S, 3 63-48, 3 101-26 1 121-74)	
172-24	THROTTLE CONNECTOR ROD RETAINER (Use with 115-135)	
181-96S	Fast idle cam and spring assembly	

† Not used on latest production

NOTE· Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used

OIL PRESSURE WARNING SWITCH

HUDSON 6 — 1948-1953



A815S Oil Pressure Warning Switch

(Can be used in place of A658S)

With ignition switch on and engine stopped, or before oil pressure reaches normal, the A815S Oil Pressure Warning Switch is closed and grounded completing the circuit to warning light on dash. When the oil pressure reaches normal operating pressure (11 to 15 lbs.) the switch operates as follows: The diaphragm, which is actuated by oil pressure, separates the contact points and the circuit is broken, extinguishing warning light. No adjustment of the switch is necessary as the calibration is set and sealed at the factory.

To insure efficient operation and long life, the Carter Oil Pressure Switch is equipped with silver contact points which are protected against moisture and corrosion.

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Form 5216

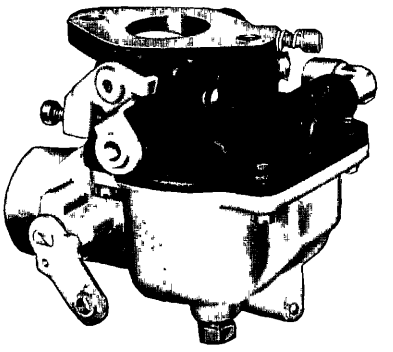
CARTER CARBURETOR
DIVISION OF ACF INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

INTERNATIONAL HARVESTER 2338S
March, 1956

MODELS
U-123
POWER UNIT

No. 76
HARVESTER-THRESHER

No. 55
BALER



INTERNATIONAL HARVESTER

(771SB can also be used)

UT UPDRAFT **CARBURETER No. 2338S**

CARBURETER SPECIFICATIONS

For 4 Cylinder Engine: 3⅛ Inch Bore, 4 Inch Stroke

Dimensions: Flange size, 1 inch S.A.E. Throttle bore, 1-1/16 inch. Main venturi, 23/32 inch.

Float Setting: Top of float 17/64 inch plus or minus 1/64 inch below top surface of upper body casting with casting inverted.

Vents: Outside, none. Inside, balance vent.

Gasoline Intake Needle: Size No. 48 (.076 inch) drill in needle seat.

Low Speed Jet Tube: Jet Size, No. 66 (.033 inch) drill. Upper bleed. No. 65 (.035 inch) drill. Lower bleed: No. 60 (.040 inch) drill. Economizer: No. 61 (.039 inch) drill.

Idle Ports: Lower port, slot type, round end, .049 to .051 inch by .029 to .031 inch wide. Bottom of port .044 to .048 inch below lower edge of valve. Upper port .038 to .042 inch diameter (for idle adjustment screw).

Set Idle Adjustment Screw: ½ to 1 turn open. For richer mixture, turn screw out. Do not idle engine below 425 R.P.M.

Main Metering Jet: Calibrated to flow 129 cc per minute. (Do not gauge for size. If in doubt, replace with new part.)

Nozzle: Inside diameter No. 42 (.0935 inch) drill. Accelerating Jets: 4 No. 64 (.036 inch) drill.

Air Bleed to Nozzle: (Thru plug) No. 70 (.028 inch) drill.

Choke: Manual—Butterfly type, with pressure relief (poppet) valve.

Vacuum Spark: None.

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .030"	Breaker Point Setting .020"	Valve Setting (Hot) Intake .014" Exhaust .014"	Float Setting 17/64" Plus or Minus 1/64"	Idle Adjustment Screw Setting ½ to 1 Turn Open Idle Engine at 425 R.P.M.

CARBURETER ADJUSTMENTS

To secure a good idle: Set throttle lever adjusting screw until motor runs approximately 425 r.p.m. Then set idle adjustment screw for highest steady vacuum gauge reading or smoothest engine operation. Correct setting will be found between ½ to 1 turn open.

If motor loads—check float level: Wear on lip of float lever will raise float level, causing carbureter to load up. To lower float level bend float lever toward needle. To raise float level, bend lip away from needle. A very slight bend is sufficient. Bend lip of float only, not bracket. Be sure float is installed with lip of float against needle.

Maximum performance can be secured only when breaker points, spark plugs, valves and motor timing are set to manufacturer's specifications.

If carbureter does not respond to the above adjustments, disassemble, clean all parts in carbureter cleaner, rinse and blow out all passages with compressed air. Replace all worn or damaged parts. Always use new gaskets. See form No. 3525 for complete overhaul procedure.

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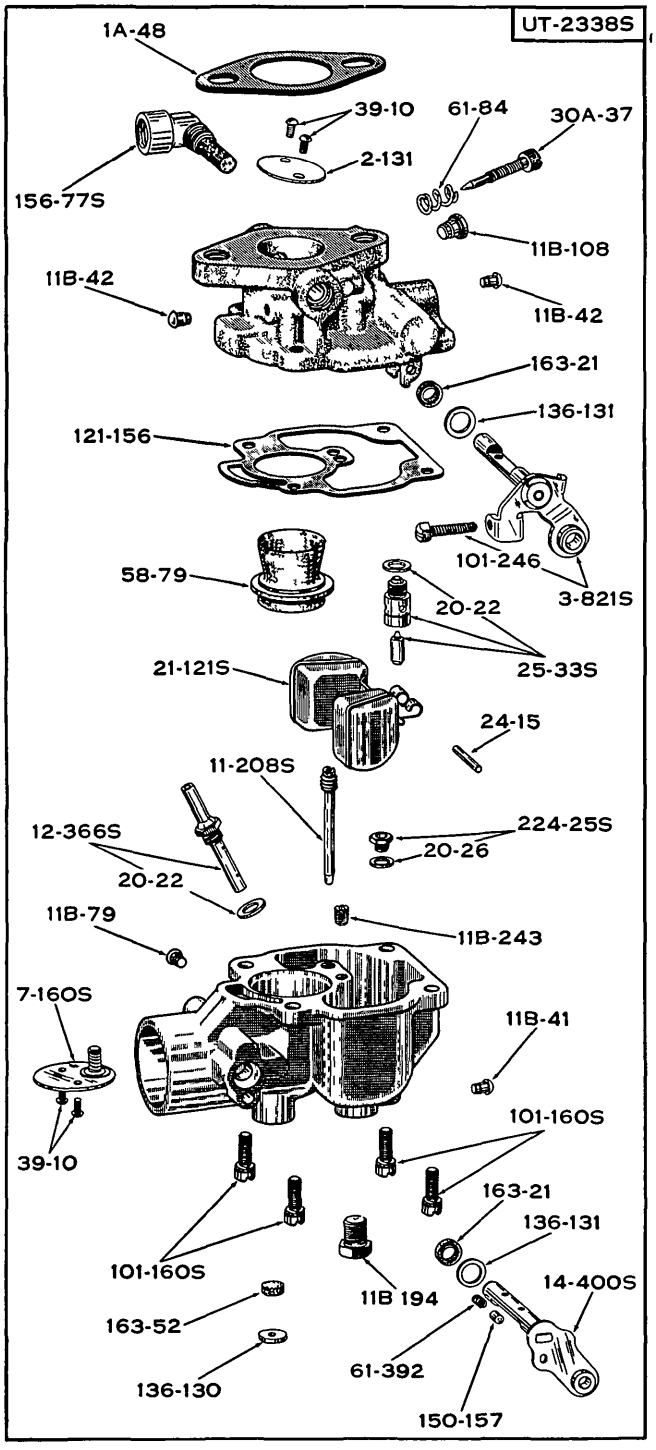
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International Harvester Carburetor No. 2338S

WHEN SERVICING USE GASKET ASSORTMENT No 207, REPAIR PACKAGE No 1769

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE



NOTE:

Parts are shown above for identification only. Check correct number and price in parts list.

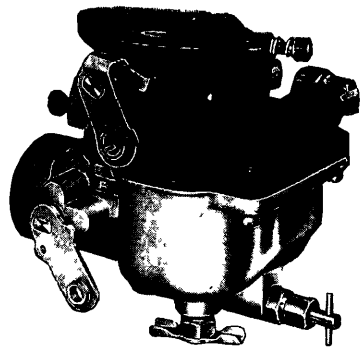
Part No	PART NAME	
1-686S	Throttle body assembly	
1A-48	FLANGE GASKET	
2-131	Throttle valve	
3-821S	THROTTLE SHAFT AND LEVER ASSEMBLY	
7-160S	Choke valve assembly	
11-208S	LOW SPEED JET ASSEMBLY	
11B-41	High speed passage rivet plug	
11B-42	Rivet plug	(2)
11B-79	Rivet plug	
11B-108	IDLE PORT RIVET PLUG	
11B-194	Bowl drain plug	
11B-243	NOZZLE BLEED SCREW PLUG	
12 366S	Nozzle assembly	
14-400S	Choke lever and shaft assembly	
20-22	Needle seat and nozzle gasket	(2)
20 26	Main metering jet gasket	
21-121S	Float and lever assembly	
24-15	FLOAT LEVER PIN	
25-33S	NEEDLE AND SEAT ASSEMBLY	
30A-37	Idle adjustment screw	
39-10	THROTTLE AND CHOKE VALVE ATTACHING SCREW	(4)
58-79	Venturi	
61-84	Idle adjustment screw spring	
61-392	Choke lock pin stop spring	
101-160S	Body attaching screw and washer assembly	(4)
101-246	Throttle adjusting screw	
121-156	BODY GASKET	
136-130	AIR HORN DUST SEAL RETAINER	
136-131	CHOKE AND THROTTLE SHAFT DUST SEAL RETAINER	(2)
150-157	Choke lock pin	
163-21	CHOKE AND THROTTLE SHAFT DUST SEAL	(2)
163-52	AIR HORN DRAIN FELT	
224-25S	MAIN METERING JET ASSEMBLY	

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

(733S-SA-SB)
Models—C, Super A and Super AV—1949-55

(734S)
Models—C and Super A 1949-55

(2222S)
Models—100 and Super A-1 1954-55



Cut Shows 734S Carbureter

INTERNATIONAL HARVESTER FARMALL TRACTOR 1949-1955

UT Updraft **Carbureters Nos. 733S-733SA-733SB-2222S** (Gasoline, Regular)

UT Updraft **Carbureter No. 734S** (Distillate Attachment)

CARBURETER SPECIFICATIONS

For International Harvester 4 Cylinder Engine (C, Super A, Super AV): 3 Inch Bore, 4 Inch Stroke

For International Harvester 4 Cylinder Engine (100 and A-1): 3⅛ Inch Bore, 4 Inch Stroke

Dimensions: Flange size, 1 inch S. A. E.
Throttle bore, 1-1/16 inch.
(733S-733SA-733SB) Main venturi, 23/32 inch.
(734S) Main venturi, 21/32 inch.
(2222S) Main venturi, 19/32 inch.

Float Setting: Top of float (733S-SA-SB-734S) 11/16 inch; (2222S) 17/64 inch plus or minus 1/64 inch below top surface of upper body casting.

Vents: Outside, none. Inside, balance vent No. 12 drill

Gasoline Intake Needle: Square vertical needle. Size No. 48 drill in needle seat.

Idle Jet Tube: Jet size (733S-SA-SB-734S) No. 70 (.028 inch); (2222S) No. 66 (.033 inch) drill.
Lower Bleed: No. 60 (.040 inch) drill.
Upper Bleed: No. 65 (.035 inch) drill.
Economizer: No. 61 (.039 inch) drill.

Idle Port: Lower port, slot type, round end, .049 to .051 inch by .029 to .031 inch wide.

Idle Port Opening: Bottom of port .044 to .048 inch below lower edge of valve.

Upper Port (For Idle Adjustment Screw): Size 038 to 042 inch diameter.

Set Idle Adjustment Screw: (733S-SA-SB-734S) ½ to 1; (2222S) ½ to 1½ turns open. For richer mixture, turn screw out Idle engine 400 - 500 r.p.m

Main Metering Jet: Calibrated to flow (733S-SA-SB) 146 to 154 cc; (2222S) 111-119 cc per minute. (Do not gauge for size. If in doubt, replace with new part.)
(734S) Adjustable, 1¾ to 2¾ turns open.

Nozzle: (733S-SA-SB-734S) Inside diameter, size No. 44 (.086 inch); (2222S) No. 36 (.1065 inch) drill. Accelerating jets 4—size No 64 (.036 inch) drill.

Air Bleed to Nozzle: (Thru plug) Size (733S-SA-SB-734S) No 65 (.035 inch); (2222S) No. 56 (.0465 inch) drill.

Choke: Manual—Butterfly type, with pressure relief (poppet) valve.

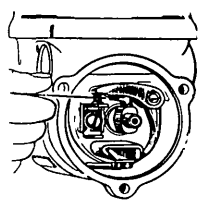
Vacuum Spark: None

Motor Tune-Up—Be Accurate! Always Use Feeler Gauges!

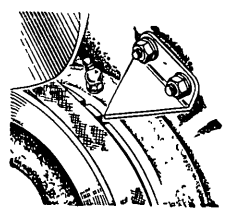
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



Spark Plug Gap
(100 and A-1) .023"
(All Others) .025"



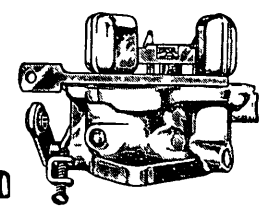
(Cut shows Magneto) Breaker Point Setting
Magneto Ign. .013"
Battery Ign. .020"



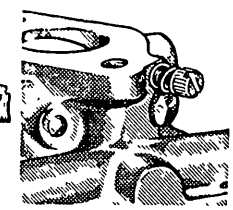
Ignition Timing Breaker Points to Open:
T. D. C.



Valve Setting Hot
Intake .014"
Exhaust .014"



Float Setting (Use Gauge)
(733S-SA-SB-734S) 11/64 Inch
(2222S) 17/64 Inch



Idle Adjustment Screw Setting
(733S-SA-SB-734S) ½ to 1
(2222S) ½ to 1½ Turns Open

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CARBURETER ADJUSTMENTS

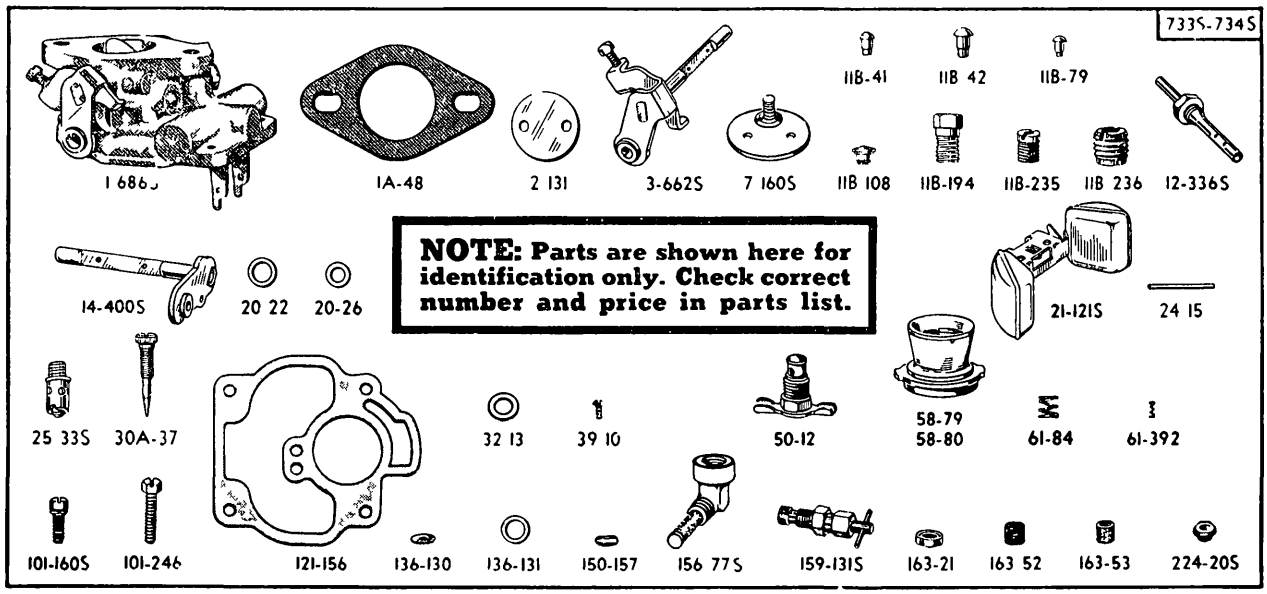
To secure a good idle Set throttle lever adjusting screw until motor runs approximately 450 r p m Then set idle adjustment screw for highest steady vacuum gauge reading or smoothest engine operation Correct setting will be found between ½ to 1½ turns open

High Speed adjustment (734S) With hand throttle wide open and engine operating at 1650 r p m (maximum governed speed) adjust high speed adjusting needle until smoothest engine operation is obtained This setting will be found between 1¾ to 2¾ turns open

If motor loads—check float level· Wear on lip of float lever will raise float level causing carbureter to load up To lower float level bend float lever toward needle To raise float level, bend lip away from needle A very slight bend is sufficient Bend lip of float only, not bracket Be sure float is installed with lip of float against needle

Maximum performance can be secured only when breaker points, spark plugs, valves and motor timing are set to manufacturer's specifications

If carbureter does not respond to the above adjustments disassemble, clean all parts in carbureter cleaner rinse and blow out all passages with compressed air Replace all worn or damaged parts Always use new gaskets See form No 3525 for complete overhaul procedure



I. H. Farmall Tractors—1949-55—Carbureters Nos. 733S-733SA-733SB-734S-2222S

WHEN SERVICING, USE GASKET ASSORTMENT No. 207, REPAIR PKG No 1521A (733S-733SA 733SB), No 1522 (734S)

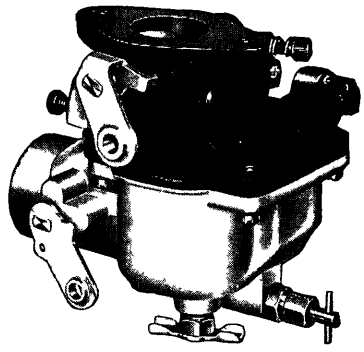
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-686S	Throttle body assembly	
1A-48	FLANGE GASKET	
2-131	Throttle valve	
3-662S	Throttle shaft and lever assembly (733S SA-SB-734S) (Sup by 3 821S)	
3-821S	THROTTLE SHAFT AND LEVER ASSEMBLY	
7-160S	Choke valve assembly	
11-208S	Low speed jet assembly (2222S)	
11B-41	High speed passage rivet plug (733S SA SB 2222S)	
11B 42	Rivet plug	(2)
11B-79	Rivet plug	
11B 108	Idle port rivet plug	
11B 194	Bowl drain plug (733S-SA-SB 2222S)	
11B 235	NOZZLE BLEED SCREW PLUG (733S-SA SB 734S)	
11B-236	IDLE JET SCREW PLUG (733S-SA-SB 734S)	
11B-320	Nozzle bleed screw plug (2222S)	
12-336S	Nozzle assembly (733S-SA-SB 734S)	
12-348S	Nozzle assembly (2222S)	
14-400S	Choke lever and shaft assembly	
20-22	NEEDLE SEAT AND NOZZLE GASKET	(2)
20-26	Main metering jet gasket (733S SA SB 2222S)	
21-121S	Float and lever assembly	
24-15	FLOAT LEVER PIN	
25-33S	NEEDLE AND SEAT ASSEMBLY	
30A-37	Idle adjustment screw	
32 13	MAIN METERING SCREW GASKET (734S)	

Part No.	PART NAME	
39-10	THROTTLE AND CHOKE VALVE ATTACHING SCREW	(4)
47-26	Welsh plug	(2)
50 12	Drain cock (734S)	
58-79	Venturi (733S-SA SB)	
58-80	Venturi (734S)	
58-83	Venturi (2222S)	
61-84	Idle adjustment screw spring	
61-392	CHOKE LOCK PIN STOP SPRING	
101-160S	Body attaching screw and washer assembly	(4)
101-246	Throttle adjusting screw	
121-156	BODY GASKET	
136-130	AIR HORN DUST SEAL RETAINER	
136 131	CHOKE AND THROTTLE SHAFT DUST SEAL RETAINER	(2)
150-157	CHOKE LOCK PIN	
156-77S	ELBOW AND STRAINER ASSEMBLY	
159-131S	Adjustable main metering screw and needle assembly (734S)	
163-21	CHOKE AND THROTTLE SHAFT DUST SEAL	(2)
163-52	AIR HORN DRAIN FELT	
163-53	MAIN METERING SCREW PACKING (734S)	
224-20S	Main metering jet assembly (733S SA) (Sup by 224 26S)	
224-26S	MAIN METERING JET ASSEMBLY (733S-SA-SB)	
224-30S	Main metering jet assembly (2222S)	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.

MODEL SUPER C



INTERNATIONAL HARVESTER FARMALL TRACTOR

UT UPDRAFT **CARBURETERS Nos. 925S-925SA**

(This carbureter is used only on tractors burning distillate fuel)

CARBURETER SPECIFICATIONS

For International Harvester 4 Cylinder Engine 3⅛ Inch Bore 4 Inch Stroke

Dimensions Flange size 1 inch S A E
Throttle bore 1 1/16 inch

Main Venturi 21/32 inch

Float Setting Top of float 17/64 inch plus or minus 1/64 inch below top surface of upper body casting

Vents Outside none Inside balance vent No 12 (.189 inch) drill in air horn ahead of choke valve

Gasoline Intake Needle Square vertical needle Size No 48 (.076 inch) drill in needle seat

Low Speed Jet Tube Jet size No 66 (.033 inch) drill
Upper bleed No 65 (.035 inch) drill
Lower bleed No 60 (.040 inch) drill
Economizer No 61 (.039 inch) drill

Idle Ports Lower port, slot type round end .049 to .051 inch by .029 to .031 inch wide
Bottom of port .044 to .048 inch below lower edge of valve
Upper port .038 to .042 inch diameter (for idle adjustment screw)

Set Idle Adjustment Screw ½ to 1 turn open For richer mixture turn screw out Do not idle engine below 425 R P M

Main Metering Jet Adjustable Seat size No 61 (.039 inch) drill 2 to 3 turns open

Nozzle In primary venturi flared type end angle 24° from vertical Inside diameter No 42 (.0925 inch) drill Accelerating jets 2 No 64 (.036 inch) drill 21/64 inch from shoulder 2 No 64 (.036 inch) drill 27/32 inch from shoulder

Air Bleed to Nozzle (thru plug) No 65 (.035 inch) drill

Choke Manual—Butterfly type with pressure relief (poppet) valve

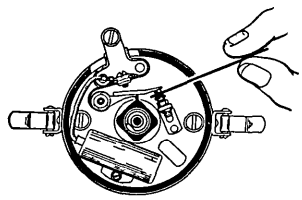
Vacuum Spark None

Motor Tune-Up—Be Accurate!

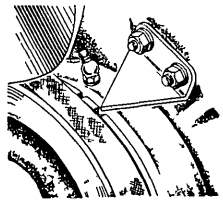
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



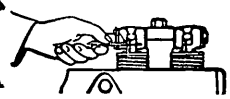
Spark Plug
Gap
.023"



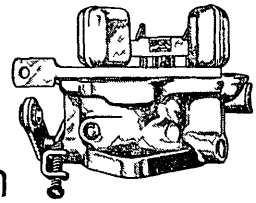
Breaker Point
Setting
Battery Ign .020"



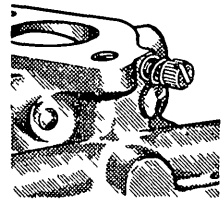
Ignition Timing
Breaker Points to Open
T D C



Valve Setting
Hot
Intake .014"
Exhaust .014"



Float Setting
(Use Gauge)
17/64 Inch
(Plus or minus 1/64 Inch)



Idle Adjustment
Screw Setting
½ to 1
Turn Open

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CARBURETER
TRADE MARK REG U S PAT OFF
MARCA REGISTRADA

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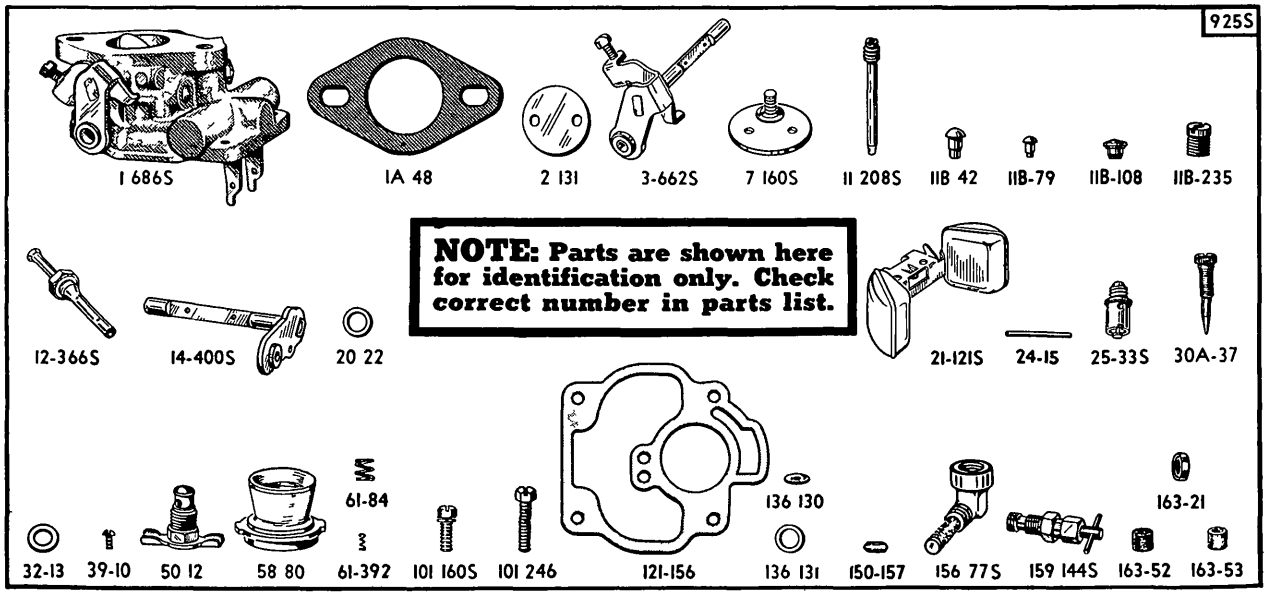
CARBURETER ADJUSTMENTS

To secure a good idle Set throttle lever adjusting screw until motor runs approximately 425 r p m Then set idle adjustment screw for highest steady vacuum gauge reading or smoothest engine operation Correct setting will be found between ½ to 1 turn open

High Speed Adjustment With hand throttle wide open and engine operating at 1650 r p m (maximum governed speed) adjust high speed adjusting needle until smoothest engine op eration is obtained This setting will be found between 2 to 3 turns open

If motor loads—check float level Wear on lip of float lever will raise float level causing carbureter to load up To lower float level bend float lever toward needle To raise float level bend lip away from needle A very slight bend is sufficient Bend lip of float only not bracket Be sure float is installed with lip of float against needle

Maximum performance can be secured only when breaker points spark plugs valves and motor timing are set to manu facturer s specifications If carbureter does not respond to the above adjustments disassemble clean all parts in carbureter cleaner rinse and blow out all passages with compressed air Replace all worn or damaged parts Always use new gaskets See Form No 3525 for complete overhaul procedure



I. H. Farmall Tractor—Carbureters Nos. 925S-925SA

WHEN SERVICING USE GASKET ASSORTMENT No 207

Part No	PART NAME
1-686S	Throttle body assembly
1A-48	Flange gasket
2-131	Throttle valve
3-662S	Throttle shaft and lever assy (Sup by 3 821S)
3-821S	Throttle shaft and lever assy
7-160S	Choke valve assembly
11-208S	Low speed jet assembly
11B-42	Rivet plug (2)
11B-79	Rivet plug
11B-108	Idle port rivet plug
11B-235	Nozzle bleed screw plug
12-366S	Nozzle assembly
14-400S	Choke lever and shaft assembly
20-22	Needle seat and nozzle gasket (2)
21-121S	Float and lever assembly
24-15	Float lever pin
25-33S	Needle and seat assembly

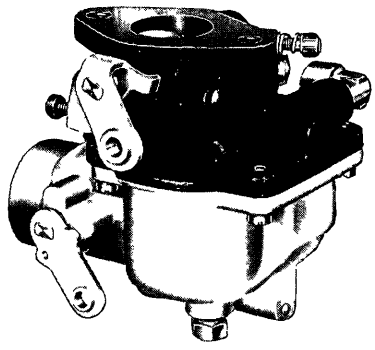
Part No	PART NAME
30A-37	Idle adjustment screw
32-13	Main metering screw gasket
39-10	Throttle and choke valve attaching screw (4)
50 12	Drain cock
58-80	Venturi
61-84	Idle adjustment screw spring
61-392	Choke lock pin stop spring
101-160S	Body attaching screw and washer assembly (4)
101-246	Throttle adjusting screw
121-156	Body gasket
136-130	Air horn dust seal retainer
136-131	Choke and throttle shaft dust seal retainer (2)
150-157	Choke lock pin
156-77S	Elbow and strainer assembly
159-144S	Adjustable main metering screw and needle assembly
163-21	Choke and throttle shaft dust seal (2)
163-52	Air horn drain felt
163-53	Main metering screw packing

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

INTERNATIONAL
HARVESTER TRACTOR 1951-54
March, 1951
Revised April, 1955

MODEL SUPER C



INTERNATIONAL HARVESTER FARMALL TRACTOR 1951-1954

UT Updraft **Carbureters Nos. 771S-771SA-771SB** (Gasoline, Regular)

CARBURETER SPECIFICATIONS

For International Harvester 4 Cylinder Engine: 3 1/8 Inch Bore, 4 Inch Stroke

Dimensions: Flange size, 1 inch S. A. E.
Throttle bore. 1-1/16 inch. (26.99 mm)
Main venturi, 23/32 inch. (18.25 mm)

Float Setting: Top of float 17/64 inch (6.74 mm) plus or minus 1/64 inch (.40 mm) below top surface of upper body casting with casting inverted. (See illustration)

Vents: Outside, none. Inside, balance vent No. 12 drill (4.80 mm).

Gasoline Intake Needle: Size No. 48 (1.93 mm) drill in needle seat.

Low Speed Jet Tube: Jet size, No. 66 (.84 mm) drill.
Upper bleed: No. 65 (.89 mm) drill.
Lower bleed: No. 60 (1.02 mm) drill.
Economizer: No. 61 (.99 mm) drill.

Idle Ports: Lower port, slot type, round end, .049 to .051 inch (1.25 to 1.30 mm) by .029 to .031 inch (.74 to .79 mm) wide. Bottom of port .044 to .048 inch (1.12 to 1.22 mm) below lower edge of valve.
Upper port .038 to .042 inch (.97 to 1.07 mm) diameter (for idle adjustment screw).

Set Idle Adjustment Screw: 1/2 to 1 turn open. For richer mixture, turn screw out. Do not idle engine below 400 R.P.M.

Main Metering Jet: Calibrated to flow 157 to 159 cc per minute (771S); 127 to 131 cc per minute (771SA).
(Do not gauge for size. If in doubt, replace with new part.)

Nozzle: Inside diameter No. 36 (2.70 mm) drill (771S); No. 42 (2.37 mm) drill (771SA).
Accelerating Jets: 2 No. 64 (.91 mm) drill 21/64 inch (8.33 mm) from shoulder. 2 No. 64 (.91 mm) drill 27/32 inch (21.44 mm) from shoulder.

Air Bleed to Nozzle: (Thru plug) No. 70 (.71 mm) drill.

Choke: Manual—Butterfly type, with pressure relief (poppet) valve.

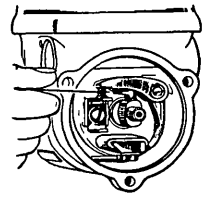
Vacuum Spark: None.

Motor Tune-Up—Be Accurate!

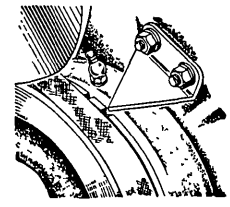
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



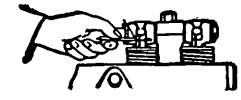
Spark Plug Gap .025"



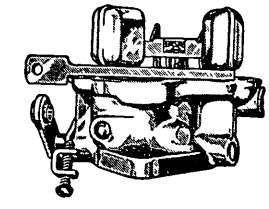
Breaker Point Setting Battery Ign. .020"



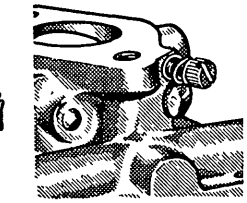
Ignition Timing Breaker Points to Open: T. D. C.



Valve Setting Hot
Intake .014"
Exhaust .014"



Float Setting (Use Gauge) 17/64 Inch



Idle Adjustment Screw Setting 1/2 to 1 Turn Open

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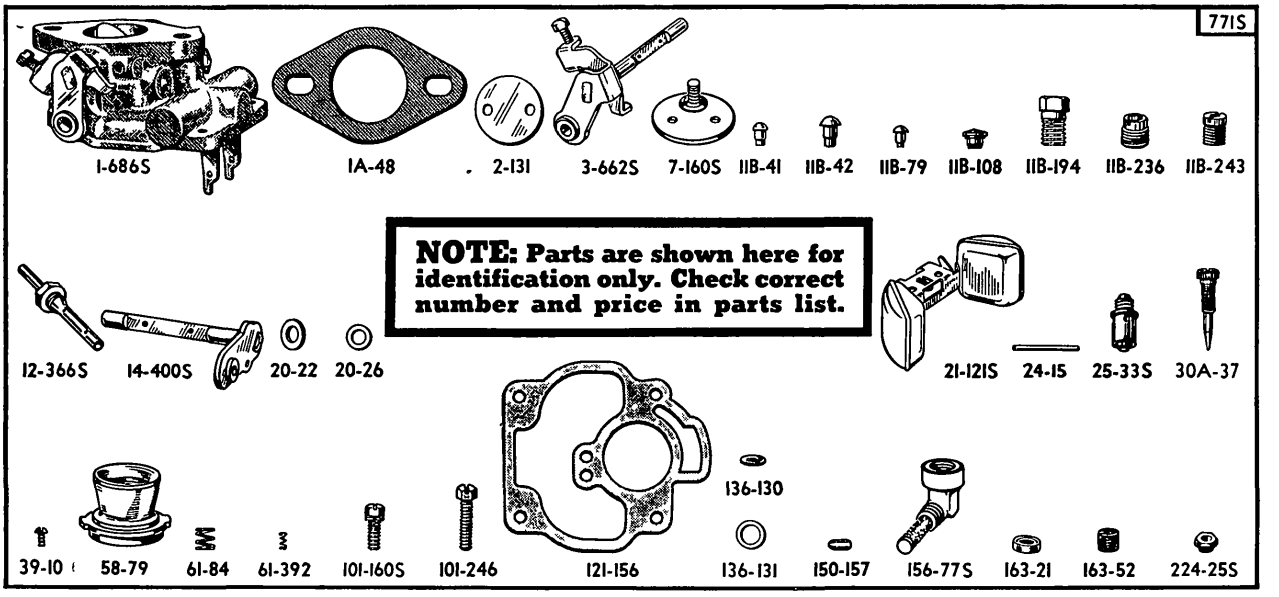
CARBURETER ADJUSTMENTS

To secure a good idle Set throttle lever adjusting screw until motor runs approximately 400 r p m Then set idle adjustment screw for highest steady vacuum gauge reading or smoothest engine operation Correct setting will be found between ½ to 1 turn open

If motor loads—check float level Wear on lip of float lever will raise float level, causing carbureter to load up To lower float level bend float lever toward needle To raise float level bend lip away from needle A very slight bend is sufficient Bend lip of float only, not bracket **Be sure float is installed with lip of float against needle.**

Maximum performance can be secured only when breaker points, spark plugs, valves and motor timing are set to manufacturer s specifications

If carbureter does not respond to the above adjustments disassemble, clean all parts in carbureter cleaner, rinse and blow out all passages with compressed air Replace all worn or damaged parts Always use new gaskets See form No 3525 for complete overhaul procedure



I. H. Farmall Tractors 1951-54, Carbs. Nos. 771S-SA-SB

WHEN SERVICING, USE GASKET ASSORTMENT No 207 REPAIR PACKAGE No 1769 (771SA-SB)

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

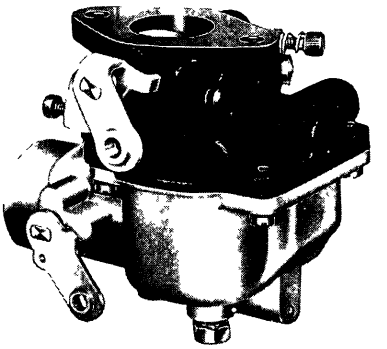
Part No	PART NAME	
1 686S	Throttle body assembly	
1A-48	FLANGE GASKET	
2-131	Throttle valve	
3-662S	Throttle shaft and lever assembly (Sup by 3 821S)	
3-821S	THROTTLE SHAFT AND LEVER ASSEMBLY	
7-160S	Choke valve assembly	
11-208S	LOW SPEED JET ASSEMBLY	
11B-41	High speed passage rivet plug	
11B-42	Rivet plug	(2)
11B-79	Rivet plug	
11B-108	IDLE PORT RIVET PLUG	
11B-194	Bowl drain plug	
11B-243	NOZZLE BLEED SCREW PLUG	
12-348S	Nozzle assembly (771S)	
12-366S	Nozzle assembly (771SA SB)	
14-400S	Choke lever and shaft assembly	
20-22	Needle seat and nozzle gasket	(2)
20-26	Main metering jet gasket	
21-121S	Float and lever assembly	

Part No	PART NAME	
24-15	FLOAT LEVER PIN	
25-33S	NEEDLE AND SEAT ASSEMBLY	
30A-37	Idle adjustment screw	
39-10	THROTTLE AND CHOKE VALVE ATTACHING SCREW	(4)
58 79	Venturi	
61 84	Iole adjustment screw spring	
61-392	Choke lock pin stop spring	
101-160S	Body attaching screw and washer assembly	(4)
101-246	Throttle adjusting screw	
121-156	BODY GASKET	
136-130	AIR HORN DUST SEAL RETAINER	
136-131	CHOKE AND THOTTLE SHAFT DUST SEAL RETAINER	(2)
150-157	Choke lock pin	
156-77S	Elbow and strainer assembly	
163-21	CHOKE AND THROTTLE SHAFT DUST SEAL	(2)
163-52	AIR HORN DRAIN FELT	
224 21S	Main metering jet assembly (771S)	
224-25S	MAIN METERING JET ASSEMBLY (771SA SB)	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

CARTER CARBURETOR CORPORATION, ST. LOUIS, MO., U. S. A.

MODEL U-2A



INTERNATIONAL HARVESTER INDUSTRIAL 1950-1954

UT UPDRAFT **CARBURETER No. 795S**

CARBURETER SPECIFICATIONS

For International Harvester 4 Cylinder Engine: 3 Inch Bore, 4 Inch Stroke

Dimensions: Flange size, 1 inch S. A. E.
Throttle bore, 1-1/16 inch.
Main venturi, 19/32 inch.

Float Setting: With body gasket removed and free weight of float resting on needle, there should be 17/64 inch (plus or minus 1/64 inch) clearance between seam of float (both sides) and machined surface of casting.

Vents: Outside, none. Inside, balance vent No. 12 drill.

Gasoline Intake Needle: Square vertical needle. Size No. 48 drill in needle seat.

Low Speed Jet Tube: Jet size, No. 66 (.033 inch) drill.
Idle bleed, (upper) No. 65 (.035 inch) drill.
Idle bleed, (lower) No. 60 (.040 inch) drill.
Economizer, No. 61 (.039 inch) drill.

Idle Ports: Lower port, slot type, round end, .049 to .051 inch by .029 to .031 inch wide. Bottom of port .044 to .048 inch below lower edge of valve. Upper port .038 to .042 inch diameter (for idle adjustment screw).

Set Idle Adjustment Screw: 1/2 to 1 turn open. For richer mixture, turn screw out. Do not idle engine below 400 r.p.m.

Main Metering Jet: Calibrated to flow 95 to 99 cc per minute. (Do not gauge for size; if in doubt, replace with new part.)

Nozzle: In primary venturi, angle 24° from vertical. Inside diameter No. 36 (.1065 inch) drill.
Accelerating Jets: 2 No. 64 (.036 inch) drill, 21/64 inch from shoulder. 2 No. 64 (.036 inch) drill, 27/32 inch from shoulder.

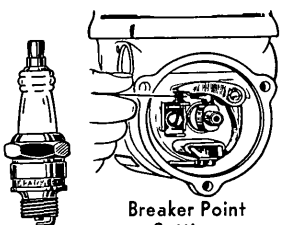
Air Bleed to Nozzle: (Thru plug) No. 57 (.043 inch) drill.

Choke: Manual—butterfly type, with poppet valve.

Vacuum Spark Port: None.

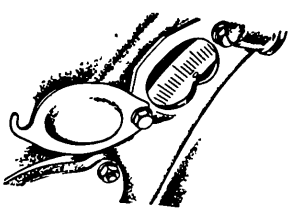
Motor Tune-Up—Be Accurate! Always Use Feeler Gauges!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



Spark Plug Gap .025"

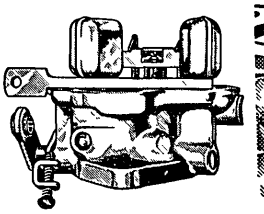
Breaker Point Setting (Magneto) .013" (Battery) .020"



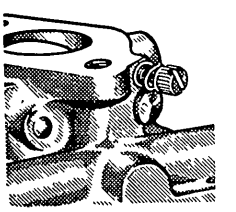
Ignition Timing Breaker Points to Open: T. D. C.



Valve Setting (Hot) Intake .014" Exhaust .014"



Float Setting (Use Gauge) 17/64" Plus or Minus 1/64"



Idle Adjustment Screw Setting 1/2 to 1 Turn Open

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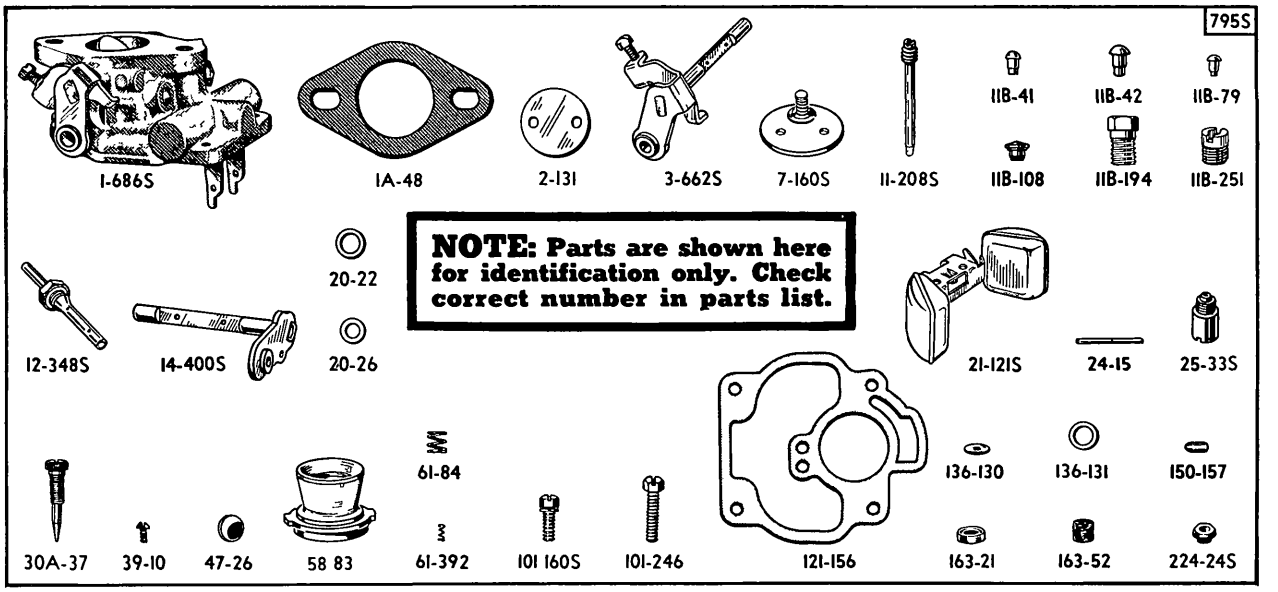
CARBURETER ADJUSTMENTS

To secure a good idle. Set throttle lever adjusting screw until motor runs approximately 400 r p m Then set idle adjustment screw for highest steady vacuum gauge reading or smoothest engine operation Correct setting will be found between ½ to 1 turn open

If motor loads—check float level Wear on lip of float lever will raise float level, causing carbureter to load up To lower float level, bend lip on float lever toward needle To raise float level bend lip away from needle A very slight bend is sufficient Bend lip of float only, not lever Be sure float is installed with lip of float against needle

Maximum performance can be secured only when breaker points, spark plugs, valves and motor timing are set to manufacturer's specifications

If carbureter does not respond to the above adjustments, disassemble, clean all parts in carbureter cleaner, rinse and blow out all passages with compressed air Replace all worn or damaged parts Always use new gaskets See form No 3525 for complete overhaul procedure



I. H. Industrial—1950-1954—Carbureter No. 795S

WHEN SERVICING, USE GASKET ASSORTMENT No. 207, REPAIR PACKAGE No. 1592

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-686S	Throttle body assembly	
1A-48	FLANGE GASKET	
2-131	Throttle valve	
3-662S	THROTTLE SHAFT AND LEVER ASSEMBLY (Sup by 3 821S)	
3-821S	Throttle shaft and lever assembly	
7-160S	Choke valve assembly	
11-208S	LOW SPEED JET ASSEMBLY	
11B-41	High speed passage rivet plug	
11B-42	Rivet plug	(2)
11B-79	Rivet plug	
11B-108	IDLE PORT RIVET PLUG	
11B-194	Bowl drain plug	
11B-251	NOZZLE BLEED SCREW PLUG	
12-348S	Nozzle assembly	
14-400S	Choke lever and shaft assembly	
20-22	Needle seat and nozzle gasket	(2)
20-26	Main metering jet gasket	

Part No.	PART NAME	
21-121S	Float and lever assembly	
24-15	FLOAT LEVER PIN	
25-33S	NEEDLE AND SEAT ASSEMBLY	
30A-37	Idle adjustment screw	
39-10	THROTTLE AND CHOKE VALVE ATTACHING SCREW	(4)
47-26	Welsh plug	(2)
58-83	Venturi	
61-84	Idle adjustment screw spring	
61-392	CHOKE LOCK PIN STOP SPRING	
101-160S	Body attaching screw and washer assembly	(4)
101-246	Throttle adjusting screw	
121-156	BODY GASKET	
136-130	AIR HORN DUST SEAL RETAINER	
136-131	CHOKE AND THROTTLE SHAFT DUST SEAL RETAINER	(2)
150-157	CHOKE LOCK PIN	
163-21	CHOKE AND THROTTLE SHAFT DUST SEAL	(2)
163-52	AIR HORN DRAIN FELT	
224-24S	MAIN METERING JET ASSEMBLY	

NOTE Figures in parentheses indicate number of pieces used in ne carbureter. Where no figure is shown, only one is used.

INTERNATIONAL TRUCK

MODEL No. R180-184

Engine Nos. BD-261, BD-282

1953

YF Down-Draft Carbureter—**Model 879S** International No 107098-R91)

CARBURETER SPECIFICATIONS

For 6 Cylinder Engine 3 13/16 Inch Bore 4 1/8 Inch Stroke

Dimensions Flange size 1 1/2 inch S A E
Primary venturi 11/32 inch I D
Secondary venturi 11/16 inch I D
Main venturi 1 3/8 inch I D

Float Setting See Adjustments

Vents Outside none Inside balance vent to air horn above choke valve

Gasoline Intake Spring loaded needle Size No 46 (081 inch) drill in needle seat

Low Speed Jet Tube Jet size No 65 (035 inch) drill By pass n air horn size No 54 (055 inch) drill Economizer size No 55 (052 inch) drill Idle bleed in body size No 54 (055 inch) drill Bleed idle well to bowl size 0292 inch diameter

Idle Port Upper port slot type length 189 to 191 inch width 030 inch

Idle Port Opening Top of port 134 to 138 inch above top edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw) 0615 to 0655 inch diameter

Set Idle Adjustment Screw 3/4 to 1 3/4 turns open For richer mixture turn screw out Do not idle engine below 400 r p m

Main Nozzle Nozzle is installed permanently DO NOT RE MOVE Anti percolator Size No 53 (0595 inch) drill

Metering Rod Economy step 070 inch diameter middle step tapers to 050 inch diameter power step 040 inch diameter

Metering Rod Jet 104 inch diameter

Metering Rod Setting See Adjustments

Accelerating Pump Diaphragm type vacuum and mechanically operated Pump jet size No 69 (0292 inch) drill Intake ball check seat (in diaphragm housing) size No 40 (098 inch) drill D scharge ball check seat (in body) size No 42 (0935 inch) drill Vacuum restriction (in flange) size No 50 (070 inch) drill Vacuum passage (diaphragm bleed) size No 65 (035 inch) drill

Pump Adjustment See Adjustments

Choke Manual interconnected w th throttle Valve offset butterfly type

Vacuum Spark Port None

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open	Valve Setting	Float Setting	Idle Adjustment Screw Setting
030"	020"	6° B T C	(Hot) Int 018" 020" (Hot) Exh 018"-020"	3/8 Inch (Use Gauge T109 80)	3/4 to 1 3/4 Turns Open

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT With bowl cover assembly inverted and float resting on pin in seated needle, and with gasket removed the distance from the bowl cover to the top of float should be 3/8 inch (gauge T109-80) Do not depress float lip against spring in needle but let float rest of its own weight Adjust by bending lip of float, not float arm

FLOAT DROP With bowl cover assembly held in upright position the distance between free end of float and bowl cover should be 1 3/16 inch Adjust by bending stop tabs on float arm

METERING ROD ADJUSTMENT This adjustment is important and should be checked each time the carbureter is

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reassembled With throttle valve seated in bore of carbureter, press down on upper end of diaphragm shaft until diaphragm bottoms in vacuum chamber (Tool T109-212 may be used to hold diaphragm shaft down while adjusting metering rod) Metering rod should contact bottom of metering rod well, and metering rod arm should contact lifter link between spring and at supporting lug Adjust by bending lip up or down

ACCELERATING PUMP: If acceleration is not satisfactory remove pump check retainer ring and pump discharge ball check Then remove pump diaphragm assembly Check diaphragm for wear or damage Be sure inlet hole is not clogged with lint or foreign matter Inspect and replace all worn or damaged parts Clean and blow out all passages with compressed air Make sure discharge check seats in casting as a leak at this point will result in poor acceleration

FAST IDLE ADJUSTMENT With choke held in wide open position lip on fast idle arm should contact boss on body casting Adjust by bending at offset of fast idle link

International Truck, 1953, Carbureter No. 879S

WHEN SERVICING USE GASKET ASSORTMENT No 241A, REPAIR PACKAGE No 1805

PART NAMES IN CAPITAL LETTERS, LISTED BELOW INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-868S	Body flange assembly	
1A-24	Flange gasket—for use with governor	
1A-31	FLANGE GASKET—for use without governor	
2-136	Throttle valve	
3-740	Throttle shaft	
4-648S	Throttle lever assembly	
6-711S	Air horn assembly (Sup by 6 893S)	
6-893S	Air horn assembly	
7-107	Choke valve (Sup by 7 186S)	
7-186S	Choke valve	
11-230S	LOW SPEED JET ASSEMBLY	
11B-12	Rivet plug	
11B-35	Rivet plug	
11B-79	Rivet plug (Late prod)	(2)
11B-108	IDLE PORT RIVET PLUG	
11B-224	Choke shaft rivet plug	
14-388S	Choke lever assembly	
14-403S	Choke shaft and lever assembly	
20-22	Needle seat gasket	
21-122S	Float and lever assembly	
24-27	Float lever pin	
25-195S	NEEDLE SPRING PIN AND SEAT ASSEMBLY	
30A-44	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	THROTTLE VALVE ATTACHING SCREW	(2)
53A-322	Fast idle arm	
61-84	Idle adjustment screw spring	
61-242	Metering rod spring	
61-389	Pump diaphragm spring (Sup by 61 451)	
61-390	Upper pump spring	
61-395	Shaft seal spring	
61-397	Choke connector rod spring	
61-451	PUMP DIAPHRAGM SPRING	
61-473	Choke lever spring	
62-166S	Tube clamp assembly	
63-44	Choke lever retainer ring	
63-135	UPPER PUMP SPRING RETAINER	
63-149	PUMP DIAPHRAGM SPRING RETAINER	
63-152	Pump intake and discharge ball check retainer ring (early prod —2 (late prod —1)	
63-202	Pump intake ball check retainer ring (late prod)	
75-797	METERING ROD—STANDARD	
75-1102	Metering rod—1 size lean	
75-1103	Metering rod—2 sizes lean	
86-15	Flange stud lock washer	(2)
101-10	W re clamp screw	
101-28	Throttle shaft arm attaching screw	
101 149S	Body flange attaching screw and washer assembly	(3)
101-160S	Bowl cover attaching screw and washer assembly	(5)
101-164	Throttle lever clamp screw	
101-216S	Air horn attaching screw and washer assembly	(2)
101-256	Throttle lever adjusting screw	
101-282S	Diaphragm housing attaching screw and washer assembly	(4)
105-11	Tube clamp screw	
105A-8	Tube clamp nut	
105A-13	Flange stud nut	(2)
105A-28	Throttle lever clamp screw nut	
111-57S	Metering rod arm assembly	
114-109S	Throttle shaft arm assembly	
115-157	Choke connector rod	
116 25	PUMP INTAKE AND DISCHARGE BALL CHECK	(2)
117-137	PUMP LIFTER LINK	
117-160	PUMP CONNECTOR LINK	
120-161	METERING ROD JET	
121-154	BOWL COVER AND AIR HORN GASKET	
121-172	LIFTER LINK SEAL GASKET	
121-220	BODY FLANGE GASKET	
136-125	DUST SEAL RETAINER	
136-134	Throttle shaft washer	
136-135	DUST SEAL RETAINER	
136-152	LIFTER LINK SEAL WASHER	
150A-10	PIN SPRING	(2)
156-15	Nipple	
163-51	FELT DUST SEAL	(2)
170-256S	Pump diaphragm housing and ball check assembly (Sup by 170 272S)	
170-272S	Pump diaphragm housing and ball check assembly	
203-60S	Pump diaphragm assembly (Sup by 203 67S)	
203-67S	PUMP DIAPHRAGM ASSEMBLY	

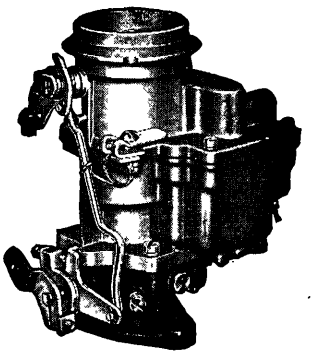
NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

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TRUCK MODELS

740S-740SA-740SB (SD-220)
L-110, L111, L-112, L-120, L121,
L-122, L130, L-131, L-132,
L-150, L-151, L-152, L-153,
R-110, R-120, R-130, R150

741S-741SA-741SB (SD-240)
L-160, L-161, L-162, L-163, L-164,
L-165, LB-140, LC-160,
R-160, RB-140



INTERNATIONAL TRUCKS 1950-1953

EXPORT AND HIGH ALTITUDE

YF Down-Draft Carbs. **740S** (I.H. No. 85462-R91), **740SA** (I.H. No. 85462-R93), **740SB** (I.H. No. 85462-R94), **741S** (I.H. No. 85463-R91), **741SA** (I.H. No. 85463-R92), **741SB** (I.H. No. 85463-R94)

CARBURETER SPECIFICATIONS

For International Engines (SD-220)—3-9/16 Inch Bore, 3-11/16 Inch Stroke
For International Engines (SD-240)—3-9/16 Inch Bore, 4.018 Inch Stroke

Dimensions: Flange size, 1¼ inch S.A.E.
Primary venturi, 11/32 inch (8.73 mm) I. D.
Secondary venturi, 11/16 inch (17.46 mm) I. D.
Main venturi, 1-5/16 inch (33.34 mm) I. D.

Float Setting: See adjustments.

Vents: Outside, none. Inside balance vent to air horn above choke valve.

Gasoline Intake: (740S-SA-SB) size No. 48 (1.93 mm) drill, (741S-SA-SB) size No. 46 (2.06 mm) drill, hole in needle seat. (741SA-SB) spring loaded needle.

Low Speed Jet Tube: Jet size: (740S-SA-SB) No. 70 (.71 mm) drill; (741S-SA-SB) No. 67 (.81 mm) drill. By-pass in air horn: (740S-SA-SB) No. 53 (1.51 mm) drill; (741S-SA-SB) No. 54 (1.40 mm) drill. Idle bleed in body: (740S-SA-SB) No. 53 (1.51 mm) drill; (741S-SA-SB) No. 54 (1.40 mm) drill. Economizer in body: No. 54 (1.40 mm) drill.

Idle Ports: Upper port: slot type, length (740S-SA-SB) .105 inch (2.67 mm). (741S-SA-SB) .120 inch (3.05 mm); width .030 inch (.76 mm). Lower port (for idle adjusting screw): size .0615 to .0655 inch (1.56 to 1.66 mm) diameter.

Idle Port Opening: Top of port: (740S-SA-SB) .076 to .080 inch (1.93 to 2.03 mm), (741S-741SA and 741SB early production) .109 to .113 inch (2.77 to 2.87 mm), (741SB late production) .105 to .109 inch (2.67 to 2.77 mm) above top edge of valve with valve tightly closed.

Set Idle Adjustment Screw: ¾ to 1¾ turns open. For richer mixture turn screw out. Do not idle engine below 400 RPM.

High Speed Adjustment Needle: Seat size, (740S-SA-SB) No. 50 (1.78 mm) drill, (741S-SA-SB) No. 53 (1.51 mm) drill. Adjustment, ¾ to 1¾ turns open.

Main Nozzle: Nozzle is installed permanently. **DO NOT REMOVE.** Anti-percolator air bleed No. 66 (.84 mm) drill hole in plug.

Metering Rod: (740S-SA-SB) Economy step, .074 inch (1.88 mm) diameter; middle step tapers to .0682 inch (1.73 mm) diameter; power step .040 inch (1.02 mm) diameter. (741S-SA-SB) Economy step, .072 inch (1.83 mm) diameter; middle step tapers to .068 inch (1.73 mm) diameter; power step .043 inch (1.09 mm) diameter.

Metering Rod Jet: (740S-SA-SB) size No. 41 (2.44 mm) drill. (741S-SA-SB) size .0945 inch (2.40 mm) diameter.

Metering Rod Setting: See adjustments.

Accelerating Pump: Diaphragm type, vacuum and mechanically operated.
Pump jet size, (740S early production and 741S-SA-SB) No. 72 (.64 mm) drill, (740S late production and 740SA-SB) No. 70 (.71 mm) drill.
Intake passage (in diaphragm housing), (740S early production and 741S-SA-SB) No. 72 (.64 mm) drill, (740S late production and 740SA-SB) No. 75 (.53 mm) drill.
Vacuum restriction (in flange) size No. 55 (1.32 mm) drill.
Vacuum passage (diaphragm bleed) size No. 65 (.89 mm) drill.

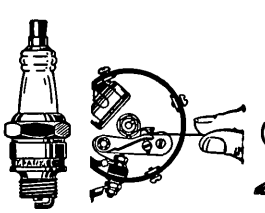
Pump Stroke: No adjustment.

Choke: Manual, interconnected with throttle. Valve, offset butterfly type.

Vacuum Spark Port: Slot (round end) type. Size .110 by .040 inch (2.79 by 1.02 mm). Bottom of port (740S-SA, 741S-SA-SB) .014-.024 inch (.36 to .61 mm), (740SB) .007-.017 inch (.18-.43 mm), above top edge of valve with valve tightly closed.

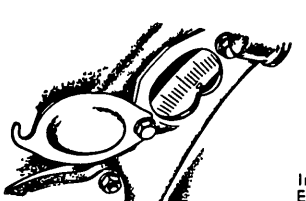
Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



Spark Plug Gap .030"

Breaker Point Setting .020"



Ignition Timing Breaker Points to Open: 2° B. T. C.



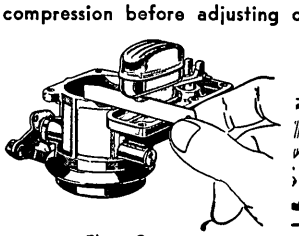
Valve Setting (Hot)

SD-220 ENGINES

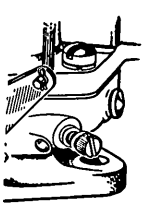
Intake	.018"-.020"
Exhaust (Conventional)	.018"-.020"
Exhaust (Slo-Roto)	.020"-.022"

SD-240 ENGINES

Intake	.018"-.020"
Exhaust (Conventional)	.024"-.025"
Exhaust (Slo-Roto)	.020"-.022"



Float Setting (Use Gauge)
25/64 Inch (740S-SA-SB)
7/16 Inch (741S)
5/16 Inch (741SA-SB)



Idle Adjustment Screw Setting ¾ to 1¾ Turns Open

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CARBURETER ADJUSTMENTS

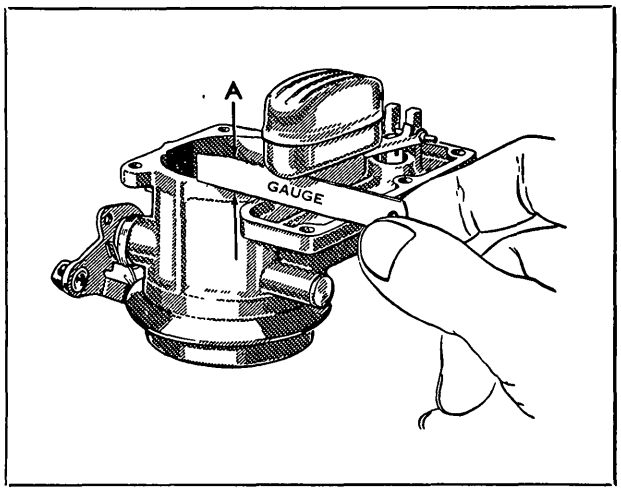


Figure 1
Float Adjustment

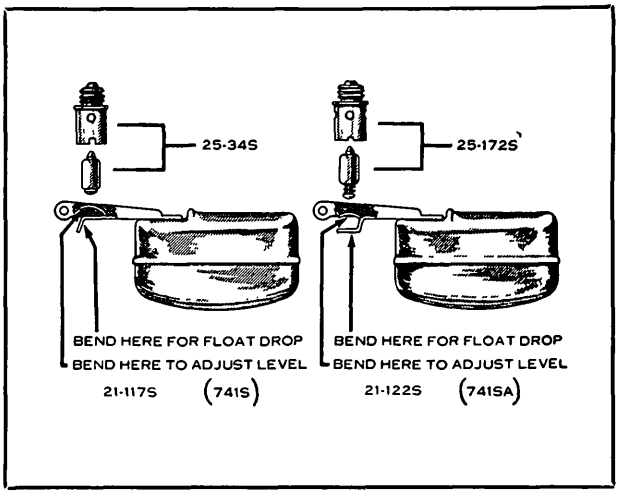


Figure 2
Float and Needle and Seat Assembly

FLOAT ADJUSTMENT (Fig. 1):

With gasket removed and bowl cover assembly inverted, the distance (A) from the bowl cover to the top of float should be 25/64" (gauge T109-206) (740S-SA-SB), 7/16" (gauge T109-81) (741S), 5/16" (gauge T109-107) (741SA-SB), with free weight of float on seated needle. Adjust by bending lip of float, not float arm.

741SA-SB float setting must be checked with bowl cover held at eye height in a level position.

Float drop: (741SA-741SB) With bowl cover assembly held in upright position, the distance between free end of float and bowl cover should be 1-3/16 inch. Adjust by bending stop tabs on float arm.

FLOAT AND NEEDLE AND SEAT ASSEMBLY (Fig. 2):

741S may be brought up to 741SA specifications by changing 21-117S float to 21-122S float, and 25-34S needle and seat assembly to 25-172S needle, pin, spring and seat assembly. Then reset float level to 5/16 inch.

When installing 25-172S needle, pin, spring and seat assembly, included in Repair Parts Package No. 1545A, float and lever assembly 21-122S must be used.

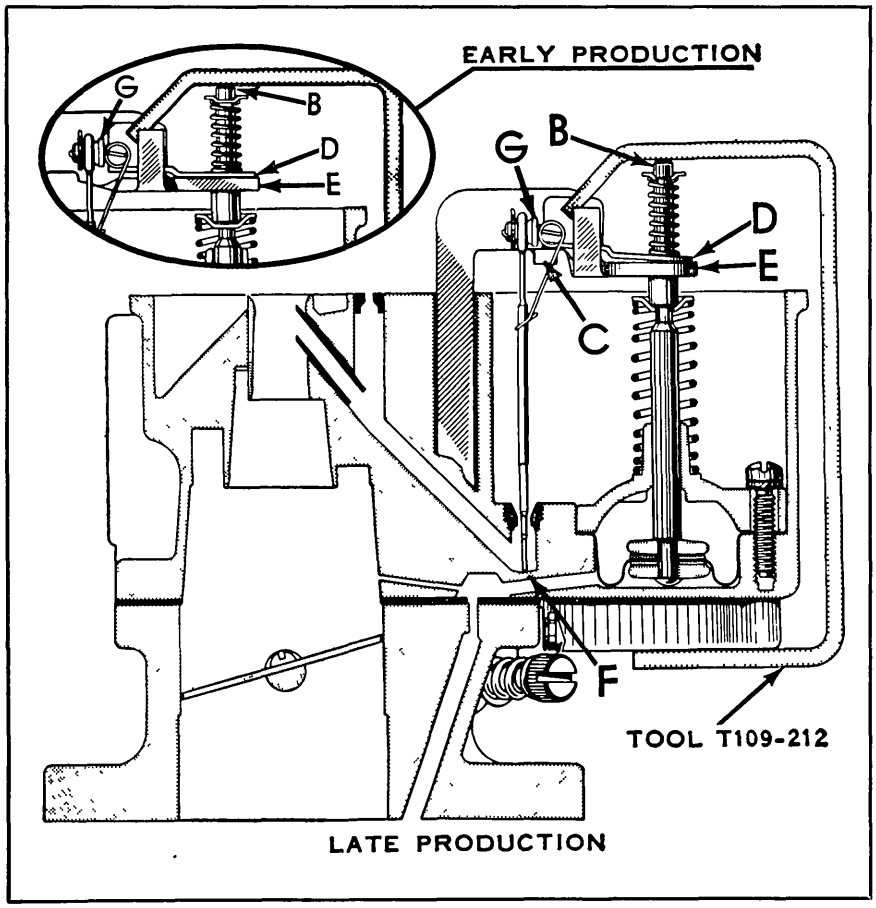


Figure 3
Metering Rod Adjustment

METERING ROD ADJUSTMENT (Fig. 3):

This adjustment is important and should be checked each time the carbureter is reassembled or lean rods are installed. With throttle valve seated in bore of carbureter, press down on upper end of diaphragm shaft (B) until diaphragm bottoms in vacuum chamber. (Tool T109-212 may be used to hold diaphragm down while adjusting metering rod.)

On late production carbureters, which have projection (C) on pump lifter link, metering rod should contact bottom of metering rod well (F) and metering rod arm (D) should contact lifter link (E) between springs and at supporting lug (C). Adjust by bending lip (G) up or down.

On early production carbureters, which do not have projection (C) on pump lifter link, metering rod should bottom in metering rod well (F) and flat of metering rod arm (D) should make parallel contact with flat of pump lifter link (E). Adjust by bending lip (G) up or down.

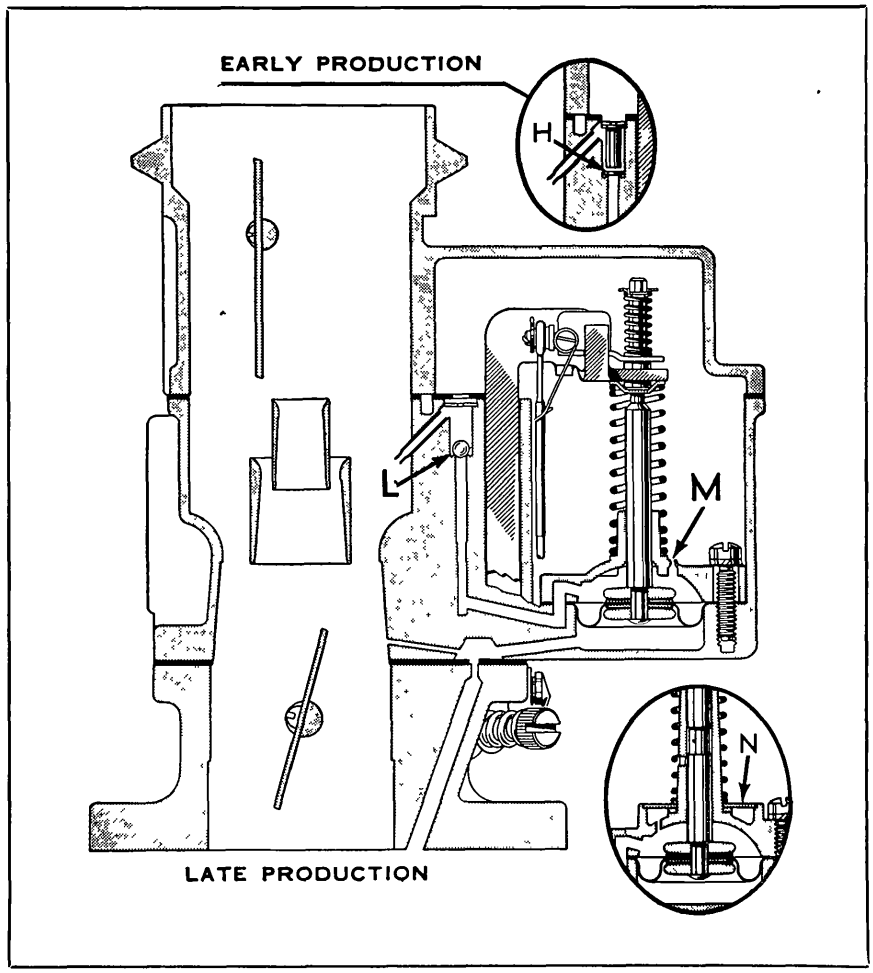


Figure 4
Accelerating Pump

ACCELERATING PUMP (Fig. 4):

If acceleration is not satisfactory, remove pump disk retainer ring, retainer, and pump check disk (H) (740S-741S-741SA) or pump discharge ball check (L) (740SA-SB-741SB). Then remove pump diaphragm assembly. Check diaphragm for wear or damage. Be sure inlet hole (M) is not clogged with lint or foreign matter. Intake screen (N) (if so equipped) should be removed in service.

If carbureter is equipped with disk type discharge check replace with aluminum ball check. Unitized Package (Part No. 116-26U) consisting of (1) 1/8" steel ball, (1) 1/8" aluminum ball, and (1) 63-152 retainer should be used. Complete instructions for this conversion are contained in the package. If the discharge ball or seat in late production carbureters, originally equipped with aluminum ball check, appear damaged, 116-26U should be used.

Inspect and replace all worn or damaged parts and clean and blow out all passages with compressed air. Make sure discharge check seats in casting as a leak at this point will result in poor acceleration.

FAST IDLE ADJUSTMENT (Fig. 5):

With choke held in wide open position, lip (J) on fast idle arm should contact boss on body casting. Adjust by bending at offset of fast idle link (K).

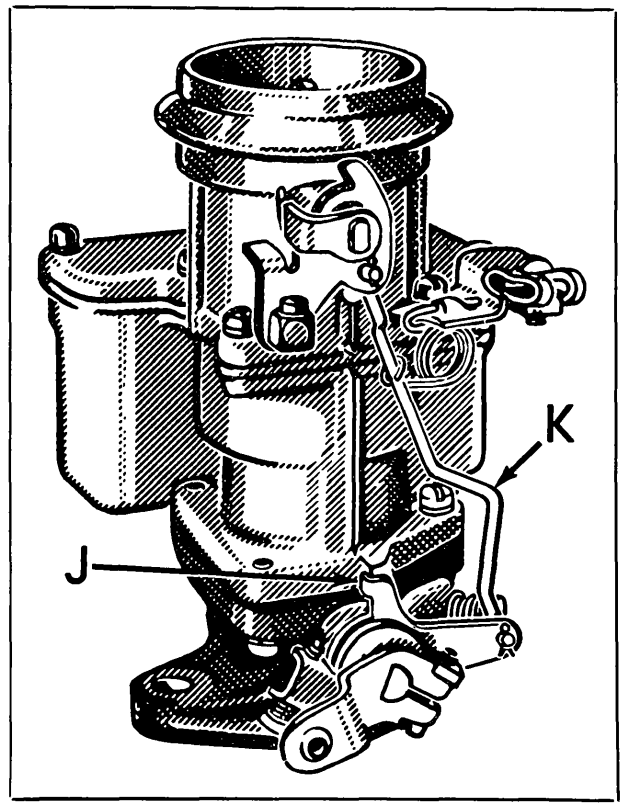


Figure 5
Fast Idle Adjustment

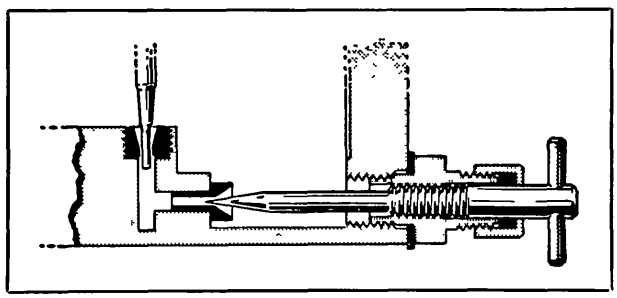
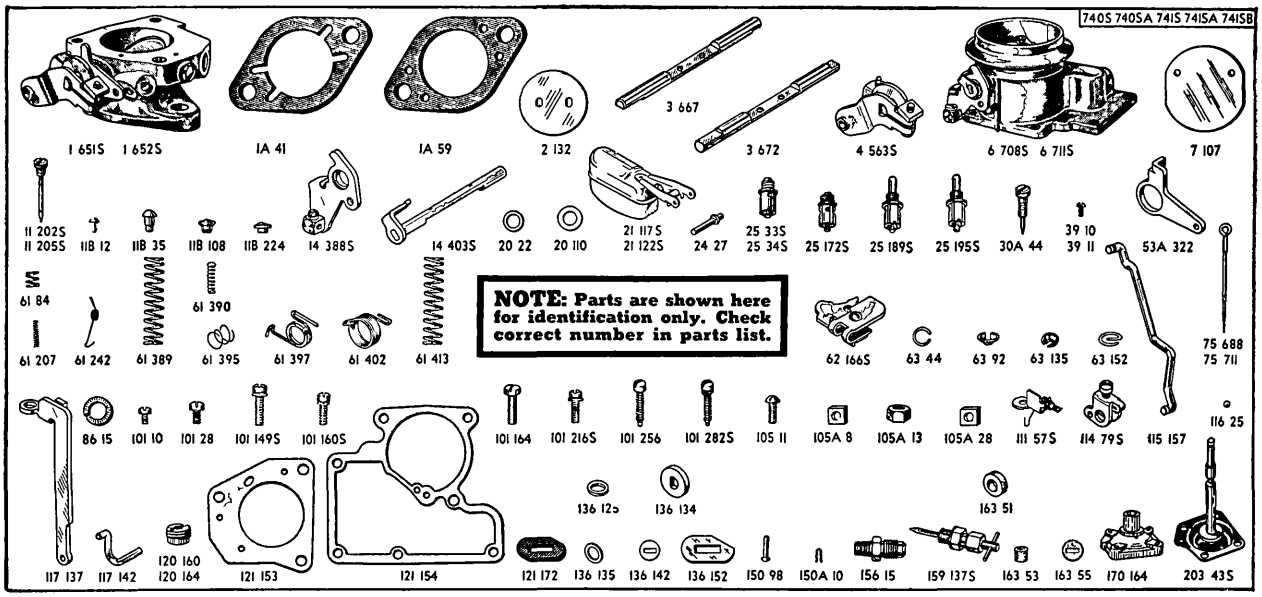


Figure 6
Main Metering Screw Adjustment

MAIN METERING SCREW ADJUSTMENT (Fig. 6):

To adjust the carbureter for best economy with the engine warmed up, speed up engine on floor with the throttle stop screw or hand throttle to a speed corresponding to approximately 30 m.p.h. Screw high speed needle in a clockwise direction until the engine begins to lose speed. Turn screw back in an anti-clockwise direction until the maximum speed is attained.



International Trucks, 1950-53—Nos. 740S-SA-SB, 741S-SA-SB

REPAIR PACKAGE No. 1544C FOR 740S-740SA-740SB, No. 1545B FOR 741S-741SA-741SB; GASKET ASSORTMENT No. 197B

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME
1-651S	Body flange assembly (740S-SA-SB)
1-652S	Body flange assembly (741S-SA-SB)
1A-41	FLANGE GASKET—FOR USE WITHOUT GOVERNOR
1A-59	Flange gasket—for use with governor
2-132	Throttle valve
3-667	Throttle shaft (741S-SA-SB)
3-672	Throttle shaft (740S-SA-SB)
4-563S	Throttle lever assembly
6 642S	Air horn assy (741S-741SA) (Sup by 6-711S)
6-648S	Air horn assy (740S) (Sup by 6-708S)
6 708S	Air horn assembly (740S-SA-SB)
6-711S	Air horn assembly (741S-SA-SB)
7-107	Choke valve
11 202S	LOW SPEED JET ASSEMBLY (740S-SA-SB)
11 205S	LOW SPEED JET ASSEMBLY (741S-SA-SB)
11B-12	Flange passage plug
11B-35	Nozzle passage rivet plug
11B-79	Rivet plug (740SB-741SB) (2)
11B-108	IDLE PORT RIVET PLUG
11B-224	Choke shaft rivet plug
14-388S	Choke lever assembly
14-403S	Choke shaft and lever assembly
20 22	Needle seat gasket
20-110	Adjustable main jet gasket
21-117S	Float and lever assembly (740S-SA-SB-741S)
21-122S	†Float and lever assembly (741SA-SB)
24-27	Float lever pin
25 33S	NEEDLE AND SEAT ASSEMBLY (740S)
25-34S	Needle and seat assembly (741S)
25-172S	†NEEDLE, PIN AND SEAT ASSEMBLY (741SA)
25-189S	Needle and seat assembly (740SA-SB)
25-195S	Needle, pin, spring and seat assy (741SB)
30-62	Pump intake strainer (740S-741S-SA) (Discontinued)
30A-44	Idle adjustment screw
39-10	Choke valve attaching screw (2)
39-11	THROTTLE VALVE ATTACHING SCREW (2)
53A-322	Fast idle arm
61-84	Idle screw spring
61-207	Intake needle spring (741SA-SB)
61-242	Metering rod spring
61-389	PUMP DIAPHRAGM SPRING (STD) (741S-SA-SB) (Sup by 61-451 on 740S-SA)
61-390	Upper pump spring
61-395	SHAFT SEAL SPRING
61-397	Fast idle connector rod spring
61-402	Choke lever spring
61-413	Pump diaphragm spring (for high alt use)
61-451	PUMP DIAPHRAGM SPRING (STD) (740S-SA-SB)
62-166S	Choke tube clamp assembly
63-44	Choke lever retaining ring
63-92	DIAPHRAGM SPRING RETAINER
63-135	UPPER PUMP SPRING RETAINER
63-138	Pump disc retainer ring (740S-741S-SA) (Sup by 63-152)
63-139	Pump disc retainer (740S-741S-SA) (Sup by 116-26U)
63-152	Pump discharge ball check retainer ring
75-688	METERING ROD—STD (741S-SA-SB) 072"- 072" to 068"- 043"
75-711	Metering rod—std (740S-SA) 069"- 0655" to 0585"- 040" (Sup by 75-869)
75 869	METERING ROD (STD) (740S-SA-SB)
86 15	Flange stud lock washer (2)
101-10	Wire clamp screw
101-28	Throttle shaft arm attaching screw
101-149S	Body flange attaching screw and washer assembly (3)
101 160S	Air horn attaching screw and washer assembly (5)
101-164	Throttle lever clamp screw
101-216S	Air horn attaching screw and washer assembly (2)
101 256	Throttle lever adjustment screw
101-282S	Diaphragm housing attaching screw and washer assembly (4)
105-11	Tube clamp screw
105A-8	Tube clamp nut
105A-13	Flange nut (2)
105A-28	Throttle lever nut
111-57S	Metering rod arm assembly
114-79S	THROTTLE SHAFT ARM ASSEMBLY
115-157	Fast idle connector rod
116-25	Pump discharge ball check
116-26U	UNITIZED PACKAGE (consists of (1) 116-11, (1) 116-25 and (1) 63-152)
117-137	PUMP LIFTER LINK
117-142	PUMP CONNECTOR LINK
120 160	METERING ROD JET (740S-SA-SB)
120-164	METERING ROD JET (741S-SA-SB)
121-153	BODY FLANGE GASKET
121 154	BOWL COVER AND AIR HORN GASKET
121-172	LIFTER LINK SEAL GASKET (740SA-SB-741SB)
136-125	DUST SEAL RETAINER
136-134	Throttle shaft washer
136 135	DUST SEAL WASHER
136 142	PUMP LIFTER LINK WASHER (740S-741S-SA)
136-152	Lifter link seal washer (740SA-SB-741SB)
150 98	Intake needle pin (741SA-SB)
150A-10	PIN SPRING (2)
156-15	Gas line nipple
159-137S	Adjustable main metering screw assembly
163-51	DUST SEAL (2)
163-53	Main metering screw packing
163-55	PUMP LIFTER LINK PACKING LEATHER (740S-741S-SA)
169-22	Pump check disc (740S-741S-SA) (Sup by 116-26U)
170-150	Pump diaphragm housing (741S-SA-SB) (Sup by 170-164 on 740S)
170-164	Pump diaphragm housing (740S-SA-SB)
203 43S	DIAPHRAGM ASSEMBLY

†Note 741S may be brought up to 741SA specifications by changing 21-117S to 21-122S, 25-34S to 25-172S and resetting float level to 5/16 inch

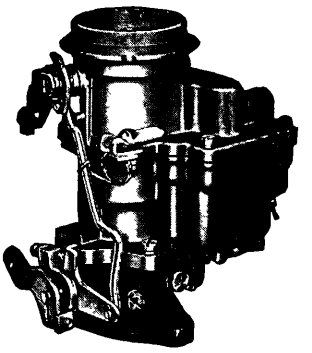
NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

CARBURETER
TRADE MARK REG U S PAT OFF.
MARCA REGISTRADA

TRUCK MODELS

735S-SA (SD-220 Engine)
L-110, L-111, L-112, L-120, L-121, L-122, L-130, L-131, L-132, L-150, L-151, L-152, L-153, R-110, R-120, R-130, R-150

736S-SA-SB (SD-240 Engine)
L-160, L-161, L-162, L-163, L-164, L-165, LB-140, LC-160, R-160, RB-140



INTERNATIONAL TRUCKS 1950-1953

YF DOWN-DRAFT **CARBS. 735S** (I H No 84650-R91), **735SA** (I H No 84650-R93), **736S** (I H No 84651-R91), **736SA** (I H No 84651-R92), **736SB** (I H No 84651-R94)

CARBURETER SPECIFICATIONS

For International Engines (SD 220)—3-9/16 Inch Bore, 3-11/16 Inch Stroke

For International Engines (SD 240)—3 9/16 Inch Bore 4 018 Inch Stroke

Dimensions Flange size 1¼ inch S A E
Primary venturi 11/32 inch (8 73 mm) I D
Secondary venturi 11/16 inch (17 46 mm) I D
Main venturi 1 5/16 inch (33 34 mm) I D

Float Setting See adjustments

Vents Outside none Inside balance vent to air horn above choke valve

Gasoline Intake (735S SA) size No 48 (1 93 mm) drill (736S SA SB) size No 46 (2 06 mm) drill hole in needle seat (736SA SB) spring loaded needle

Low Speed Jet Tube Jet size (735S SA) No 70 (71 mm) drill (736S SA SB) No 69 (74 mm) drill By pass in air horn (735S SA) No 53 (1 51 mm) drill (736S SA SB) No 54 (1 40 mm) drill Idle bleed in body (735S SA) No 53 (1 51 mm) drill (736S SA SB) No 54 (1 40 mm) drill Econ omizer in body, No 54 (1 40 mm) drill (735S SA 736S SA) No 53 (1 51 mm) drill (736SB)

Idle Ports Upper port slot type length (735S SA) 105 inch (2 67 mm) (736S SA SB) 120 inch (3 05 mm), width 030 inch (76 mm) Lower port (for idle adjusting screw) size 0615 to 0655 inch (1 56 to 1 66 mm) diameter

Idle Port Opening Top of port (735S SA) 076 to 080 inch (1 93 to 2 03 mm) (736S 736SA and 736SB early production) 109 to 113 inch (2 77 to 2 87 mm) (736SB late production) 105 to 109 inch (2 67 to 2 77 mm) above top edge of valve with valve tightly closed

Set Idle Adjustment Screw ¾ to 1¾ turns open For richer mixture turn screw out Do not idle engine below 400 RPM

Main Nozzle Nozzle is installed permanently **DO NOT RE MOVE** Anti percolator air bleed No 66 (84 mm) drill hole in plug

Metering Rod (735S SA) Economy step 0725 inch (1 84 mm) diameter middle step tapers from 0655 to 06025 inch (1 66 to 1 53 mm) diameter power step 040 inch (1 02 mm) diam eter (736S SA SB) Economy step 072 inch (1 83 mm) diameter middle step tapers to 068 inch (1 73 mm) diameter power step 043 inch (1 09 mm) diameter

Metering Rod Jet S ze (735S SA) 104 inch (736S SA SB) 1015 inch diameter

Metering Rod Setting See adjustments

Accelerating Pump Diaphragm type vacuum and mechanically operated
Pump jet size (735S early production and 736S SA SB) No 72 (64 mm) drill (735S late production and 735SA) No 70 (71 mm) drill
Intake passage (in diaphragm housing) (735S early produc tion and 736S SA SB) No 72 (64 mm) drill (735S late pro duction and 735SA) No 75 (53 mm) drill
Vacuum restriction (in flange) size No 55 (1 32 mm) drill
Vacuum passage (diaphragm bleed) size No 65 (89 mm) drill

Pump Stroke No adjustment

Choke Manual interconnected with throttle Valve offset butterfly type

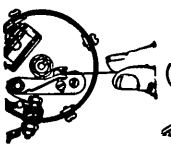
Vacuum Spark Port Slot (round end) type Size 110 by 040 inch (2 79 by 1 02 mm) Bottom of port 014 to 024 inch (36 to 61 mm) (735SA late production) 007 to 017 inch (18 43 mm) above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

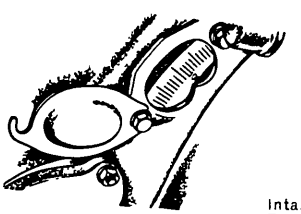
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



Spark Plug Gap
030"



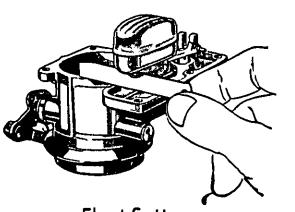
Breaker Point Setting
020"



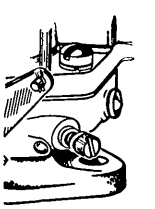
Ignition Timing Breaker Points to Open
2° B T C



Valve Setting (Hot)
SD 220 Engines
Intake 018" 020"
Exhaust (Conventional) 018"- 220
Exhaust (Slo Roto) 020 022'
SD 240 Engines
Intake 018" 020'
Exhaust (Conventional) 024"- 025"
Exhaust (Slo Roto) 020 022"



Float Setting (Use Gauge)
25/64 Inch (735S-SA)
7/16 Inch (736S)
5/16 Inch (736SA-SB)



Idle Adjustment Screw Setting
¾ to 1¾
Turns Open

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CARBURETER ADJUSTMENTS

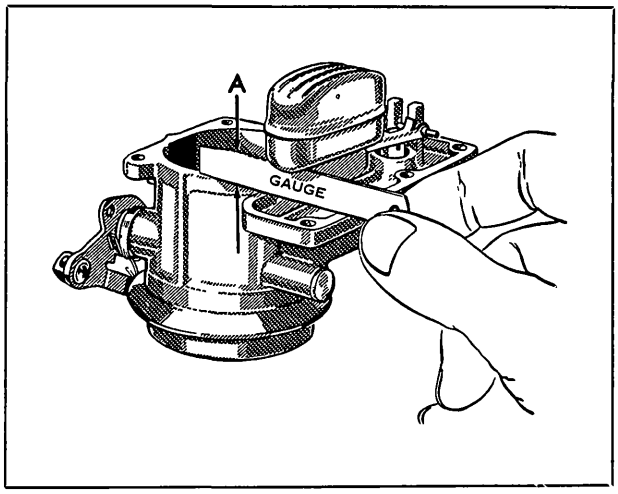


Figure 1

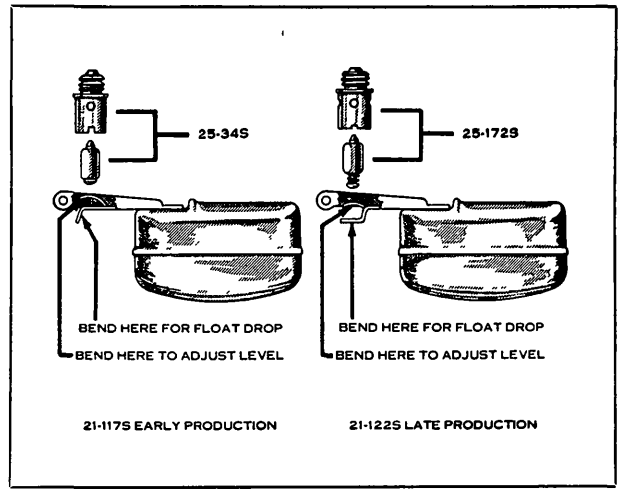


Figure 1A
Float and Needle and Seat Assembly

FLOAT ADJUSTMENT (Fig. 1):

With gasket removed, bowl cover assembly inverted and float resting on seated needle, the distance (A) from the bowl cover to the top of float should be 25/64" (gauge T109-206) (735S-SA), 7/16" (gauge T109-81) (736S) and 5/16" (gauge T109-107) (736SA-SB). Adjust by bending lip of float, not float arm

736SA-SB float setting must be checked with the bowl cover held at eye height in a level position.

Float drop: (736SA-736SB) With bowl cover assembly held in upright position, the distance between free end of float and bowl cover should be 1-3/16 inch. Adjust by bending stop tabs on float arm.

FLOAT AND NEEDLE AND SEAT ASSEMBLY (Fig. 1A):

736S may be brought up to 736SA specifications by changing 21-117S float to 21-122S float, and 25-34S needle and seat assembly to 25-172S needle, pin, spring and seat assembly. Then reset float level to 5/16 inch.

When installing 25-172S needle, pin, spring and seat assembly, included in Repair Package No. 1531A, float and lever assembly 21-122S must be used.

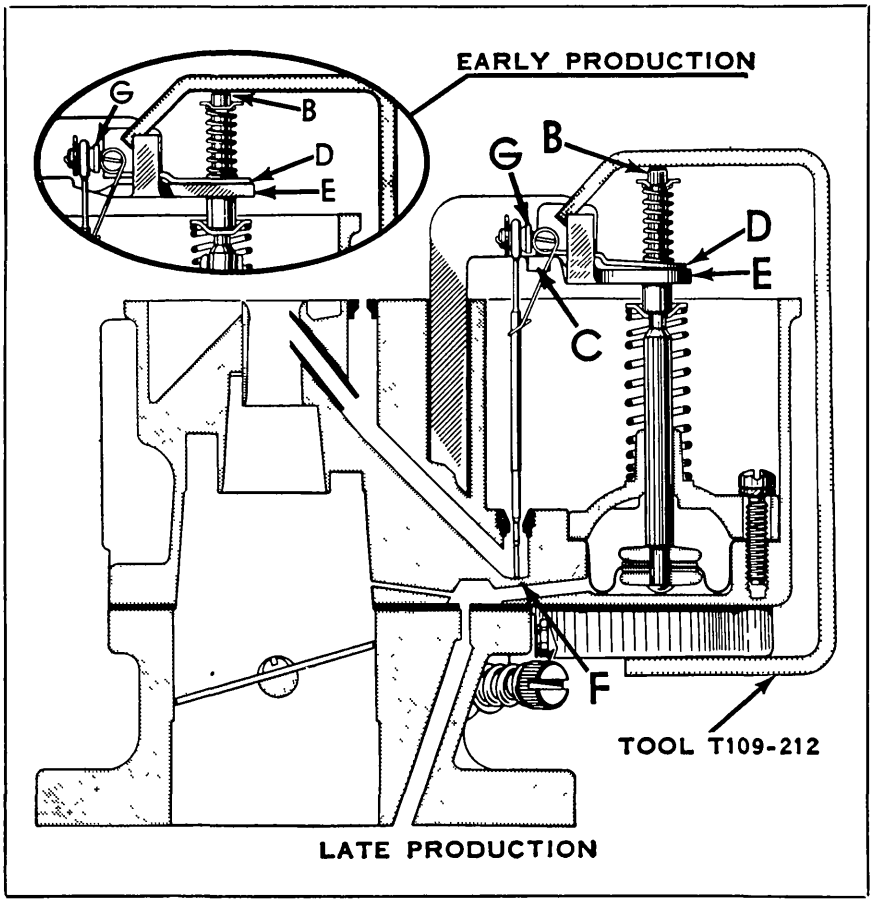


Figure 2
Metering Rod Adjustment

METERING ROD ADJUSTMENT (Fig. 2):

This adjustment is important and should be checked each time the carbureter is reassembled or lean rods are installed With throttle valve seated in bore of carbureter, press down on upper end of diaphragm shaft (B) until diaphragm bottoms in vacuum chamber. (Tool T109-212 may be used to hold diaphragm down while adjusting metering rod.)

On late production carbureters, which have projection (C) on pump lifter link, metering rod should contact bottom of metering rod well (F) and metering rod arm (D) should contact lifter link (E) between springs and at supporting lug (C). Adjust by bending lip (G) up or down.

On early production carbureters, which do not have projection (C) on pump lifter link, metering rod should bottom in metering rod well (F) and flat of metering rod arm (D) should make parallel contact with flat of pump lifter link (E). Adjust by bending lip (G) up or down.

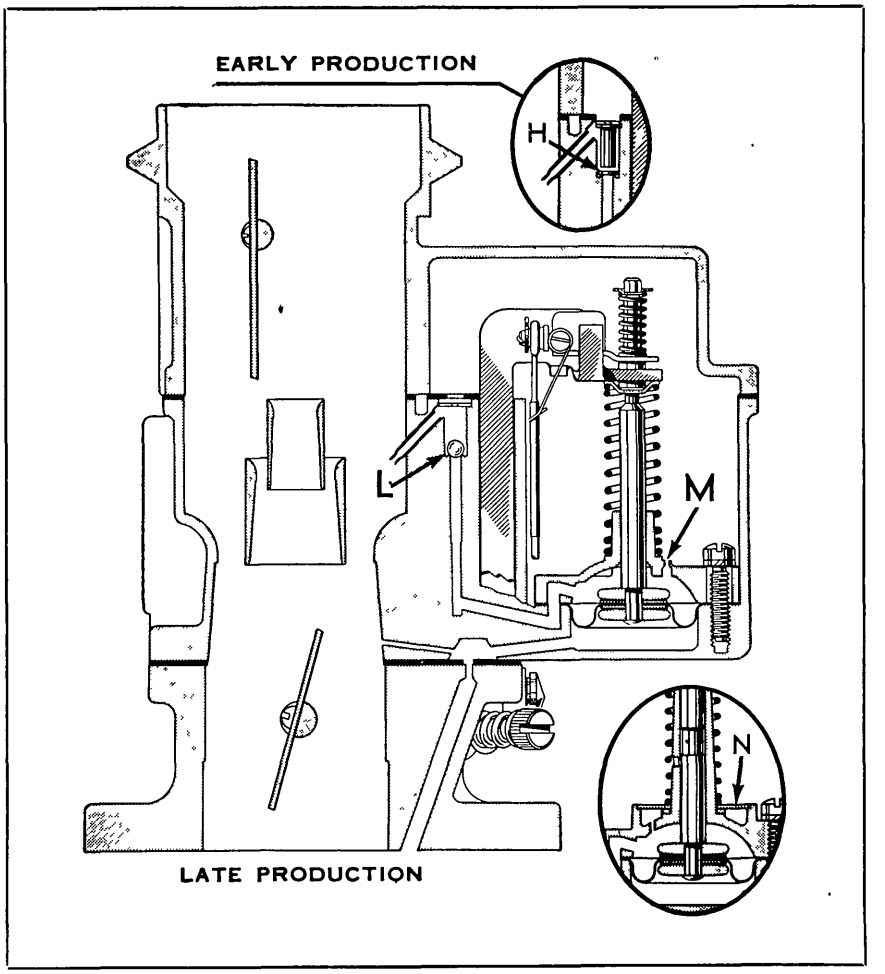


Figure 3
Accelerating Pump

ACCELERATING PUMP (Fig. 3):

If acceleration is not satisfactory, remove pump disk retainer ring, retainer, and pump check disk (H) (735S-736S-736SA) or pump discharge ball check (L) (735SA-736SB). Then remove pump diaphragm assembly. Check diaphragm for wear or damage. Be sure inlet hole (M) is not clogged with lint or foreign matter. Intake screen (N) (if so equipped) should be removed in service.

If carbureter is equipped with disk type discharge check replace with aluminum ball check. Unitized Package (Part No. 116-26U) consisting of (1) 1/8" steel ball, (1) 1/8" aluminum ball, and (1) 63-152 retainer should be used. Complete instructions for this conversion are contained in the package. If the discharge ball or seat in late production carbureters, originally equipped with aluminum ball check, appear damaged, 116-26U should be used.

Inspect and replace all worn or damaged parts. Clean and blow out all passages with compressed air. Make sure discharge check seats in casting as a leak at this point will result in poor acceleration

FAST IDLE ADJUSTMENT (Fig. 4):

With choke held in wide open position, lip (J) on fast idle arm should contact boss on body casting. Adjust by bending at offset of fast idle link (K).

Note: This adjustment is not necessary on early production carbureters.

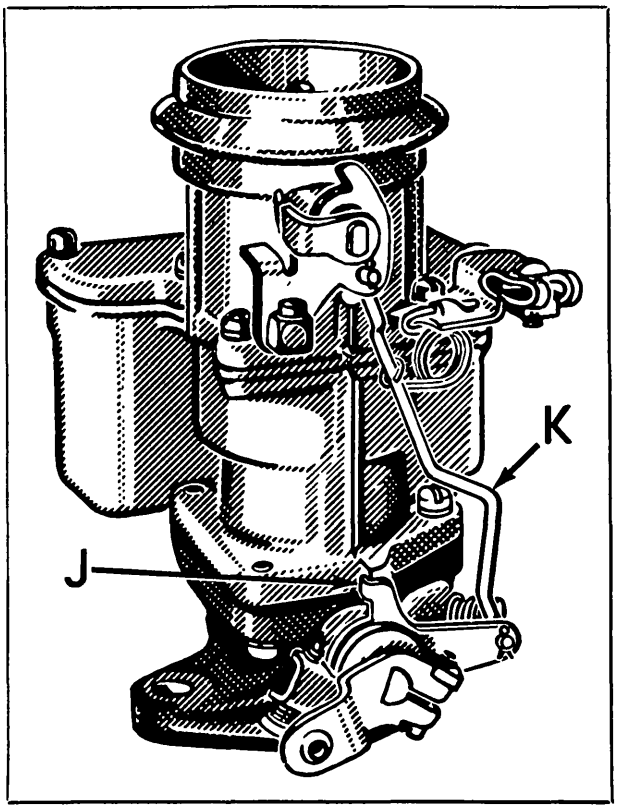
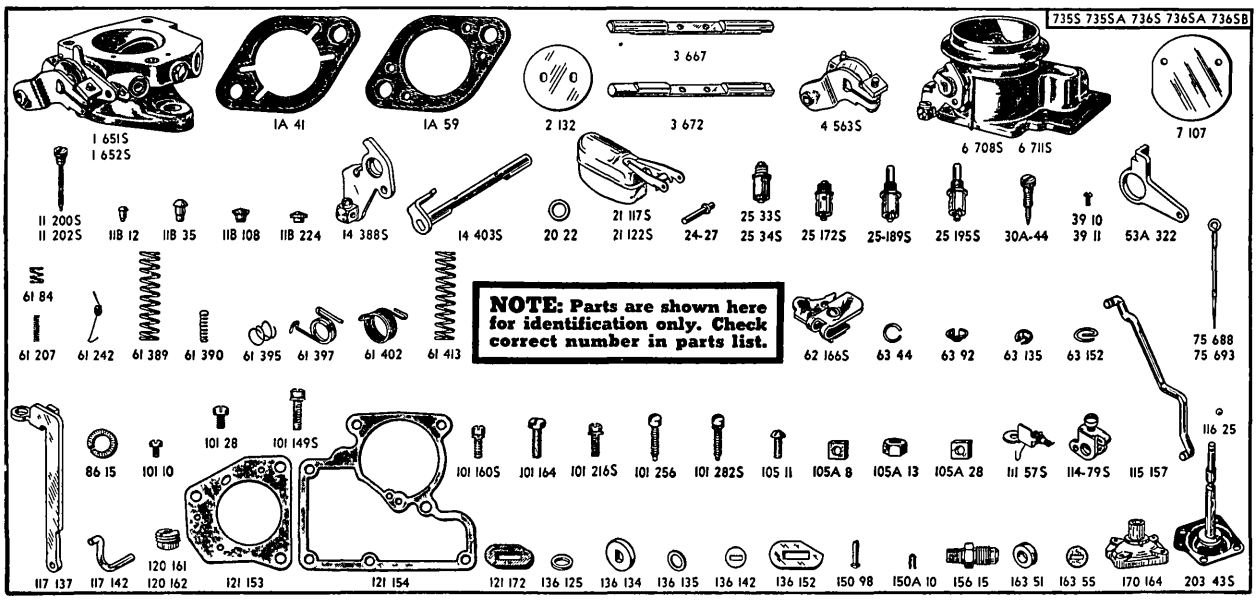


Figure 4
Fast Idle Adjustment



International Trucks, 1950-53—Nos. 735S, 735SA, 736S, 736SA, 736SB

WHEN SERVICING, USE GASKET ASSORTMENT No. 197B,

REPAIR PACKAGE No 1530B FOR 735S-735SA, No. 1531B FOR 736S 736SA-736SB

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME
1-651S	Body flange assembly (735S-SA)
1-652S	Body flange assembly (736S-SA-SB)
1A-41	FLANGE GASKET—FOR USE WITHOUT GOVERNOR
1A-59	Flange gasket—for use with governor
2-132	Throttle valve
3 667	Throttle shaft (736S-SA-SB)
3-672	Throttle shaft (735S-SA)
4-563S	Throttle lever assembly
6-642S	Air horn assembly (736S-SA) (Sup by 6-711S)
6-648S	Air horn assembly (735S) (Sup by 6-708S)
6-708S	Air horn assembly (735S-SA)
6-711S	Air horn assembly (736S-SA-SB)
7-107	Choke valve
11-200S	LOW SPEED JET ASSEMBLY (736S-SA-SB)
11-202S	LOW SPEED JET ASSEMBLY (735S-SA)
11B-12	Flange passage plug
11B-35	Nozzle passage rivet plug
11B-79	Rivet plug (735SA-736SB) (2)
11B-108	IDLE PORT RIVET PLUG
11B-224	Choke shaft rivet plug
14 388S	Choke lever assembly
14 403S	Choke shaft and lever assembly
20-22	Needle seat gasket
21-117S	Float and lever assembly (735S-SA-736S)
21-122S	†Float and lever assembly (736SA-SB)
24-27	Float lever pin
25-33S	NEEDLE AND SEAT ASSEMBLY (735S)
25-34S	Needle and seat assembly (736S)
25-172S	†NEEDLE PIN SPRING AND SEAT ASSEMBLY (736SA)
25 189S	Needle and seat assembly (735SA)
25-195S	NEEDLE PIN SPRING AND SEAT ASSEMBLY (736SB)
30 62	Pump intake strainer (735S-736S-SA) Discontinued
30A-44	Idle adjustment screw
39-10	Choke valve attaching screw (2)
39-11	THROTTLE VALVE ATTACHING SCREW (2)
53A-317	Fast idle arm (Sup by 53A-322)
53A-322	Fast idle arm
61-84	Idle screw spring
61-207	Intake needle pin spring (736SA-SB)
61-242	Metering rod spring
61-389	PUMP DIAPHRAGM SPRING (STD)
61-390	Upper pump spring
61-395	SHAFT SEAL SPRING
61-397	Fast idle connector rod spring
61-402	Choke lever spring
61-413	Pump diaphragm spring (for high alt use)
62-166S	Choke tube clamp assembly
63-44	Choke lever retaining ring
63-92	DIAPHRAGM SPRING RETAINER
63-135	UPPER PUMP SPRING RETAINER
63-138	Pump disc retainer ring (735S-736S-SA) (Sup by 63-152)
63-139	Pump disc retainer (735S-736S-SA) (Sup by 116-26U)
63-152	Pump discharge ball check retainer ring
75-688	METERING ROD (STD) (736S-SA-SB)
75-693	METERING ROD (STD) (735S-SA)
75-752	Metering rod (1 size lean) (735S-SA)
75-753	Metering rod (2 sizes lean) (735S-SA)
75-756	Metering rod (1 size lean) (736S-SA-SB)
75-757	Metering rod (2 sizes lean) (736S-SA-SB)
86-15	Flange stud lock washer
101-10	Wire clamp screw
101-28	Throttle shaft arm attaching screw
101-149S	Body flange attaching screw and washer assembly (3)
101-160S	Air horn attaching screw and washer assembly (5)
101-164	Throttle lever clamp screw
101-216S	Air horn attaching screw and washer assembly (2)
101-256	Throttle lever adjustment screw
101-282S	Diaphragm housing attaching screw and washer assembly (4)
105-11	Tube clamp screw
105A-8	Tube clamp nut
105A-13	Flange nut
105A-28	Throttle lever nut
111-57S	Metering rod arm assembly
114-79S	THROTTLE SHAFT ARM ASSEMBLY
115-152	Fast idle connector rod (Sup by 115-157)
115-157	Fast idle connector rod
116-25	Pump discharge ball check
116-26U	UNITIZED PACKAGE (Consists of (1) 116-11, (1) 116-25 and (1) 63-152)
117-137	PUMP LIFTER LINK
117-142	PUMP CONNECTOR LINK
120-161	METERING ROD JET (735S-SA)
120-162	METERING ROD JET (736S-SA-SB)
120-171	‡Metering rod jet (1 size rich) (735S-SA)
121-153	BODY FLANGE GASKET
121-154	BOWL COVER AND AIR HORN GASKET
121-172	LIFTER LINK SEAL GASKET (735SA-736SB)
136-125	DUST SEAL RETAINER
136-134	Throttle shaft washer
136-135	DUST SEAL WASHER
136-142	PUMP LIFTER LINK WASHER (735S-736S-SA)
136-152	Lifter link seal washer (735SA-736SB)
150-98	Intake needle pin (736SA-SB)
150A-10	PIN SPRING (2)
156-15	Gas line nipple
163-51	FELT DUST SEAL (2)
163-55	PUMP LIFTER LINK PACKING LEATHER (735S-736S-SA)
169-22	Pump check disc (735S-736S-SA) (Sup by 116-26U)
170-150	Pump diaphragm housing (736S-SA-SB) (Sup by 170-164 on 735S)
170-164	Pump diaphragm housing (735S-SA)
203-43S	PUMP DIAPHRAGM ASSEMBLY

†Note 736S may be brought up to 736SA specifications by changing 21-117S to 21-122S, 25-34S to 25-172S and resetting float level to 5/16 inch

‡When using 120-171 metering rod jet (1 size rich), 170-164 pump diaphragm housing must be used

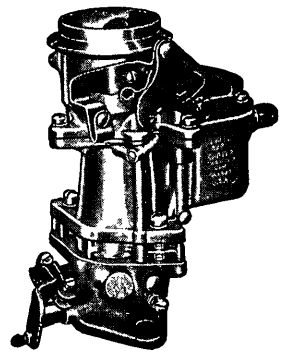
NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

TRUCK MODELS

L170 and L180 Series with BD-269 Engine No. 62501 and Higher—1952

R170 Series—1953

(All Previous Models of L, K and KB Series Using BLD269 and BD269 Engines Converted to 6 5 Compression Ratio)



INTERNATIONAL TRUCK 1941-1953

BBR1—Down-Draft Carbureter **No. 980S** (I H. No 112908-R91)

(May be used with or without sandwich velocity governor, using standard flange gasket 1A-41)

CARBURETER SPECIFICATIONS

For 6 Cylinder International Engine Model BD-269—3-9/16 Inch Bore, 4½ Inch Stroke

Dimensions Flange size 1¼ inch S A E Throttle bore 1 9/16 inch (39 69 mm) Main venturi 1 5/16 inch (33 38 mm)

Float Setting Top of float 5/64 inch (1 98 mm) plus or minus 1/64 inch (397 mm) below top surface of carbureter body casting

Vents Outside none Inside balance vent tube

Gasoline Intake Needle Triangular horizontal No 44 (086 inch) (2 18 mm) drill in needle seat

Idle Orifice Tube Jet size 031 inch (79 mm) Idle passage air bleed (in body) size 063 inch (1 60 mm) Restriction (n body) size 054 055 inch (1 371 1 397 mm)

Idle Ports Upper port slot type length 180 inch (4 57 mm) Width 030 inch (76 mm) Top of port located 138 to 142 (3 50 to 3 61 mm) above top edge of valve Lower port size 053 to 057 inch (1 35 to 1 45 mm) diameter (For idle adjustment screw)

Set Idle Adjustment Screw ¼ to 1¼ turns open For richer mixture turn screw out Do not idle engine below 400 r p m or 6 m p h

Main Metering Jet Calibrated to flow 362 to 366 cc per minute

Main Vent Through diffuser (air bleed inside bowl) size 0394 inch (1 00 mm) drill

Main Vent Tube Side holes 6—0354 inch diameter

Step Up Jet 0374 inch (95 mm) drill

Accelerating Pump Type delayed action Summer setting (inner hole short stroke) Winter setting (outer hole long stroke) Pump intake passage ball check seat size 107 to 112 inch (2 72 to 2 85 mm) diameter Pump discharge pas sage Restriction (under ball check) size 062 to 065 inch (1 58 to 1 65 mm) diameter in body Pump (discharge) jet size 0315 inch (80 mm) drill

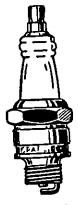
Pump Adjustment 24/64 inch plunger travel full throttle posi tion short stroke Use gauge T109 117S

Choke Manual—Offset butterfly type with poppet valve Choke valve stops at 8½° from wide open position

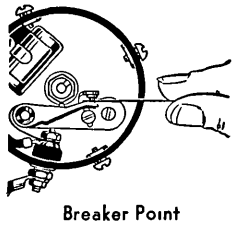
Vacuum Spark Port None

Motor Tune-Up—Be Accurate!

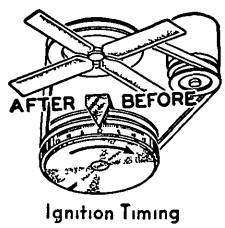
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



Spark Plug Gap 028" 033"



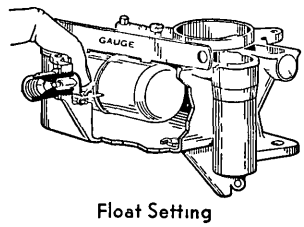
Breaker Point Setting 018" 024"



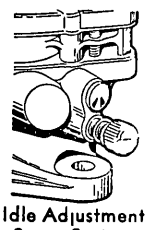
Ignition Timing Breaker Points to Open T D C



Valve Setting (Hot) Intake 018"-020" Exhaust 018"-020"



Float Setting 5/64 Inch (Use Gauge T109-50)



Idle Adjustment Screw Setting ¼ to 1¼ Turns Open

CARBURETER ADJUSTMENTS

For most satisfactory starting during extremely cold weather, pull out choke, crack throttle about one-half open and then engage starter

If carbureter loads up after considerable service check float level Wear on lip of float lever will raise float level Before adjusting float be sure float lever pin is firmly seated Reset by bending lip of float lever away from needle to raise level, or bend lip toward needle to lower float level Bend vertical lip of float only

If motor stalls while idling, set throttle lever adjusting screw so motor runs approximately 400 r p m Then set idle adjustment screw to specifications If these adjustments do not correct the trouble remove idle orifice tube and plug assembly and clean tube and passages with compressed air

If acceleration is not satisfactory remove pump jet and clean with compressed air, however, it is usually advisable to replace the pump jet as its cost is nominal All jets must be seated gasoline tight Poor acceleration may be due to

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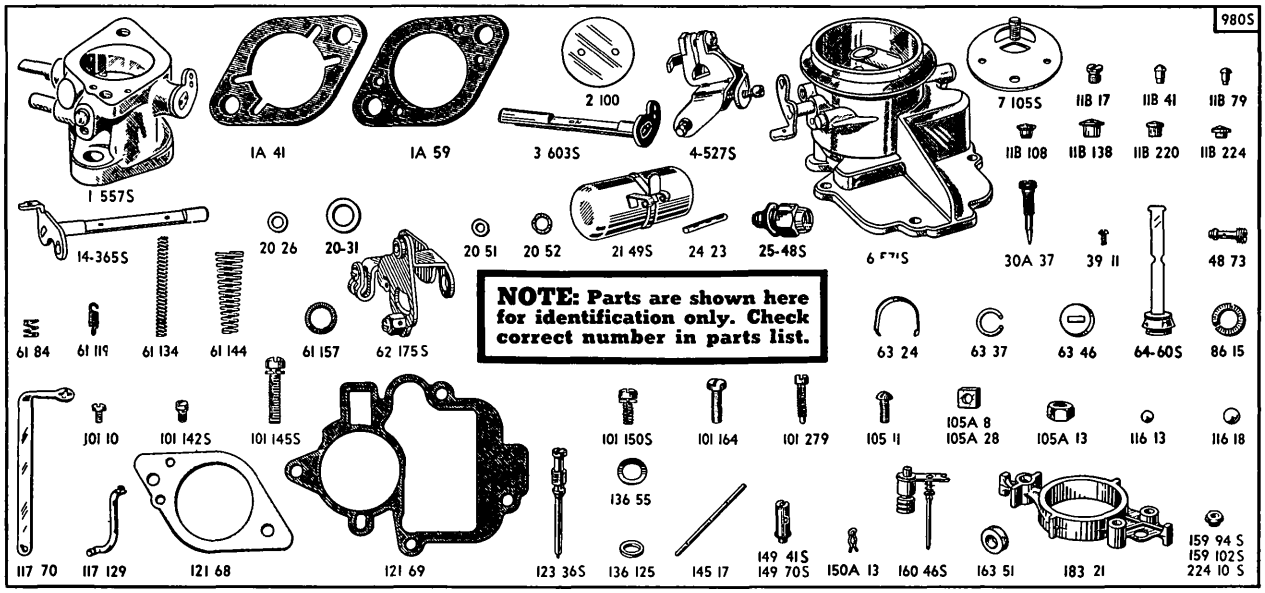
damaged or worn plunger leather in accelerating pump, sediment in pump cylinder or clogged intake ball check at bottom of pump cylinder and discharge ball check in discharge passage If plunger is removed from cylinder, use care in installing to avoid damage to plunger leather

Correct air fuel ratio is provided by a 'balance tube located in the air horn The balance tube should be checked each time the carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type size or condition of air cleaner Should the cleaner become clogged the capacity will be reduced but the air-fuel mixture ratio will not be changed

Excessive richness above 50 miles per hour may be caused by a clogged main vent tube After removal of rivet plug beneath float bowl with tool No T109 210 main vent tube can be removed and a new tube inserted with tool No T109-195 Care must be exercised in inserting new tube which must seat tightly Use new rivet to complete the installation

Pump Adjustment Remove air horn assembly, back out throttle lever adjustment screw and install pump operating link in inner hole (short stroke) of throttle shaft arm Place base of pump travel gauge T109-117S on upper edge of body of casting at pump cylinder With throttle valve seated, turn gauge until projecting finger contacts top of plunger shaft Note number on gauge Repeat with throttle valve wide open and plunger pressed to bottom of the cylinder The difference between the numbers indicated at wide open and closed throttle positions should be '24 (24/64' pump stroke) Adjust by bending horizontal portion of pump lifter link

Pump stroke is adjustable for high or low temperature Set to longest stroke (outer hole) for cold weather, shorter stroke (inner hole) for hot weather driving



International Truck 1941-1953—Carbureter No. 980S

WHEN SERVICING, USE GASKET ASST No 192, REPAIR PACKAGE No 1716

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

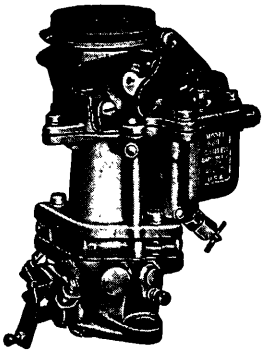
Part No	Part Name	
1-557S	Body flange assembly	
1A-41	FLANGE GASKET—FOR USE WITHOUT GOVERNOR	
1A-59	Flange gasket—for use with governor	
2-100	Throttle valve	
3-603S	Throttle shaft and arm assembly	
4-527S	Throttle lever assembly	
6-571S	Air horn assembly	
7-105S	Choke valve assembly	
11B 17	PUMP DISCHARGE PASSAGE PLUG	
11B-41	Rivet passage plug	
11B-79	Rivet passage plug	(2)
11B-108	IDLE PORT RIVET PLUG	
11B-138	PUMP JET PASSAGE RIVET PLUG	
11B-220	RIVET PASSAGE PLUG	
11B 224	Choke shaft rivet plug	
14 365S	Choke control lever and shaft assembly	
20-26	Main metering jet gasket	
20-31	Needle seat gasket	
20 51	Step up jet gasket	
20 52	STEP-UP PISTON GASKET	
21 49S	Float and lever assembly	
24-23	FLOAT LEVER PIN	
25 48S	NEEDLE AND SEAT ASSEMBLY	
30A-37	Idle adjustment screw	
39-11	VALVE ATTACHING SCREW	(4)
48-73	PUMP JET	
61 84	Idle adjustment screw spring	
61-119	Choke pull-back spring	
61-134	STEP-UP PISTON SPRING	
61-144	PUMP SPRING	
61-157	Plunger spring	
62-175S	Choke tube bracket assembly	
63 24	FLOAT LEVER PIN RETAINER	
63 37	SPRING RETAINER	
63-46	PUMP RETAINER RING	
64-60S	PLUNGER AND ROD ASSEMBLY	

Part No	Part Name	
86-15	Flange stud lock washer..	(2)
101-10	Wire clamp screw	
101-142S	Choke bracket attaching screw and washer assembly	
101-145S	Flange attaching screw and washer assembly	(2)
101-150S	Bowl cover attaching screw and washer assembly	(4)
101-164	Throttle lever clamp screw	
101-279	Throttle adjusting screw	
105-11	Tube clamp screw	
105A-8	Choke tube clamp nut	
105A-13	Flange nut	(2)
105A 28	Clamp nut	
116-13	PUMP INTAKE CHECK BALL	
116-18	PUMP DISCHARGE CHECK BALL	
117-70	PUMP LIFTER	
117-129	PUMP LINK	
121 68	BODY FLANGE GASKET	(2)
121 69	BODY GASKET	
123-36S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
136-55	SPRING WASHER	
136-125	THROTTLE SHAFT SEAL RETAINER	(2)
145 17	MAIN VENT TUBE	
149-41S	Step-up jet assy (Use with 159 94S or 224-10S)	
149 70S	STEP-UP JET AND GASKET ASSEMBLY	
150A-13	PIN SPRING	
159-94S	Main metering jet assy —1 size lean—(Use with 149 41S)	
159-102S	MAIN METERING JET ASSEMBLY (STANDARD)	
160 46S	STEP-UP PISTON, PLATE AND ROD ASSEMBLY	
163 51	THROTTLE SHAFT SEAL	(2)
183 21	Insulator	
224-10S	Main metering jet assy —2 sizes lean—(Use with 149-41S)	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

TRUCK MODEL NUMBERS
K-6, K-7, KB-6, KB-7, L170, L171, L172, L173, L174, L175, LF170, LF171, LF172, L180, L181, L182, L183, L184, L185, R170

TRUCK ENGINE NUMBERS
BLD269 and BD269



INTERNATIONAL TRUCK 1941-1953

EXPORT AND HIGH ALTITUDE

BBR1—Downdraft Carbureters—**Models 686S-686SA** (International No. 71429-R92)

CARBURETER SPECIFICATIONS

For 6 Cylinder Engine, Model BLD 250—3-7/16" Bore; 4½" Stroke (Truck Models K-6, KB-6)
For 6 Cylinder Engine, Models BLD 269, BD 269—3-9/16" Bore; 4½" Stroke (Truck Models K-7, KB-7)

Dimensions: Flange size, 1¼ inch S. A. E.
Throttle bore, 1-9/16 inch (39.69 mm).
Main venturi, 1-5/16 inch (33.38 mm).

Float Setting: Top of float 5/64 inch (1.98 mm) plus or minus 1/64 inch (.397 mm) below top surface of carbureter body casting.

Vents: Outside, none. Inside, balance vent .218 inch (5.54 mm) diameter.

Gasoline Intake Needle: Triangular, horizontal. No. 44 (2.18 mm) drill in needle seat.

Idle Orifice Tube: Jet size, .031 inch (.79 mm). Idle passage air bleed (in body) size, .0635 inch (1.60 mm). Restriction (in body) size .054-.055 inch (1.371-1.397 mm).

Idle Ports: Upper port, slot type; length, .180 inch (4.57 mm). Width, .030 inch (.76 mm). Top of port located .138 to .142 inch (3.50 to 3.61 mm) above top edge of valve. Lower port size, .053 to .057 inch (1.35 to 1.45 mm) diameter. (For idle adjustment screw.)

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture, turn screw out. Do not idle engine below 400 r.p.m. or 6 m.p.h.

Main Metering Jet: Calibrated to flow 146 to 150 cc per minute.

Main Metering Screw: Adjustable. Jet size: (686S) .059 inch (1.50 mm) drill. (686SA) No. 49 (.073 inch) (1.85 mm) drill.

Main Vent: Through diffuser (air bleed inside bowl) size .0394 inch (1.00 mm) drill.

Main Vent Tube: Side holes, 6—.0354 inch diameter.

Step-Up Jet: .0374 inch (.95 mm) drill.

Accelerating Pump: Type, delayed action. Summer setting (inner hole, short stroke). Winter setting (outer hole, long stroke). Pump intake passage, ball check seat, size .115 to .120 inch (2.93 to 3.05 mm) diameter.
Pump discharge passage: Restriction (under ball check) size .062 to .065 inch (1.58 to 1.65 mm) diameter in body.
Pump (discharge) jet size .0315 inch (.80 mm) drill.

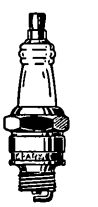
Pump Adjustment: 24/64 inch plunger travel; full throttle position, short stroke. Use gauge T109-117S.

Choke: Offset butterfly type, with poppet valve. Choke valve stops at 8½° from wide open position.

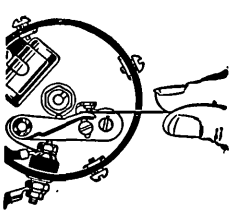
Vacuum Spark Port: None.

Motor Tune-Up—Be Accurate!

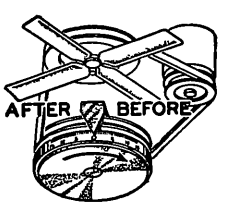
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



Spark Plug Gap .028"-.032"



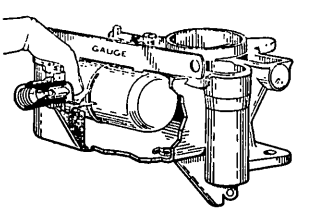
Breaker Point Setting .018"-.024"



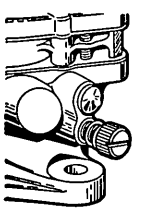
Ignition Timing
Breaker Points to Open:
3° B.T.D.C.



Valve Setting
(Hot) Int. .018"-.020"
(Hot) Exh. .018"-.020"



Float Setting (Use Gauge) 5/64 Inch



Idle Adjustment Screw Setting ½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

For most satisfactory starting during extremely cold weather, pull out choke, crack throttle about one half open and then engage starter.

If carbureter loads up after considerable service, check float level. Wear on lip of float lever will raise float level. Before adjusting float, be sure float lever pin is firmly seated. Reset by bending lip of float lever away from needle to raise level, or bend lip toward needle to lower float level. Bend vertical lip of float only.

If motor stalls while idling, set throttle lever adusting screw so motor runs approximately 400 r.p.m. Then set idle adjustment screw to specifications. If these adjustments do

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not correct the trouble, remove idle orifice tube and plug assembly and clean tube and passages with compressed air

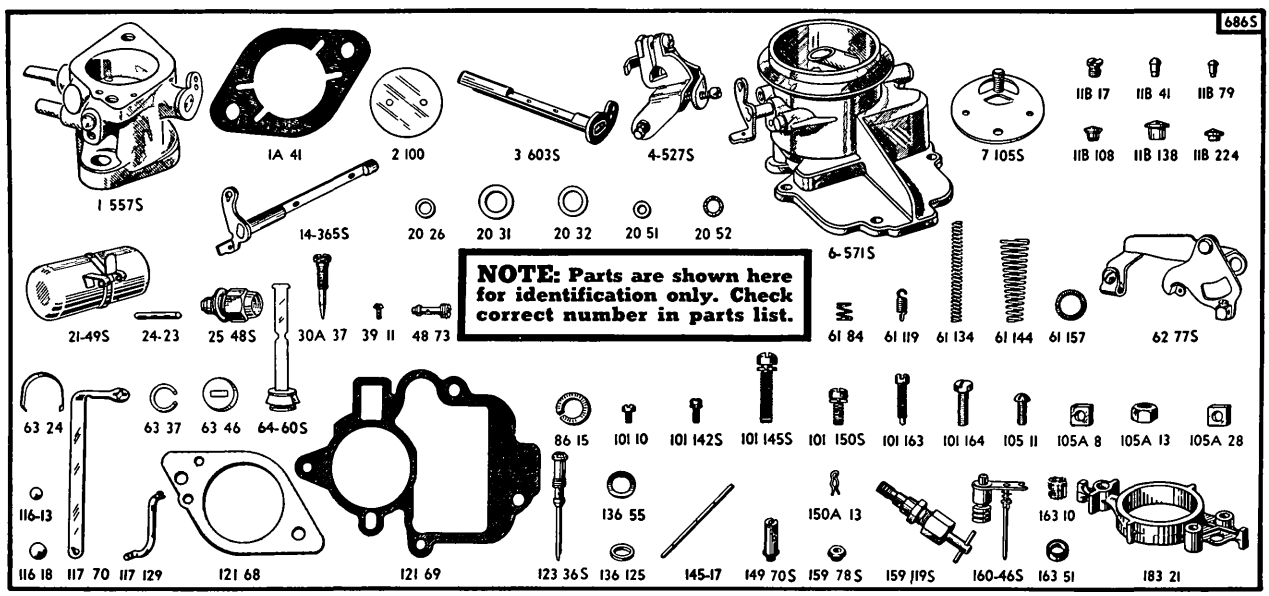
If acceleration is not satisfactory, remove pump jet and clean with compressed air however, it is usually advisable to replace the pump jet as its cost is nominal All jets must be seated gasoline tight Poor acceleration may be due to damaged or worn plunger leather in accelerating pump sediment in pump cylinder or clogged ball check at bottom of pump cylinder and discharge ball check in discharge passage If plunger is removed from cylinder, use care in installing to avoid damage to plunger leather

Correct air fuel ratio is provided by a 'balance tube" located in the air horn The balance tube should be checked each time the carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type, size or condition of air cleaner Should the cleaner become clogged the capacity will be reduced but the air-fuel mixture ratio will not be changed

Excessive richness above 50 miles per hour may be caused by a clogged main vent tube After removal of main metering screw assembly beneath float bowl, main vent tube can be removed and a new tube inserted with tool T109-195 Care must be exercised in inserting new tube which must seat tightly

Pump Adjustment Remove air horn assembly, back out throttle lever adjustment screw and install pump operating link in inner hole (short stroke) of throttle shaft arm Place base of pump travel gauge T109-117S on upper edge of body casting at pump cylinder With throttle valve seated turn gauge until projecting finger contacts top of plunger shaft Note number indicated on gauge Repeat with throttle valve wide open and plunger pressed to bottom of the cylinder The difference between the numbers indicated at wide open and closed throttle positions should be '24", (24/64' pump stroke) Adjust by bending horizontal portion of pump lifter link Pump stroke is adjustable for high or low temperature Set to long stroke (outer hole) for cold weather, short stroke (inner hole) for hot weather driving

Main Metering Screw Adjustment Using a tachometer and with engine operating at normal temperature, adjust throttle for an engine speed of approximately 2000 r p m. Open main metering screw until engine operates smoothly with the highest vacuum gauge reading Slowly tighten main metering screw until a slight reduction of engine speed can be noticed or vacuum gauge shows slight decrease Open screw slightly from this position until maximum R P M and vacuum is obtained—usually not more than ⅛ to ¼ turn Hold screw securely and tighten nut to lock screw in position



International Truck, 1941-1953, Carbureters Nos. 686S-686SA

WHEN SERVICING, USE GASKET ASSORTMENT No 192, REPAIR PACKAGE No. 1396

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-557S	Body flange assembly	
1A-41	FLANGE GASKET	
2-100	Throttle valve	
3-603S	Throttle shaft and arm assembly	
4-527S	Throttle lever assembly	
6-571S	Air horn assembly	
7-105S	Choke valve assembly	
11B-17	PUMP DISCHARGE PASSAGE PLUG	
11B-41	RIVET PASSAGE PLUG	
11B-79	Rivet passage plug	(2)
11B-108	IDLE PORT RIVET PLUG	
11B-138	PUMP JET RIVET PLUG	
11B-224	Choke shaft rivet plug	
14-365S	Choke control lever and shaft assembly	
20-26	Gasket	
20-31	Needle seat gasket	
20-32	Gasket (metering screw)	
20-51	Step-up jet gasket	
20-52	STEP-UP PISTON GASKET	
21-49S	Float and lever assembly	
24-23	FLOAT LEVER PIN	
25-48S	NEEDLE AND SEAT ASSEMBLY	
30A-37	Idle adjustment screw	
39-11	CHOKE AND THROTTLE VALVE ATTACHING SCREW	(4)
48-73	PUMP JET	
61-84	Idle adjustment screw spring	
61-119	Choke pull-back spring	
61-134	STEP-UP PISTON SPRING	
61-144	PUMP SPRING	
61-157	Plunger spring	
62-77S	Choke tube bracket assembly (Sup by 62-175S)	
62-175S	Choke tube bracket assembly	
63-24	FLOAT LEVER PIN RETAINER	
63-37	INTAKE BALL RETAINING RING	
63-46	SPRING RETAINER	

Part No.	PART NAME	
64-60S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49-120)	
86-15	Flange stud lock washer	(2)
101-10	Wire clamp screw	
101-142S	Choke bracket attaching screw and washer assembly	
101-145S	Body flange attaching screw and washer assembly	(2)
101-150S	Air horn attaching screw and washer assembly	(4)
101-163	Throttle adjusting screw (Sup by 101-279)	
101-164	Throttle lever clamp screw	
101-279	Throttle adjusting screw	
105-11	Tube clamp screw	
105A-8	Choke tube clamp nut	
105A-13	Flange nut	(2)
105A-28	Throttle lever clamp nut	
116-13	PUMP INTAKE CHECK BALL	
116-18	PUMP DISCHARGE CHECK BALL	
117-70	PUMP LIFTER	
117-129	PUMP LINK	
121-68	BODY FLANGE GASKET	(2)
121 69	BODY GASKET	
123-36S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
136-55	SPRING WASHER (Between throttle lever and boss of flange)	
136-125	RETAINER WASHER	
145-17	MAIN VENT TUBE	
149-70S	STEP-UP JET ASSEMBLY	
150A-13	PIN SPRING	
159-78S	MAIN METERING JET ASSEMBLY	
159-119S	Adjustable main metering screw and needle assembly (Sup by 159-150S)	
159 150S	Adjustable main metering screw and needle assembly	
160-46S	STEP-UP PISTON, PLATE AND ROD ASSEMBLY	
163-10	Packing	
163-51	THROTTLE SHAFT SEAL	(2)
183-21	Insulator	

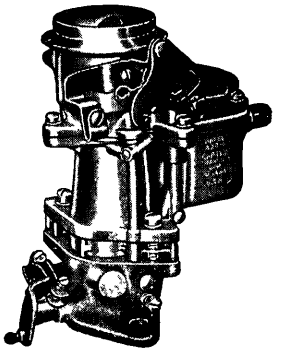
NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

TRUCK MODEL NUMBERS

K-6, K-7, KB-6, KB-7, L170, L171, L172, L173, L174, L175, LF170, LF171, LF172, L180, L181, L182, L183, L184, L185

TRUCK ENGINE NUMBERS

BLD-269 and BD-269



INTERNATIONAL TRUCKS 1941-1952

BBR1—Downdraft Carbs. **Nos. 617S-617SA** (I. H. Nos. 61777-R91 and 61777-R93)

(May be used with or without sandwich velocity governor, using standard flange gasket 1A-41.)

CARBURETER SPECIFICATIONS

For 6 Cylinder Engine, Model BLD 250—3-7/16" Bore; 4½" Stroke
For 6 Cylinder Engine, Models BLD 269, BD 269—3-9/16" Bore; 4½" Stroke

Dimensions: Flange size, 1¼ inch S. A. E.
Throttle bore, 1-9/16 inch (39.69 mm).
Main venturi, 1-5/16 inch (33.38 mm).

Float Setting: Top of float 5/64 inch (1.98 mm) plus or minus 1/64 inch (.397 mm) below top surface of carbureter body casting.

Vents: Outside, none. Inside, balance vent .218 inch (5.54 mm) diameter.

Gasoline Intake Needle: Triangular, horizontal. No. 44 (2.18 mm) drill in needle seat.

Idle Orifice Tube: Jet size, .031 inch (.79 mm). Idle passage air bleed (in body) size, .063 inch (1.60 mm). Restriction (in body) size .054-.055 inch (1.371-1.397 mm).

Idle Ports: Upper port, slot type; length, .180 inch (4.57 mm). Width, .030 inch (.76 mm). Top of port located .138 to .142 (3.50 to 3.61 mm) above top edge of valve. Lower port size, .053 to .057 inch (1.35 to 1.45 mm) diameter. (For idle adjustment screw.)

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture, turn screw out. Do not idle engine below 400 r. p. m. or 6 m. p. h.

Main Metering Jet: Calibrated to flow 296 to 300 cc per minute.

Main Vent: Through diffuser (air bleed inside bowl) size, .0394 inch (1.00 mm) drill.

Main Vent Tube: Side holes, 6—.0354 inch diameter.

Step-up Jet: .0374 inch (.95 mm) drill (Early Production). No. 65 (.035 inch) drill (Late Production).

Accelerating Pump: Type, delayed action. Summer setting (inner hole, short stroke). Winter setting (outer hole, long stroke). Pump intake passage, ball check seat, size .115 to .120 inch (2.93 to 3.05 mm) diameter.
Pump discharge passage: Restriction (under ball check) size .062 to .065 inch (1.58 to 1.65 mm) diameter in body.
Pump (discharge) jet, size .0315 inch (.80 mm) drill.

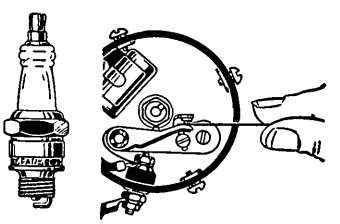
Pump Adjustment: 24/64 inch plunger travel; full throttle position, short stroke. Use gauge T109-117S.

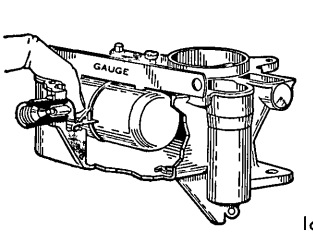
Choke: Manual—Offset butterfly type, with poppet valve. Choke valve stops at 8½° from wide open position.

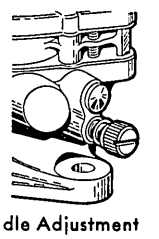
Vacuum Spark Port: None.

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.







Spark Plug Gap .028"-.032"

Breaker Point Setting .018"-.024"

Ignition Timing Breaker Points to Open: 3° B. T. D. C.

Valve Setting (Hot) Int. .018"-.020" (Hot) Exh. .018"-.020"

Float Setting (Use Gauge) 5/64 Inch

Idle Adjustment Screw Setting ½ to 1½ Turns Open

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CARBURETER ADJUSTMENTS

For most satisfactory starting during extremely cold weather, pull out choke, crack throttle about one half open and then engage starter

If carbureter loads up after considerable service, check float level Wear on lip of float lever will raise float level Before adjusting float, be sure float lever pin is firmly seated Reset by bending lip of float lever away from needle to raise level, or bend lip toward needle to lower float level Bend vertical lip of float only

If motor stalls while idling, set throttle lever adjusting screw so motor runs approximately 400 r p m Then set idle adjustment screw to specifications If these adjustments do not correct the trouble, remove idle orifice tube and plug assembly and clean tube and passages with compressed air

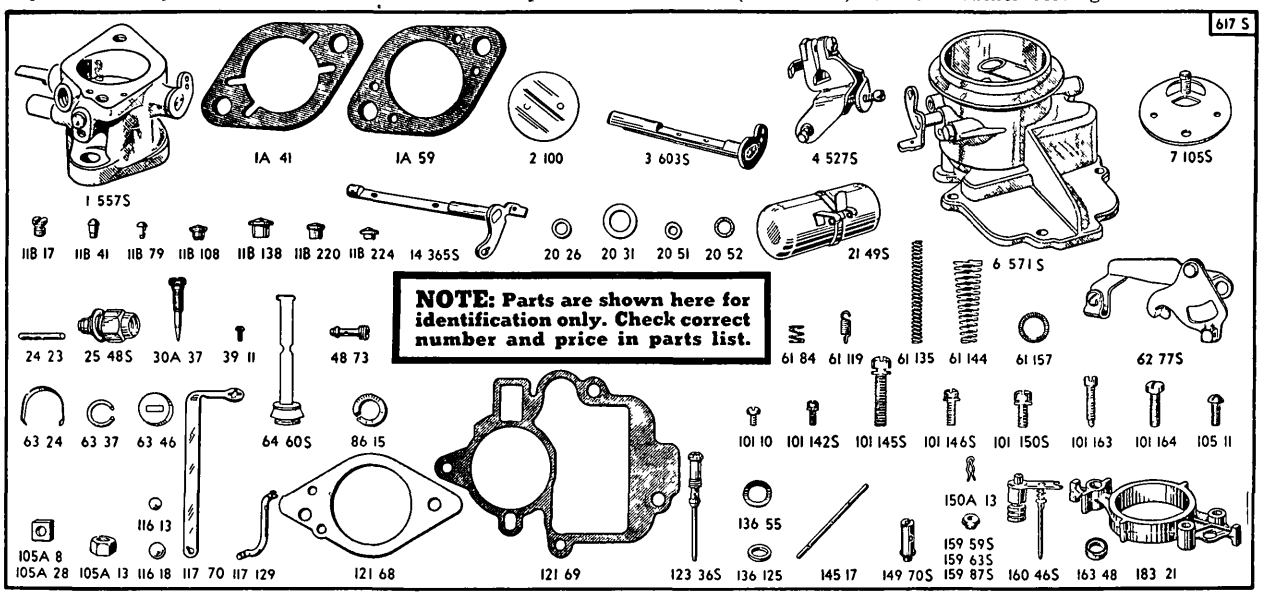
If acceleration is not satisfactory remove pump jet and clean with compressed air, however, it is usually advisable to replace the pump jet, as its cost is nominal All jets must be seated gasoline tight Poor acceleration may be due to damaged or worn plunger leather in accelerating pump, sediment in pump cylinder or clogged intake ball check at bottom of pump cylinder and discharge ball check in discharge passage If plunger is removed from cylinder, use care in installing to avoid damage to plunger leather

Correct air fuel ratio is provided by a "balance tube located in the air horn The balance tube should be checked each time the carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type, size or condition of air cleaner Should the cleaner become clogged, the capacity will be reduced but the air-fuel mixture ratio will not be changed

Excessive richness above 50 miles per hour may be caused by a clogged main vent tube After removal of rivet plug beneath float bowl with tool No T109-43, main vent tube can be removed and a new tube inserted with tool No T109 195 Care must be exercised in inserting new tube which must seat tightly Use new rivet to complete the installation

Pump Adjustment Remove air horn assembly, back out throttle lever adjustment screw and install pump operating link in inner hole (short stroke) of throttle shaft arm Place base of pump travel gauge T109-117S on upper edge of body of casting at pump cylinder With throttle valve seated, turn gauge until projecting finger contacts top of plunger shaft Note number indicated on gauge Repeat with throttle valve wide open and plunger pressed to bottom of the cylinder The difference between the numbers indicated at wide open and closed throttle positions should be '24' (24/64" pump stroke) Adjust by bending horizontal portion of pump lifter link

Pump stroke is adjustable for high or low temperature Set to longest stroke (outer hole) for cold weather, shorter stroke (inner hole) for hot weather driving



International Trucks 1941-1952; Carbs. Nos. 617S-617SA

WHEN SERVICING, USE GASKET ASSORTMENT No. 192; REPAIR PACKAGE No. 1380C

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-557S	Body flange assembly	
1A-41	★FLANGE GASKET—FOR USE WITHOUT GOVERNOR	
1A-59	Flange gasket—for use with governor	
2 100	Throttle valve	
3-603S	Throttle shaft and arm assembly	
4-527S	Throttle lever assembly	
6-571S	Air horn assembly	
7-105S	Choke valve assembly	
11B-17	PUMP DISCHARGE PASSAGE PLUG	
11B-41	Rivet passage plug	
11B-79	Rivet passage plug	(2)
11B-108	IDLE PORT RIVET PLUG	
11B-138	PUMP JET PASSAGE RIVET PLUG	
11B-220	RIVET PASSAGE PLUG	
11B-224	Choke shaft rivet plug	
14-365S	Choke control lever and shaft assembly	
20-26	Gasket	
20-31	Needle seat gasket	
20-51	Step-up jet gasket	
20-52	STEP-UP PISTON GASKET	
21-49S	Float and lever assembly	
24 23	FLOAT LEVER PIN	
25-48S	NEEDLE AND SEAT ASSEMBLY	
30A-37	Idle adjustment screw	
39-11	VALVE ATTACHING SCREW	(4)
48-73	PUMP JET	
61-84	Idle adjustment screw spring	
61-119	Choke pull-back spring	
61-134	★STEP-UP PISTON SPRING	
61-135	Step-up piston spring (Sup by 61-134)	
61-144	PUMP SPRING	
61-157	Plunger spring	
62-77S	Choke tube bracket assembly (Sup by 62-175S)	
62-175S	Choke tube bracket assembly	
63-24	FLOAT LEVER PIN RETAINER	
63-37	PUMP RETAINER RING	
63-46	SPRING RETAINER	
64-60S	PLUNGER AND ROD ASSEMBLY	

Part No.	PART NAME	
86-15	Flange stud lock washer	
101-10	Wire clamp screw	
101-142S	Choke bracket attaching screw and washer assembly	
101-145S	Flange attaching screw and washer assembly	(2)
101-146S	Bowl cover attaching screw and washer assembly (Sup by 101-150S)	
101-150S	Bowl cover attaching screw and washer assembly	(4)
101-163	Throttle adjusting screw (Sup by 101-279)	
101-164	Throttle lever clamp screw	
101-279	Throttle adjusting screw	
105-11	Tube clamp screw	
105A-8	Choke tube clamp nut	
105A-13	Flange nut	
105A-28	Clamp nut	
116-13	PUMP INTAKE CHECK BALL	
116-18	PUMP DISCHARGE CHECK BALL	
117-70	PUMP LIFTER	
117-129	PUMP LINK	
121-68	BODY FLANGE GASKET	(2)
121-69	BODY GASKET	
123-36S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
136-55	SPRING WASHER	
136-125	THROTTLE SHAFT SEAL RETAINER	(2)
145-17	MAIN VENT TUBE	
149-41S	†STEP-UP JET ASSEMBLY	
149 70S	Step-up jet assembly (Sup by 149-41S)	
150A-13	PIN SPRING	
159-59S	Main metering jet assembly (2 sizes lean)	
159-63S	Main metering jet assembly (1 size lean)	
159-87S	Main metering jet assembly (Sup by 159-93S)	
159-93S	†MAIN METERING JET ASSEMBLY	
160-46S	STEP-UP PISTON PLATE AND ROD ASSEMBLY	
163-48	Throttle shaft seal (Sup by 163-51)	(2)
163-51	THROTTLE SHAFT SEAL	(2)
183-21	Insulator	

★To rebuild 617S to 617SA specifications, use 1380C Repair Package containing 61 134 step-up spring 1A-41 flange gasket may then be used with or without governor

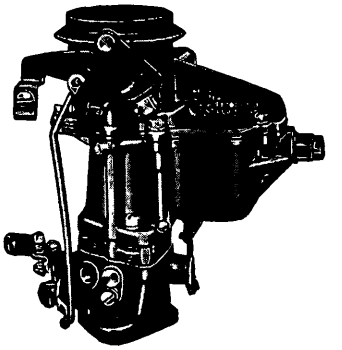
†These parts must be used on carbureters which have "BO ' stamped after the model number On earlier models which do not have the ' BO stamped on the carbureters, these assemblies can be used but must be used together

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

TRUCK MODELS

K-1, K-2, K-3, K-4, K-5,

KB-1, KB-2, KB-3, KB-4, KB-5



INTERNATIONAL TRUCK 1941-1949

BBR1—Down-Draft Carbureter—**Model 700S** (International No. 61776-R92)

(May be used with or without sandwich velocity governor, using standard flange gasket 1A-41.)

CARBURETER SPECIFICATIONS

For 6 Cylinder Engine, Model GRD 214—3-5/16" Bore; 4 1/8" Stroke (Truck Models K-1, K-2, K-3, K-4, KB-1, KB-2, KB-3, KB-4)

For 6 Cylinder Engine, Model GRD 233—3-5/16" Bore; 4 1/2" Stroke (Truck Models K-5, KB-5)

Dimensions: Flange size, 1 1/4 inch S. A. E.
Throttle bore, 1-9/16 inch (39.69 mm).
Main venturi, 1 1/4 inch (31.75 mm).

Float Setting: Top of float 5/64 inch (1.98 mm) plus or minus 1/64 inch (.397 mm) below top surface of carbureter body casting.

Vents: Outside, none. Inside, balance vent .218 inch (5.54 mm) diameter.

Gasoline Intake Needle: Triangular, horizontal. No. 44 (2.18 mm) drill in needle seat.

Idle Orifice Tube: Jet size, .0275 inch (.70 mm). Idle passage air bleed (in body), size, .067 inch (1.70 mm). Idle restriction (in body) size .054-.055 inch (1.371-1.397 mm).

Idle Ports: Upper port, keyhole type; length, .160 inch (4.06 mm). Width, .030 inch (.76 mm); .045 inch (1.14 mm) diameter hole at top. Top of port located .118 to .122 (3.00 to 3.10 mm) above top edge of valve. Lower port size, .053 to .057 inch (1.35 to 1.45 mm) diameter. (For idle adjustment screw.)

Set Idle Adjustment Screw: 1/2 to 1 1/2 turns open. For richer mixture, turn screw out. Do not idle engine below 400 r. p. m. or 6 m. p. h.

Main Metering Jet: Calibrated to flow 268 to 272 cc per minute.

Main Vent: Through diffuser (air bleed inside bowl) size, .0315 inch (.80 mm) drill.

Vent Tube: Side holes: 1—.0354 (.90 mm) drill 11/32 inch (8.73 mm) from end.
1—.0354 (.90 mm) drill 1 inch (25.40 mm) from end.
1—.0354 (.90 mm) drill 1-11/32 inch (31.43 mm) from end.
2—.0354 (.90 mm) drill approximately 1 1/2 inch (38.10 mm) from end.
1—.024 (.61 mm) drill 1-41/64 inch (41.67 mm) from end.

Step-Up Jet: .035 inch (.89 mm) drill.

Accelerating Pump: Type, delayed action. Stroke, summer setting (inner hole, short stroke). Winter setting (outer hole, long stroke). Pump intake passage, ball check seat, size .115 to .120 inch (2.93 to 3.05 mm) diameter.
Pump discharge passage: Restriction (under ball check) size .062 to .065 inch (1.58 to 1.65 mm) diameter in body.
Pump (discharge) jet, size .0276 inch (.70 mm) drill.

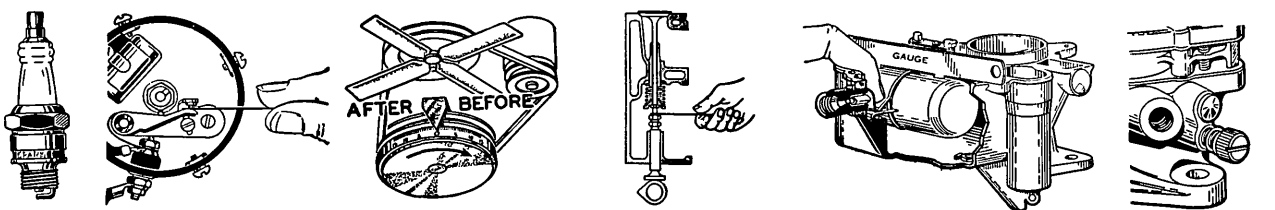
Pump Adjustment: 24/64 inch plunger travel; full throttle position, inner hole (short stroke). Use gauge No. T109-117S.

Choke: Offset butterfly type, with poppet valve.

Vacuum Spark Port: Slot type: size, .040 by .110 inch (1.016 by 2.794 mm). Bottom of port to be .003 to .009 inch (.076 to .229 mm) above top edge of valve.

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open: 4° B. T. D. C. 26° Total Advance	Valve Setting	Float Setting (Use Gauge)	Idle Adjustment Screw Setting
.028"-.032"	.018"-.024"		(Hot) Int. & Exh. .017" (Cold) Int. & Exh. .020"	5/64 Inch	1/2 to 1 1/2 Turns Open

CARBURETER ADJUSTMENTS

For most satisfactory starting during extremely cold weather, pull out choke, crack throttle about one half open and then engage starter.

If carbureter loads up after considerable service, check float level. Wear on lip of float lever will raise float level. Before adjusting float, be sure float lever pin is firmly seated. Reset by bending lip of float lever away from needle to raise level, or bend lip toward needle to lower float level. Bend vertical lip of float only.

If motor stalls while idling, set throttle lever adjusting screw so motor runs approximately 400 r. p. m. Then set idle adjustment screw to specifications. If these adjustments

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do not correct the trouble, remove idle orifice tube and plug assembly and clean tube and passages with compressed air

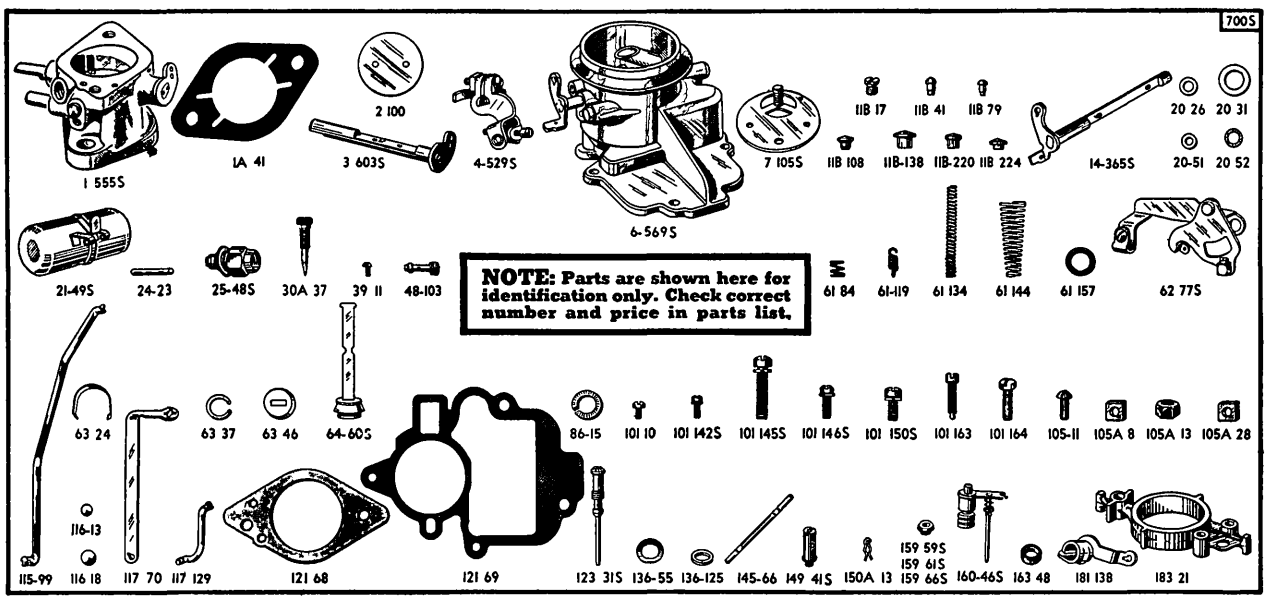
If acceleration is not satisfactory, remove pump jet and clean with compressed air, however, it is usually advisable to replace the pump jet, as its cost is nominal All jets must be seated gasoline tight Poor acceleration may be due to damaged or worn plunger leather in accelerating pump sediment in pump cylinder or clogged intake ball check at bottom of pump cylinder and discharge ball check in discharge passage If plunger is removed from cylinder use care in installing to avoid damage to plunger leather

Correct air fuel ratio is provided by a balance tube located in the air horn The balance tube should be checked each time the carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type, size or condition of air cleaner Should the cleaner become clogged the capacity will be reduced but the air-fuel mixture ratio will not be changed

Excessive richness above 50 miles per hour may be caused by a clogged main vent tube After removal of rivet plug beneath float bowl with tool No T109-43, main vent tube can be removed and a new tube inserted with tool No T109-195 Care must be exercised in inserting new tube which must seat tightly Use new rivet to complete the installation

PUMP ADJUSTMENT: Remove air horn assembly, back out throttle lever adjustment screw and install pump operating link in inner hole (short stroke) of throttle shaft arm Place base of pump travel gauge T109-117S on upper edge of body casting at pump cylinder With throttle valve seated, turn gauge until projecting finger contacts top of plunger shaft Note number indicated on gauge Repeat with throttle valve wide open and plunger pressed to bottom of the cylinder The difference between the numbers indicated at wide open and closed throttle positions should be "24", (24/64" pump stroke) Adjust by bending horizontal portion of pump lifter link

Pump stroke is adjustable for high or low temperature Set to longest stroke (outer hole) for cold weather, shorter stroke (inner hole) for hot weather driving



International Truck—1941-49—Carbureter No. 700S

WHEN SERVICING, USE GASKET ASSORTMENT No 192; REPAIR PACKAGE No. 1395A

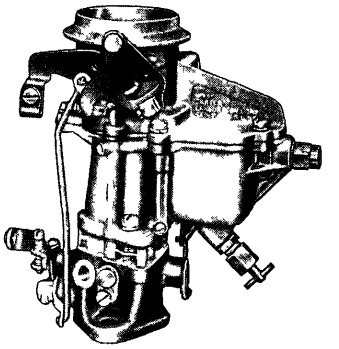
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-555S	Body flange assembly	
1A-41	FLANGE GASKET	
2 100	Throttle valve	
3-603S	Throttle shaft and arm assembly	
4-529S	Throttle lever assembly	
6-569S	Air horn assembly	
7-105S	Choke valve assembly	
11B-17	PUMP DISCHARGE PASSAGE PLUG	
11B-41	Rivet plug	
11B-79	Rivet plug	(2)
11B-108	IDLE PORT RIVET PLUG	
11B-138	PUMP JET RIVET PLUG	
11B-220	RIVET PLUG	
11B-224	Choke shaft rivet passage plug	
14 365S	Choke shaft and lever assembly	
20-26	Main metering jet gasket	
20-31	Needle seat gasket	
20-51	Step-up jet gasket	
20-52	STEP-UP PISTON GASKET	
21-49S	Float and lever assembly	
24-23	FLOAT LEVER PIN	
25-48S	NEEDLE AND SEAT ASSEMBLY	
30A-37	Idle adjustment screw	
39-11	VALVE ATTACHING SCREW	(4)
48-103	PUMP JET	
61-84	Idle adjustment screw spring	
61-119	Choke pull-back spring	
61-134	STEP UP PISTON SPRING	
61-144	PUMP SPRING	
61-157	Plunger spring	
62-77S	Choke tube assembly (Sup by 62 175S)	
62-175S	Choke tube bracket assembly	
63 24	FLOAT LEVER PIN RETAINER	
63-37	INTAKE BALL RETAINER RING	
63-46	SPRING RETAINER	
64-60S	PUMP PLUNGER ASSEMBLY (Identify by shaft No 49-120)	
86-15	Flange stud lock washer	(2)

Part No.	PART NAME	
101-10	Wire clamp screw	
101-142S	Choke bracket attaching screw and washer assembly	
101-145S	Flange attaching screw and washer assembly	(2)
101-146S	Bowl cover attaching screw and washer assembly (Sup by 101-150S)	(3)
101-150S	Bowl cover attaching screw and washer assembly	(4)
101-163	Throttle adjusting screw (Sup by 101 279)	
101-164	Throttle lever clamp screw	
101-279	Throttle adjusting screw	
105-11	Tube clamp screw	
105A-8	Choke tube clamp nut	
105A-13	Flange nut	(2)
105A-28	Throttle lever clamp nut	
115 99	Fast idle rod	
116-13	PUMP INTAKE CHECK BALL	
116-18	PUMP DISCHARGE CHECK BALL	
117-70	PUMP LIFTER LINK	
117 129	PUMP LINK	
121 68	BODY FLANGE GASKET	(2)
121-69	BODY GASKET	
123-31S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
136-55	THROTTLE SHAFT SPRING WASHER	
136 125	THROTTLE SHAFT SEAL RETAINER	(2)
145 66	MAIN VENT TUBE	
149-41S	STEP-UP JET ASSEMBLY	
150A-13	PIN SPRING	
159-59S	MAIN METERING JET ASSEMBLY—STANDARD	
159-61S	Main metering jet assembly—1 size lean	
159-66S	Main metering jet assembly—2 sizes lean	
160-46S	STEP-UP PISTON, PLATE AND ROD ASSEMBLY	
163 48	Tnrottle shaft seal (Sup by 163-51)	(2)
163-51	THROTTLE SHAFT SEAL	(2)
181-138	Fast idle cam	
183-21	Insulator	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

TRUCK MODELS
K-1, K-2, K-3, K-4, K-5,
KB-1, KB-2, KB-3, KB-4, KB-5



INTERNATIONAL TRUCKS 1941-49

EXPORT AND HIGH ALTITUDE

BBR1 Downdraft **Carbs. 656S-656SA** (I H Nos 68768-R91 and 68768-R92)

CARBURETER SPECIFICATIONS

For 6 Cylinder Engine, Model GRD 214—3-5/16" Bore, 4 1/8" Stroke (Truck Models K 1 K-2 K 3 K-4 KB-1 KB 2 KB 3, KB-4)

For 6 Cylinder Engine, Model GRD 233—3 5/16" Bore 4 1/2" Stroke (Truck Models K 5 KB-5)

Dimensions Flange size 1 1/4 inch S A E
Throttle bore 1 9/16 inch (39 69 mm)
Main venturi 1 1/4 inch (31 75 mm)

Float Setting Top of float 5/64 inch (1 98 mm) plus or minus 1/64 inch (397 mm) below top surface of carbureter body casting

Vents Outside none Inside balance vent 218 inch (5 54 mm) diameter

Gasoline Intake Needle Triangular horizontal No 44 (2 18 mm) drill in needle seat

Idle Orifice Tube Jet size 0275 inch (70 mm) Idle passage air bleed (in body) size 067 inch (1 70 mm) Economizer (in body) size 054 055 inch (1 371 1 397 mm)

Idle Ports Upper port keyhole type length 160 inch (4 06 mm) Width 030 inch (76 mm) 045 inch (1 14 mm) diameter hole at top Top of port located 118 to 122 (3 00 to 3 10 mm) above top edge of valve Lower port size 053 to 057 inch (1 35 to 1 45 mm) diameter (For idle adjustment screw)

Set Idle Adjustment Screw 1/2 to 1 1/2 turns open For richer mixture turn screw out Do not idle engine below 400 r p m or 6 m p h

Main Metering Jet Calibrated to flow 188 to 192 cc per minute

Main Metering Screw Adjustable Jet No 57 (043") drill

Main Vent Through diffuser (air bleed inside bowl) size 0315 inch (80 mm) drill

Main Vent Tube 1—0354 (90 mm) drill 11/32 inch (8 73 mm) from end
1—0354 (90 mm) drill 1 inch (25 40 mm) from end
1—0354 (90 mm) drill 1 11/32 inch (31 43 mm) from end
2—0354 (90 mm) drill approximately 1 1/2 inch (38 10 mm) from end
1—024 (61 mm) drill 1 41/64 inch (41 67 mm) from end

Step up Jet 035 nch (89 mm) drill

Accelerating Pump Type delayed action Stroke summer setting (inner hole short stroke) Winter setting (outer hole long stroke) Pump intake passage ball check seat size 115 to 120 inch (2 93 to 3 05 mm) diameter
Pump discharge passage Restriction (under ball check) size 062 to 065 inch (1 58 to 1 65 mm) diameter in body
Pump (discharge) jet, size 0276 inch (70 mm) drill

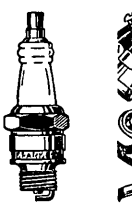
Pump Adjustment 24/64 inch plunger travel full throttle position nner hole (short stroke) Use gauge No T109 117S

Choke Offset butterfly type with poppet valve

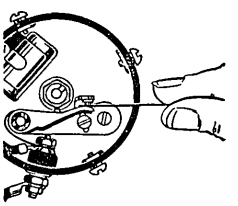
Vacuum Spark Port Slot type size 040 by 110 inch (1 016 by 2 794 mm) Bottom of port to be 003 to 009 inch (076 to 229 mm) above top edge of valve

Motor Tune-Up—Be Accurate!

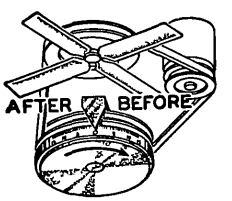
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



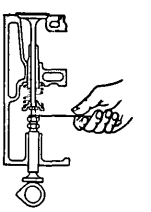
Spark Plug Gap
028" 032"



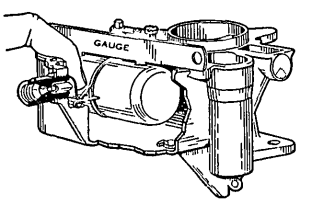
Breaker Point Setting
018" 024"



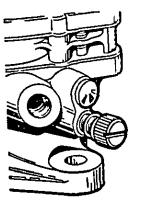
Ignition Timing
Breaker Points to Open
4° B T D C
26° Total Advance



Valve Setting
(Hot) Int & Exh 017"
(Cold) Int & Exh 020"



Float Setting
5/64 Inch
(Use Gauge T109 50)



Idle Adjustment Screw Setting
1/2 to 1 1/2
Turns Open

CARBURETER ADJUSTMENTS

For most satisfactory starting during extremely cold weather, pull out choke, crack throttle about one half open and then engage starter

If carbureter loads up after considerable service, check float level Wear on lip of float lever will raise float level Before adjusting float, be sure float lever pin is firmly seated Reset by bending lip of float lever away from needle to raise level, or bend lip toward needle to lower float level Bend vertical lip of float only

If motor stalls while idling set throttle lever adjusting screw so motor runs approximately 400 r p m Then set idle adjustment screw to specifications If these adjustments do not correct the trouble, remove idle orifice tube and plug assembly and clean tube and passages with compressed air

If acceleration is not satisfactory, remove pump jet and clean with compressed air however, it is usually advisable to replace the pump jet as its cost is nominal All jets must be seated gasoline tight Poor acceleration may be due to

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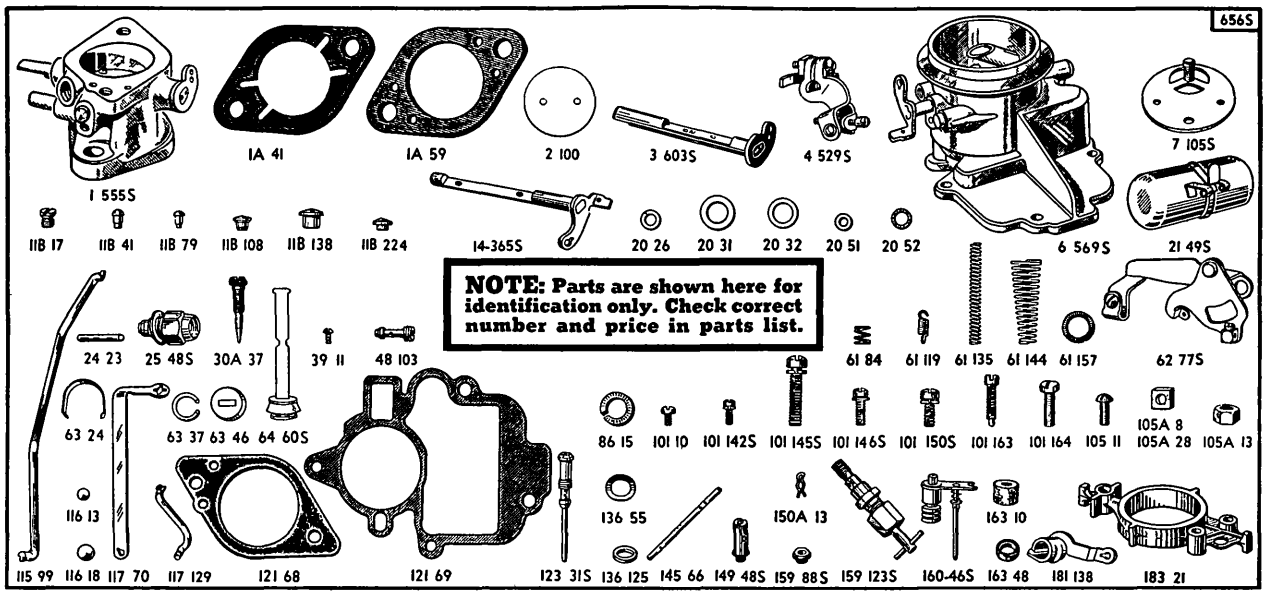
damaged or worn plunger leather in accelerating pump, sediment in pump cylinder or clogged ball check at bottom of pump cylinder and discharge ball check in discharge passage If plunger is removed from cylinder, use care in installing to avoid damage to plunger leather

Correct air fuel ratio is provided by a balance tube ' located in the air horn The balance tube should be checked each time the carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type size or condition of air cleaner Should the cleaner become clogged the capacity will be reduced but the air fuel mixture ratio will not be changed

Excessive richness above 50 miles per hour may be caused by a clogged main vent tube After removal of main metering screw assembly beneath float bowl main vent tube can be removed and a new tube inserted with tool T109-195 Care must be exercised in inserting new tube which must seat tightly

Pump Adjustment Remove air horn assembly, back out throttle lever adjustment screw and install pump operating link in inner hole (short stroke) of throttle shaft arm Place base of pump travel gauge T109-117S on upper edge of body casting at pump cylinder With throttle valve seated, turn gauge until projecting finger contacts top of plunger shaft Note number indicated on gauge Repeat with throttle valve wide open and plunger pressed to bottom of the cylinder The difference between the numbers indicated at wide open and closed throttle positions should be "24", (24/64" pump stroke) Adjust by bending horizontal portion of pump lifter link Pump stroke is adjustable for high or low temperature Set to long stroke (outer hole) for cold weather, short stroke (inner hole) for hot weather driving

Main Metering Screw Adjustment Using a tachometer and with engine operating at normal temperature adjust throttle for an engine speed of approximately 2000 r p m Open main metering screw until engine operates smoothly with the highest vacuum gauge reading Slowly tighten main metering screw until a slight reduction of engine speed can be noticed or vacuum gauge shows slight decrease Open screw slightly from this position until maximum R P M and vacuum is obtained—usually not more than ⅛ to ¼ turn Hold screw securely and tighten nut to lock screw in position



International Trucks—1941-49—Carbureters Nos. 656S-656SA

WHEN SERVICING, USE GASKET ASSORTMENT No 192, REPAIR PACKAGE No 1374B

PART NAMES IN CAPITAL LETTERS LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1 555S	Body flange assembly	
1A 41	★FLANGE GASKET—FOR USE WITHOUT GOVERNOR	
1A-59	Flange gasket—for use with governor	
2-100	Throttle valve	
3 603S	Throttle shaft and arm assembly	
4 529S	Throttle lever assembly	
6 569S	Air horn assembly	
7 105S	Choke valve assembly	
11B 17	PUMP DISCHARGE PASSAGE PLUG	
11B 41	RIVET PASSAGE PLUG	
11B 79	Rivet passage plug	(2)
11B-108	RIVET PASSAGE PLUG	
11B 138	PUMP JET RIVET PLUG	
11B 224	Choke shaft rivet plug	
14-365S	Choke shaft and lever assembly	
20-26	Gasket	
20-31	Needle seat gasket	
20 32	Main metering screw gasket	
20-51	Step up jet gasket	
20 52	STEP-UP PISTON GASKET	
21-49S	Float and lever assembly	
24-23	FLOAT LEVER PIN	
25 48S	NEEDLE AND SEAT ASSEMBLY	
30A 37	Idle adjustment screw	
39-11	VALVE ATTACHING SCREW	(4)
48-103	PUMP JET	
61-84	Idle adjustment screw spring	
61-119	Choke pull back spring	
61-134	★STEP UP PISTON SPRING	
61-135	Step-up piston spring (Sup by 61 134)	
61-144	PUMP SPRING	
61-157	Plunger spring	
62 77S	Choke tube bracket assembly (Sup by 62 175S)	
62-175S	Choke tube bracket assembly	
63-24	FLOAT LEVER PIN RETAINER	
63-37	INTAKE BALL RETAINER RING	
63-46	SPRING RETAINER	
64-60S	PUMP PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49-120)	

Part No	PART NAME	
86-15	Flange stud lock washer	(2)
101-10	Wire clamp screw	
101-142S	Choke bracket attaching screw and washer assembly	
101-145S	Flange attaching screw and washer assembly	(2)
101 146S	Bowl cover attaching screw and washer assembly (Sup by 101-150S)	
101 150S	Bowl cover attaching screw and washer assembly (long)	(4)
101-163	Throttle adjusting screw (Sup by 101-279)	
101-164	Throttle lever clamp screw	
101-279	Throttle adjusting screw	
105-11	Tube clamp screw	
105A-8	Choke tube clamp nut	
105A 13	Flange nut	(2)
105A 28	Clamp nut	
115 99	Fast idle rod	
116 13	PUMP INTAKE CHECK BALL	
116-18	PUMP DISCHARGE CHECK BALL	
117-70	PUMP LIFTER	
117-129	PUMP LINK	
121 68	BODY FLANGE GASKET	(2)
121-69	BODY GASKET	
123 31S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
136 55	SPRING WASHER	
136-125	THROTTLE SHAFT SEAL RETAINER	(2)
145 66	MAIN VENT TUBE	
149 48S	STEP-UP JET ASSEMBLY	
150A 13	PIN SPRING	
159 88S	MAIN METERING JET ASSEMBLY	
159-123S	Adjustable main metering screw assembly	
160-46S	STEP-UP PISTON PLATE AND ROD ASSEMBLY	
163 10	Main metering screw packing	
163 48	Throttle shaft seal (Sup by 163 51)	(2)
163-51	THROTTLE SHAFT SEAL	(2)
181-138	Fast idle cam	
183-21	Insulator	

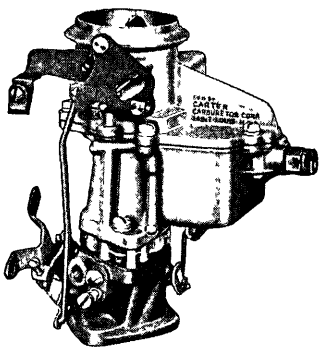
★To rebuild 656S to 656SA specifications use 1374B Repair Package containing 61 134 step-up spring 1A-41 flange gasket may then be used with or without governor

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

TRUCK MODELS

K-1, K-2, K-3, K-4, K-5,

KB-1, KB-2, KB-3, KB-4, KB-5



INTERNATIONAL TRUCKS 1941-48

(700S Can Also Be Used)

BBR1—Downdraft Carbureter—**Model 615S** (International No. 57416-R91)
BBR1—Downdraft Carbureter—**Model 615SS** (International No. 57416-R92)
BBR1—Downdraft Carbureter—**Model 615SB** (International No. 68276-R91)
BBR1—Downdraft Carbureter—**Model 615SA** (International No. 61776-R91)
BBR1—Downdraft Carbureter—**Model 615SC** (International No. 65379-R91)

(615SB and 615SC for use with sandwich velocity governor)

CARBURETER SPECIFICATIONS

For 6 Cylinder Engine, Model GRD 214—3-5/16" Bore; 4⅛" Stroke (Truck Models K-1, K-2, K-3, K-4, KB-1, KB-2, KB-3, K-B4)
For 6 Cylinder Engine, Model GRD 233—3-5/16" Bore; 4½" Stroke (Truck Models K-5, KB-5)

Dimensions: Flange size, 1¼ inch S. A. E.
Throttle bore, 1-9/16 inch (39.69 mm).
Main venturi, 1¼ inch (31.75 mm).

Float Setting: Top of float 5/64 inch (1.98 mm) plus or minus 1/64 inch (.397 mm) below top surface of carbureter body casting.

Vents: Outside, none. Inside, balance vent .218 inch (5.54 mm) diameter.

Gasoline Intake Needle: Triangular, horizontal. No. 44 (2.18 mm) drill in needle seat.

Idle Orifice Tube: Jet size, .0275 inch (.70 mm). Idle passage air bleed (in body), size, .067 inch (1.70 mm). Idle restriction (in body) size .054-.055 inch (1.371-1.397 mm).

Idle Ports: Upper port, keyhole type; length, .160 inch (4.06 mm). Width, .030 inch (.76 mm); .045 inch (1.14 mm) diameter hole at top. Top of port located .118 to .122 (3.00 to 3.10 mm) above top edge of valve. Lower port size, .053 to .057 inch (1.35 to 1.45 mm) diameter. (For idle adjustment screw.)

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture, turn screw out. Do not idle engine below 400 r. p. m. or 6 m. p. h.

Main Metering Jet: 615S, 615SS, 615SA: Calibrated to flow 268 to 272 cc per minute. 615SB and 615SC calibrated to flow 282 to 286 cc per minute.

Main Vent: Through diffuser (air bleed inside bowl) size, .0315 inch (.80 mm) drill.

Vent Tube: Side holes: 1—.0354 (.90 mm) drill 11/32 inch (8.73 mm) from end.
1—.0354 (.90 mm) drill 1 inch (25.40 mm) from end.
1—.0354 (.90 mm) drill 1-11/32 inch (31.43 mm) from end.
2—.0354 (.90 mm) drill approximately 1½ inch (38.10 mm) from end.
1—.024 (.61 mm) drill 1-41/64 inch (41.67 mm) from end.

Step-up Jet: .035 inch (.89 mm) drill.

Accelerating Pump: Type, delayed action. Stroke, summer setting (inner hole, short stroke). Intermediate setting (center hole). Winter setting (outer hole, long stroke). Pump intake passage, ball check seat, size .115 to .120 inch (2.93 to 3.05 mm) diameter.
Pump discharge passage: Restriction (under ball check) size .062 to .065 inch (1.58 to 1.65 mm) diameter in body.
Pump (discharge) jet, size .0276 inch (.70 mm) drill.

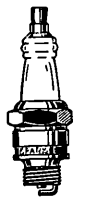
Pump Adjustment: 24/64 inch plunger travel; full throttle position, center hole (medium stroke 615S, 615SS, 615SB), inner hole (short stroke 615SA, 615SC). Use gauge No. T109-117S.

Choke: Offset butterfly type, with poppet valve.

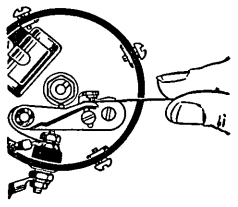
Vacuum Spark Port: Slot type: size, .040 by .110 inch (1.016 by 2.794 mm). Bottom of port to be .003 to .009 inch (.076 to .229 mm) above top edge of valve.

Motor Tune-Up—Be Accurate!

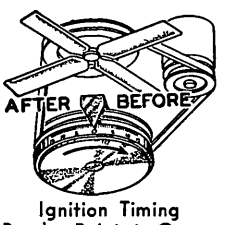
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



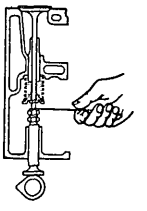
Spark Plug Gap .028"-.032"



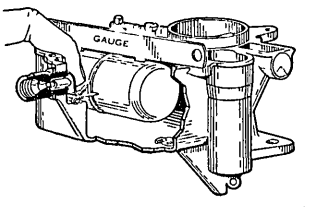
Breaker Point Setting .018"-.024"



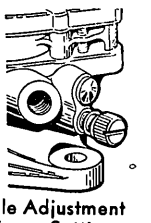
Ignition Timing Breaker Points to Open: 4° B. T. D. C. 26° Total Advance



Valve Setting (Hot) Int. & Exh. .017" (Cold) Int. & Exh. .020"



Float Setting (Use Gauge) 5/64 Inch



Idle Adjustment Screw Setting ½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

For most satisfactory starting during extremely cold weather, pull out choke, crack throttle about one half open and then engage starter.

If carbureter loads up after considerable service, check float level. Wear on lip of float lever will raise float level. Before adjusting float, be sure float lever pin is firmly seated. Reset by bending lip of float lever away from needle to raise level, or bend lip toward needle to lower float level. Bend vertical lip of float only.

If motor stalls while idling, set throttle lever adjusting screw so motor runs approximately 400 r. p. m. Then set idle adjustment screw to specifications. If these adjustments

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do not correct the trouble, remove idle orifice tube and plug assembly and clean tube and passages with compressed air

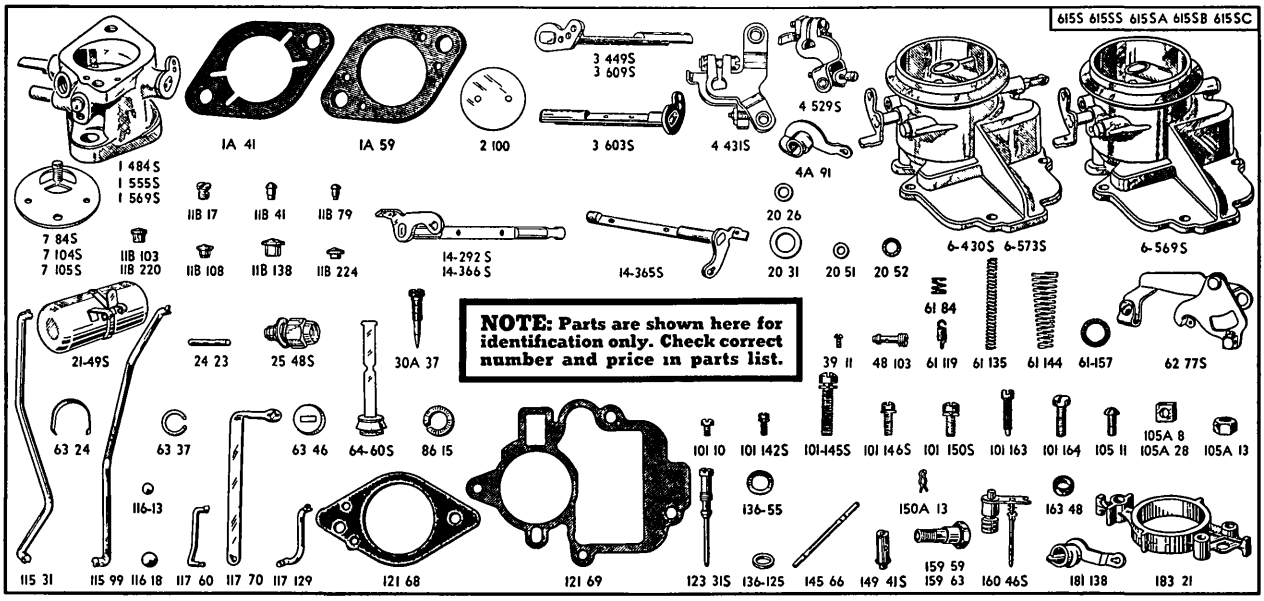
If acceleration is not satisfactory remove pump jet and clean with compressed air, however, it is usually advisable to replace the pump jet, as its cost is nominal All jets must be seated gasoline tight Poor acceleration may be due to damaged or worn plunger leather in accelerating pump, sediment in pump cylinder or clogged intake ball check at bottom of pump cylinder and discharge ball check in discharge passage If plunger is removed from cylinder, use care in installing to avoid damage to plunger leather

Correct air fuel ratio is provided by a "balance tube" located in the air horn The balance tube should be checked each time the carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type, size or condition of air cleaner Should the cleaner become clogged, the capacity will be reduced but the air-fuel mixture ratio will not be changed

Excessive richness above 50 miles per hour may be caused by a clogged main vent tube After removal of rivet plug beneath float bowl with tool No T109-43, main vent tube can be removed and a new tube inserted with tool No T109-195 Care must be exercised in inserting new tube which must seat tightly Use new rivet to complete the installation

PUMP ADJUSTMENT· Remove air horn assembly, back out throttle lever adjustment screw and install pump operating link in center hole (medium stroke, 615S, 615SS, 615SB) and inner hole (short stroke, 615SA, 615SC) of throttle shaft arm Place base of pump travel gauge T109-117S on upper edge of body casting at pump cylinder With throttle valve seated, turn gauge until projecting finger contacts top of plunger shaft Note number indicated on gauge Repeat with throttle valve wide open and plunger pressed to bottom of the cylinder The difference between the numbers indicated at wide open and closed throttle positions should be "24", (24/64" pump stroke) Adjust by bending horizontal portion of pump lifter link

Pump stroke is adjustable for high or low temperature *Set to longest stroke (outer hole) for cold weather, shorter* stroke (inner hole) for hot weather driving



International Trucks 1941-48, Carb. Nos. 615S-615SS-615SB-615SA-615SC

WHEN SERVICING ALL CARBURETERS, USE GASKET ASSORTMENT No 192, REPAIR PACKAGE No 1395A

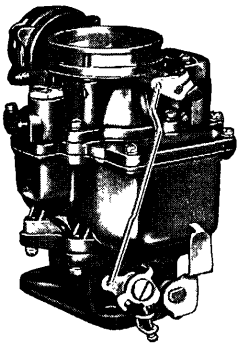
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME
1 484S	Body flange assembly (615S)
1-555S	Body flange assembly (615SA-SC)
1-569S	Body flange assembly (615SS-SB)
1A-41	★FLANGE GASKET—FOR USE WITHOUT GOVERNOR
1A-59	Flange gasket—for use with governor
2-100	Throttle valve
3 449S	Throttle shaft and arm assy (Sup by 3-609S)
3-603S	Throttle shaft and arm assembly (615SA-SC)
3-609S	Throttle shaft and arm assy (615S-SS-SB)
4 431S	Throttle lever assy (Sup by 4-529S)
4-529S	Throttle lever assembly
4A-91	Fast idle cam (615SS-SB)
6 430S	Air horn assembly (Sup by 6-569S)
6 569S	Air horn assembly
6 573S	Air horn assembly (Sup by 6-569S)
7 84S	Choke valve assembly (Sup by 7-105S)
7-104S	Choke valve assembly (Sup by 7-105S)
7-105S	Choke valve assembly
11B-17	PUMP DISCHARGE PASSAGE PLUG
11B-41	Rivet passage plug
11B-79	Rivet passage plug (2)
11B-103	Rivet passage plug (Sup by 11B-220)
11B-108	IDLE PORT RIVET PLUG
11B-138	PUMP JET RIVET PLUG
11B-220	RIVET PASSAGE PLUG
11B-224	Choke shaft rivet plug (615SA-SC)
14 292S	Choke shaft and lever assy (Sup by 14-366S)
14-365S	Choke shaft and lever assembly (615SA-SC)
14 366S	Choke shaft and lever assy (615S-SS-SB)
20-26	Main metering jet gasket -
20-31	Needle seat gasket
20-51	Step-up jet gasket
20 52	STEP-UP PISTON GASKET
21-49S	Float and lever assembly
24-23	FLOAT LEVER PIN
25-48S	NEEDLE AND SEAT ASSEMBLY
30A-37	Idle adjustment screw
39-11	VALVE ATTACHING SCREW (4)
48-103	PUMP JET
61-84	Idle adjustment screw spring
61-119	Choke pull-back spring -
61-134	★STEP-UP PISTON SPRING
61-135	Step-up piston spring
61-144	PUMP SPRING
61-157	Plunger spring
62-77S	Choke tube bracket assembly
63-24	FLOAT LEVER PIN RETAINER
63-37	INTAKE BALL RETAINER RING

Part No.	PART NAME
63-46	SPRING RETAINER
64-60S	PUMP PLUNGER ASSEMBLY
86-15	Flange stud lock washer
101-10	Wire clamp screw
101-142S	Choke bracket attaching screw and washer assembly
101-145S	Flange attaching screw and washer assy (2)
101-146S	Bowl cover attaching screw and washer assembly (Sup by 101-150S)
101-150S	Air horn attaching screw and washer assembly (All) (4)
101-163	Throttle adjusting screw (Sup by 101-279)
101-164	Throttle lever clamp screw
101-279	Throttle adjusting screw
105-11	Tube clamp screw
105A-8	Choke tube clamp nut
105A-13	Flange nut
105A-28	Throttle lever clamp nut
115-31	Fast idle rod (615SS, 615SB)
115-99	Fast idle rod (615SA-SC)
116-13	PUMP INTAKE CHECK BALL
116-18	PUMP DISCHARGE CHECK BALL
117-60	PUMP LINK (615S-SS-SB)
117-70	PUMP LIFTER LINK
117-129	PUMP LINK (615SA-SC)
121-68	BODY FLANGE GASKET (2)
121-69	BODY GASKET -
123 31S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY
136-55	THROTTLE SHAFT SPRING WASHER
136-125	THROTTLE SHAFT SEAL RETAINER (615SA-SC) (2)
145-66	MAIN VENT TUBE
149-41S	STEP-UP JET ASSEMBLY
150A-13	PIN SPRING
159-59S	★MAIN METERING JET ASSEMBLY—Standard (615S-SS-SA)
159-59S	Main metering jet—1 size lean—(615SB SC)
159-61S	Main metering jet—2 sizes lean—(615SB SC)
159-61S	Main metering jet—1 size lean—(615SS-SA)
159-63S	Main metering jet assembly—Standard (615SB-SC)
159-66S	Main metering jet—2 sizes lean—(615SS-SA)
160-46S	STEP-UP PISTON PLATE AND ROD ASSEMBLY
163-48	Throttle shaft seal (615SA-SC) (Sup by 163-51) (2)
163-51	THROTTLE SHAFT SEAL (615SA-SC) (2)
181-138	Fast idle cam (615SA-SC)
183-21	Insulator

★Repair Parts Package No 1395A contains 1A-41, 159-59S and 61 134 These parts installed in 615 series carbureters will bring them up to 700s specifications 1A-41 flange gasket may then be used with or without a sandwich velocity governor After rebuilding 615SA and 615SC attach the metal inspection tag stamped 700S, attach printed tag to other models

Model
Manhattan "K542"
(With Supercharger)



KAISER
1954-1955

WCD Dual Down-Draft Climatic® Control **Carbureter No. 2146S**

CARBURETER SPECIFICATIONS

For Six Cylinder Engine: 3-5/16 Inch Bore, 4⅜ Inch Stroke

Dimensions: Flange size, 1¼ inch dual, 4 bolt type.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 19/32 inch I. D.
Main venturi, 1-3/16 inch I. D.

Float Level: See adjustments.

Vents: Inside, none. Outside, No. 35 (.110 inch) drill 2—holes.

Gasoline Intake: Size No. 42 (.0935 inch) drill in needle seat.

Low Speed Jet Tube: Jet, size No. 62 (.038 inch) drill.
By pass, in bowl cover, size No. 56 (.0465 inch) drill. Economizer, in bowl cover, size No. 63 (.037 inch) drill. Idle bleed, in bowl cover, size No. 55 (.052 inch) drill.

Idle Port: Upper, slot type, length .165 inch; width, .030 inch.

Idle Port Opening: Top of port .122-.128 inch above upper edge of valve with valve tightly closed.

Lower Port (For Idle Adjustment Screw): Size .0615 to .0655 inch diameter.

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture turn screw out. Idle engine at 450 r.p.m. (Hydra-matic—in Drive Range), 500 r.p.m. (Standard and Overdrive Trans.).

Main Nozzle: Nozzle is installed permanently. DO NOT REMOVE.

Metering Rod (Vacumeter Type): Economy step .0735 inch diameter. Middle step tapers to .069 inch diameter. Power step .051 inch diameter.

Main Metering Jet: .091 inch diameter.

Metering Rod Setting: See adjustments.

Accelerating Pump: Discharge jet (twin) size, No. 74 (.0225 inch) drill.
Intake disk check size, No. 30 (.1285 inch) drill.
Discharge (needle seat) size, No. 62 (.038 inch) drill.
Relief ball check size, No. 55 (.052 inch) drill.

Pump Adjustment: See adjustments.

Choke: Carter Climatic® Control, set on index. Offset butterfly type. Bleed hole, size .156 inch diameter in valve. Choke heat suction hole, in bowl cover, size No. 32 (.116 inch) drill.

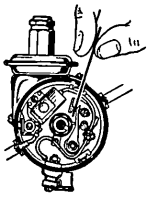
Vacuum Spark Port: .062 to .064 inch diameter. Top of port .052 to .056 inch above valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

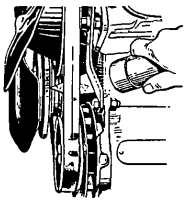
CAUTION. Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter



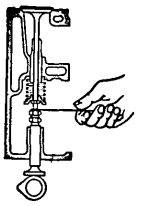
Spark Plug Gap .030"



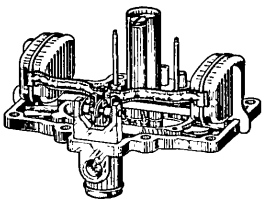
Breaker Point Setting 1954—.022" 1955—.016"



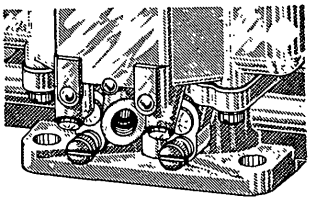
Ignition Timing Breaker Points to Open: 4° B. T. D. C.



Valve Setting (Cold) Int. .014" Exh. .014"



Float Setting (See Adjustments)



Idle Adjustment Screw Setting ½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

Float Adjustment: Two separate float adjustments must be made—lateral and vertical. LATERAL ADJUSTMENT: With bowl cover assembly inverted, bowl cover gasket removed and float resting on seated needle, place float gauge T109-162 directly under float with notched portions of gauge fitted over edges of casting. Sides of floats should barely touch the vertical uprights of float gauge. Adjustment should be made by bending arms of floats. VERTICAL ADJUSTMENT: With float gauge in same position floats should just clear the horizontal portion of gauge. (Vertical distance between top of float, and machined surface of casting must be 3/16 inch.) Adjust by bending float arms. Remove float, install bowl cover gasket and then reinstall float.

Pump Adjustment: Install pump connector link in lower hole (short stroke) of pump arm with ends extending toward countershaft arm. Back out throttle lever set screw until

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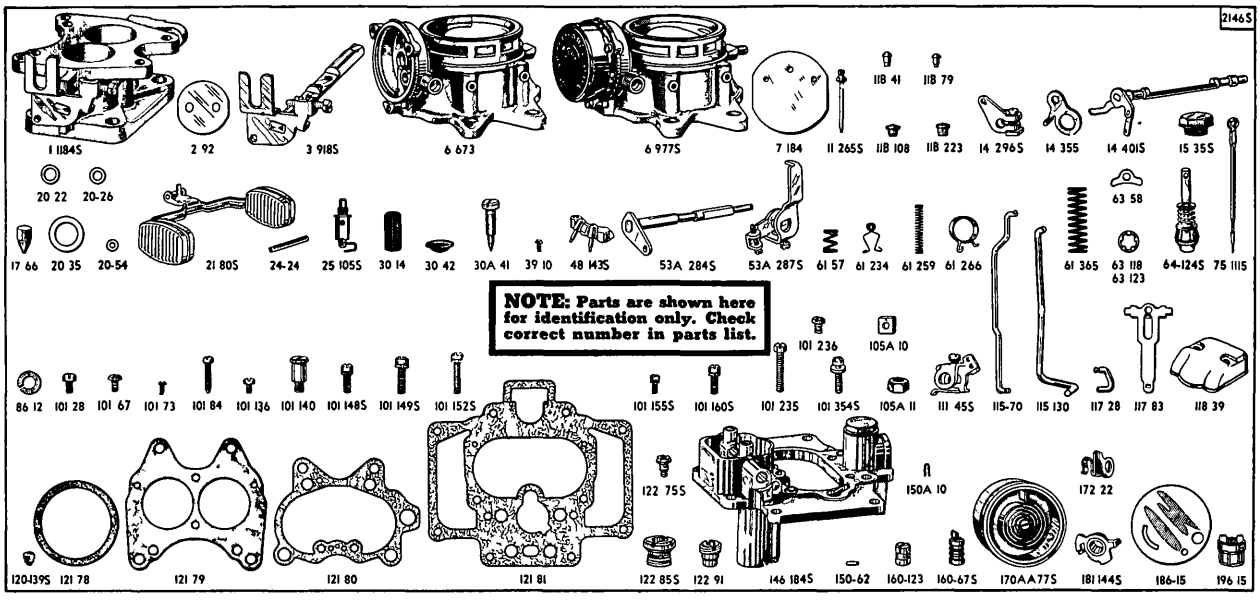
throttle valves seat in bores of carbureter Hold straight edge across top of dust cover boss at pump arm The flat on top of pump arm should be parallel to straight edge Adjust by bending throttle connector rod at lower angle (Use tool T109-213)

Metering Rod Adjustment With throttle valves seated in bores of carbureter, insert one metering rod gauge T109-163 in place of either metering rod Press down lightly on vacuum piston link until lug of piston link contacts lip of metering rod arm There should be less than 005" clearance between metering rod bearing and shoulder in notch of gauge Adjust by bending lip of metering rod arm (tool T109-105)

Fast Idle Adjustment· Loosen choke lever clamp screw on choke shaft Insert 040 inch feeler gauge T109-193 between lip of fast idle cam and boss of flange casting Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw.

With choke valve tightly closed, tighten fast idle adjusting screw until there is 026 inch (gauge T109-189) opening between throttle valve and bore of carbureter (side opposite idle port) Be sure fast idle adjusting screw is on high step of cam while making this adjustment

Unloader Adjustment With throttle wide open there should be 7/32 inch (gauge T109-106) clearance between upper edge of choke valve and inner wall of air horn Adjust by bending unloader lip on throttle shaft lever. Use bending tool (T109-41)



Kaiser—1954-55—Carbureter No. 2146S

WHEN SERVICING, USE GASKET ASSORTMENT No. 189

Part No	PART NAME	
1-1184S	Body flange assembly	
2-92	Throttle valve	(2)
3-918S	Throttle shaft and lever assembly	
6-673	Air horn	
6-977S	Air horn and Climatic® control assembly	
7-184	Choke valve	
11-265S	Low speed jet assembly	(2)
11B-41	Rivet plug	(2)
11B-79	Rivet plug	(3)
11B-108	Idle port rivet plug	(2)
11B-223	Nozzle passage rivet plug	(2)
14-296S	Choke lever and screw assembly	
14-355	Cam trip lever	
14-401S	Choke piston lever, link and shaft assembly	
15-35S	Strainer nut assembly	
17-66	Pump check needle	
20-22	Needle seat gasket	
20-26	Pump relief valve gasket	
20-35	Bowl strainer gasket	
20-54	Metering rod jet gasket	(2)
21-80S	Float and lever assembly	
24-24	Float lever pin	
25-80S	Needle and seat assembly	
25-105S	Needle and seat assembly (Sup by 25-80S)	
30-14	Bowl cover strainer	
30-42	Pump strainer	
30A-41	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
48-143S	Pump jet and housing assembly	
53A-284S	Pump operating lever and countershaft assembly	
53A-287S	Fast idle arm and screw assembly	
61-57	Idle adjustment screw spring	(2)
61-234	Metering rod spring	
61-259	Vacuum piston spring	
61-266	Fast idle cam spring	
61-365	Pump spring (Lower)	
63-58	Coil housing retainer	(3)
63-118	Throttle shaft retaining ring	
63-123	Choke shaft retaining ring	
64-124S	Pump plunger, rod, spring and retainer assembly	
75-1115	Metering rod—standard	(2)
86-12	Flange stud lock washer	(4)
101-28	Fast idle arm screw	
101-67	Pump plunger guide screw	

Part No	PART NAME	
101-73	Throttle valve attaching screw	(1)
101-84	Fast idle adjustment screw	
101-136	Coil housing attaching screw	(3)
101-140	Fast idle cam attaching screw	
101-148S	Dust cover attaching screw and washer assembly	(2)
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	(4)
101-155S	Pump jet housing attaching screw and washer assembly	(2)
101-160S	Bowl cover attaching screw and washer assembly	(6)
101-235	Throttle lever adjusting screw	
101-236	Metering rod arm clamp screw	
101-354S	Choke lever clamp screw assembly	
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
111-45S	Pump and metering rod arm assembly	
115-70	Fast idle connector rod	
115-130	Throttle connector rod	
117-28	Pump connector link	
117-83	Vacumeter piston link	
118-39	Dust cover	
120-139S	Metering rod jet assembly	(2)
121-78	Coil housing gasket	
121-79	Body flange gasket	
121-80	Air horn gasket	
121-81	Bowl cover gasket	
122-75S	Pump relief valve assembly	
122-85S	Intake disk check assembly	
122-91	Pump discharge check seat plug	
146-184S	Bowl cover assembly	
150 62	Choke piston pin (Sup by 150-170)	
150-170	Choke piston pin	
150A-10	Pin spring	(3)
160-67S	Vacuum piston and pin assembly	
160-123	Choke piston	
170AA77S	Thermostatic coil and housing assembly	
172-22	Throttle connector rod retainer	
181-144S	Fast idle cam assembly	
186 15	Choke baffle plate	
196-15	Pump plunger guide	

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used

KAISER

DARRIN "161"

(Model K547)

1954

YF Down-Draft Carbureter—**No. 2094S**

CARBURETER SPECIFICATIONS

For Kaiser 6 Cylinder Engine: 3⅛ Inch Bore, 3½ Inch Stroke

Dimensions: Flange size, 1¼ inch S. A. E.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 11/16 inch I. D.
Main venturi, 1-5/16 inch I. D.

Float Setting: See adjustments.

Vents: Outside, none. Inside balance vent to air horn, above choke valve.

Gasoline Intake: Spring loaded needle. Size No. 48 (.076 inch) drill in needle seat.

Low Speed Jet Tube: Jet, size No. 70 (.028 inch) drill. By pass in air horn, size No. 57 (.043 inch) drill. Economizer size No. 55 (.052 inch) drill. Idle bleed, size No. 53 (.0595 inch) drill.

Idle Port: Upper port. slot type, length .159 to .161 inch; width .030 inch.

Idle Port Opening: Top of port .148 to .152 inch above top edge of valve with valve tightly closed.

Lower Port (For Idle Adjustment Screw): Size .0615 to .0655 inch diameter.

Set Idle Adjustment Screw: 1 to 2 turns open. For richer mixture turn screw out. Do not idle engine below 600 r.p.m.

Main Nozzle: Nozzle is installed permanently. DO NOT REMOVE. Anti-percolator well vent (plug), size No. 75 (.021 inch) drill.

Metering Rod (Diaphragm Type): Economy step .076 inch diameter; middle step tapers to .064 inch diameter; power step, .047 inch diameter.

Metering Rod Jet: Size No. 40 (.098 inch) drill.

Metering Rod Setting: See adjustments.

Accelerating Pump: Diaphragm type, vacuum and mechanically operated. Pump jet, size No. 72 (.025 inch) drill. Intake passage (in diaphragm housing), size No. 75 (.021 inch) drill Discharge ball check seat (in body), size No. 42 (.0935 inch) drill. Vacuum restriction (in flange), size No. 55 (.052 inch) drill. Vacuum passage diaphragm bleed size No. 65 (.035 inch) drill.

Pump Adjustment: None.

Choke: Manual, interconnected with throttle. Valve, offset butterfly type.

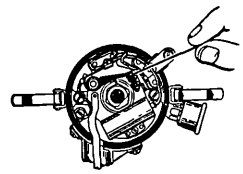
Vacuum Spark Port: .054 to .056 inch diameter. Top of port .035 to .045 inch above top edge of valve with valve tightly closed.

Motor Tune-Up—Be Accurate! Always Use Feeler Gauges!

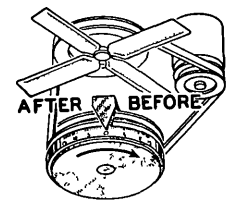
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter



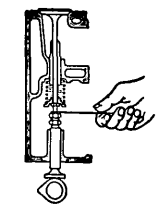
Spark Plug Gap .030"



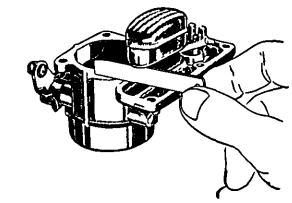
Breaker Point Setting .020"



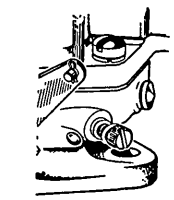
Ignition Timing Breaker Points to Open: 5° B. T. D. C.



Valve Setting (Hot or Cold) Intake .018" Exhaust .016"



Float Setting See Adjustments



Idle Adjustment Screw Setting 1 to 2 Turns Open

CARBURETER ADJUSTMENTS

Float Adjustment: With bowl cover assembly inverted and float resting on pin in seated needle, and with gasket removed, the distance from the bowl cover to the top of float should be 9/32 inch (gauge T109-126). Do not depress float lip against spring loaded pin in needle, but let float rest of its own weight. Adjust by bending lip of float, not float arm. Float setting must be checked with the bowl cover held at eye height in a level position.

Metering Rod Adjustment: This adjustment is important and should be checked each time the carbureter is reassembled or lean rods are installed. With throttle valve seated in bore of carbureter, press down on upper end of diaphram shaft until diaphragm bottoms in vacuum chamber. (Tool T109-212 may be used to hold diaphragm shaft down while adjusting metering rod.) Metering rod should contact bottom of metering rod well and metering rod arm should contact lifter link at the outer end nearest the springs and at supporting lug. Adjust by bending lip of metering rod arm, to which metering rod is attached up or down.

Accelerating Pump: If acceleration is not satisfactory remove pump discharge ball check retainer ring and alumi

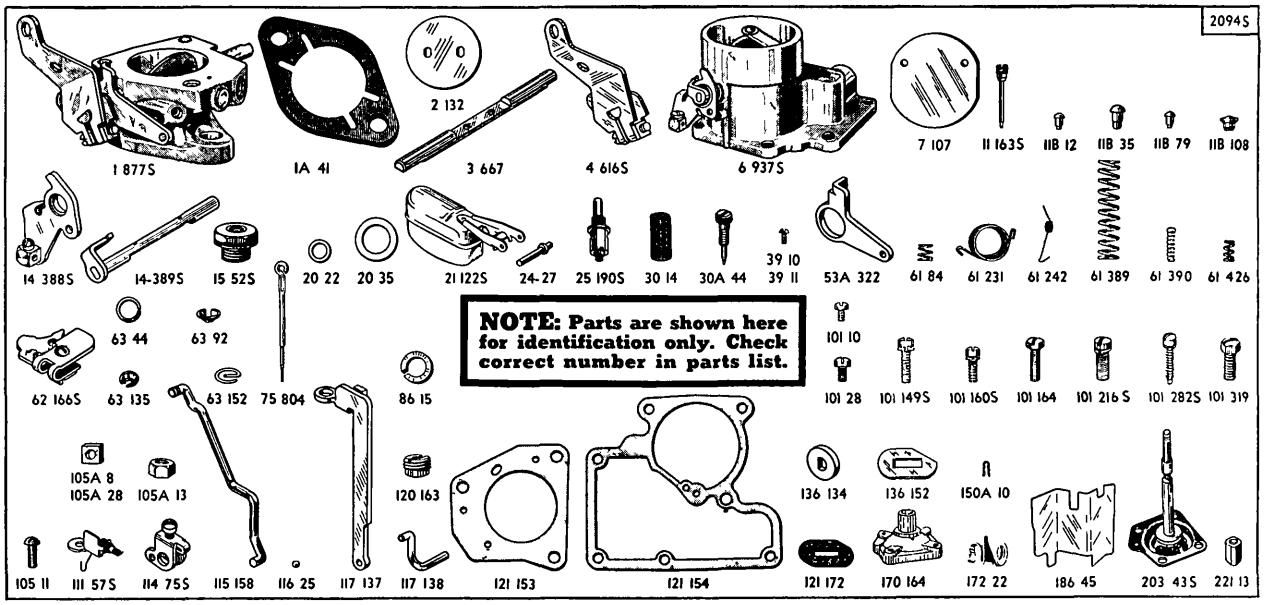
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CARBURETER
TRADE MARK REG. U. S. PAT. OFF.
MARCA REGISTRADA

S. S. PRINTED IN U.S.A.

num pump discharge check ball Then remove pump diaphragm assembly Check diaphragm for wear or damage Be sure inlet hole in diaphragm housing is not clogged with lint or foreign matter Inspect and replace all worn or damaged parts and clean and blow out all passages with compressed air Make sure discharge ball check seats in casting as a leak at this point will result in poor acceleration

Fast Idle Adjustment. With choke held in wide open position, lip on fast idle arm should contact boss on body casting Adjust by bending at offset portion of choke connector rod



Kaiser—1954—Carbureter No. 2094S

WHEN SERVICING, USE GASKET ASSORTMENT No 206A; REPAIR PARTS PACKAGE No. 1715

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-877S	Body flange assembly	
1A-41	FLANGE GASKET—FOR USE WITHOUT GOVERNOR	
2-132	Throttle valve	
3 667	Throttle shaft	
4 616S	Throttle lever assembly	
6-937S	Air horn assembly	
7-107	Choke valve	
11-163S	LOW SPEED JET ASSEMBLY	
11B-12	Flange passage plug	
11B-35	Rivet plug	
11B-79	Rivet plug	(2)
11B-108	IDLE PORT RIVET PLUG	
14-388S	Choke lever assembly	
14-389S	Choke shaft and lever assembly	
15-52S	Strainer nut assembly	
20-22	Needle seat gasket	
20-35	Strainer nut gasket	
21-122S	Float and lever assembly	
24-27	Float lever pin	
25-190S	NEEDLE AND SEAT ASSEMBLY	
30-14	Bowl cover strainer	
30A-44	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	THROTTLE VALVE ATTACHING SCREW	(2)
53A-322	Fast idle arm	
61-84	Throttle lever adjusting screw spring	
61-231	Choke lever spring	
61-242	Metering rod spring	
61-389	PUMP DIAPHRAGM SPRING	
61-390	UPPER PUMP SPRING	
61-426	Idle adjustment screw spring	
62-166S	Tube clamp assembly	
63-44	Choke lever retaining ring	
63-92	DIAPHRAGM SPRING RETAINER	
63-135	UPPER PUMP SPRING RETAINER	

Part No.	PART NAME	
63-152	PUMP DISCHARGE BALL CHECK RETAINER RING	
75-804	METERING ROD—STANDARD	
75-840	Metering rod—1 size lean	
86-15	Flange stud nut lock washer	(2)
101-10	Wire clamp screw	
101-28	Throttle shaft arm attaching screw	
101-149S	Body flange attaching screw and washer assembly	(3)
101-160S	Bowl cover attaching screw and washer assembly	(5)
101-164	Throttle lever clamp screw	
101-216S	Air horn attaching screw and washer assembly	(2)
101-282S	Diaphragm housing attaching screw and washer assembly	(4)
101-319	Throttle lever adjusting screw	
105-11	Tube clamp screw	
105A-8	Tube clamp nut	
105A-13	Flange stud nut	(2)
105A-28	Throttle lever clamp nut	
111-57S	Metering rod arm assembly	
114-75S	THROTTLE SHAFT ARM ASSEMBLY	
115-158	Choke connector rod	
116-25	PUMP DISCHARGE CHECK BALL	
117-137	PUMP LIFTER LINK	
117-138	PUMP CONNECTOR LINK	
120-163	METERING ROD JET	
121-153	BODY FLANGE GASKET	
121-154	BOWL COVER AND AIR HORN GASKET	
121-172	Lifter link seal gasket	
136-134	Throttle shaft washer	
136-152	Lifter link seal washer	
150A-10	PIN SPRING	
170-164	Pump diaphragm housing	
172-22	Choke connector rod retainer	
186-27	Bowl baffle (Sup by 186 45)	
186-45	Fuel bowl baffle plate	
203-43S	PUMP DIAPHRAGM ASSEMBLY	
221-13	Ball check weight	

NOTE· Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

CARTER CARBURETOR

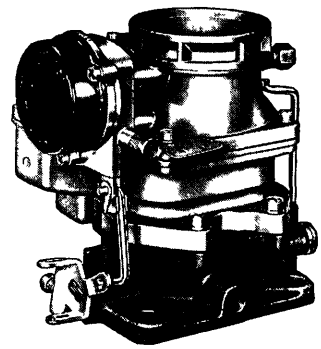
DIVISION OF acf INDUSTRIES INCORPORATED
ST LOUIS, MO, U S A

"Hardtop" Dragon "K-530"
1953

Deluxe "K-531"—1953
"K-541"—1954

Manhattan "K-532"—1953
"K-542"—1954

Special "K-545"—1954



KAISER

1953-1954

(2052SA can be used in place of 999S 2052S)

WGD Dual Down-Draft Climatic® Control Carbureters—**Nos. 999S-2052S-2052SA**

CARBURETER SPECIFICATIONS

For Kaiser 6 Cylinder Engine 3 5/16 Inch Bore, 4⅜ Inch Stroke

Dimensions Flange size 1¼ inch dual 4 bolt type
Primary venturi 11/32 inch I D
Secondary venturi 21/32 inch I D
Main venturi 1 1/16 inch I D

Float Level See Adjustments

Vents Outside 156 inch diameter Inside No 32 (116 inch) drill

Gasoline Intake Size No 42 (0935 inch) drill in needle seat

Low Speed Jet Tube Jet size (999S) No 67 (032 inch) (2052S) No 70 (028 inch) drill By pass size (999S) No 60 (040 inch) (2052S) No 56 (0465 inch) drill Economizer size (999S) No 63 (037 inch) drill (2052S) No 55 (052 inch) drill Idle bleed size No 54 (055 inch) drill Idle restriction in body size No 52 (0635 inch) drill

Idle Port Upper port slot type length 160 inch width 030 inch

Idle Port Opening 117 to 123 inch above upper edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw) 068 to 072 inch diameter

Set Idle Adjustment Screw ½ to 1½ turns open For richer mixture turn screw out Idle engine at 450 R P M on Hydra matic transmission and 500 on Standard and Overdrive trans missions

Main Nozzle Nozzle is installed permanently DO NOT RE MOVE

Metering Rod (Vacumeter Type) (999S) Economy step 0685 inch diameter Middle step tapers to 056 inch diameter Power step 0475 inch diameter (2052S) Economy step 065 inch diameter Middle step tapers to 0485 inch diameter Power step 041 inch diameter (These rods designed with stabilizing flats on economy step)

Metering Rod Jet No 44 (086 inch) drill

Metering Rod Setting See Adjustments

Accelerating Pump Discharge jet (twin) size No 74 (0225 inch drill Intake ball check seat size No 40 (098 inch) drill Discharge needle seat size No 50 (070 inch) drill

Pump Adjustment See Adjustments

Choke Carter Climatic® Control set (999S) one point rich (2052S) set 2 points rich (2052SA) Index Offset butterfly type Choke heat suction hole in piston housing (999S and 2052S late prod 2052SA) size No 42 (0935 inch) drill (2052S early prod) size No 44 (086 inch) drill

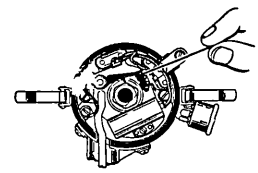
Vacuum Spark Port (999S) Round type size 062 to 064 inch diameter Top of port 033 to 038 inch above top edge of valve with valve tightly closed (2052S) Horizontal slot (round end) size 045 by 110 inch Top of port 020 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

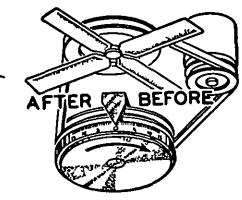
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



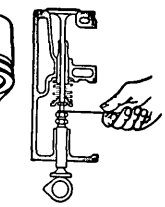
Spark Plug
Gap
030"



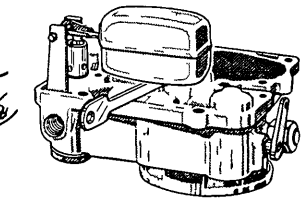
Breaker Point
Setting
022"



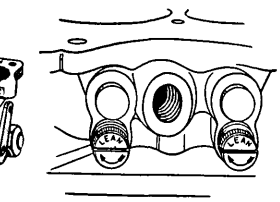
Ignition Timing
Breaker Points to Open
4° B T D C
at 425 R P M



Valve Setting
(Cold)
Intake 014"
Exhaust 014"



Float Setting
9/32"
(Use Gauge T109-126)



Idle Adjustment
Screw Setting
½ to 1½
Turns Open

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT. With bowl cover gasket removed bowl cover inverted and needle seated, there should be 9/32 inch (gauge T109-126) between top of float and bowl cover Adjust by bending float arm

PUMP ADJUSTMENT. Back out throttle lever set screw until throttle valves seat in bores of carbureter Place Universal pump travel gauge T109-117S inverted on edge of dust cover boss of bowl cover Turn knurled nut of gauge until finger on gauge just touches top of plunger shaft The distance from the dust cover boss to the top of the plunger shaft should be ½ inch (distance from base to tip of finger on gauge) Adjust by bending throttle connector rod at upper angle

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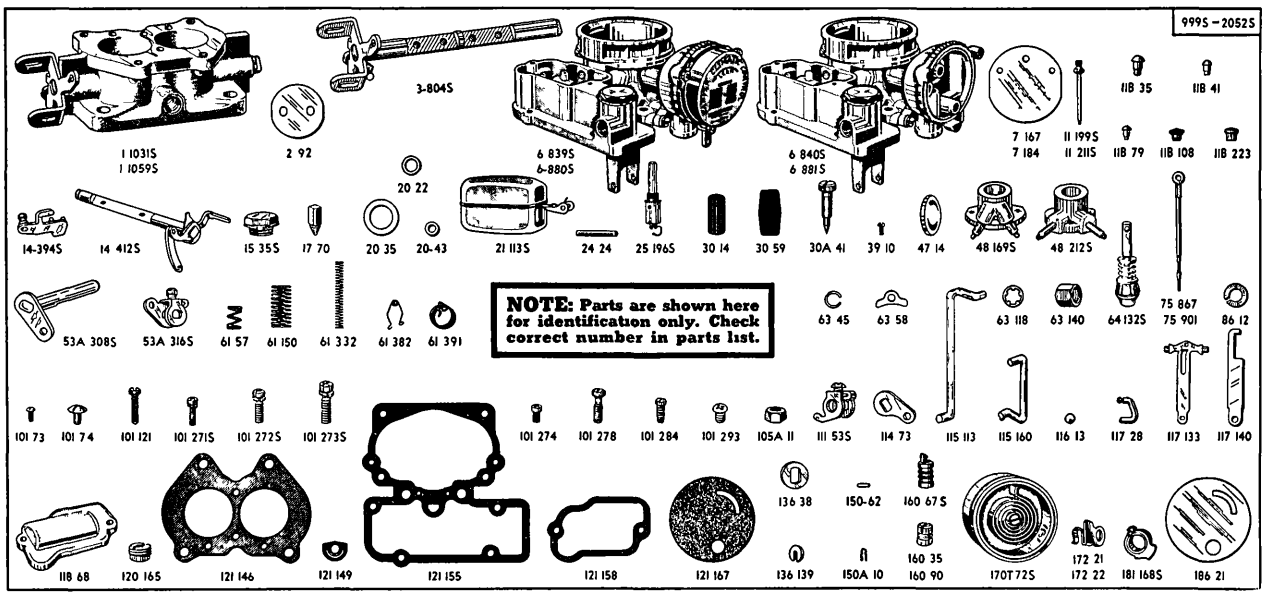
CARBURETER
TRADE MARK REG U S PAT OFF
MARCA REGISTRADA

PRINTED IN U.S.A.

METERING ROD ADJUSTMENT The metering rods must be adjusted after the pump adjustment or when leaner than standard rods are installed No metering rod gauges are necessary Procedure is as follows With the throttle lever set screw backed out and throttle valves seated in bores of carbureter, press down on vacumeter link until metering rods bottom With rods held in this position revolve meter ing rod arm until lip contacts vacumeter link Hold in place and carefully tighten metering rod arm set screw

FAST IDLE ADJUSTMENT With the thermostatic coil housing gasket and baffle plate removed crack throttle valve and hold choke valve closed Then close throttle There should now be 018"- 023" clearance (gauge T109-29) between throttle valve and bore of carbureter (side opposite idle port) Adjust by bending the choke connector rod at lower angle

UNLOADER ADJUSTMENT· Must be made after fast idle adjustment Hold throttle valve wide open and close choke valve as far as possible without forcing there should now be 9/64 inch (gauge T109-34) clearance between upper edge of choke valve and inner wall of air horn Adjust by bend- ing arm on choke trip lever



Kaiser—1953-54—Carbureters Nos. 999S-2052S-2052SA

WHEN SERVICING, USE GASKET ASSORTMENT No 196, REPAIR PKG No 1724 (999S), No 1759 (2052S SA)

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1031S	Body flange assembly (999S)	
1-1059S	Body flange assembly (2052S)	
2-92	Throttle valve	(2)
3-804S	Throttle shaft and lever assembly	
6-839S	Air horn and Climatic® control assembly (999S)	
6-840S	Air horn assembly (999S)	
6-880S	*Air horn and Climatic® control assembly (2052S) (Sup by 6-997S)	
6-881S	*Air horn assembly (2052S) (Sup by 6-997S)	
6-997S	**Air horn and Climatic® control assembly (2052S-SA)	
7-167	Choke valve (999S) (Sup by 7-184)	
7-184	Choke valve	
11-199S	LOW SPEED JET ASSEMBLY (2052S)	(2)
11-211S	LOW SPEED JET ASSEMBLY (999S)	(2)
11B 35	Rivet passage plug	(3)
11B-41	Rivet passage plug	(3)
11B-79	Rivet passage plug	
11B-108	IDLE PORT RIVET PLUG	(2)
11B 223	Nozzle rivet plug	(2)
14-394S	Choke trip lever and pin assembly	
14 412S	Choke piston lever link and shaft assembly	
15-35S	Strainer nut assembly	
17-70	PUMP CHECK NEEDLE	
20 22	Needle seat gasket	
20 35	BOWL STRAINER GASKET	
20-43	PISTON HOUSING GASKET	
21-113S	Float and lever assembly (Sup by 21 172S)	
21-172S	Float and lever assembly	
24-24	Float lever pin	
25 196S	NEEDLE AND SEAT ASSEMBLY	
30 14	BOWL COVER STRAINER	
30-59	STRAINER	
30A 41	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
47-14	CHOKE PISTON WELSH PLUG	
48-169S	Pump jet and housing assembly (999S)	
48 212S	Pump jet and housing assembly (2052S)	
53A-308S	Pump operating lever and countershaft assembly	
53A 316S	Pump arm and screw assembly	
61 57	Idle adjustment screw lock spring	(2)
61-150	LOWER PUMP SPRING	
61 332	VACUUM PISTON SPRING	
61-382	METERING ROD SPRING	
61-391	Fast idle cam spring	
63-45	PUMP CHECK BALL RETAINER RING	
63-58	Coil housing retainer	(3)
63-118	Throttle shaft retaining ring	
63-140	Choke shaft retainer	
64-132S	PLUNGER, ROD, SPRING AND RETAINER ASSEMBLY	
75-867	METERING ROD—STANDARD (999S)	(2)
75-897	Metering rod—1 size lean (999S)	(2)
75-898	Metering rod—2 sizes lean (999S)	(2)
75-901	METERING ROD—STANDARD (2052S)	(2)
75-948	Metering rod—1 size lean (2052S)	
75-949	Metering rod—2 sizes lean (2052S)	
86-12	Flange stud lock washer	(4)
101 73	THROTTLE VALVE ATTACHING SCREW	(4)
101-74	Throttle shaft arm attaching screw	
101-121	Throttle lever adjustment screw	
101-271S	Dust cover attaching screw and washer assembly	(2)
101-272S	Air horn attaching screw and washer assembly	(8)
101-273S	Body flange attaching screw and washer assembly	(4)
101-274	Coil housing attaching screw	(3)
101-278	Pump jet housing attaching screw	
101-284	Piston housing attaching screw	(3)
101-293	Metering rod arm clamp screw	(2)
105A-11	Flange stud nut	(4)
111-53S	Metering rod arm and screw assembly	
114-73	THROTTLE SHAFT ARM	
115-113	THROTTLE CONNECTOR ROD	
115-160	Choke connector rod	
116-13	PUMP INTAKE CHECK BALL	
117-28	PUMP CONNECTOR LINK	
117 133	Vacumeter piston link	
117-140	Fast idle link	
118-68	Dust cover	
120-165	METERING ROD JET	(2)
121-146	BODY FLANGE GASKET	
121-149	Pump jet gasket (Sup by 121-241)	
121-155	AIR HORN GASKET	
121-158	DUST COVER GASKET	
121-167	COIL HOUSING GASKET	
121-241	PUMP JET HOUSING GASKET	
136-38	Throttle shaft washer	
136-139	Choke shaft retainer washer	
150 62	Choke piston pin	
150A-10	PIN SPRING	
160-35	Choke piston (2052S)	
160-90	Choke piston (999S)	
160-67S	Vacuum piston and pin assembly	
160 130	Choke piston (2052SA)	
170P-72S	Thermostatic coil and housing assembly (2052SA)	
170T-72S	Thermostatic coil and housing assembly (999S-2052S)	
172-21	Choke connector rod retainer	
172-22	Throttle connector rod retainer	(2)
181-168S	Fast idle cam assembly	
186-21	Choke baffle plate	

*Identified by casting No 170-283 or 170-291 on piston housing

**Identified by casting No 170-171 on piston housing Used to convert 2052S to SA

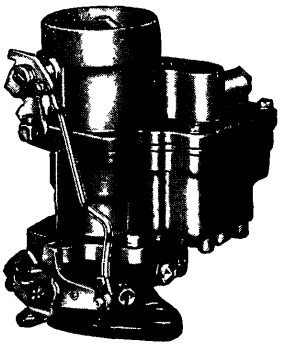
NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST LOUIS MO, U S A

KAISER FRAZER 820S 820SA 820SB
November, 1950
Revised November 1955

MODELS

"513"—1951
"K523"—1952
"K533"—1953
"K543"—1954



Cut Shows YF 820S Carbureter

Casting No 648 on face of flange

KAISER-FRAZER "HENRY J" 4 Cyl. 1951-1954

YF DOWN-DRAFT CARBURETERS **Nos. 820S-820SA-820SB**

CARBURETER SPECIFICATIONS

For Kaiser-Frazer 4 Cylinder Engine 3 1/8 Inch Bore, 4 3/8 Inch Stroke

Dimensions Flange size 1 1/4 inch S A E
Primary venturi, 11/32 inch I D
Secondary venturi 11/16 inch I D
Main venturi 1 1/4 inch I D

Float Level Distance from top of float (at free end) to float chamber cover when needle is seated 9/32 inch (Use gauge No T109 126)

Vents Outside No 42 (0935 inch) drill Inside balance vent to air horn above choke valve

Gasoline Intake Square vertical (spring loaded) needle Size No 48 drill in needle seat

Low Speed Jet Tube Jet size No 70 (028 inch) drill By pass in air horn size No 56 (0465 inch) drill Idle bleed size No 56 (0465 inch) drill Economizer size No 58 (042 inch) drill

Idle Ports Upper port slot type length 169 171 inch Width 030 inch

Idle Port Opening Top of port 126 to 130 inch, above top edge of valve with valve tight closed Lower port size No 52 (0635 inch) drill diameter (for idle adjusting screw)

Set Idle Adjustment Screw 1/2 to 1 1/2 turns open For richer mixture turn screw out Do not idle engine below 550 r p m

Main Nozzle In primary venturi angle 40° off vertical Nozzle is installed permanently **Do not remove** Anti percolator well vent (in body) size No 66 (033 inch) drill Passage from anti peroclator well to nozzle restriction size No 70 (028 inch) drill

Metering Rod (Diaphragm Type) Economy step 066 inch diameter middle step tapers to 060 inch diameter power step C48 inch diameter Length 2 13/32 inches (This rod is designed with flats on economy step)

Metering Rod Jet 089 inch diameter

Metering Rod Setting See Adjustments

Accelerating Pump Diaphragm type vacuum operated (Non adjustable) Discharge (pump) jet size No 75 drill Needle seat (in discharge passage) size 092 inch diameter Intake passage (in diaphragm housing) size No 60 drill Vacuum restriction (in flange) size No 55 drill Vacuum passage (diaphragm bleed) size No 65 drill

Pump Adjustment None

Choke Manual interconnected with throttle Valve offset butterfly type

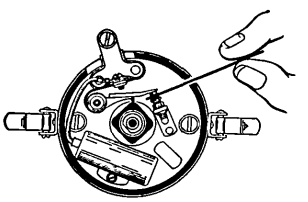
Vacuum Spark Port Slot type Size 125 by 040 inch Bottom of port 025 to 035 inch below top edge of valve in closed position

Motor Tune-Up—Be Accurate!

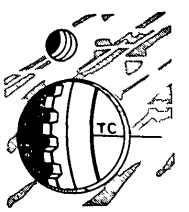
CAUTION **Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter**



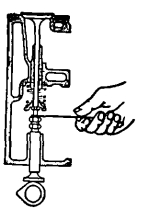
Spark Plug Gap 030"



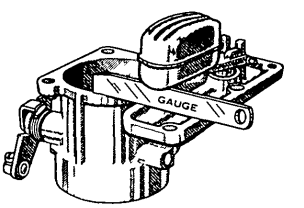
Breaker Point Setting
(K-523 1203956 and earlier) 020"
(K-523-1203957 and later) 022"
(K533-K543) 022"



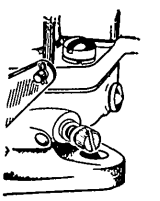
Ignition Timing Breaker Points to Open 5° B T D C



Valve Setting (Cold)
Intake 016'
Exhaust 016"



Float Setting 9/32 Inch (Use Gauge T109-126)



Idle Adjustment Screw Setting 1/2 to 1 1/2 Turns Open

CARBURETER ADJUSTMENTS

Float Adjustment With bowl cover assembly inverted and float resting on pin in seated needle and with gasket removed, the distance from the bowl cover to the top of float should be 9/32" (Use gauge No T109-126) Do not depress float lip against spring loaded pin in needle, but let float rest of its own weight Adjust by bending lip of float, not float arm Float setting must be checked with the bowl cover held at eye height in a level position

Metering Rod Adjustment This adjustment is important and should be checked each time the carbureter is reassembled or lean rods are installed With throttle valve seated in bore of carbureter press down on upper end of diaphragm shaft until diaphragm bottoms in vacuum chamber (Tool T109-212 may be used to hold diaphragm shaft down while adjusting metering rod)

Metering rod should contact bottom of metering rod well

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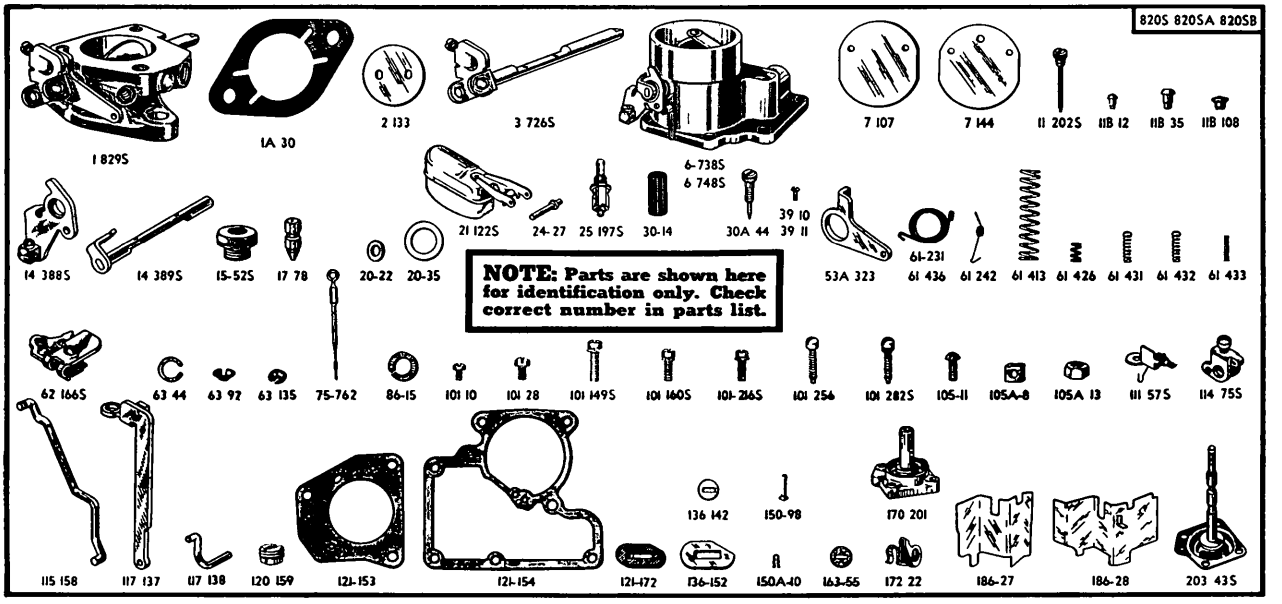
CARBURETER
TRADE MARK REG U S PAT OFF
MARCA REGISTRADA

PRINTED IN U S A

and metering rod arm should contact lifter link between springs and supporting lug Adjust by bending lip up or down

Accelerating Pump If acceleration is not satisfactory, remove pump discharge check needle and pump diaphragm assembly Examine needle and seat (in casting) and diaphragm for wear or damage Be sure intake screen and inlet hole under intake screen is not clogged with lint or foreign matter Inspect and replace all worn or damaged parts, clean and blow out all passages with compressed air Pump discharge check needle must seat, as a leak at this point will result in poor acceleration

Fast Idle Adjustment With choke held in wide open position lip on fast idle arm should contact boss on body casting Adjust by bending at offset of fast idle link



Kaiser-Frazer—1951-1954—Carbureters Nos. 820S-820SA-820SB

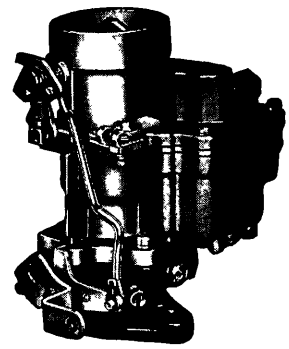
WHEN SERVICING, USE GASKET ASSORTMENT No 211, REPAIR PACKAGE No 1572

PART NAMES IN CAPITAL LETTERS, LISTED BELOW INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1 829S	Body flange assembly	
1A-30	FLANGE GASKET	
2 133	Throttle valve	
3 726S	Throttle shaft and lever assembly	
6-738S	Air horn assembly (820S)	
6 748S	Air horn assembly (820SA 820SB)	
7-107	Choke valve (820S)	
7-144	Choke valve (820SA 820SB)	
11 202S	LOW SPEED JET ASSEMBLY	
11B 12	Flange passage plug	
11B-35	Nozzle passage rivet	
11B-79	Rivet plug (820SB late prod)	(2)
11B-108	Idle port rivet passage plug	
14 388S	Choke lever assembly	
14 389S	Choke shaft and lever assembly	
15 52S	Strainer nut assembly (820SA 820SB)	
17-78	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	
20-35	Strainer nut gasket (820SA 820SB)	
21-122S	Float and lever assembly	
24-27	Float lever pin	
25-197S	NEEDLE SPRING AND SEAT ASSEMBLY	
30-14	STRAINER (820SA 820SB)	
30A-44	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	THROTTLE VALVE ATTACHING SCREW	(2)
53A-323	Fast idle arm	
61-231	Choke lever spring (820S)	
61-242	Metering rod spring	
61-413	PUMP DIAPHRAGM SPRING	
61-426	Idle adjusting screw spring	
61-431	Upper pump spring (outer)	
61-432	Upper pump spring (inner)	
61-433	Intake needle spring	
61-436	Choke lever spring (820SA 820SB)	
62-166S	Choke tube clamp assembly	
63-44	Choke lever retainer ring	
63-92	DIAPHRAGM SPRING RETAINER	
63-135	UPPER PUMP SPRING RETAINER	
75 762	METERING ROD (STANDARD)	
75 781	Metering rod (1 size lean)	
75 782	Metering rod (2 sizes lean)	
86 15	Flange stud lock washer	(2)
101-10	Wire clamp screw	
101-28	Throttle shaft arm attaching screw	
101 149S	Body flange attaching screw and washer assembly	(3)
101 160S	Air horn attaching screw and washer assembly	(5)
101 216S	Air horn attaching screw and washer assembly	(2)
101 256	Throttle lever adjustment screw	
101 282S	Diaphragm housing attaching screw and washer assembly	(4)
105 11	Tube clamp screw	
105A 8	Tube clamp nut	
105A 13	Flange nut	(2)
111 57S	Metering rod arm assembly	
114 75S	THROTTLE SHAFT ARM ASSEMBLY	
115-158	Fast idle connector rod	
117 137	PUMP LIFTER LINK	
117-138	PUMP CONNECTOR LINK	
120-159	METERING ROD JET	
121-153	BODY FLANGE GASKET	
121-154	BOWL COVER AND AIR HORN GASKET	
121-172	LIFTER LINK SEAL	
136-152	Lifter link seal washer	
150-98	Intake needle pin	
150A-10	PIN SPRING	
163-55	Pump lifter link packing leather (820S 820SA)	
170-201	Pump diaphragm housing	
172-22	Throttle connector rod retainer	
186-27	Baffle plate (820SB) (Sup by 186 45)	
186-28	Baffle plate (820S late production 820SA)	
186-45	Fuel bowl baffle plate (820SB)	
203-43S	DIAPHRAGM ASSEMBLY	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is sh wn, only ne is used

MODELS
"514"—1951
"K524"—1952
"K534" Corsair Deluxe—1953
"K544" Corsair Deluxe—1954



Cut shows YF-833S Carbureter
Casting No. 648 on face of flange

KAISER-FRAZER "HENRY J" 6 Cyl. 1951-1954

(833SB can be used in place of 814S-833S-833SA)

YF DOWN-DRAFT **CARBURETERS Nos. 814S-833S-833SA-833SB**

CARBURETER SPECIFICATIONS

For Kaiser-Frazer 6 Cylinder Engine: 3⅛ Inch Bore, 3½ Inch Stroke

Dimensions. Flange size 1¼ inch S A E
Primary venturi, 11/32 inch I D
Secondary venturi, 11/16 inch I D
Main venturi, 1¼ inch I D

Float Level: Distance from top of float (at free end) to float chamber cover when needle is seated 9/32 inch (Gauge No T109 126)

Vents: Outside none Inside balance vent to air horn above choke valve

Gasoline Intake: Square vertical (spring loaded) needle Size No 48 drill, in needle seat

Low Speed Jet Tube: Jet size No 70 (0 28 inch) drill By-pass in air horn, size No 56 (0465 inch) drill Idle bleed size No 56 (0465 inch) drill Economizer size No 58 (042 inch) drill (814S-833S 833SA and 833SB early production) size No 57 (043 inch) drill (833SB late production)

Idle Ports Upper port slot type length 169 171 inch Width 030 inch

Idle Port Opening: Top of port 126 to 130 inch above top edge of valve with valve tight closed Lower port size 0615 to 0655 inch diameter (for idle adjusting screw)

Set Idle Adjustment Screw 1 to 2 turns open For richer mixture turn screw out Do not idle engine below 550 r p m

Main Nozzle Nozzle is installed permanently. **DO NOT REMOVE.**
Anti-percolator well vent (in body) size No 66 (033 inch) drill
Passage from anti-percolator well to nozzle restriction size No 70 (028 inch) drill

Metering Rod (Diaphragm Type): Economy step, 0715 inch diameter, middle step, tapers to 062 inch dameter; power step 045 inch diameter Length 2-13/32 inches

Metering Rod Jet: 0935 inch diameter

Metering Rod Setting See Adjustments

Accelerating Pump: Diaphragm type, vacuum operated (non adjustable)
Discharge (pump) jet size No 75 drill Needle seat (in discharge passage) size 092 inch diameter
Intake passage (in diaphragm housing) size No 72 drill
Vacuum restriction (in flange) size No 55 drill
Vacuum passage (diaphragm bleed) size No 65 drill

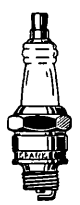
Pump Adjustment: None

Choke: Manual interconnected with throttle Valve offset butterfly type

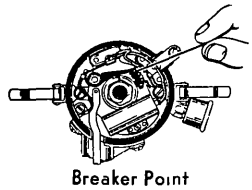
Vacuum Spark Port: Slot type Size 125 by 040 inch Top of port 025 to 035 inch (814S) and 035 to 045 inch (833S-SA SB) above top edge of valve in closed position

Motor Tune-Up—Be Accurate!

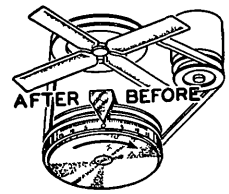
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



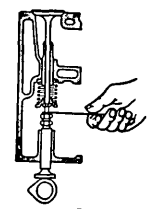
Spark Plug Gap
030"



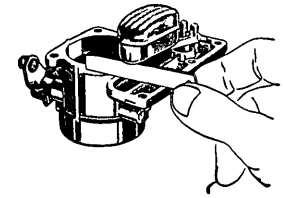
Breaker Point Setting
(K-524-1205338 and earlier)
.020"
(K-524-1205339 and later)
.022"
(K534-K544) 022"



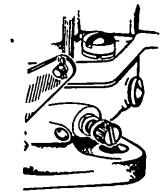
Ignition Timing
Breaker Points to Open.
T.D.C.



Valve Setting
(Cold)
Intake .016"
Exhaust .016"



Float Setting
9/32 Inch
(Use Gauge T109-126)



Idle Adjustment Screw Setting
1 t 2
Turns Open

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MARCA REGISTRADA

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CARBURETER ADJUSTMENTS

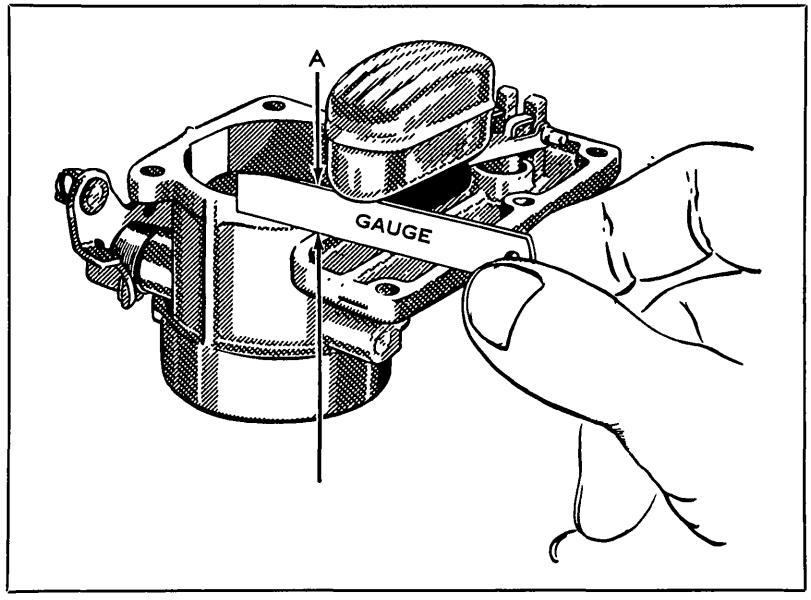


Figure 1
Float Adjustment

FLOAT ADJUSTMENT (Fig. 1):

With bowl cover assembly inverted and float resting on pin in seated needle, and with gasket removed, the distance (A) from the bowl cover to the top of float should be 9/32". (Gauge No. T109-126.) Do not depress float lip against spring loaded pin in needle, but let float rest of its own weight. Adjust by bending lip of float, not float arm.

Float setting must be checked with the bowl cover held at eye height in a level position.

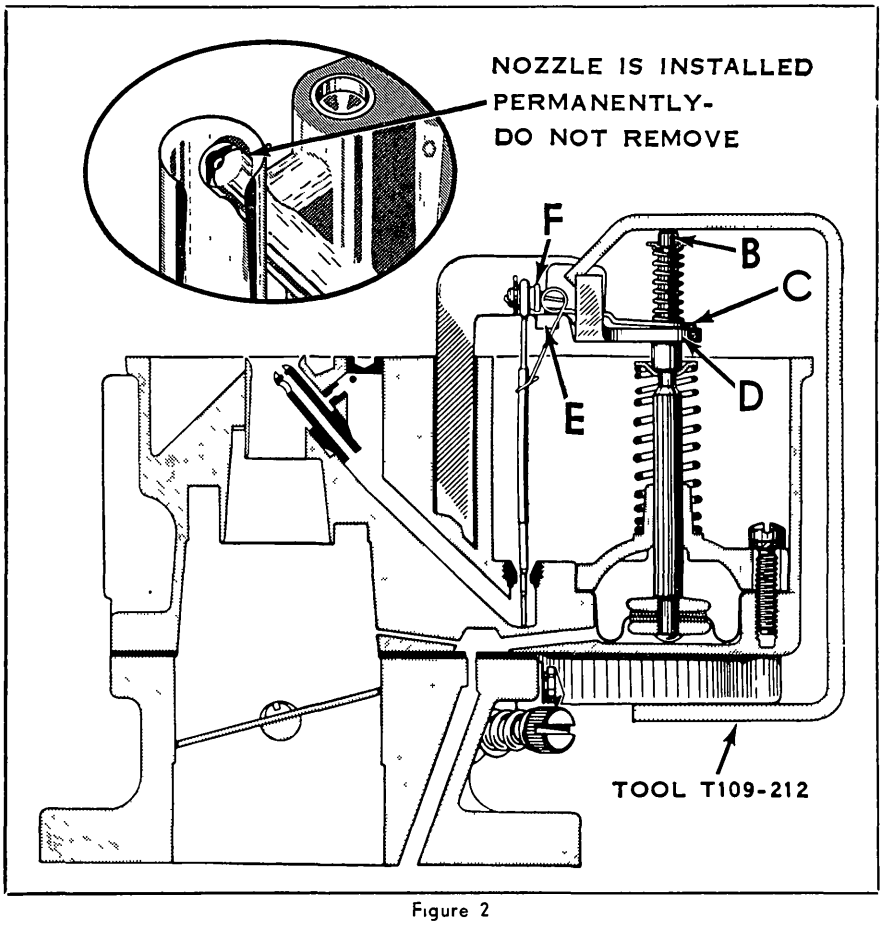


Figure 2
Metering Rod Adjustment

METERING ROD ADJUSTMENT (Fig. 2):

This adjustment is important and should be checked each time the carbureter is reassembled or lean rods are installed. With throttle valve seated in bore of carbureter press down on upper end of diaphragm shaft (B) until diaphragm bottoms in vacuum chamber (Tool T109-212 may be used to hold diaphragm shaft down while adjusting metering rod.)

Metering rod should contact bottom of metering rod well, and metering rod arm (C) should contact lifter link (D) between springs and at supporting lug (E). Adjust by bending lip (F) up or down

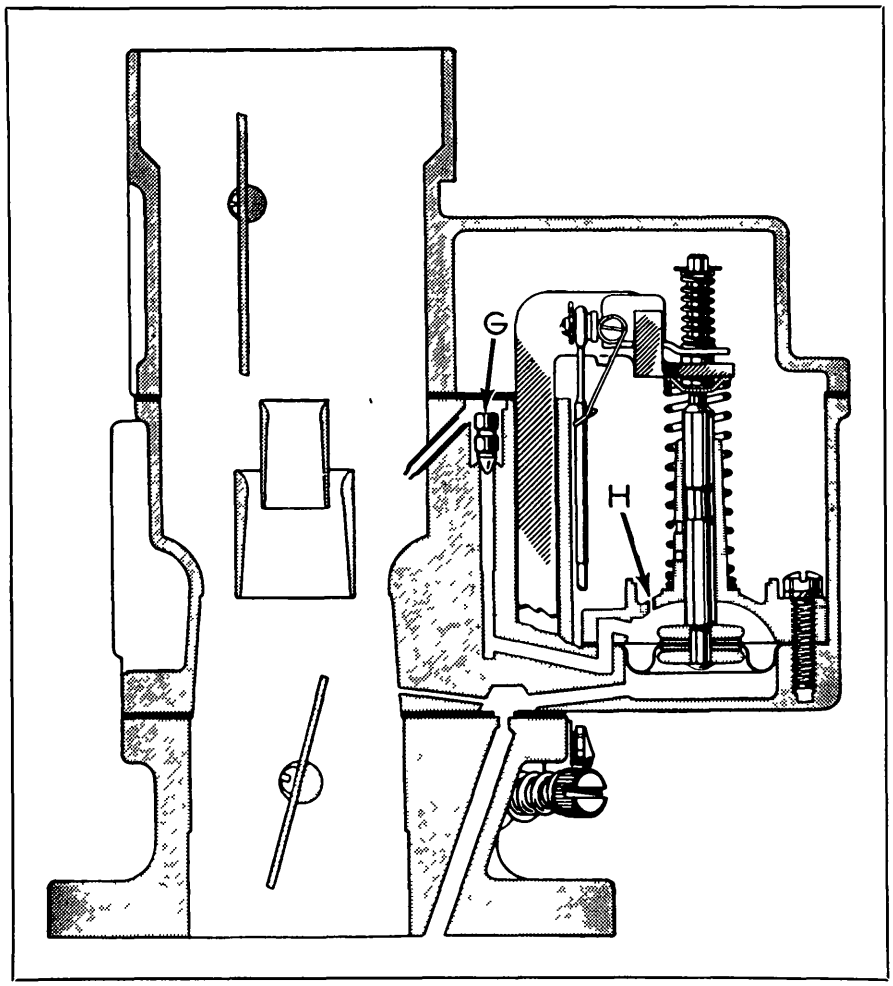


Figure 3
Accelerating Pump

ACCELERATING PUMP (Fig. 3):

If acceleration is not satisfactory, remove pump discharge check needle (G) and pump diaphragm assembly Examine needle and seat (in casting) and diaphragm for wear or damage Be sure inlet hole (H) is not clogged with lint or foreign matter Inspect and replace all worn or damaged parts, clean and blow out all passages with compressed air Pump discharge check needle (G) must seat, as a leak at this point will result in poor acceleration

FAST IDLE ADJUSTMENT (Fig. 4):

With choke held in wide open position, lip (J) on fast idle arm should contact boss on body casting Adjust by bending at offset (K) of fast idle link

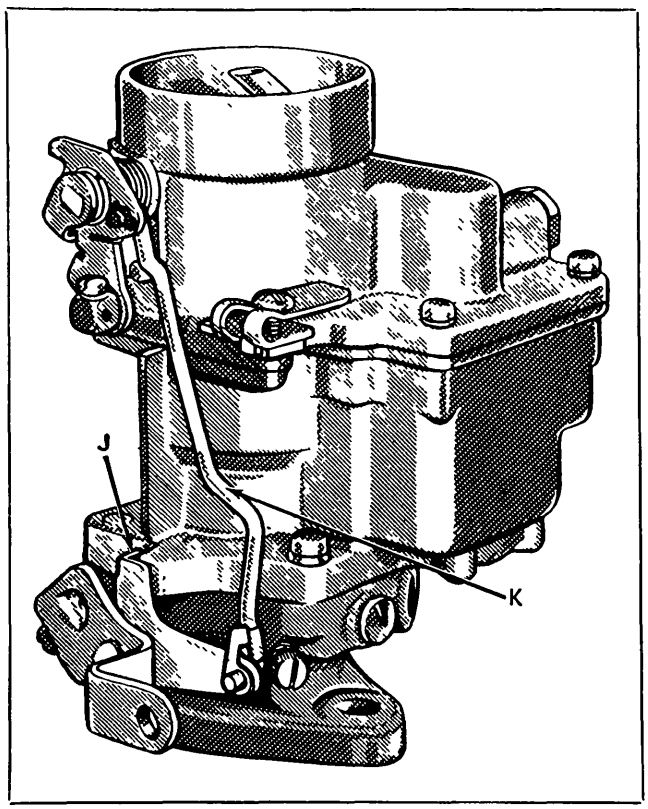
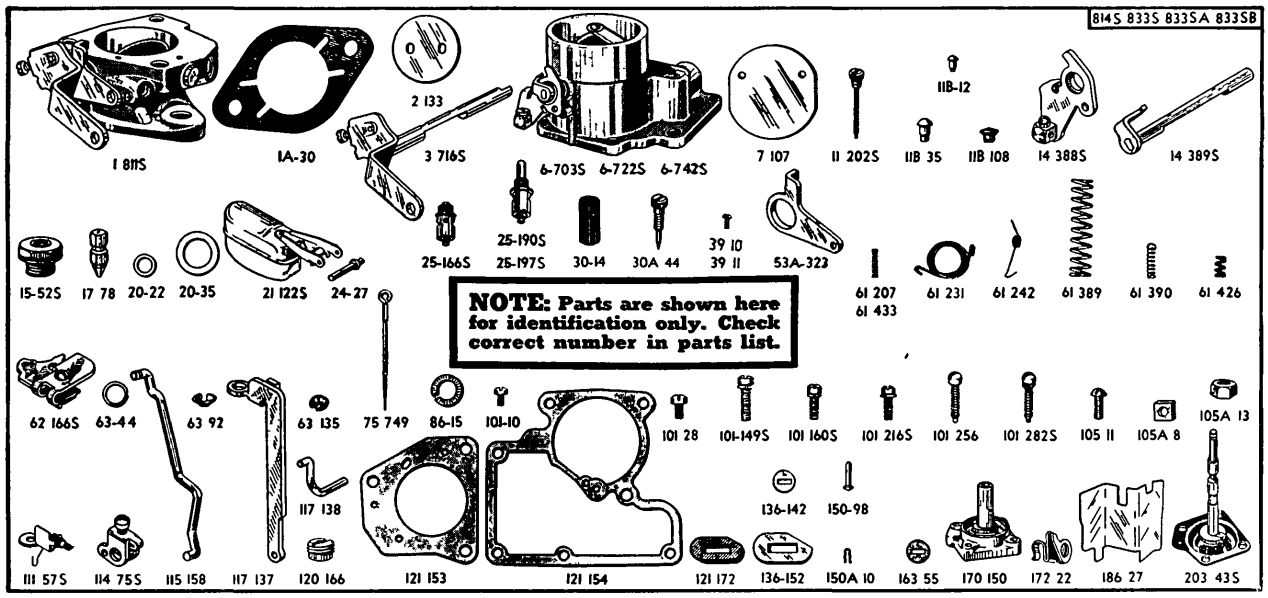


Figure 4
Fast Idle Adjustment



Kaiser-Frazer—1951-1954—Carbureters Nos. 814S-833S-833SA-833SB

WHEN SERVICING, USE GASKET ASSORTMENT No 211, REPAIR PACKAGE No 1571 (833S-833SA-833SB)

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-811S	Body flange assembly	
1A-30	FLANGE GASKET	
2-133	Throttle valve	
3-716S	Throttle shaft and lever assembly	
6-703S	Air horn assembly (814S)	
6-722S	Air horn assembly (833S)	
6-742S	Air horn assembly (833SA 833SB)	
7-107	Choke valve	
11-202S	LOW SPEED JET ASSEMBLY	
11B-12	Flange passage plug	
11B-35	Rivet plug	
11B-79	Rivet plug (833SB late prod)	(2)
11B-108	Idle port rivet plug	
14-388S	Choke lever assembly	
14 389S	Choke shaft and lever assembly	
15-52S	Strainer nut assembly (833SA 833SB)	
17-78	PUMP CHECK NEEDLE	
20 22	Needle seat gasket	
21-122S	Float and lever assembly	
24-27	Float lever pin	
25-166S	Needle spring and seat assembly (814S)	
25-190S	Needle spring and seat assembly (833S) (Sup by 25 197S)	
25 197S	NEEDLE SPRING AND SEAT ASSEMBLY (833S 833SA 833SB)	
30-14	STRAINER (833SA 833SB)	
30A-44	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	THROTTLE VALVE ATTACHING SCREW	(2)
53A-323	Fast idle arm	
61-84	Idle adjusting screw spring (Sup by 61 426)	
61-207	Intake needle spring (Use with 25 166S and 25 190S)	
61-231	Choke lever spring	
61-242	Metering rod spring	
61-389	PUMP DIAPHRAGM SPRING	
61-390	Upper pump spring	
61-426	Idle adjusting screw spring	
61-433	Intake needle spring (Use with 25 197S)	

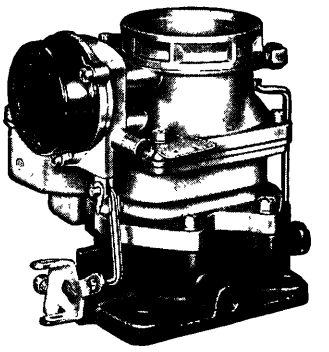
Part No	PART NAME	
62-166S	Choke tube clamp assembly	
63-44	Choke lever retainer ring	
63-92	DIAPHRAGM SPRING RETAINER	
63-135	SPRING RETAINER	
75-749	METERING ROD—STANDARD	
75-783	Metering rod—1 size lean	
75-784	Metering rod—2 sizes lean	
86-15	Flange stud lock washer	(2)
101-10	Wire clamp screw	
101-28	Throttle shaft arm attaching screw	
101-120	Throttle lever adjustment screw	
101-149S	Body flange attaching screw and washer assembly	(3)
101-160S	Air horn attaching screw and washer assembly	(5)
101-216S	Air horn attaching screw and washer assembly	(2)
101-256	Throttle lever adjustment screw (Sup by 101 120)	
101-282S	Diaphragm housing attaching screw and washer assembly	(4)
105-11	Tube clamp screw	
105A-8	Tube clamp nut	
105A-13	Flange nut	(2)
111-57S	Metering rod arm assembly	
114-75S	THROTTLE SHAFT ARM ASSEMBLY	
115-158	Fast idle connector rod	
117-137	PUMP LIFTER LINK	
117-138	PUMP CONNECTOR LINK	
120 166	METERING ROD JET	
121-153	BODY FLANGE GASKET	
121-154	BOWL COVER AND AIR HORN GASKET	
121-172	LIFTER LINK SEAL (833SB)	
136-142	Pump lifter link washer (814S 833S 833SA)	
136 152	Lifter link seal washer (833SB)	
150A-10	PIN SPRING	
163-55	Pump lifter link packing leather (814S 833S 833SA)	
170-150	Pump diaphragm housing	
172-22	Throttle connector rod retainer	
186-27	Baffle plate (833SB) (Sup by 186 45)	
186-45	Fuel bowl baffle plate (833SB)	
203-43S	DIAPHRAGM ASSEMBLY	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

CARBURETER
TRADE MARK REG U S PAT OFF
MARCA REGISTRADA

Carb. No. 781S—Kaiser

Carb. No. 813S—Frazer



Casting No. 774 on Face of Flange

KAISER MODELS K511-K512 K521-K522 1951-1952

FRAZER MODELS F515-F516 1951

WGD Dual Down-Draft Climatic® Control Carbureters—**Nos. 781S-813S**

CARBURETER SPECIFICATIONS

For 6 Cylinder Engine: 3-5/16 Inch Bore, 4 3/8 Inch Stroke

Dimensions: Flange size, 1 1/4 inch dual, 4 bolt type.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 21/32 inch I. D.
Main venturi, 1-1/16 inch I. D.

Float Level: Distance from float to bowl cover, when needle is seated to be 1/4 inch (gauge T109-31) when solid needle with needle pull clip is used; 7/64 inch (free weight of float on needle and spring) when spring loaded needle is used.

Vents: Outside: .156 inch diameter.
Inside: No. 32 drill (.116 inch diameter).

Gasoline Intake: Spring loaded needle (early production). Solid needle with needle pull clip (late production). No. 42 drill in needle seat.

Low Speed Jet Tube: Jet size No. 68 drill (.031 inch). By-pass, size No. 55 drill (.052 inch). Economizer, size No. 60 drill (.040 inch). Idle bleed, size No. 56 drill (.0465 inch).

Idle Ports: Upper port, length .187 inch. Width, .030 inch.

Idle Port Opening: .135 to .141 inch above upper edge of valve with valve closed tight.

Lower Port (For Idle Adjustment Screw): Size .0615 to .0655 inch diameter.

Set Idle Adjustment Screw: 1/2 to 1 turn open. For richer mixture turn screw out. Idle engine between 550-600 r.p.m.

Main Nozzle: In primary venturi, closed tip, angle 47° from horizontal. Nozzle is installed permanently. Do not remove. Anti-percolating well; jet size, No. 71 drill.

Metering Rod (Vacumeter Type): Economy step .0695 inch diameter. Middle step tapers to .063 inch diameter. Power step, (781S) .052 inch diameter, (813S) .049 inch diameter, length 2-59/64 inches.

Metering Rod Jet: No. 44 (.086 inch) diameter.

Metering Rod Setting: After adjusting for pump stroke, set metering rod as follows: With throttle tightly closed, hold metering rods (assembled on vacumeter link) in maximum down position, tighten clamp screw securely with metering rod arm contacting vacumeter link.

Accelerating Pump: Pressure type, delayed action plunger (non-adjustable lever). Discharge jet (twin) size, No. 74 drill (.0225 inch). Intake disk check size, No. 40 drill (.098 inch). Discharge (needle seat) size, No. 50 drill (.070 inch).

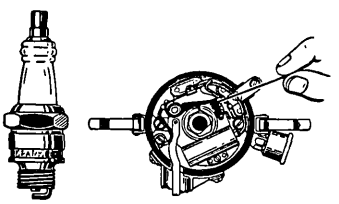
Pump Adjustment: See Adjustments.

Choke: Carter Climatic® Control, set on index. Offset butterfly type. Choke heat suction hole, in bowl cover, No. 42 drill.

Vacuum Spark Port: .062 to .064 inch diameter. Top of port .033 to .038 inch above valve.

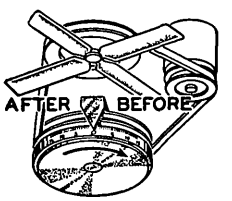
Motor Tune-Up—Be Accurate! Always Use Feeler Gauges!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

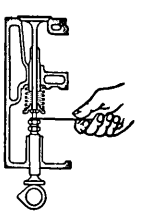


Spark Plug Gap .032"

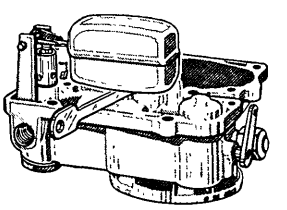
Breaker Point Setting .022"



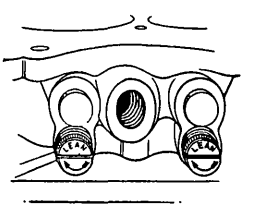
Ignition Timing Breaker Points to Open: 4° B.T.D.C.



Valve Setting (Cold) Intake .014" Exhaust .014"



Float Setting (Use Gauge) 1/4 Inch—Solid Needle 7/64 Inch—Spring Loaded Needle



Idle Adjustment Screw Setting 1/2 to 1 Turn Open

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TRADE MARK REG. U. S. PAT. FF.
MARCA REGISTRADA

PRINTED IN U.S.A.

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT (Fig. 1):

With bowl cover gasket removed, bowl cover inverted and needle seated, there should be 1/4 inch (gauge T109-31) between top of float and bowl cover when solid needle with needle pull clip is used, or 7/64 inch between top of float and bowl (free weight of float resting on needle and spring) when spring loaded needle is used. Adjust by bending float arm

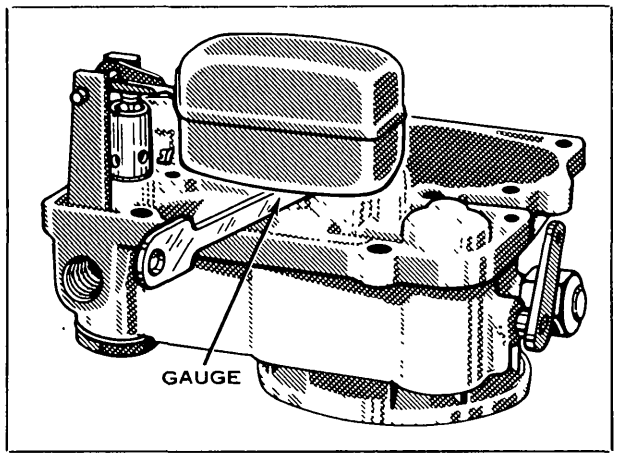


Figure 1
Float Adjustment

PUMP ADJUSTMENT (Fig. 2):

Back out throttle lever set screw until throttle valves seat in bores of carbureter. Place Universal pump travel gauge T109-117S inverted on edge of dust cover boss of bowl cover. Turn knurled nut of gauge until finger on gauge just touches top of plunger shaft (A).

The distance from the dust cover boss to the top of the plunger shaft should be 1/2 inch (distance from base to tip of finger on gauge) (C). Adjust by bending throttle connector rod at upper angle (B).

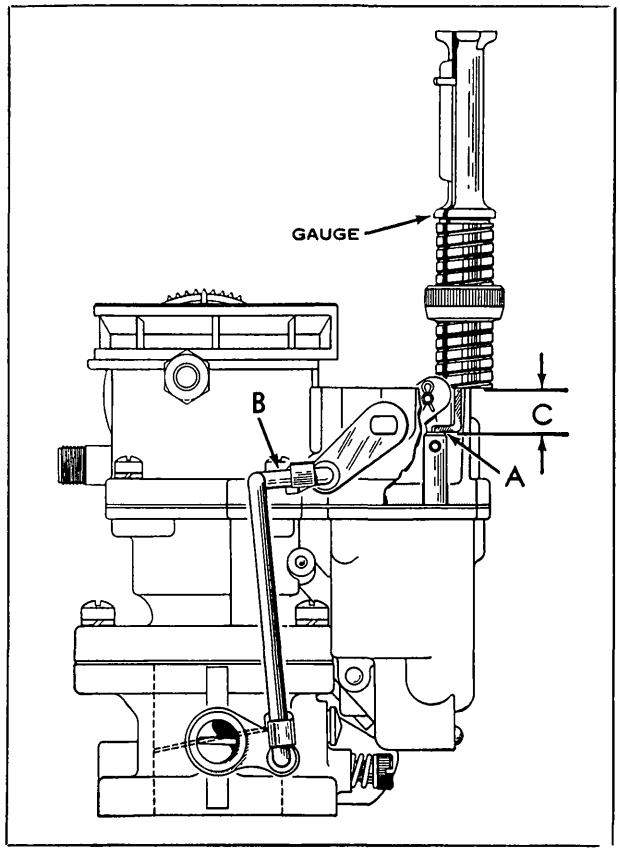


Figure 2
Pump Adjustment

METERING ROD ADJUSTMENT (Fig. 3):

The metering rods must be adjusted after the pump adjustment or when leaner than standard rods are installed. No metering rod gauges are necessary. Procedure is as follows. with the throttle lever set screw backed out and throttle valves seated in bores of carbureter, press down on vacumeter link (D) until metering rods bottom at (E). With rods held in this position, revolve metering rod arm (F) until lip contacts vacumeter link. Hold in place and carefully tighten metering rod arm set screw (G).

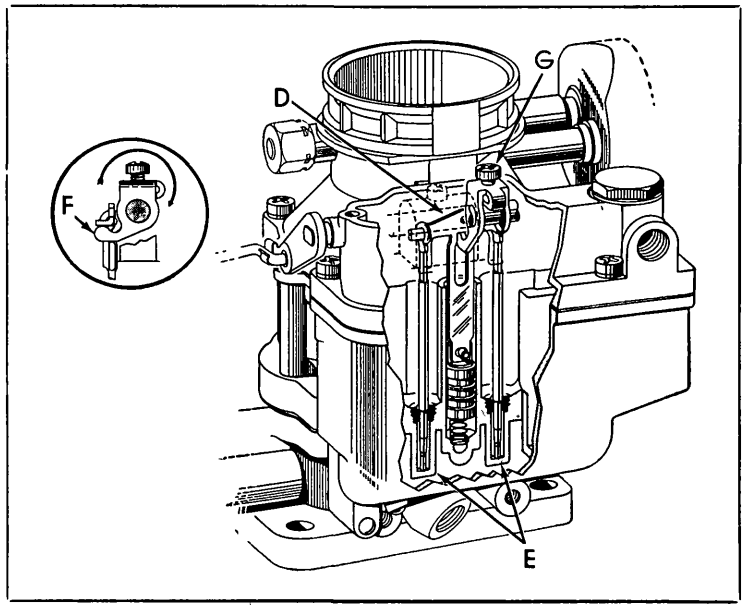


Figure 3
Metering R d Adjustment

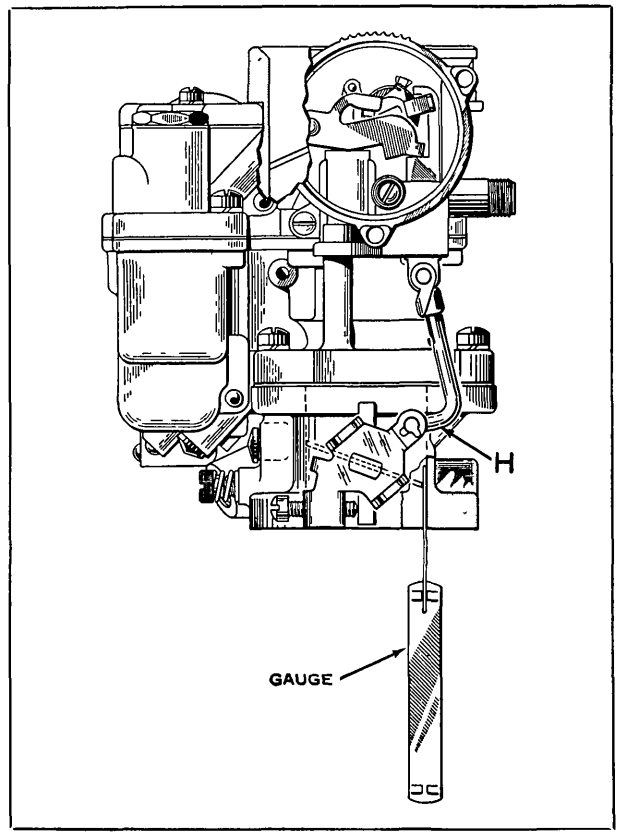


Figure 4
Fast Idle Adjustment

FAST IDLE ADJUSTMENT (Fig. 4):

With the thermostatic coil housing, gasket and baffle plate removed, crack throttle valve and hold choke valve closed. Then close throttle. There should now be .018"-.023" clearance (gauge T109-29) between throttle valve and bore of carbureter (side opposite idle port). Adjust by bending the choke connector rod at lower angle (H).

UNLOADER ADJUSTMENT (Fig. 5):

Must be made after fast idle adjustment. Hold throttle valve wide open and close choke valve as far as possible without forcing; there should now be 9/64 inch clearance between upper edge of choke valve and inner wall of air horn. Adjust by bending arm (J) on choke trip lever (tool T109-34).

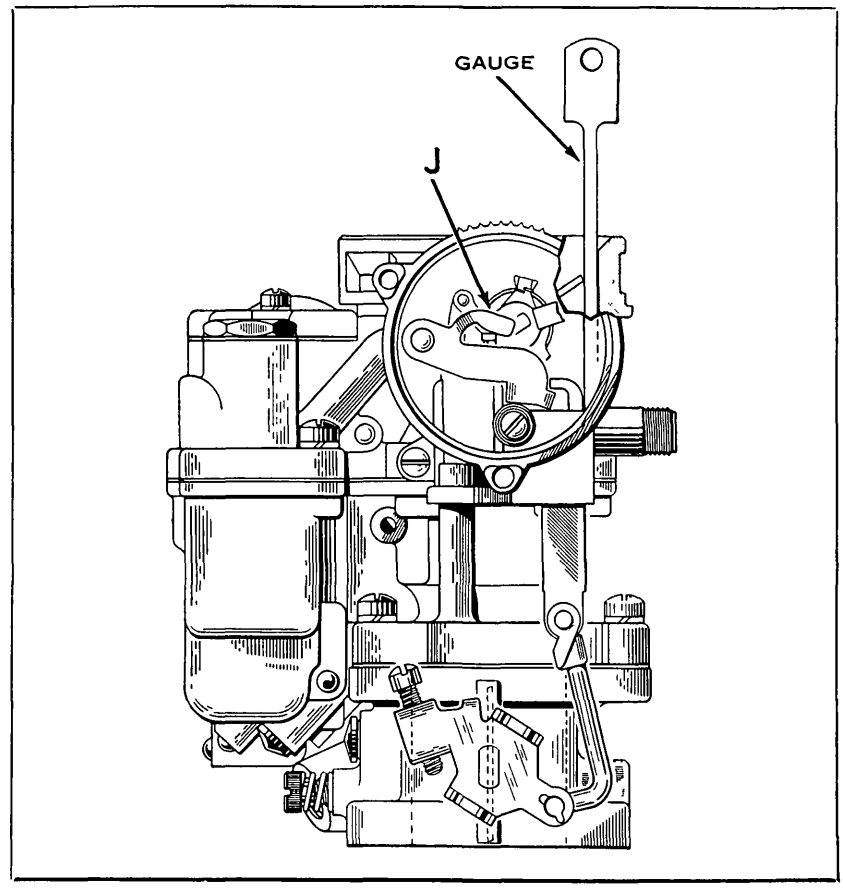
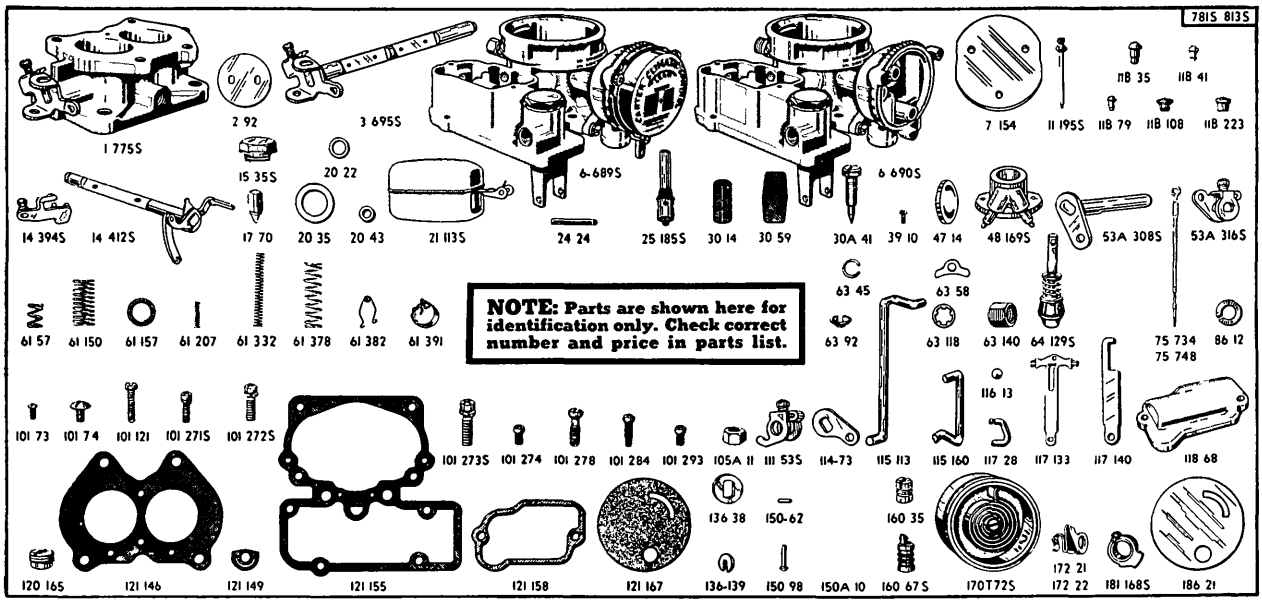


Figure 5
Unl ader Adjustment



Carbureters No. 781S—Kaiser—1951-52—No. 813S—Frazer—1951

WHEN SERVICING, USE GASKET ASSORTMENT No. 196; REPAIR PACKAGE (781S) No 1548C, (813S) No 1558B

PART NAMES IN CAPITAL LETTERS LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

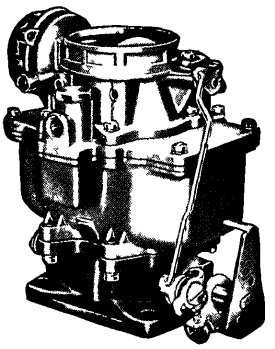
Part No	PART NAME	
1-775S	Body flange assembly	
2 92	Throttle valve	(2)
3-695S	Throttle shaft and lever assembly	
6-689S	Air horn and Climatic® control assembly	
6-690S	Air horn and piston housing assembly	
7-154	Choke valve	
11-195S	LOW SPEED JET ASSEMBLY	(2)
11B-35	Rivet passage plug	(3)
11B-41	Rivet passage plug	(3)
11B-79	Rivet passage plug	
11B-108	IDLE PORT RIVET PLUG	(2)
11B-223	NOZZLE RIVET PLUG	(2)
14-394S	Choke trip lever and pin assembly	
14-412S	Choke piston lever link and shaft assembly	
15 35S	Strainer nut assembly	
17-70	PUMP CHECK NEEDLE	
20 22	Needle seat gasket	
20 35	BOWL STRAINER GASKET	
20-43	Piston housing gasket	
21-113S	Float and lever assembly	
24-24	Float lever pin	
25-173S	Needle spring and seat assembly (Sup by 25 185S)	
25-185S	Needle spring and seat assembly (Sup by 25 196S)	
25-196S	NEEDLE SPRING AND SEAT ASSEMBLY	
30 14	BOWL COVER STRAINER	
30-59	STRAINER	
30A-41	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
47-14	Choke cylinder welsh plug	
48-169S	Pump jet and housing assembly	
53A-308S	Pump operating lever and countershaft assembly	
53A-316S	Pump arm and screw assembly	
61-57	Idle adjustment screw lock spring	(2)
61-150	LOWER PUMP SPRING	
61-157	Plunger spring	
61-192	Needle pull clip	
61 207	Intake needle spring (Use with 25 185S)	
61-332	VACUUM PISTON SPRING	
61-378	Upper pump spring	
61-382	METERING ROD SPRING	
61-391	Fast idle cam spring	
63-45	PUMP CHECK BALL RETAINER RING	
63-58	Coil housing retainer	(3)
63-92	Pump spring retainer (Sup by 63 149)	
63-118	Throttle shaft retaining ring	
63 140	Choke shaft retainer	
63-149	Pump spring retainer	
64-129S	Plunger rod spring and retainer assembly (Sup by 64 132S)	
64-132S	PLUNGER ROD SPRING AND RETAINER ASSEMBLY	

Part No.	PART NAME	
75-734	METERING ROD STANDARD (781S)	(2)
75-738	Metering rod 1 size lean (781S) 2 sizes lean (813S)	(2)
75-739	Metering rod 2 sizes lean (781S)	(2)
75-748	METERING ROD STANDARD (813S)	(2)
75-759	Metering rod 1 size lean (813S)	(2)
75-773U	Unitized Package (Consists of 2—75 738 and 2—75 739) (781S)	
75-774U	Unitized Package (Consists of 2—75 759 and 2—75 738) (813S)	
86-12	Flange stud lock washer	(4)
101-73	Throttle valve attaching screw	(4)
101-74	Throttle shaft arm attaching screw	
101-121	Throttle lever adjustment screw	
101 271S	Dust cover attaching screw and washer assembly	(2)
101-272S	Air horn attaching screw and washer assembly	(8)
101-273S	Body flange attaching screw and washer assembly	(4)
101-274	Coil housing attaching screw	(3)
101-278	Pump jet housing attaching screw	
101-284	Piston housing attaching screw	(3)
101-293	Metering rod arm clamp screw	(2)
105A 11	Flange stud nut	(4)
111-53S	Metering rod arm and screw assembly	
114-73	THROTTLE SHAFT ARM	
115-113	THROTTLE CONNECTOR ROD	
115-160	Choke connector rod	
116-13	PUMP INTAKE CHECK BALL	
117-28	Pump arm link	
117-133	Vacumeter piston link	
117-140	Fast idle link	
118-68	Dust cover	
120-165	METERING ROD JET	(2)
121-146	BODY FLANGE GASKET	
121-149	Pump jet gasket (Sup by 121 241)	
121-155	AIR HORN GASKET	
121-158	DUST COVER GASKET	
121-167	COIL HOUSING GASKET	
121-241	PUMP JET HOUSING GASKET	
136-38	Throttle shaft washer	
136-139	Choke shaft retainer washer	
150-62	Choke piston pin	
150-98	Intake needle pin (Use with 25 185S)	
150A-10	Pin spring	
160-35	Choke piston	
160-67S	Vacuum piston and pin assembly	
170T-72S	Thermostatic coil and housing assembly	
172-21	Throttle connector rod retainer	
172-22	THROTTLE AND CHOKE CONNECTOR ROD RETAINER	(2)
181 168S	Fast idle cam assembly	
186-21	Baffle plate	

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

MOTOR NUMBERS

M1001 and higher



Casting No 550 on Face of Flange

FRAZER MANHATTAN "F-496"-"F-506"—1949-50 FRAZER "F-495"-"F-505" 1949-50

KAISER DELUXE "K-492"-"K-502"—1949-50

WCD Dual Down-Draft Climatic® Control Carbureter—**Model 723S**

CARBURETER SPECIFICATIONS

For Six Cylinder Engine 3 5/16 Inch Bore, 4⅜ Inch Stroke

Dimensions Flange size 1¼ inch dual 4 bolt type
Primary venturi 11/32 inch I D
Secondary venturi 19/32 inch I D
Main venturi 1 3/16 inch I D

Float Level Distance from seam of float (both sides—at top center) to lower edge of bowl cover when needle is seated (free weight of float on needle and spring) to be flush with casting to 1/32 inch

Gasoline Intake Square vertical (spring loaded) needle Size No 42 drill in needle seat

Vents Inside (tube) 123 inch inside diameter
Outside Size No 20 (161) inch drill hole

Low Speed Jet Tube Jet size No 66 drill (033) inch
By pass size No 56 drill (0465) inch
Economizer size No 63 drill (037) inch
Idle bleed size No 55 drill (052) inch

Idle Ports Upper port length 165 inch Width 030 inch

Idle Port Opening 122 to 128 inch above upper edge of valve with valve closed tight

Lower Port (For Idle Adjustment Screw) Size 0615 to 0655 inch diameter

Set Idle Adjustment Screw 1 to 1½ turns open For richer mixture turn screw out Do not attempt to idle engine below 8 m p h

Main Nozzle In primary venturi closed tip angle 49° from horizontal Nozzle is installed permanently **Do not remove**

Metering Rod (Vacumeter Type) Economy step 064 inch diameter tapers to power step 048 inch diameter Length 3 41/64 inch (This rod is designed with stabilizing flat on economy step)

Metering Rod Jet 2 15 mm (0846 inch) diameter

Metering Rod Setting Use gauge part No T109 163 (2 940 inches)

Accelerating Pump Pressure type delayed action non adjustable lever
Discharge jet (twin) size No 74 drill (0225) inch
Intake disk check size No 30 drill (1285) inch
Discharge (needle seat) size No 55 drill (052) inch

Pump Adjustment 29 as indicated on gauge T109 117S with throttle valves seated or 17/64" from top of pump shaft to top of dust cover boss

Choke Carter Climatic® Control set on index Offset butterfly type valve Choke heat suction hole in bowl cover No 32 drill

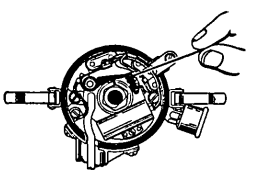
Vacuum Spark Port 062 to 064 inch diameter Top of port 033 to 038 inch above valve

Motor Tune-Up—Be Accurate!

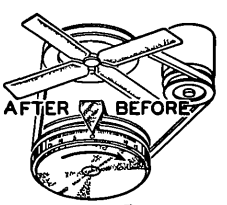
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



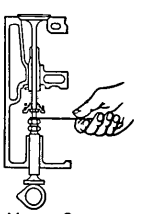
Spark Plug
Gap
032"



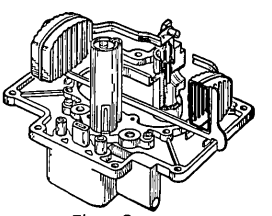
Breaker Point
Setting
020"



Ignition Timing
Breaker Points to Open
Distributor No IGS 4211—T D C
Distributor No IGS 4214—
4° B T D C



Valve Setting
(Cold)
Int 014"
Exh 014"



Float Setting
See Paragraph I
under Float Adj
below



Idle Adjustment
Screw Setting
1 to 1½
Turns Open

CARBURETER ADJUSTMENTS

Float Adjustment Two separate float adjustments must be made—lateral and vertical
(1) With bowl cover gasket removed, bowl cover inverted and held horizontal, at eye level, float should be flush to 1/32 inch from machined surface of bowl cover with float resting on float needle pin and spring
(2) Sides of floats must be at right angle to surface of bowl cover

Pump Adjustment The total distance the plunger head (not shaft) moves from closed to wide open throttle position controls the amount of fuel discharged Correct pump plunger travel is important and should be checked each time the carbureter is dis-assembled or when leaner than standard metering rods are installed Procedure is as follows
Install pump connector link in lower hole (short stroke) of pump arm, with ends extending towards countershaft arm

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CARBURETER
TRADE MARK REG U S PAT OFF
MARCA REGISTRADA

PRINTED IN U S A

Back out throttle lever set screw until throttle valves seat in bores of carbureter Be sure fast idle adjusting screw does not hold throttle open Place universal pump travel gauge T109-117S inverted on edge of dust cover boss of bowl cover Turn knurled nut of gauge until finger just touches upper end of plunger shaft Number indicated on gauge should be "29" Hold the gauge vertical to insure correct reading

Adjust by bending the throttle connector rod at lower angle

Optional Adjustment With throttle valves seated in bores of carbureter, the distance from the top of the plunger shaft to the top of the dust cover boss should be 17/64"

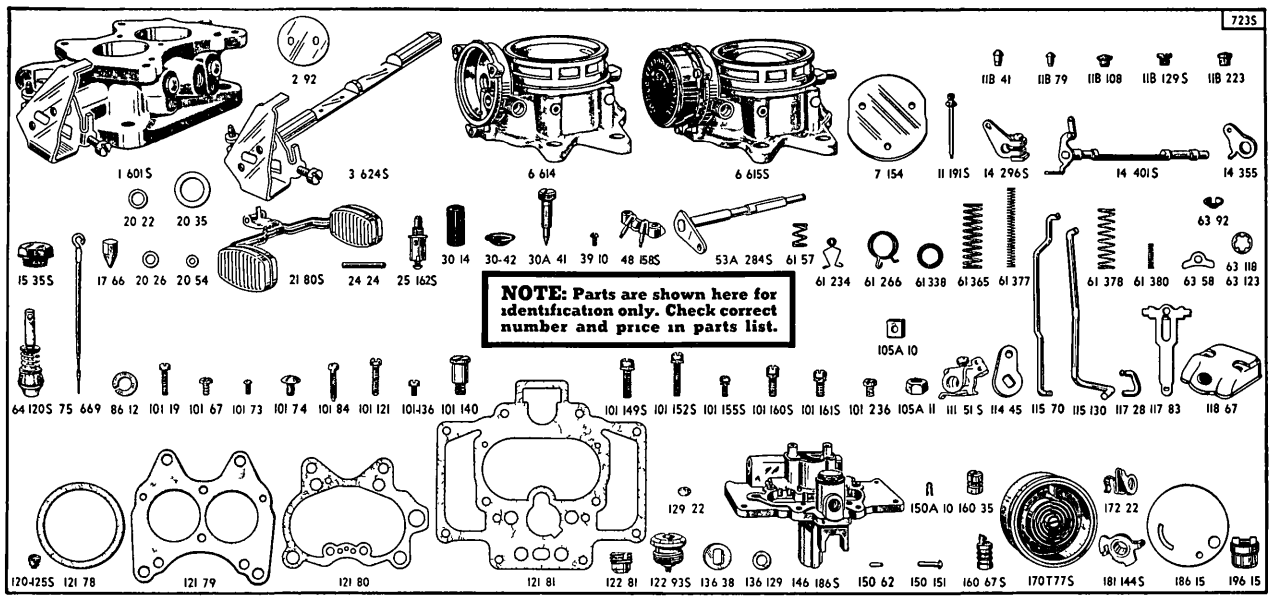
Adjust as mentioned above

Metering Rod Adjustment: With throttle valves seated in bores of carbureter, insert one metering rod gauge T109-163 in place of either metering rod Press down lightly on vacuum piston link until lug of piston link contacts lip of metering rod arm There should be less than 005" clearance between metering rod bearing and shoulder in notch of gauge

Fast Idle Adjustment: Loosen choke lever clamp screw on choke shaft Insert 010" feeler gauge T109-200 between lip of fast idle cam and boss of flange casting Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position — hold in place and tighten clamp screw

With choke valve tightly closed, tighten fast idle adjusting screw until there is 018" opening between throttle valve and bore of carbureter (side opposite idle port) Use gauge T109-44 Be sure fast idle adjusting screw is on high step of cam while making this adjustment.

Unloader Adjustment: With throttle wide open there should be 1/8" clearance between upper edge of choke valve and inner wall of air horn (gauge T109-36) Adjust by bending unloader lip on throttle shaft lever (T109-41)



Kaiser-Frazer—1949-1950—Carbureter No. 723S

WHEN SERVICING, USE GASKET ASSORTMENT No 189, REPAIR PACKAGE No 1512A
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-601S	Body flange assembly	
2-92	Throttle valve	(2)
3-624S	Throttle shaft and lever assembly	
6-615S	Air horn assembly	
6-654S	Air horn and piston housing assembly	
7-154	Choke valve	
11-191S	LOW SPEED JET ASSEMBLY	(2)
11B-41	Passage plug	(2)
11B-79	Rivet plug	(3)
11B-108	IDLE PORT RIVET PLUG	(2)
11B-129S	Pump discharge passage plug assembly	
11B-223	NOZZLE PASSAGE PLUG	(2)
14-296S	Choke lever assembly	
14-344S	Choke piston lever, link and shaft assembly (Sup by 14-401S)	
14-355	Cam trip lever	
14-401S	Choke piston lever link and shaft assembly	
15-35S	Strainer nut assembly	
17-66	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	
20 26	Pump plug gasket	
20-35	Bowl strainer gasket	
20-54	Metering rod jet gasket	(2)
21-80S	Float and lever assembly	
24-24	Float lever pin	
25-162S	NEEDLE AND SEAT ASSEMBLY	
30-14	BOWL COVER STRAINER	
30-42	PUMP STRAINER	
30A-41	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
48-158S	Pump jet and housing assembly	
53A-284S	Pump operating lever and countershaft assembly	
61-57	Adjustment screw lock spring	(2)
61-157	Plunger spring	
61-234	METERING ROD SPRING	
61-266	Fast idle cam spring	
61-338	Plunger spring (Sup by 61-157)	
61-365	PUMP SPRING (LOWER)	
61-377	VACUUM PISTON SPRING	
61-378	Pump spring (upper)	
63-58	Coil housing retainer	(3)
63-92	Spring retainer (pump)	
63-118	Throttle shaft retaining ring	
63-123	Choke shaft retaining ring	
64-120S	PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
75-669	METERING ROD—STANDARD— 064"- 064" to 048")	(2)
75-694	Metering rod—1 size lean	
75-695	Metering rod—2 sizes lean	
75-696U	Unitized package (Consists of 2—75-694 and 2—75-695 metering rods)	

Part No	PART NAME	
86-12	Flange stud lock washer	
101-19	Choke lever clamp screw (Sup by 101-354-S)	
101-67	Pump retainer screw	
101-73	Throttle valve attaching screw	(4)
101-74	Throttle shaft dog screw	
101-84	Fast idle adjustment screw	
101-121	Throttle lever adjustment screw	
101-136	Coil housing attaching screw	(3)
101-140	Fast idle attaching screw	
101-148S	Dust cover attaching screw and washer assembly	(2)
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	(4)
101-155S	Pump jet attaching screw and washer assembly	(2)
101-160S	Bowl cover attaching screw and washer assembly	(6)
101-161S	Dust cover attaching screw and washer assembly (Sup by 101-148S)	
101-236	Metering rod arm clamp screw	
101 354S	Choke lever clamp screw assembly	
105A-10	Choke lever clamp nut	
105A-11	Flange stud nut	
111-51S	Pump and metering rod arm assembly	
114-45	THROTTLE SHAFT ARM	
115-70	Fast idle connector rod	
115-130	THROTTLE CONNECTOR ROD	
117-28	Pump connector link	
117-83	Vacuum piston link	
118-67	Dust cover	
120-125S	METERING ROD JET ASSEMBLY	(2)
121-78	COIL HOUSING GASKET	
121-79	BODY FLANGE GASKET	
121-80	AIR HORN GASKET	
121-81	BOWL COVER GASKET	
122-81	PUMP DISCHARGE JET PLUG	
122-93S	DISK CHECK PLUG ASSEMBLY	
129-22	Metering rod disk	(2)
136-38	Throttle shaft arm washer	
136-129	Choke shaft washer (Use with 14-344S)	
146-186S	Bowl cover assembly	
150-62	Piston pin	
150A-10	PIN SPRING	(3)
160-35	Choke piston	
160-67S	Vacuum piston and pin assembly	
170T-77S	Thermostatic coil and housing assembly	
172-22	THROTTLE CONNECTOR ROD RETAINER	
181-144S	Fast idle cam assembly	
186-15	Baffle plate	
196-15	Pump plunger guide	

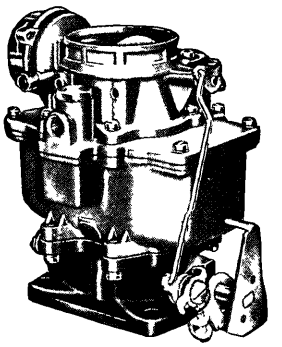
NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where n figure is shown, only one is used

FRAZER MANHATTAN "F-486" 1948 & "F-496" 1949
FRAZER "F-495" 1949
KAISER DELUXE "K-492" 1949

(723S can also be used)

MOTOR NUMBERS

M1001 and higher



Casting No. 550 on Face of Flange

WCD Dual Down-Draft Climatic® Control Carbureter—**Models 685S-685SA**

CARBURETER SPECIFICATIONS

For 6 Cylinder Engine: 3-5/16 Inch Bore, 4⅜ Stroke

Dimensions: Flange size, 1¼ inch dual 4 bolt type
Primary venturi, 11/32 inch I D
Secondary venturi, 19/32 inch I D
Main venturi, 1-3/16 inch I D

Float Level: Distance from seam of float (both sides—at top center) to lower edge of bowl cover, when needle is seated (free weight of float on needle and spring) to be 9/64 inch (685S)*, 1/16 inch (685SA)* Use gauge No T109-160 (685S), No T109-197 (685SA)

Vents: Inside none Outside 2—size No 12 (.189) inch drill holes

Gasoline Intake: Square vertical (spring loaded) needle Size No 42 drill in needle seat

Low Speed Jet Tube: Jet size No 66 drill (.033) inch
By-pass, size No 56 drill (.0465) inch.
Economizer size No 63 drill (.037) inch
Idle bleed, size No 55 drill (.052) inch

Idle Ports: Upper port length .165 inch Width, .030 inch

Idle Port Opening: .122 to .128 inch above upper edge of valve with valve closed tight

Lower Port (For Idle Adjustment Screw): Size .0615 to .0655 inch diameter

Set Idle Adjustment Screw 1 to 1½ turns open For richer mixture turn screw out Do not attempt to idle engine below 8 m p h

Main Nozzle: In primary venturi, closed tip angle 49° from horizontal Nozzle is installed permanently **Do not remove.**

Metering Rod (Vacumeter Type): Economy step .0645 inch diameter Middle step tapers to .0545 inch diameter Power step .042 inch diameter Length 3 41/64 inches

Metering Rod Jet: 2.15 mm (.0846 inch) diameter

Metering Rod Setting: Use gauge part No T109 163 (2.940 inches)

Accelerating Pump: High pressure delayed action type Adjustable stroke
Discharge jet (twin) size No 74 drill (.0225) inch
Intake disk check size No 30 drill (.1285) inch
Discharge (needle seat) size No 55 drill (.052) inch

Pump Adjustment: "29" as indicated on gauge T109-117S with throttle valve seated and pump connector link in lower hole (short stroke)

Choke: Carter Climatic® Control set on index Offset butterfly type Choke heat suction hole in bowl cover No 32 drill

Vacuum Spark Port: .062 to .064 inch diameter Top of port .033 to .038 inch above valve

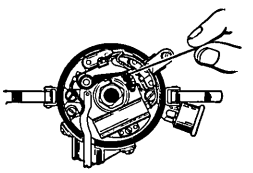
***NOTE:** 685S may be changed to 685SA by replacing 25-161S with 25-162S needle and seat assembly—resetting float level to 1/16 inch 25 161S may be identified by a copper plated spring (61 150) 25 162S may be identified by a copper oxide (black) plated spring

Motor Tune-Up—Be Accurate!

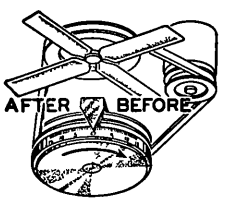
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



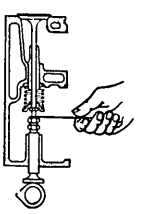
Spark Plug Gap .032"



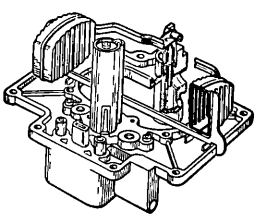
Breaker Point Setting .020"



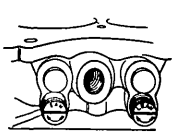
Ignition Timing
Breaker Points to Open:
Distributor No. IGS-4211—T.D.C.
Distributor No. IGS-4214—4° B T D C



Valve Setting (Cold)
Int. .014"
Exh. .014"



Float Setting (Use Gauge)
9/64 Inch (685S)
1/16 Inch (685SA)



Idle Adjustment Screw Setting
1 to 1½ Turns Open

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TRADE MARK REG U S PAT OFF
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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT (Fig 1) With bowl cover assembly in verted gasket removed and needle seated place gauge T109 160 (685S) T109 197 (685SA) between float and machined surface of casting By bending arm adjust floats to touch verti cal sides of gauge (A) and clear horizontal portion (B) Re move gauge and float install gasket then reinstall float

PUMP ADJUSTMENT (Fig 2) The accelerating pump has been designed to produce a uniform pump action The total dis tance the plunger head (not shaft) moves from closed to wide open throttle controls the amount of fuel discharged Correct pump plunger travel is important and should be checked each time the carbureter is disassembled Procedure is as follows Install pump connector link in lower hole (short stroke) with ends extending away from countershaft arm Back out throttle lever set screw to allow throttle valves to seat in bores of car bureter Be sure fast idle adjusting screw does not hold throt tle open Place pump travel gauge T109 117S inverted on edge of dust cover boss of bowl cover turn knurled nut of gauge until finger (C) just touches upper end of plunger shaft with throttle valves seated Number indicated on gauge should be 29 Hold gauge vertical to insure correct reading Adjust by bending throttle connector rod at lower angle (D)

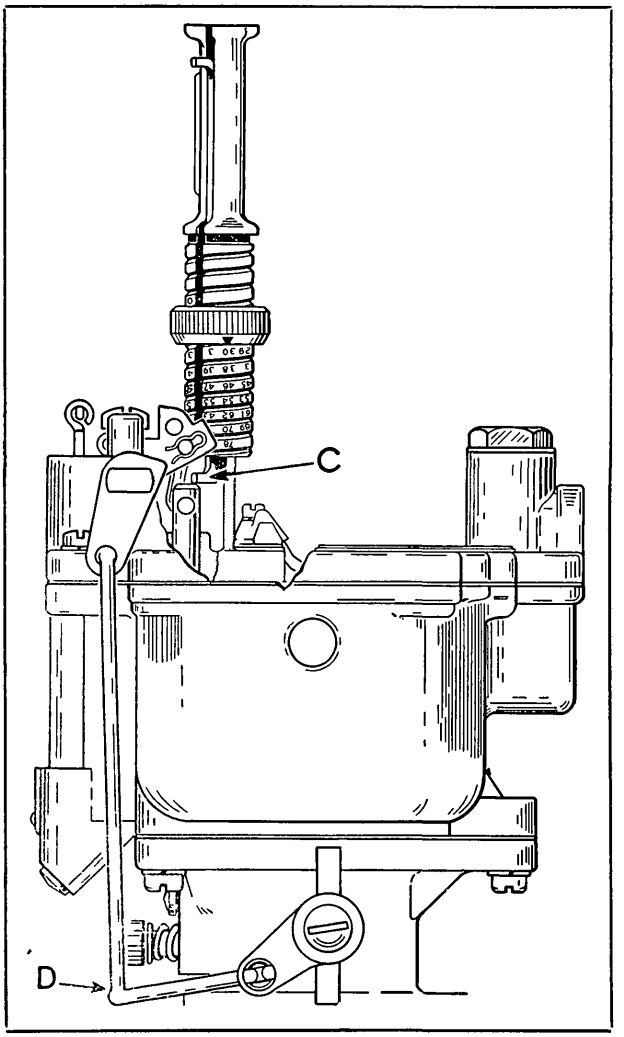


Figure 2

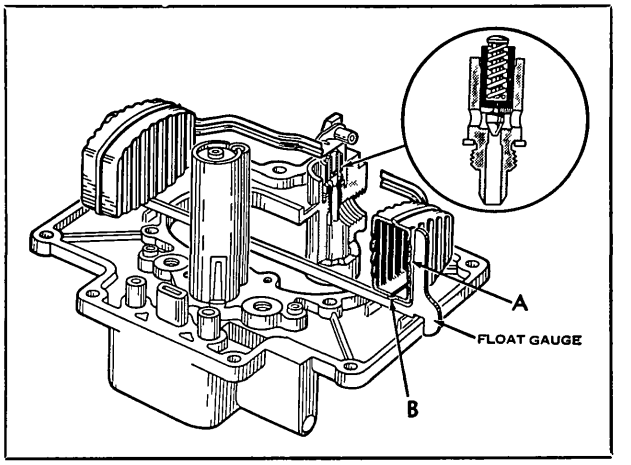


Figure 1

PUMP JET ADJUSTMENT (Fig 3) Good acceleration per formance at low speeds depends primarily on the gasoline dis charged from the pump jets Each of the two streams must be directed to its proper section of the dual venturi system In order to obtain maximum efficiency each stream must be di rected to a point between the primary and secondary venturi missing the outer wall of the primary venturi but striking the lower part of the inner wall of the secondary venturi

Only a slight bend should be necessary to aim the pump jets properly

METERING ROD ADJUSTMENT (Fig 4) Back out throttle lever adjusting screw until throttle valves seat in bores of car bureter Be sure fast idle adjusting screw does not hold throttle open Insert one metering rod gauge T109 163 in place of either metering rod Press down lightly on vacuum piston link (E) until lug of piston link (F) contacts lip (G) of metering rod arm There should be less than 005" clearance between metering rod bearing and shoulder in notch of gauge (H) Adjust by bending lip (G) of metering rod arm (Use tool T109 105 for bending)

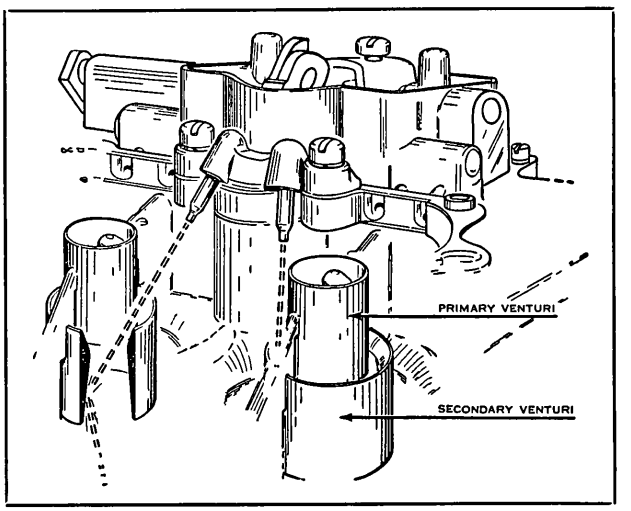


Figure 3

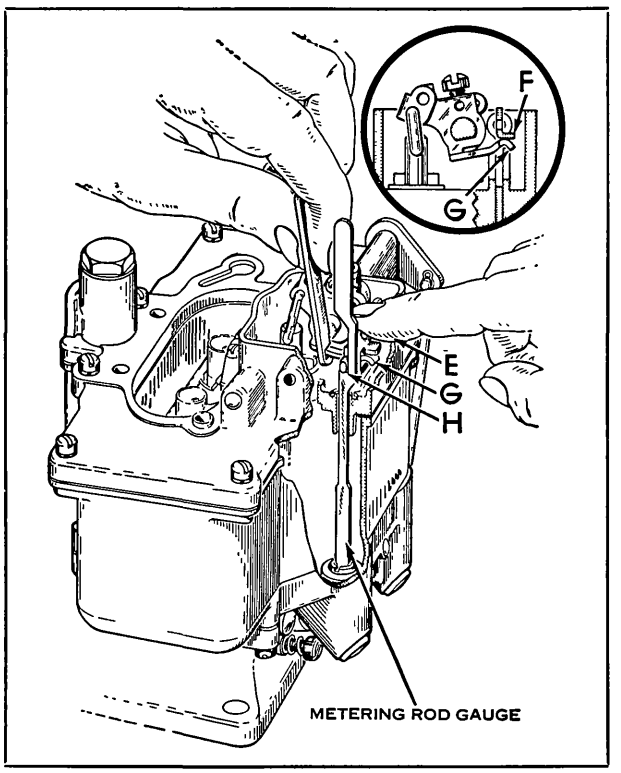


Figure 4

FAST IDLE ADJUSTMENT: (Fig. 5) With choke valve tightly closed, and throttle lever set screw backed out, adjust fast idle set screw (J) to just touch the high spot on the fast idle cam (L). From this position turn screw until there is .016" (K) between edge of throttle valve and bore of carbureter (side opposite idle port).

UNLOADER ADJUSTMENT: (Fig. 6) Loosen choke lever and screw assembly (M), on shaft. With choke valve tightly closed, insert .010" flat feeler gauge (N) between lip on fast idle cam and boss on flange casting, and tighten choke lever screw. Then with throttle valve wide open, adjust unloader lip (O) on throttle shaft lever to give 1/8" clearance (P) between upper edge of choke valve and inside wall of air horn (tool T109-36).

CHOKE ASSEMBLY: (Fig. 7) Correct assembly of the choke shaft, washers, choke valve and choke lever and screw assembly is important and must be done in the following way:

1. Install fiber washer (Q) on choke shaft before installing shaft in air horn.
2. With choke shaft and washer turned to closed position, and held tightly against air horn, install choke valve and tighten screws.

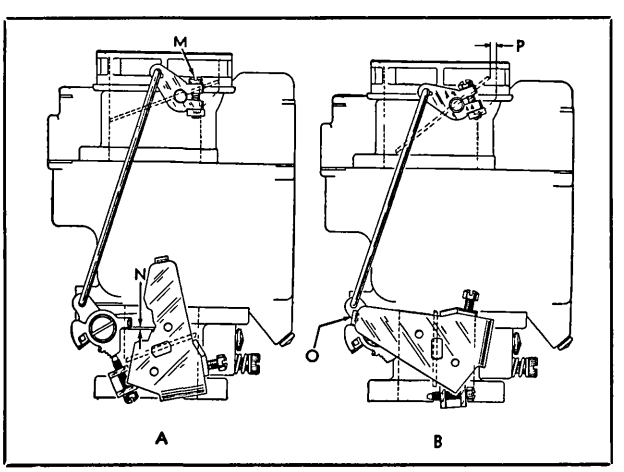


Figure 6

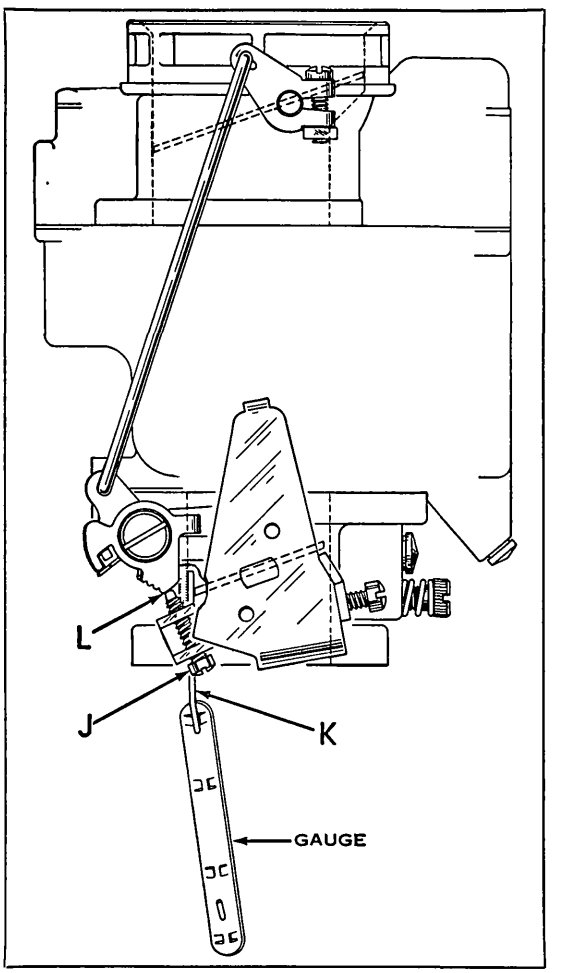


Figure 5

3. Then install fiber washer (R) and choke lever and screw assembly (S) on end of choke shaft where it extends through the air horn.
4. Place a .005" flat feeler gauge between washer and face of air horn.
5. Hold choke lever and screw assembly (S) against washer and tighten clamp screw (M).

It will be necessary to relocate the choke lever and screw assembly when making the unloader adjustment. Be sure there is .005" clearance between washer and air horn.

Choke must not drag or bind in any position.

FLANGE ASSEMBLY: Correct assembly of the flange is important and should be made in the following manner:

1. Install throttle shaft assembly and turn to closed position.
2. Press retaining ring (prongs extending away from casting) on throttle shaft so that it is against boss on casting and no endplay in shaft.
3. Install throttle valves with "C" toward the idle ports (viewed from manifold side of flange). Center valves by tapping lightly. Hold in place and tighten screws.

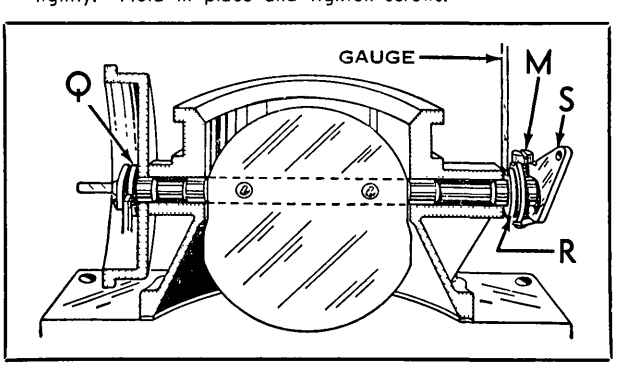
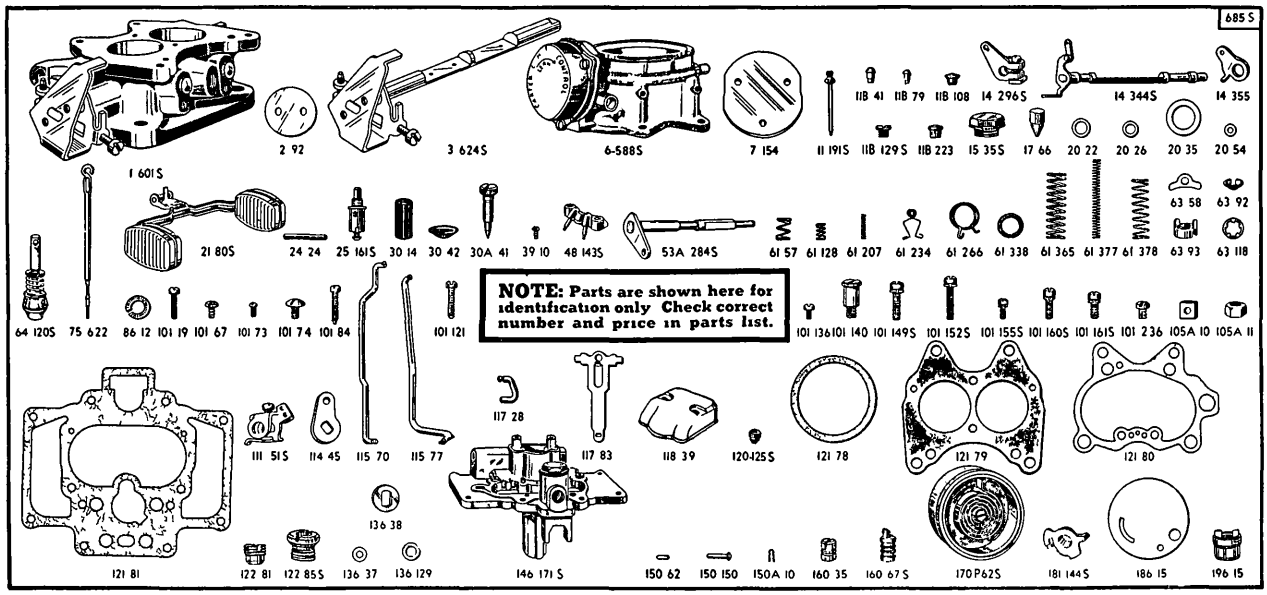


Figure 7



Kaiser-Frazer—1948-1949—Carbureter Nos. 685S-685SA

WHEN SERVICING, USE GASKET ASSORTMENT No. 189; REPAIR PACKAGE No. 1390B

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-601S	Body flange assembly	
2-92	Throttle valve	(2)
3-624S	Throttle shaft and lever assembly	
6-588S	Air horn assembly	
7-154	Choke valve	
11-191S	LOW SPEED JET ASSEMBLY	(2)
11B-41	Rivet plug	(2)
11B-79	Rivet plug	(3)
11B-108	IDLE PORT RIVET PLUG	(2)
11B-129S	Pump discharge passage plug assembly	
11B-223	NOZZLE PASSAGE PLUG	(2)
14-296S	Choke lever and screw assembly	
14-344S	Choke piston lever link and shaft assembly	
14-355	Cam trip lever	
15-35S	Strainer nut assembly	
17-66	PUMP DISCHARGE CHECK NEEDLE	
20-22	Needle seat gasket	
20-26	Pump discharge passage plug gasket	
20-35	Bowl strainer nut gasket	
20-54	Metering rod jet gasket	(2)
21-80S	Float and lever assembly	
24-24	Float lever pin	
25-161S	Needle and seat assembly (Sup by 25 162S)	
25-162S	†NEEDLE AND SEAT ASSEMBLY	
30-14	BOWL COVER STRAINER	
30-42	PUMP STRAINER	
30A-41	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
48-143S	Pump jet and housing assembly (Sup by 48 158S)	
48-158S	Pump jet and housing assembly	
53A-284S	Pump operating lever and countershaft assembly	
61-57	Idle adjustment screw lock spring	(2)
61-128	Connector rod spring (Use with 115 77)	
61-207	Intake needle spring (Sup by 61-380)	
61-234	METERING ROD SPRING	
61-266	Fast idle cam spring	
61-338	Plunger spring	
61-365	PUMP SPRING (LOWER)	
61-377	VACUUM PISTON SPRING	
61-378	Pump spring (upper)	
63-58	Coil housing retainer	(3)
63-92	Pump spring retainer	
63-93	Connector rod spring retainer (Use with 115 77)	
63-118	Throttle shaft retaining ring (Install with prongs extending outward)	
64-120S	PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
75 622	METERING ROD—STANDARD—0645" 0645" to 0545" 042"	(2)
75-674	Metering rod—1 size lean—0655"-0655" to 0565" 045"	(2)
75 675	Metering rod—2 sizes lean—067" 067" to 0585" 048"	(2)
75-699U	Unitized package (Consists of 2—75-674 and 2—75 675)	
86-12	Flange stud lock washer	(4)
101-19	Choke lever clamp screw (Sup by 101-354S)	
101-67	Pump retainer screw	
101-73	Throttle valve attaching screw	(4)
101-74	Throttle shaft dog screw	
101-84	Fast idle adjustment screw	
101-121	Throttle lever adjustment screw	
101-136	Coil housing attaching screw	(3)
101-140	Fast idle cam attaching screw	
101-148S	Dust cover screw and washer assembly	(2)
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	(4)
101-155S	Pump jet attaching screw and washer assembly	(2)
101-160S	Bowl cover attaching screw and washer assembly	(6)
101-161S	Dust cover attaching screw and washer assembly (Sup by 101-148S)	(2)
101-236	Metering rod arm clamp screw	
101-354S	Choke lever clamp screw assembly	
105A-10	Choke lever clamp nut	
105A-11	Flange stud nut	(4)
111-51S	Pump and metering rod arm assembly	
114-45	THROTTLE LEVER DOG	
115-70	Fast idle connector rod	
115-77	Throttle connector rod (Sup by 115 130)	
115-130	THROTTLE CONNECTOR ROD	
117-28	Pump link	
117-83	Vacuum piston link	
118-39	Dust cover	
120-125S	METERING ROD JET ASSEMBLY	(2)
121-78	COIL HOUSING GASKET	
121-79	BODY FLANGE GASKET	
121-80	AIR HORN GASKET	
121-81	BOWL COVER GASKET	
122-81	PUMP DISCHARGE CHECK PLUG	
122-85S	INTAKE DISK CHECK ASSEMBLY	
136-37	Connector rod washer	
136-38	Throttle shaft dog washer	
136-129	Choke shaft washer	(2)
146-171S	Bowl cover assembly	
150-62	Piston pin	
150-150	Intake needle pin (Sup by 150 151)	
150A-10	PIN SPRING	(3)
160-35	Choke piston	
160-67S	Vacuum piston and pin assembly	
170P-62S	Thermostatic housing and coil assembly	
172-22	THROTTLE CONNECTOR ROD RETAINER (Use with 115 130)	
181-144S	Fast idle cam assembly	
186 15	Climatic® control baffle plate	
196 15	Pump plunger guide	

†685S can be changed to 685SA by using 25 162S and resetting float level to 1/16 inch (T109-197)

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

CAR SERIAL NUMBERS

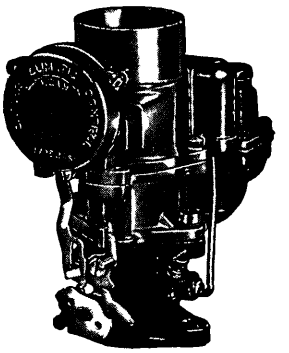
1947 { K-100 —001001 and up
1947 { KC-101—2000001 and up

1948 { K-481—001001 and up
1948 { K-482—001001 and up

1947 { F-47 —001001 and up
1947 { F-47C—1000001 and up

1948 { F485—001001 and up
1948 { F-486—001001 and up

1949 K-491—001001 and up



Casting Number 309 on Face of Flange

KAISER SPECIAL SIX
MODELS
K-100 & KC-101, 1947
K-481 & K-482, 1948
K-491, 1949

FRAZER SIX
F-47 & F-47C, 1947
F-485 & F-486, 1948

WA-1 Down-Draft **Carbureters 622S-622SA-622SB** With Climatic® Control

CARBURETER SPECIFICATIONS

For Six Cylinder Engine 3 5/16 Inch Bore 4 3/8 Inch Stroke

Dimensions Flange size 1¼ inch S A E
Primary venturi 11/32 inch I D
Secondary venturi 11/16 inch I D
Main venturi 1⅜ inch I D

Float Level Distance from seam of float (at free end) to tip on lower edge of float chamber cover when needle is seated to be ⅜ inch for 622S and ½ inch for 622SA SB

Movement of float at free end (float drop) to be ½ inch

Vents Outside No 10 drill Inside none

Gasoline Intake Square vertical needle Size No 38 drill hole in needle seat

Low Speed Jet Tube (622S 622SA) Jet size No 70 drill 028 inch (622SB) Jet size No 68 drill 031 inch
By pass size No 54 drill
Economizer 0755 0765 inch diameter
Idle bleed size No 50 drill

Idle Port Length 175 inch width 030 inch

Idle Port Opening 133 to 137 inch above edge of valve with valve closed tight

Idle Screw Seat No 46 drill

Set Idle Adjustment Screw ¾ to 1¾ turns open For richer mixture turn screw out Do not attempt to idle engine below 8 m p h (Slow idle free engine idle speed is between 525 and 555 r p m)

Main Nozzle In primary venturi angle 45° Closed tip Inside diameter No 30 drill Upper hole 021 inch diameter on 45° angle Lower hole 0945 inch d ameter on 70° angle

Metering Rod (Vacumeter Type) Economy step 075 inch diameter power step 055 inch diameter Length 3 9/64 inches

Metering Rod Jet 099 inch diameter

Metering Rod Setting Use gauge part No T109 102 (2 468 inches)

Accelerating Pump High pressure type with adjustable pump stroke
Pump discharge jet size No 67 drill
Relief passage (to outside) size No 42 drill
Intake ball check size No 55 drill
Discharge ball check size No 32 drill

Plunger Travel 18/64 inch plunger travel (full throttle position) Medium stroke Use gauge No T109 117S

Choke Carter Climatic® Control set on index Butterfly type offset valve Choke heat suction hole in body size No 35 (.110") drill

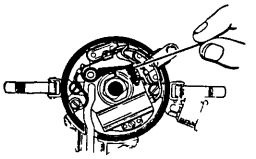
Vacuum Spark Port 051 to 054 inch d ameter (622S) Top of port 035 to 040 inch above top edge of valve (622SA SB) Top of port 033 to 043 inch (early production) 035 to 045 inch (late production) above top edge of valve

Motor Tune Up—Be Accurate!

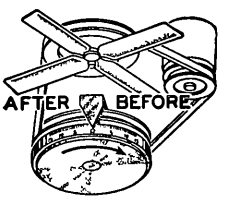
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



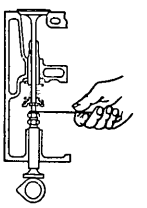
Spark Plug
Gap
032"



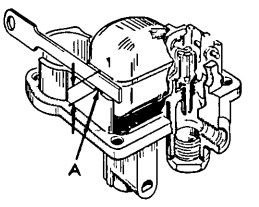
Breaker Point
Setting
020"



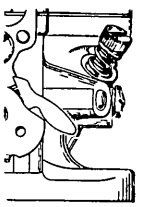
Ignition Timing
Breaker Points to Open
T D C



Valve Setting
(Cold)
Intake 014"
Exhaust 014"



Float Setting
(Measure from point A to top of float seam)
⅜ Inch (622S)
½ Inch (622SA SB)



Idle Adjustment Screw Setting
¾ to 1¾
Turns Open

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MARCA REGISTRADA

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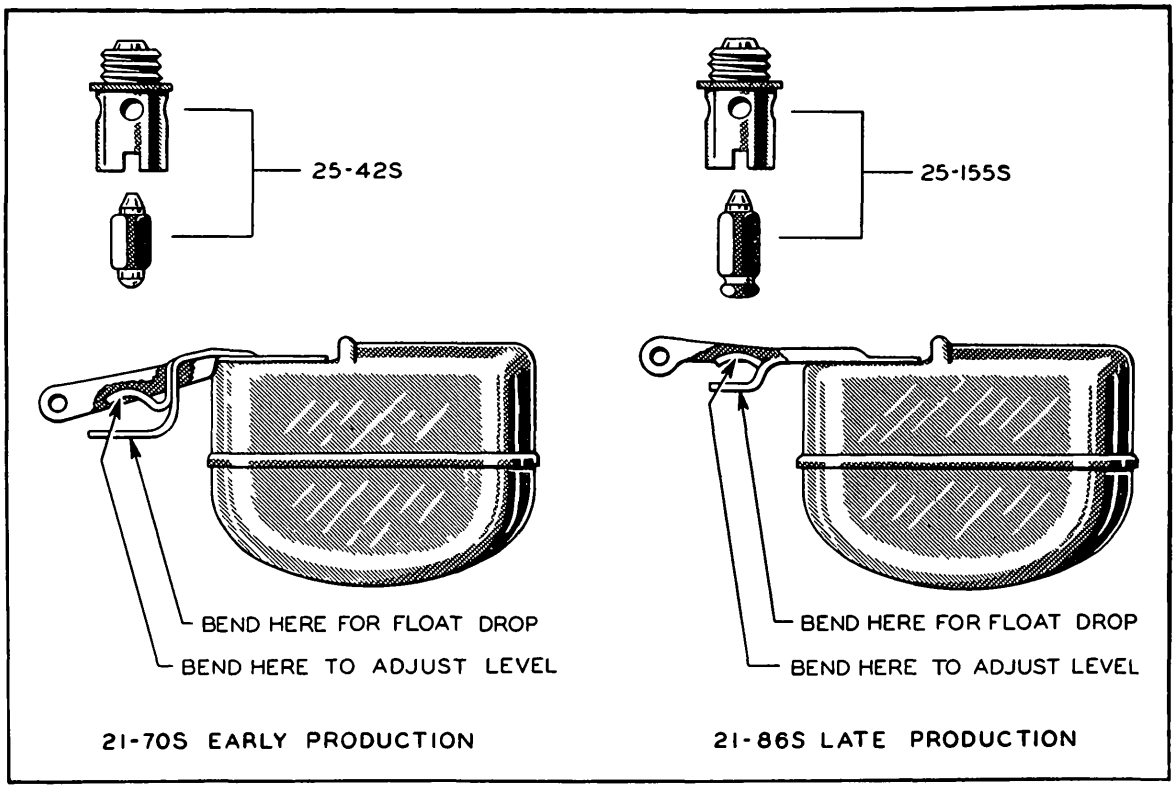


Figure 1

FLOAT LEVEL:

Early Production: 622S Carbureters use 21-70S float and lever assembly and must be used with 25-42S needle and seat assembly (Fig 1) Adjust float 3/8" from machined portion on bowl cover to seam of float (T109-80) (Fig. 2)

Late Production: 622SA Carbureters use 21-86S float and lever assembly and must be used with 25-155S needle and seat assembly (Fig. 1). Adjust float ½" from machined portion on bowl cover to seam of float (T109-83) (Fig 2)

To convert 622S to 622SA, unitized package 21-101U can be used (consists of 25-155S needle and seat assembly and 21-86S float and lever assembly).

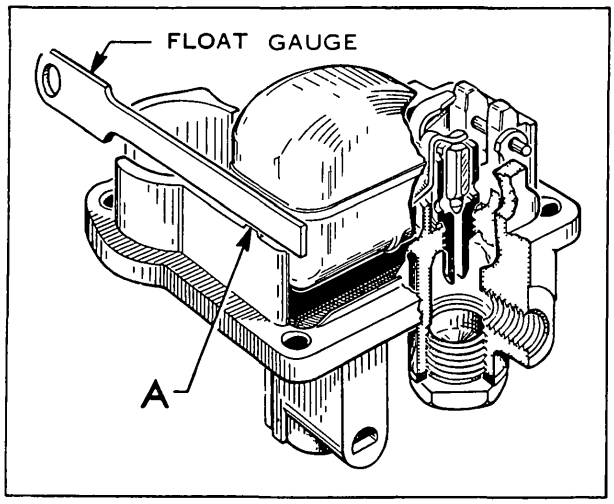


Figure 2

Pump Adjustment: Must be made before metering rod adjustment With throttle valve seated and pump connector link in lower hole (medium stroke), pump plunger should travel 18/64" from seated to wide open throttle position Pump travel can be measured by using universal pump stroke gauge, T109-117S, placing base of gauge on ridged portion of bowl cover so that finger of gauge is over top of pump connector link where it extends through plunger shaft, (B—Figure 3) Hold gauge vertical and turn knurled nut of gauge until finger lightly touches top of connector link Take gauge reading Difference in readings obtained at wide open and seated throttle positions should be "18"

Adjustment can be made by bending throttle connector rod at lower angle (Insert Figure 3)

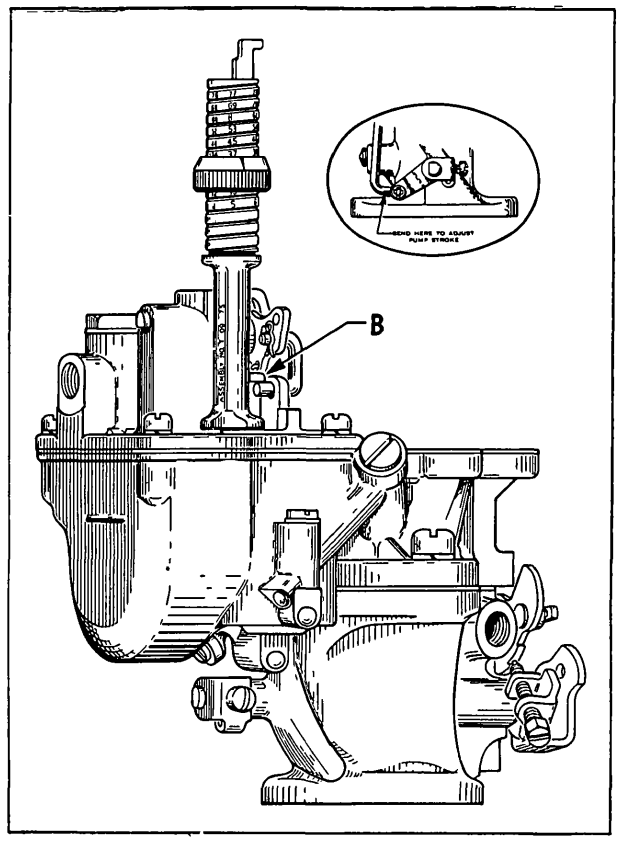


Figure 3

Metering Rod Adjustment: (Figure 4) Correct setting of metering rod is important and must be made after pump adjustment Procedure is as follows

1 Back out throttle lever set screw to seat throttle valve
2 Insert metering rod gauge T109-102 in place of metering rod seating tapered end in metering rod jet
3 Press lightly on vacuum piston link (C) until lip (D) contacts raised portion on pump operating lever There should be less than 005' between metering rod pin and shoulder in notch of gauge with throttle valve seated
4 Adjustment can be made by bending lip (D) on vacuum piston link
5 Remove gauge and install metering rod and disk Connect metering rod spring

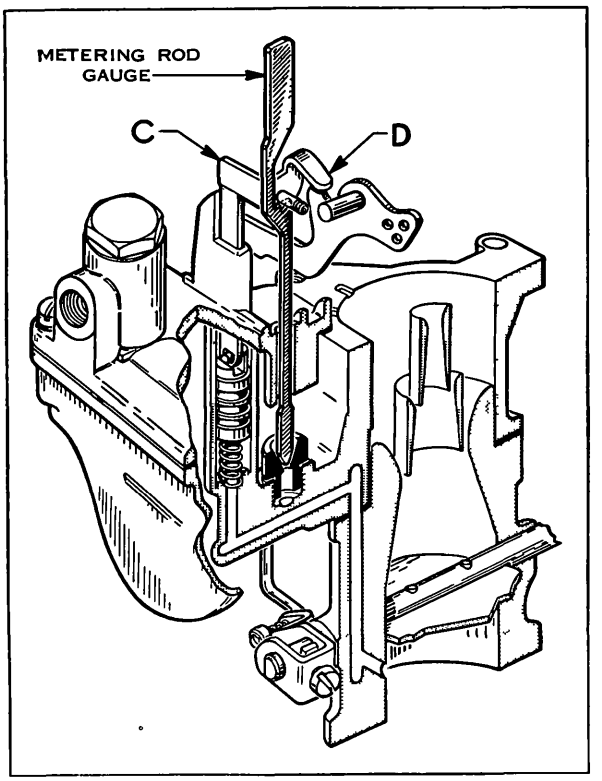


Figure 4

Anti-Percolator Adjustment: (Figure 5) Crack throttle valve 030' (E) by placing gauge T109-29 (F) between valve and bore of carbureter at side opposite port Bend rocker arm (Use tool T109-105) until there is a clearance of 005" to 015" between rocker arm and pump arm (G)

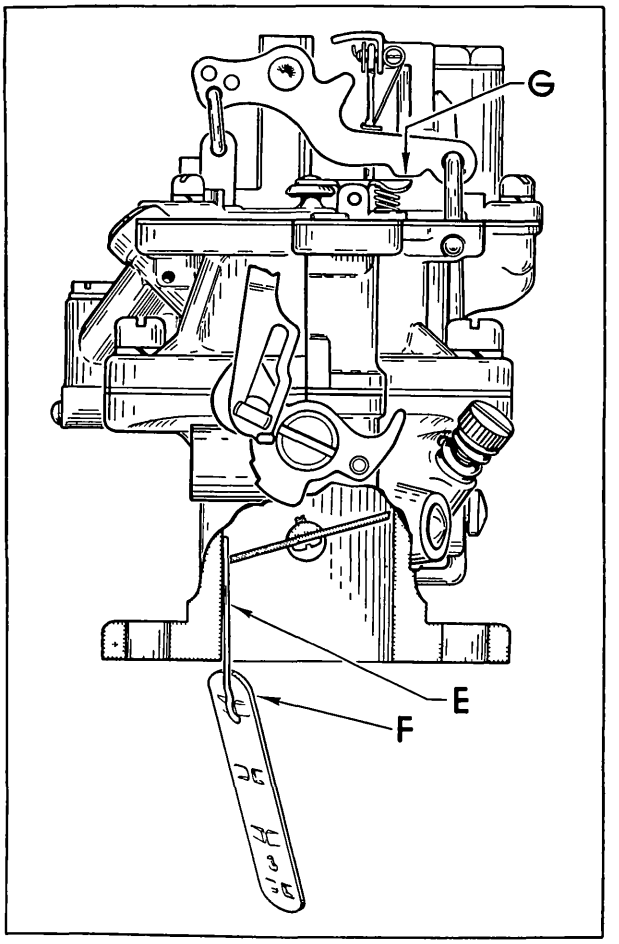


Figure 5

Fast Idle Adjustment: (Figure 6) With fast idle cam held in normal idle position tighten throttle lever adjusting screw until it just touches cam Hold throttle closed and pull cam back until first step on cam is against (not on) set screw (H)

There should now be 5/8' clearance (J) between inside wall of air horn and lower edge of choke valve Use tool T109-85

Adjustment can be made by bending at offset portion (K) of fast idle link Use tool T109-41

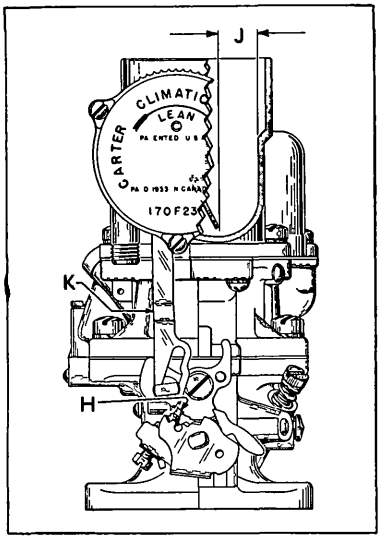


Figure 6

Unloader Adjustment: (Figure 7) With throttle valve wide open there should be 7/16" clearance (L) between lower edge of choke valve and inner wall of air horn Use gauge T109-81 Adjustment should be made by bending arm (M) on throttle lever using tool T109-41

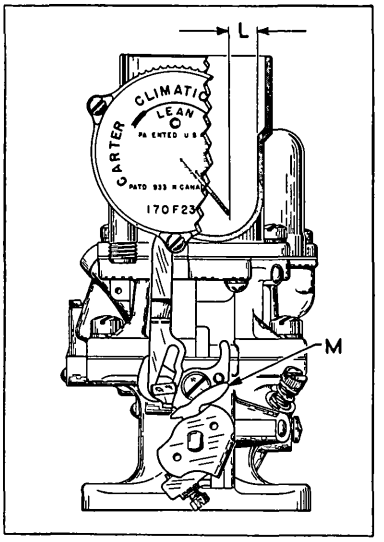


Figure 7

Lock-Out Adjustment: (Figure 8) With throttle and choke valves wide open, choke should lock in wide open position Adjustment should be made by bending lip at lower end of fast idle link (N) to give 1/32' clearance between lip and throttle lever lock

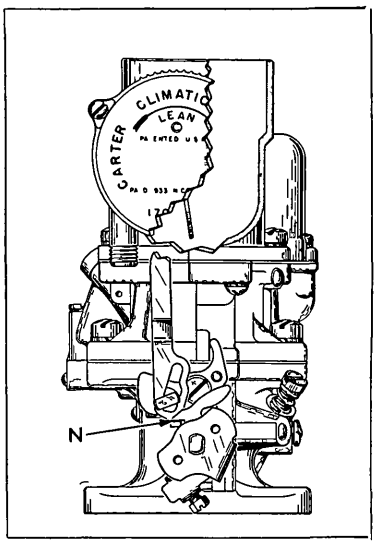
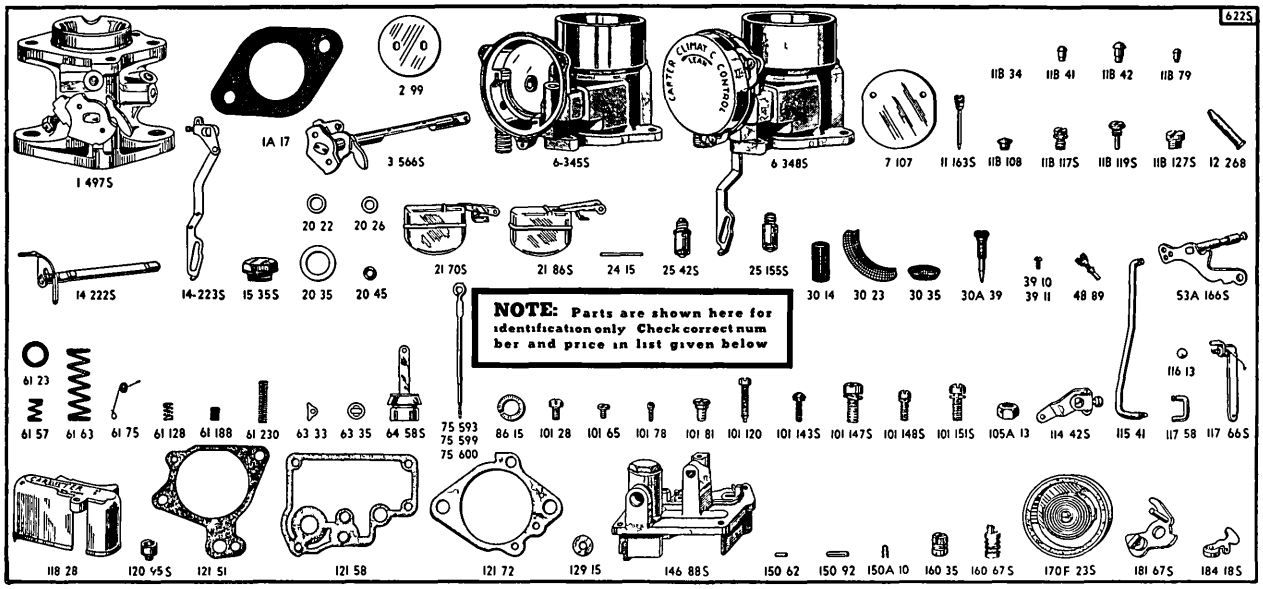


Figure 8



Kaiser-Frazer—1947-48-49—Carbureters Nos. 622S-622SA-622SB

WHEN SERVICING, USE GASKET ASSORTMENT No 139A, ★ REPAIR PACKAGE No 1362C

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1A-17	FLANGE GASKET	
1-497S	Body flange assembly	
2-99	Throttle valve	
3-566S	Throttle shaft and lever assembly	
6-345S	Air horn and piston housing assembly	
6-348S	Air horn assembly	
7-107	Choke valve	
11-160S	LOW SPEED JET ASSEMBLY	
11-163S	Low speed jet assembly (Sup by 11-160S)	
11B-34	Nozzle retainer plug (Sup by 11B-164)	
11B-41	Rivet passage plug	
11B-42	Rivet passage plug	
11B-79	Rivet passage plug	(5)
11B-108	Idle port rivet passage plug	
11B-117S	Idle passage plug assembly	
11B-119S	Discharge ball retainer plug assembly	
11B-127S	Passage plug assembly	(2)
11B-164	Nozzle retainer plug	
12-268	Nozzle	
14-222S	Choke piston lever link and shaft assembly	
14-223S	Choke lever screw and link assembly	
15-35S	Strainer nut assembly	
20-22	Gasket	(3)
20-26	Gasket	(3)
20-35	Bowl strainer gasket	
20-45	NOZZLE GASKET	
21-70S	†Float and lever assembly (Sup by 21-86S)	
21-86S	†Float and lever assembly	
21-101U	Unitized Package (Consists of one 21-86S and one 25-155S)	
24-15	Float lever pin	
25-42S	†Needle and seat assembly (Sup by 25-155S)	
25-155S	†NEEDLE AND SEAT ASSEMBLY	
30-14	BOWL STRAINER GAUZE	
30-23	PISTON HOUSING STRAINER	
30-35	PUMP CYLINDER STRAINER	
30A-39	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	THROTTLE VALVE ATTACHING SCREW	(2)
48-89	PUMP JET	
53A-166S	Pump arm and countershaft assembly	
61-23	Plunger spring (Sup by 61-200)	
61-57	Idle adjustment screw spring	
61-63	Pump spring	
61-75	Metering rod spring	
61-128	Connector rod spring (Use with 115-41)	
61-188	Rocker arm spring	
61-200	Plunger spring	
61-230	VACUUM PISTON SPRING	
63-33	Choke housing retainer	(3)
63-93	Spring retainer (Use with 115-41)	
64-58S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49-108)	
75-593	Metering rod—standard— 073'- 050" (Sup by 75-642)	
75-599	Metering rod—1 size lean— 0745"- 054" (Sup by 75-643)	
75-600	Metering rod—2 sizes lean— 076"- 057" (Sup by 75-644)	
75-602U	Unitized package—Metering rods (Consisting of 2 one 75-599 and one 75-600) (Sup by 75-645U)	
75-642	METERING ROD—STANDARD— 075"- 055'	
75-643	Metering rod—1 size lean	
75-644	Metering rod—2 sizes lean	
75-645U	Unitized package—Metering rods (Consisting of one 75-643 and one 75-644)	
86-15	Flange stud lock washer	
101-26	Coil housing attaching screw	(3)
101-28	Throttle shaft arm clamp screw	
101-65	Choke housing attaching screw (Sup by 101-26)	
101-78	Choke lever clamp screw	
101-81	Fast idle cam screw	
101-120	Throttle lever adjusting screw	
101-143S	Piston housing attaching screw and washer assembly	
101-147S	Body flange attaching screw and washer assembly	(2)
101-148S	Bowl cover attaching screw and washer assembly	(5)
101-151S	Air horn attaching screw and washer assembly	(2)
105A-13	Flange nut	
114-42S	THROTTLE SHAFT ARM AND SCREW ASSEMBLY	
115-41	Throttle connector rod (Sup by 115-122)	
115-122	THROTTLE CONNECTOR ROD	
116-13	PUMP CHECK BALL	(2)
117-58	PUMP CONNECTOR LINK	
117-66S	Piston link and spring assembly	
118-28	Dust cover	
120-95S	METERING ROD JET ASSEMBLY	
121-51	AIR HORN GASKET	
121-58	BOWL GASKET	
121-72	BODY FLANGE GASKET	
129-15	Metering rod disk	
146-88S	Bowl cover and strainer assembly	
150-62	Choke piston pin	
150-92	Anti-percolator pin	
150A-10	PIN SPRING	(3)
160-35	Choke piston	
160-67S	Vacuum piston and pin assembly	
170F-23S	Thermostatic coil and housing assembly (Sup. by 170F-64SU)	
170F-64SU	Unitized package (Consists of 1—170F-64S, 3—63-48, 3—101-26 1—121-74)	
172-21	THROTTLE CONNECTOR ROD RETAINER (Use with 115-122)	
181-67S	Fast idle cam and pin assembly	
184-18S	ANTI-PERLOLATOR CAP AND ROCKER ARM ASSEMBLY	

†See Page 2— 'Float Level

★When servicing 622S float and lever assembly 21-86S must be used

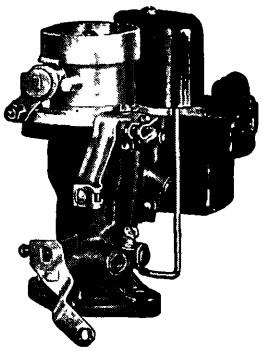
NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

CARBURETER
TRADE MARK REG U S PAT OFF.
MARCA REGISTRADA

CARTER CARBURETOR CORPORATION, ST. LOUIS, MO., U. S. A.

CAR SERIAL NUMBERS
Kaiser—K-100-51361
Custom—K-101-2000001

Frazer—F-47-30770
Manhattan—F-47C-1021118



Casting No. 421 on face of flange

KAISER SPECIAL SIX MODEL "K-100"
FRAZER SIX MODEL "F-47"
1947
(LIMITED PRODUCTION)
(622SB can also be used)

W-1 DOWN-DRAFT **CARBURETER No. 574S**

CARBURETER SPECIFICATIONS

For Six Cylinder Engine: 3-5/16 Inch Bore, 4⅜ Inch Stroke

Dimensions: Flange size, 1¼ inch S. A. E.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 11/16 inch I. D.
Main venturi, 1¼ inch I. D.

Float Level: Distance from float (at free end) to float chamber cover, when needle is seated, to be ½ inch plus or minus 1/64 inch.

Vents: Outside, none. Inside balance vent tube above choke valve 13/64 inch I. D.

Gasoline Intake: Square vertical needle. Size No. 48 drill hole in needle seat.

Low Speed Jet Tube: Vertical jet size, .035 inch diameter.
By-pass in body, size No. 51 drill.
Economizer jet, size .0545 to .0555 inch diameter.

Idle Ports: Upper port diameter, No. 44 drill.
Lower port diameter, No. 54 drill.

Idle Port Opening: Top of lower port .044 to .048 inch above top edge of valve, with valve closed tight.

Idle Screw Seat: Size No. 52 drill.

Set Idle Adjustment Screw: 1¼ to 2¼ turns open. For richer mixture, turn screw out. Do not attempt to idle engine below 350 r. p. m.

Outer Nozzle: In primary venturi, angle 30°. Discharge size, .125 inch diameter.

Inner Nozzle: (Seats in outer nozzle) .120 inch I. D.

Nozzle Retainer Plug: Jet size No. 31 drill.

Metering Rod: Economy step .067 inch diameter. Second step tapers to .062 inch diameter. Third step tapers to .060 inch diameter. Power step .046 inch diameter. Length 3⅜ inches.

Metering Rod Jet: Size .093 inch diameter.

Metering Rod Setting: Use gauge, part No. T109-25 (2.795 inches).

Accelerating Pump: Low pressure type with non-adjustable stroke
Discharge jet, size No. 72 drill.
Intake disk check plug, size No. 62 drill.
Discharge disk check plug, size No. 40 drill

Choke: Manual—butterfly type, offset valve.

Throttle Valve: Opens to within 0° to 3° from perpendicular

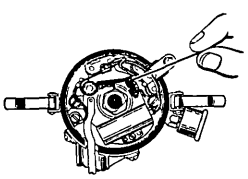
Vacuum Spark Port: Slot type: size, .041 to .125 inch. Bottom of port .000 to .004 inch above top of valve.

Motor Tune-Up—Be Accurate! Always Use Feeler Gauges!

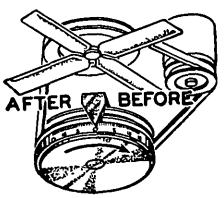
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



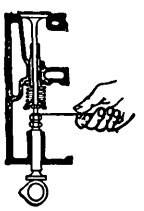
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Gap
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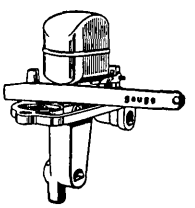
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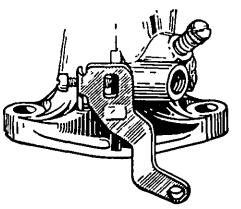
Ignition Timing
Breaker Points to Open:
T.D.C.



Valve Setting
COLD
Intake .014"
Exhaust .014"



Float Setting
(Use Gauge)
½ Inch



Idle Adjustment
Screw Setting
1¼ to 2¼
Turns Open

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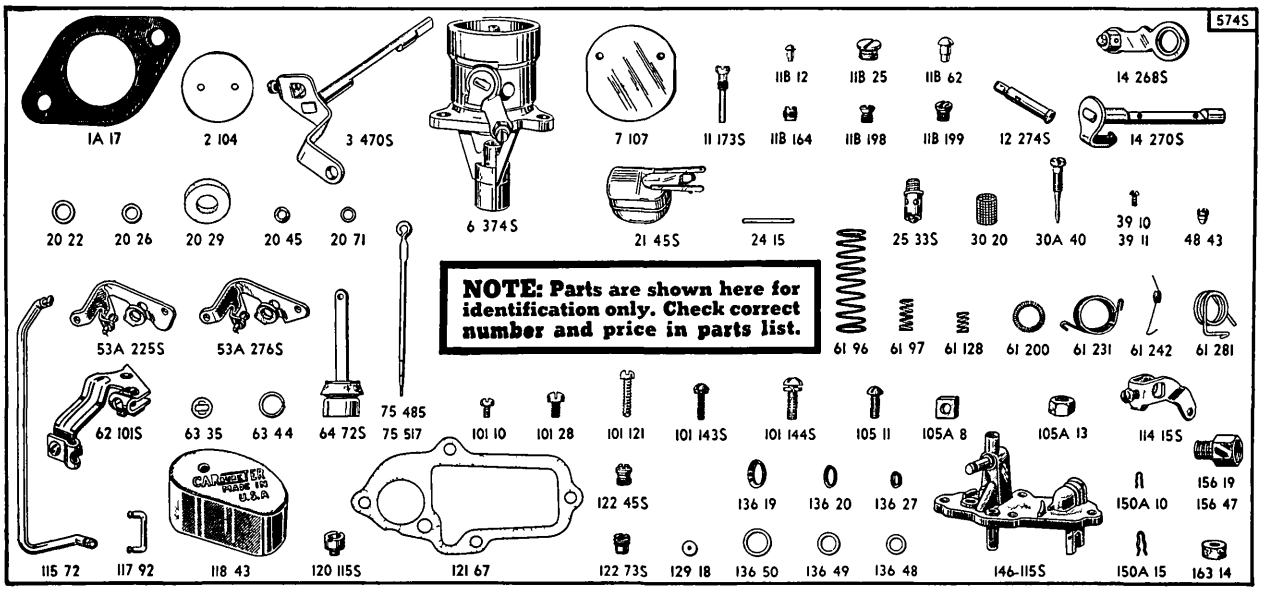
CARBURETER ADJUSTMENTS

If carbureter loads up after considerable service, float level should be checked Wear on lip of float lever will raise float level Float level may be reset by bending lip of float lever down to raise float level or bending lever up to lower float level Only a very slight bend is needed

If motor stalls while idling reset idle adjustment screw and throttle lever adjusting screw If these adjustments do not correct the trouble, remove low speed jet tube and clean thoroughly with compressed air Examine and see that tube seats gasoline-tight in body casting, top and bottom If not replace with a new tube of identical specifications NEVER CHANGE A LOW SPEED JET TUBE FROM ONE CARBURETER TO ANOTHER

Increased resistance on foot throttle indicates a clogged pump jet Pump jet should be removed and cleaned with compressed air, which in many cases, will remove the dirt or lint However, it is usually advisable to replace the pump jet, as its cost is nominal All jets and ball checks must be seated gasoline-tight

Poor acceleration may be due to damaged or worn plunger leather in accelerating pump, corrosion in pump cylinder loose or cracked cylinder cracked plunger cup or bent pump arm (parts which may be replaced at small cost) If plunger is removed from cylinder always use loading tool in reassembling to avoid damage to plunger leather



Kaiser-Frazer—1947—Carbureter 574S

WHEN SERVICING, USE GASKET ASSORTMENT No 138A, REPAIR PACKAGE No 1089D

PART NAMES IN CAPITAL LETTERS LISTED BELOW INDICATE CONTENTS OF REPAIR PACKAGE

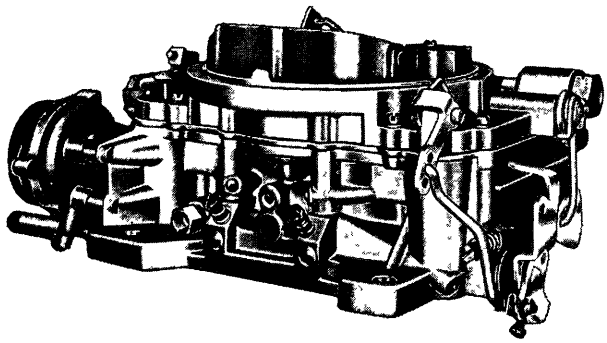
Part No	PART NAME	
1A-17	FLANGE GASKET	
2-104	Throttle valve	
3-470S	Throttle shaft and lever assembly	
6-374S	Air horn assembly	
7-107	Choke valve	
11-173S	LOW SPEED JET ASSEMBLY	
11B-12	Rivet plug	(7)
11B-25	Disk check passage plug	
11B-62	Rivet plug	
11B-164	Nozzle plug	
11B-198	Pump jet passage plug	
11B-199	Idle hole passage plug	
12-274S	NOZZLE ASSEMBLY	
14-268S	Choke assembly	
14-270S	Choke shaft and lever assembly	
20-22	Idle hole passage plug gasket	
20-26	Metering rod jet gasket	
20-29	PUMP CYLINDER GASKET—UPPER	
20-45	NOZZLE GASKET	
20-71	AIR HORN GASKET	
21-45S	Float and lever assembly	
24-15	Float lever pin	
25-33S	NEEDLE AND SEAT ASSEMBLY	
30 20	STRAINER GAUZE	
30A 40	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	Throttle valve attaching screw	(2)
48-43	PUMP JET 72 DRILL	
53A 225S	Pump lever assembly (Service)	
53A-276S	Pump lever assembly	
61-96	Pump spring	
61-97	Adjusting screw lock spring	
61-128	Connector rod spring (Use with 115 72)	
61-200	Plunger spring	
61-231	Choke valve spring	
61-242	Metering rod spring	
61-281	Pump connector link spring	
62-101S	Tube clamp assembly	

Part No	PART NAME	
63-35	Spring retainer (Use with 115 72)	
63-44	Retainer ring	
64-72S	PLUNGER AND ROD ASSEMBLY (Identify by Shaft No 49 129)	
75-485	METERING ROD—STANDARD—067" 067" to 062" 062" to 060" 046"	
75 517	Metering rod—1 size lean—068" 068" to 065" 065" to 064" 049"	
101-10	Wire clamp screw	
101-28	Throttle shaft arm clamp screw	
101-121	Throttle lever adjusting screw	
101-143S	Dust cover attaching screw and washer assembly	
101-144S	Air horn or bowl cover attaching screw and washer assembly	(7)
105-11	Tube clamp screw	(2)
105A 8	Tube clamp nut	(2)
105A 13	Flange nut	(2)
114-15S	THROTTLE SHAFT ARM AND SCREW ASSEMBLY	
115-72	Throttle connector rod (Sup by 115 149)	
115-149	THROTTLE CONNECTOR ROD	
117-92	★Connector link	
118-43	Dust cover	
120-115S	METERING ROD JET ASSEMBLY—093" DR	
121-67	BOWL COVER GASKET	
122-45S	INTAKE DISK CHECK ASSEMBLY	
122-47S	DISCHARGE DISK CHECK ASSEMBLY	
122-73S	Discharge disk check assembly (Sup by 122 47S)	
129-18	METERING ROD DISK	
136-19	†PLUG WASHER (CONICAL) 136 50 (FLAT)	
136-20	†PLUG WASHER (CONICAL) 136 49 (FLAT)	(2)
136-27	†PLUG WASHER (CONICAL) 136 48 (FLAT)	(2)
146-115S	Bowl cover and countershaft assembly	
150A-10	PIN SPRING	(3)
150A 15	PIN SPRING	
156-19	Gas line fitting (brass) optional	
156-47	Gas line fitting (steel)	
163-14	FELT PACKING	
172-21	THROTTLE CONNECTOR ROD RETAINER (Use with 115 149)	

†Note The use of flat or conical plug washers should be determined by shape of seat in casting

★117 92 available for service (not used in production)

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used



LINCOLN
CAPRI, PREMIERE & CONTINENTAL MARK IV
1959

AFB Four-Bore Down-Draft Climatic® Control **Carbureter No. 2853S**

CARBURETER SPECIFICATIONS

For Lincoln 8 Cylinder 430 Cu. In. Engine: Vacuum at Idle 17-18 Inches

Dimensions: Flange, four-bore—4 bolt type.
Throttle bore, primary, 1-9/16 inch; secondary, 1-11/16 inch I. D.
Primary venturi size, primary side, 7/16 inch; secondary, 11/32 inch I. D.
Main venturi size, primary side, 1-3/16 inch; secondary side, 1-9/16 inch I. D.

Vents: Inside (2) in air horn: Outside (2) in air horn.

Low Speed Circuit: (Primary side only)
Jet, size No. 67 (.032 inch) drill.
By-pass, size .057 inch diameter.
Economizer, size No. 56 (.0465 inch) drill.
Idle bleed, size No. 54 (.055 inch) drill.
Idle port, slot type, length .220 inch; width .030 inch.

Idle Port Opening: .152 to .158 inch above top edge of valve with valve tightly closed.

Lower Port: (For idle adjustment screw), size .0635 inch diameter.

Set Idle Adjustment Screw: 1½ to 2½ turns open. For richer mixture turn screw out. Idle engine at 450 R.P.M. for Auto Trans. in Drive Range.

Main Nozzle: Installed permanently. DO NOT REMOVE. Anti-percolator bleed primary, (tube in venturi assembly) size No. 70 (.028 inch) drill. Secondary, (drilled hole in venturi assembly) size No. 57 (.043 inch) drill.
Under strut bleed, primary side only, size No. 42 (.0935 inch) drill.

Main Vent Tube: (In venturi assembly) Side holes primary 1—size No. 40 (.060 inch) drill, secondary no side holes.

Secondary Initial Discharge: (In venturi assembly, secondary side only).
Pick up tube, size No. 56 (.0465 inch) drill.
Air bleed size, No. 60 (.040 inch) drill.
Discharge port (upper) size, No. 53 (.0595 inch), (lower) size, No. 60 (.040 inch) drill.

Accelerating Pump: Discharge jet (twin) primary side only, size No. 70 (.028 inch) drill. Intake disc check (screw plug) size .115 to .120 inch diameter. Disc check bleed size .016" to .020". Discharge needle seat, size .070 inch diameter.

Choke: Carter Climatic® Control set on index. Butterfly type—offset choke valve, primary side only. Choke heat suction hole, restriction in body, size No. 45 (.082 inch) drill.

Vacuum Spark Port: Horizontal slot (round end) .055 x .130 inch. Top of port .015 to .025 inch above top edge of valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open: 6° B.T.D.C. At Vibration Damper	Float Setting 3/16 Inch (Use Gauge T109-28)	Idle Adjustment Screw Setting 1½ to 2½ Auto. Trans. 450 R.P.M. in Drive Range
.032"-.036"	.014"-.016"			

NOTE: These cars are equipped with Hydraulic Valve Lifters—N Adjustment.

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CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3770

FLOAT ALIGNMENT: Side of floats, parallel to edge of casting. Minimum clearance between lever and air horn lugs without binding. To adjust, bend float lever.

FLOAT LEVEL: 3/16 inch (Gauge T109-28) plus or minus 1/64 inch between top of floats at outer end and air horn gasket. To adjust, bend float lever.

FLOAT DROP: 23/32 inch plus or minus 1/16 inch between top of floats at outer end and air horn gasket. To adjust, bend stop tabs on float brackets.

PUMP: 17/32 inch from the top of the bowl cover to the top of the plunger shaft with throttle connector rod in inner hole (long stroke) of pump arm.

CHOKE PISTON LEVER ADJUSTMENT: 3/32 inch (Gauge T109-125) between choke lever and stop in piston housing with choke held closed. To adjust, take slack out of linkage by setting counter shaft lever.

FAST IDLE LINKAGE ADJUSTMENT: With slight clearance between lug on fast idle cam and stop on flange casting, and inner countershaft lever contacting lug on outer conutershaft lever align index mark on cam with adjusting screw. To adjust, bend fast idle connector rod. It may be necessary to bend stop lug on fast idle cam.

FAST IDLE THROTTLE VALVE CLEARANCE: .030 inch (Gauge T109-29) between lower edge of valve and bore with adjusting screw on index mark of cam.

FAST IDLE ON CAR: 550 R.P.M. hot engine—with fast idle screw on lowest (last) step of cam.

UNLOADER: 1/8 inch (Gauge T109-36) between upper edge of choke valve and inner wall of air horn. To adjust, bend unloader arm on throttle lever.

SECONDARY THROTTLE LEVER ADJUSTMENT: 1. Block choke valve wide open. 2. with 15/32 inch between lower edge of primary valve and bore (opposite idle port) secondary valves should just start to open. To adjust, bend throttle operating rod. NOTE: At wide open throttle primary and secondary valves will reach vertical position. 3. With primary and secondary throttle valves in tightly closed position there should be .010" to .030" (Gauge T109-29) between positive closing secondary shoe and cam on primary throttle lever. To adjust, bend shoe on secondary lever.

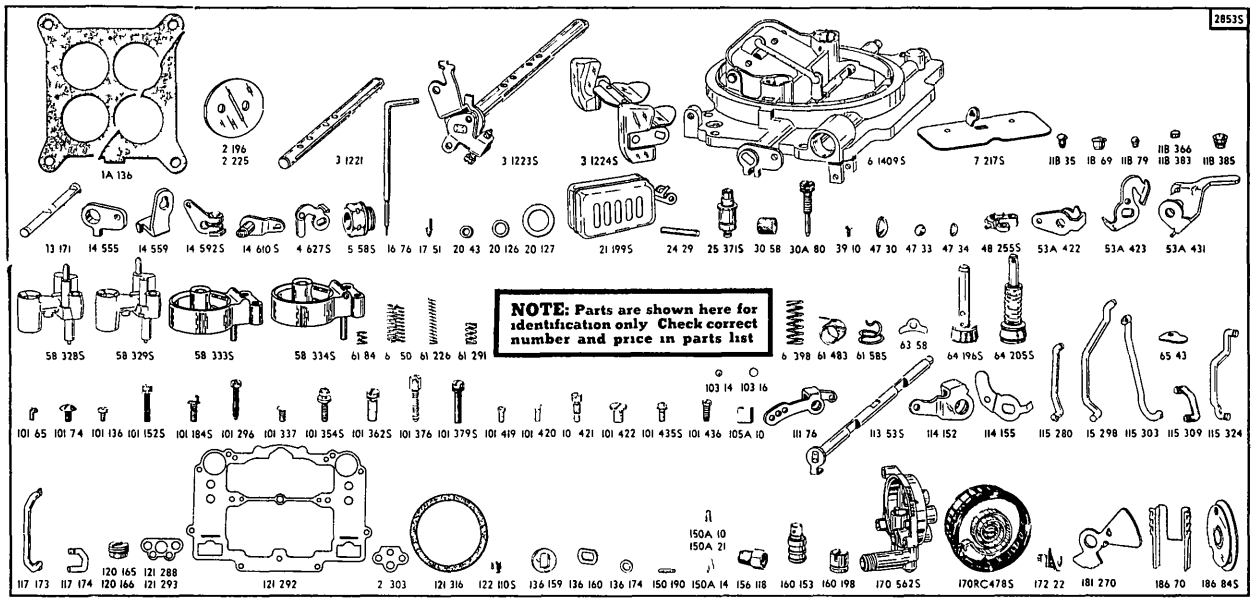
DASH POT: 1. 1/8 inch from the top of the bowl cover to the top of the plunger shaft with primary valves tightly closed. To adjust, bend the flat portion of the dash pot lever. Check to be sure dash pot lever does not contact bowl cover attaching screw. 2. 7/16 inch from the top of the bowl cover to the top of the plunger shaft with primary valves wide open. To adjust, bend stop lug on flat lever. Check to be sure plunger shaft operates without sticking in hole in bowl cover.

TOOLS REQUIRED FOR SERVICING CARBURETERS

T109-28	3/16" Float gauge	T109-22	Bending Tool
T109-29	.020" Wire gauge	T109-213	Bending Tool
T109-36	1/8" Unloader gauge	T109-214	Bending Tool

T109-125 3/32" Unloader gauge (Used for choke piston lever adj.)

CARBURETER
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Lincoln—1959—Carbureter No. 2853S

WHEN SERVICING, USE GASKET ASSORTMENT No. 328, RE-CARBURETION KIT No 1974N

PART NAMES IN CAPITAL LETTERS LISTED BELOW INDICATE CONTENTS OF RE-CARBURETION KIT

Part No	PART NAME	
1A-136	—FLANGE GASKET	
2-196	Secondary throttle valve	(2)
2-225	—Primary throttle valve	(2)
3-1221	—Secondary throttle shaft	
3-1223S	—Primary throttle shaft and lever assembly	
3-1224S	—Auxiliary throttle shaft valve and weight assembly	
6-1409S	—Air horn assembly	
7-217S	Choke valve and lever assembly	
11B-35	Rivet plug	
11B-69	Rivet plug	(2)
11B-79	Rivet plug	(2)
11B-366	Lead plug	(2)
11B-383	Lead plug	(2)
11B-385	Idle port and fuel passage plug	(3)
13-171	Choke shaft	
14-555	Inside countershaft lever	
14-559	Countershaft lever (to choke valve)	
14-592S	Countershaft lever screw and nut assembly	
14-610S	Choke lever and shaft assembly (piston housing)	
14-627S	—Choke piston link and lever assembly	
15-58S	Fuel inlet fitting assembly	
16-76	—STEP UP ROD—STANDARD 0665" x 053"	(2)
17-51	Pump discharge check needle	
20-43	Piston housing gasket	
20-126	Needle seat gasket	(2)
20-127	Fuel inlet fitting gasket	
21-199S	—Float and lever assembly	(2)
24-29	Float lever pin	(2)
25-371S	—NEEDLE AND SEAT ASSEMBLY (1015")	(2)
30-58	Fuel inlet strainer	
30A-80	Idle adjustment screw	(2)

Part No	PART NAME	
39-10	Choke valve attaching screw	(2)
47-30	Piston housing welsh plug	
47-33	Venturi welsh plug	(4)
47-34	Spark port welsh plug	
48-255S	Pump jet housing	
53A-422	Dash pot arm (outer)	
53A-423	Secondary throttle operating lever	
53A-431	Dash pot arm (inner)	
58-328S	—Primary venturi assembly (choke side)	
58-329S	—Primary venturi assembly (pump side)	
58-333S	—Secondary venturi assembly (choke side)	
58-334S	—Secondary venturi assembly (pump side)	
61-84	Idle adjustment screw spring	(2)
61-150	Dash pot return spring	
61-226	STEP UP PISTON SPRING	(2)
61-291	Throttle lever adjusting screw spring	
61-398	Pump spring (lower)	
61-483	Secondary throttle return spring	
61-585	Step up rod retaining spring	(2)
63-58	Coil housing retainer	(3)
64-196S	DASH POT PLUNGER ROD AND CHECK ASSEMBLY	
64-205S	PUMP PLUNGER ROD AND SPRING ASSEMBLY	
65-43	Step up piston cover plate	(2)
101-65	Piston housing choke shaft lever attaching screw	
101-74	Throttle shaft lever attaching screw	(2)
101-136	Coil housing attaching screw	(3)
101-152S	Air horn attaching screw and washer assembly	(2)
101-184S	Pump jet housing attaching screw and washer assembly	(2)
101-296	Fast idle adjustment screw	

Part No	PART NAME	
101-337	Countershaft lever attaching screw	
101-354S	Countershaft lever clamp screw and washer assembly	
101-362S	Air horn attaching screw and washer assembly	(8)
101-376	Throttle lever adjusting screw	
101-379S	Venturi attaching screw and washer assembly	(8)
101 419	Secondary throttle valve attaching screw	(4)
101 420	Primary throttle valve attaching screw	(4)
101-421	Pump arm attaching screw	
101-422	Fast idle cam attaching screw	
101-435S	Step up piston cover plate attaching screw and washer assembly	(2)
101 436	Piston housing attaching screw	(3)
103-14	Lead shot (180" dia)	
103-16	Lead shot (200" dia)	
105A-10	Countershaft lever clamp screw nut	
111-76	Pump arm	
113 53S	—Countershaft and lever assembly	
114-152	Primary throttle shaft arm (inner)	
114-155	—Primary throttle shaft arm (outer)	
115 280	Fast idle connector rod	
115-298	Throttle connector rod	
115-303	Choke connector rod	
115-309	Throttle operating rod	
115-324	—Dash pot connector rod	
117-173	Choke valve connector link	
117-174	Pump connector link	
120-165	Secondary metering jet (086")	(2)
120-166	PRIMARY METERING JET (0935")	(2)
121 288	PRIMARY VENTURI CLUSTER GASKET	(2)
121-292	AIR HORN GASKET	
121-293	SECONDARY VENTURI CLUSTER GASKET	(2)
121-303	PUMP JET HOUSING GASKET	
121-316	COIL HOUSING GASKET	
122-110S	—Pump intake disk check assembly	
136-159	Primary throttle shaft washer	
136-160	Secondary throttle shaft washer	
136 174	Throttle lever adjusting screw washer	
150-190	Choke piston pin	
150A-10	Pin spring	(6)
150A-14	Pin spring	
150A-21	Pin spring	
156-118	Spark fitting	
160-153	Step up piston	(2)
160-198	—Choke piston	
170 562S	Piston housing and plug assembly	
170RC-478S	—Thermostatic coil and housing assembly	
172-22	Throttle connector rod retainer	
181-270	—Fast idle cam	
186-70	Fuel bowl baffle	(2)
186-84S	—Choke baffle plate assembly	

—Parts so marked are new and listed for the first time

NOTE **Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used**

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Form 3770
October, 1958

CARTER CARBURETOR

DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

File Under Lincoln

CARTER MODEL AFB CARBURETER FOR LINCOLN (SERVICE ADJUSTMENT PROCEDURE)

NOTE: The parts and specification pages referred to are catalog pages. These pages can be obtained from Carter-Carburetor, Catalog Department, St. Louis (7), Missouri. Specify the carbureter number found on the base of carbureter, when requesting specification pages.

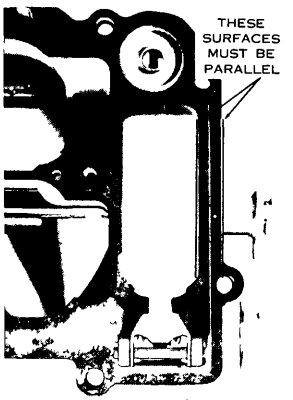


Figure 1 Left

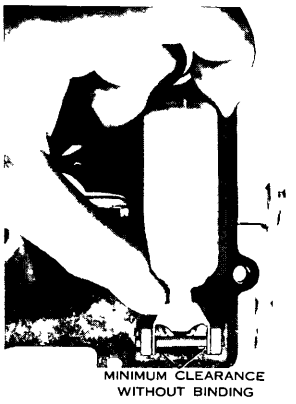
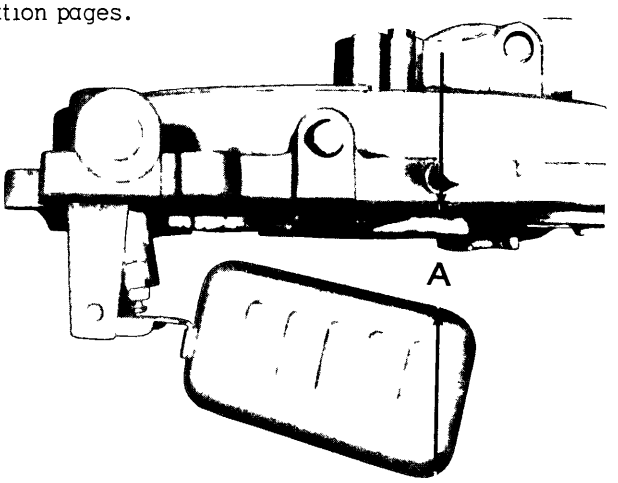


Figure 1 Right



FLOAT ALIGNMENT ADJUSTMENT (Fig. 1):

1. Sight down the side of the float shell to determine if the side of the float is parallel to the outer edge of the air horn casting. TO ADJUST: Bend float lever by applying pressure to the end of the float shell with the fingers while supporting the float lever with the thumb.

CAUTION: To avoid damaging the float, apply only enough pressure to bend float lever.

2. After aligning float, remove as much clearance as possible between arms of float lever and lugs on air horn by bending the float lever. Arms of float lever should be as parallel to the inner surfaces of lugs on air horn as possible.

   Floats must operate freely without excess clearance on its hinge pin.

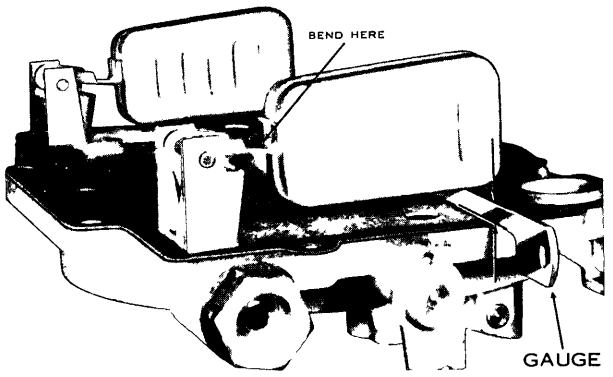


Figure 2

FLOAT LEVEL ADJUSTMENT (Fig. 2):

With air horn inverted, bowl cover gasket in place and needle seated, there should be the clearance as listed on carburetor specification page between outer end of float and air horn gask t. To adjust, b nd float arm. Adjust both floats. Recheck float alignment.

FLOAT DROP ADJUSTMENT (Fig. 3):

With bowl cover held in upright position and measuring from outer end of float, the distance (A) between top of floats and bowl cover gasket should be as listed on specification page. To adjust, bend stop tabs on float brackets.

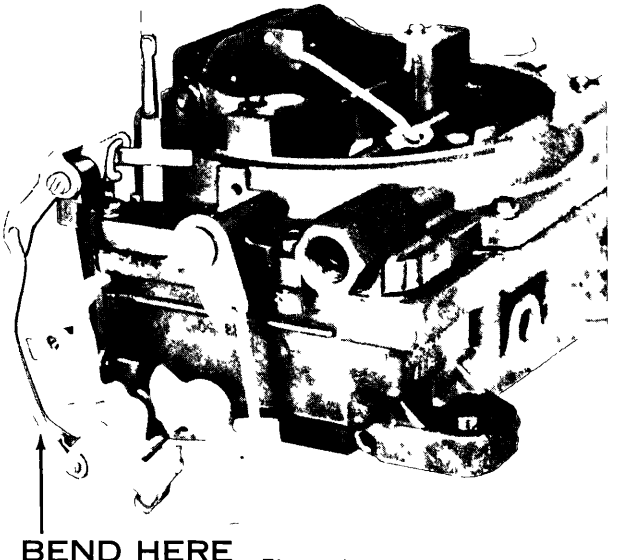


Figure 4

PUMP ADJUSTMENT (Fig. 4):

1. Back out idle speed screw until throttle valves s at in bores of carburetor. NOTE: Be sure choke is wid open so fast idle cam does not hold throttle valve open.
2. With throttle connector rod in inner hole (long strok) of pump arm, the distance from the top of the bowl cover to the top of the plung r shaft should b as specified on carbur tor specification page.
3. Adjust by bending throttle connector rod at lower angle (use tool T109-213).

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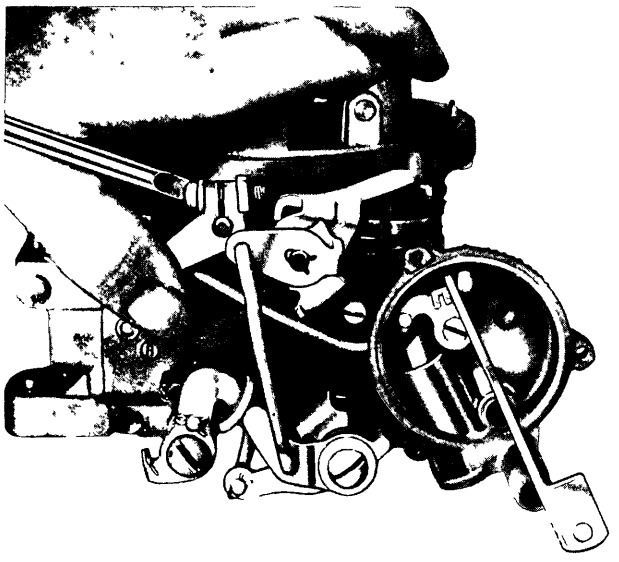


Figure 5

CHOKE PISTON LEVER ADJUSTMENT (Fig. 5):

Loosen countershaft lever clamp screw. Take end play out of countershaft, and hold choke valve tightly closed. Tak slack out of linkage by pressing countershaft lever towards closed position with gauge in place between choke lever and stop in piston housing. Hold in place and tighten clamp screw.

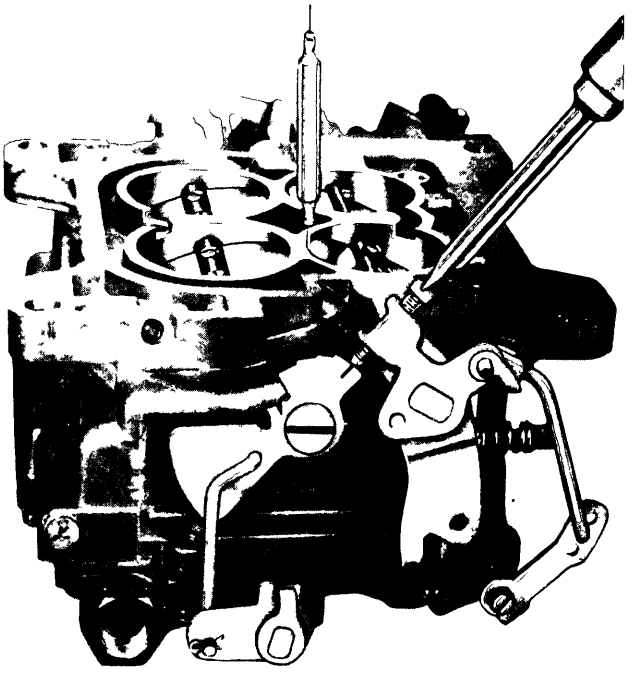


Figure 7

FAST IDLE THROTTLE VALVE CLEARANCE ADJUSTMENT (Fig. 7):

With choke valve tightly closed, tighten fast idle adjusting screw (on index mark of cam) until the clearance between throttle valve and bore of carbureter, side opposite idle port, is as listed on carbureter specification page.

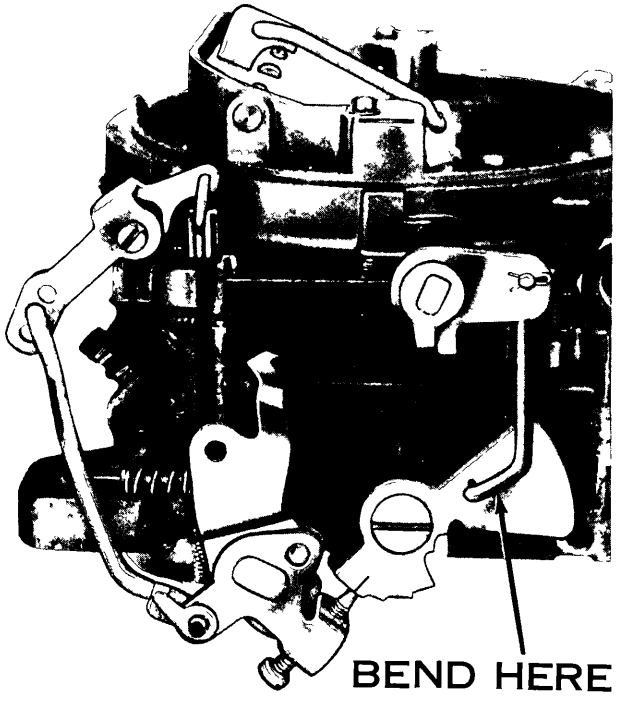


Figure 6

FAST IDLE LINKAGE ADJUSTMENT (Fig. 6):

With chok valv tightly clos d and lug on out r choke shaft lev r contacting stop on inn r chok shaft l v r align c nt r of fast idl scr w with ind x mark on cam. To adjust, bend fast idl conn ctor rod. (Use tool T109-213).

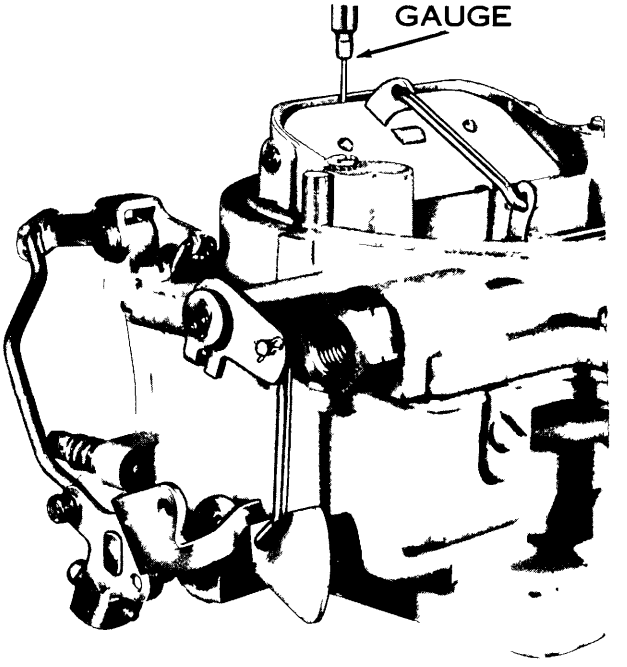


Figure 8

UNLOADER ADJUSTMENT (Fig. 8):

With throttl wid op n th r should b the clearance as listed on carburet r sp cification pag between upp r dg of chok valv and inn r wall of air horn. To adjust, b nd unload r lip on throttl shaft lev r. (Us tool T109-214).

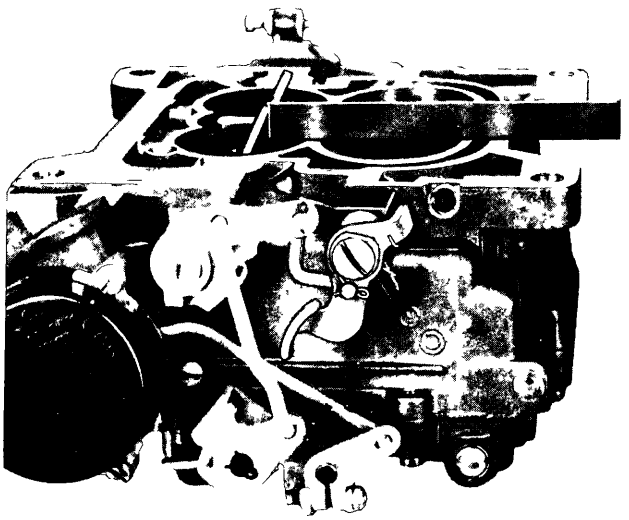


Figure 9A

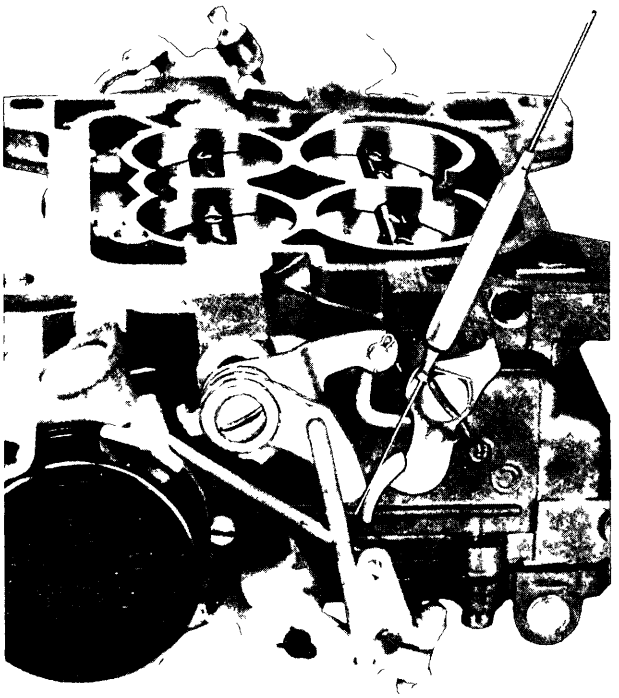


Figure 9B

SECONDARY THROTTLE LEVER ADJUSTMENT (Figs. 9A and 9B):

1. Block choke valve wide open.
2. Secondary throttle valves should just start to open when primary throttle valves are opened to the clearance as listed on specification page between lower edge of valve and bore (opposite idle port). To adjust, bend throttle operating rod. (Use bending tool T109-213). (See Fig. 9A) NOTE: Primary and secondary throttle valves should reach wide open position, full vertical, at the same time.
3. With primary and secondary throttle valves in tightly closed position, there should be the clearance as listed on specification page between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoes on secondary lever. (See Fig. 9B).

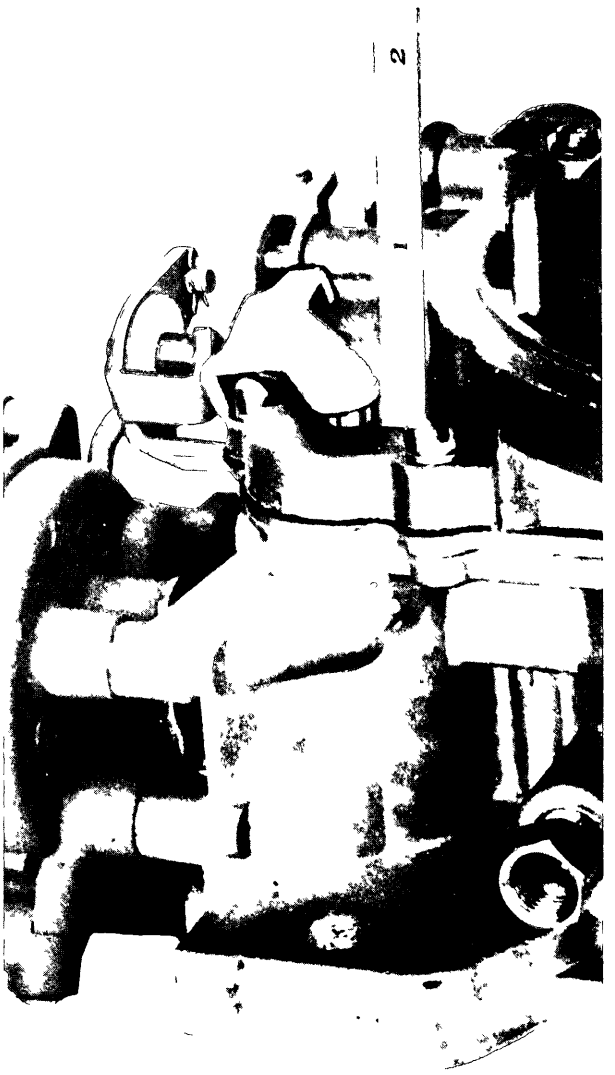


Figure 10

DASH POT ADJUSTMENT (Fig. 10):

1. With primary valves tightly closed there should be the distance as listed on specification page between the top surface of the bowl cover and the top of the plunger shaft. To adjust, bend the flat portion of the dash pot lever. Check to be sure dash pot lever does not contact bowl cover attaching screw.
2. With primary valves wide open there should be the distance as listed on specification page between the top surface of the bowl cover and the top of the plunger shaft. To adjust, bend stop lug on dash pot lever. (Use bending tool T109-22). Check to be sure plunger shaft operates without sticking in hole in bowl cover.

NOTE: See last page for pertinent service information.

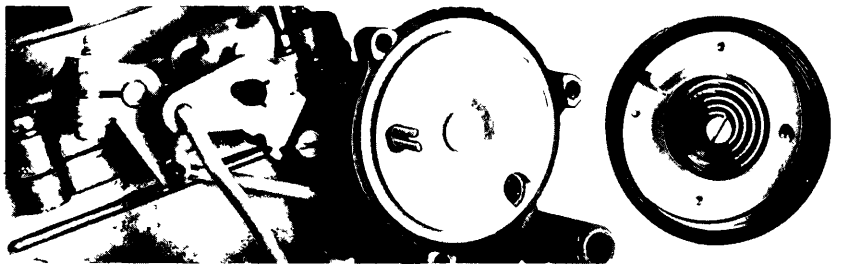


Figure 11

FIGURE 11:

After choke baffle plate assembly has b en properly installed as shown in Fig. 11 install gasket and coil housing with the lip on the coil spring installed in the slot of the piston lever.

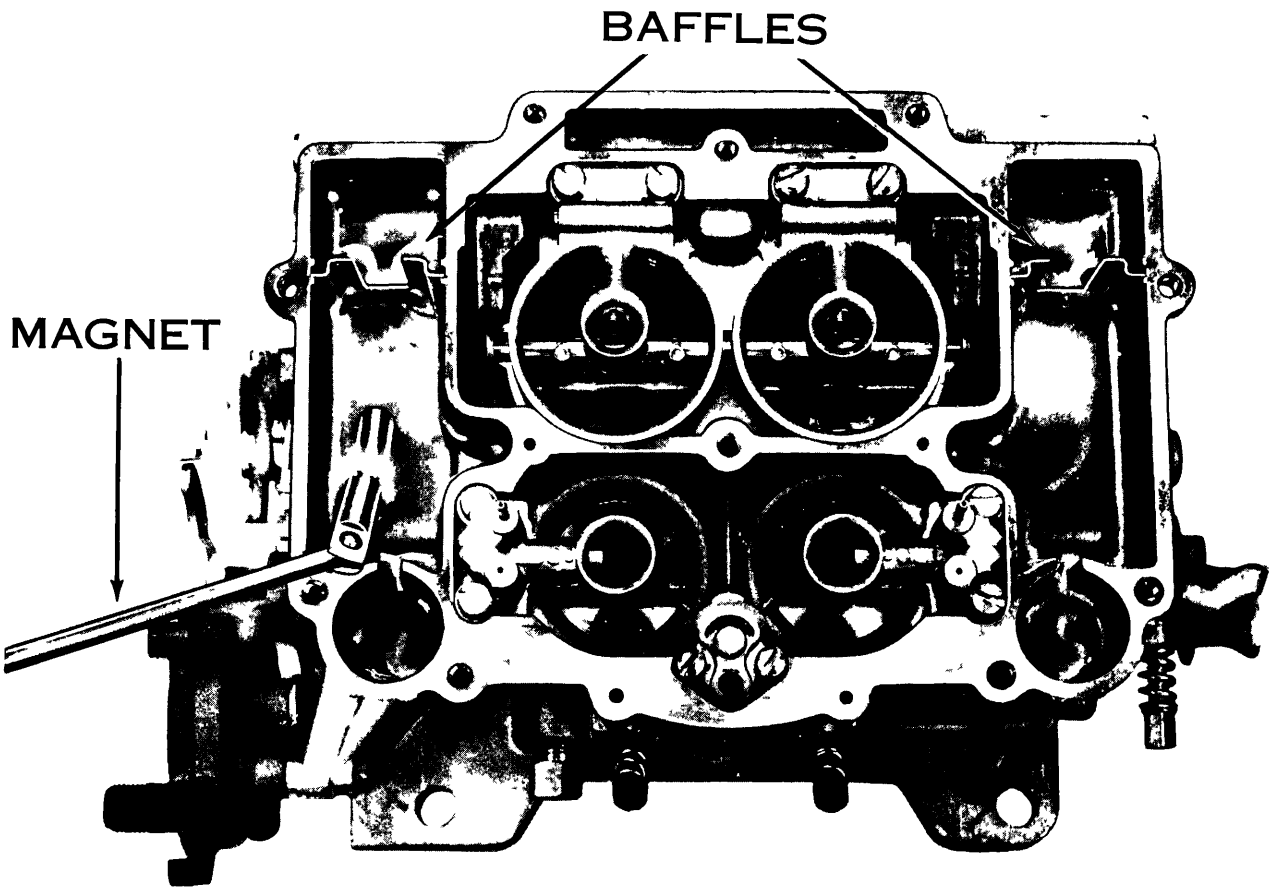


Figure 12

FIGURE 12:

Flooding, stumble on acceleration and other performance complaints are, in many instances, caused by the presence of dirt, water or oth r foreign matter in the carbureter. To aid in diagnosing the cause of the complaint, the carbureter should be carefully remov d from the engine without draining the fuel from the bowl. The contents of the fuel bowl may then be examin d for contamination as the carbureter is disassembled.

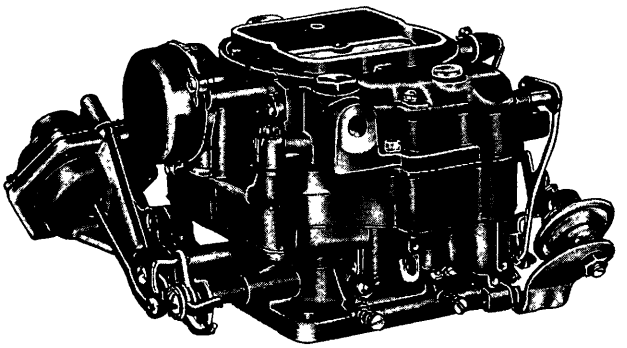
Check the fuel in the bowl for contamination by dirt, water, gum or other foreign matter. A magnet moved through the fuel in th bowl will pick up and identify any iron oxide dust that may have caused intake needle and seat leakage.

Inspect gasketed surfaces between body and air horn. Small nicks or burrs should be smoothed down to eliminate air or fu l leakage. Be especially particular when inspecting the top surface of the inner wall of the bowl around the vacuum piston passage. A poor seal at this location may contribute to a "cutting-out" on turns complaint.

Install fuel baffles as shown (Fig. 12) to prevent damage of floats.

Fill the carbur ter bowl with clean fu l before installing on the manifold. This will h lp prev nt dirt trapped in th fuel syst m from being dislodged by the free flow of fuel as the carbureter is primed. The operation of the floats and intake needl and seats may be checked under pr ssure if a fuel pump is used at th b nch to fill th carbur ter bowl. Operate the throttl sev ral times and visually check the discharge from the pump jets.

Before installing the carbur ter, hold ch ke valv open and turn the idl sp ed scr w until it just contacts th throttle lev r, then ½ a turn more to open the throttle valves enough to keep the engine running, until the idle mixture and final R.P.M. adjustment can be made.



LINCOLN
MODELS
"CAPRI" & "PREMIERE"
1957

(Also used on Mercury "Turnpike Cruiser" with 368 Cu. In. Engine)

WCFB Four-Bore Down-Draft Climatic® Control **Carbureters Nos. 2404S-2404SA**

CARBURETER SPECIFICATIONS

For Lincoln 8 Cylinder Engine: 4.00 Inch Bore, 3.66 Inch Stroke

Dimensions: Flange, four bore—4 bolt type.
Throttle bore, size, 1-7/16 inch I. D.
Primary venturi size, 11/32 inch I. D.
Main venturi size 1-3/16 inch.

Vents: Outside, none. Inside (5).

Gasoline Intake: Primary, size No. 38 (.1015 inch); secondary, size No. 42 (.0935 inch) drill hole in needle seat.

Low Speed Jet Tube: (Primary side only). Jet, size No. 69 (.0292 inch) drill.
By-pass, in body, size (.0625 inch) diameter.
Economizer, in body, size (.0492 inch) diameter.
Idle bleed, in body, size No. 55 (.052 inch) drill.

Idle Port: (Upper) slot type. Primary, length .160 inch; width .030 inch. Secondary, none.

Idle Port Opening: Primary, .125 to .131 inch above top edge of valve with valve tightly closed. Secondary, none.

Lower Port: Primary (for idle adjustment screw), size No. 50 (.070 inch) drill. Secondary, none.

Set Idle Adjustment Screw: 1/2 to 1 1/2 turns open. For richer mixture turn screw out. Idle engine between 475 and 500 r.p.m. (in neutral).

Main Nozzle: Installed permanently. DO NOT REMOVE. Anti-percolating well restriction (primary, in plug) size No. 67 (.032 inch) drill, (secondary, in plug) size No. 55 (.052 inch) drill.

Metering Rod: Vacuum operated. See Parts List for size.

Metering Rod Jet: Primary, size .1015 inch diameter (for metering rod).
Secondary size .073 inch diameter (no metering rod).

Accelerating Pump: Discharge jet (twin) primary side only, size No. 69 (.0292 inch) drill. Intake ball check seat, size .115 to .120 inch diameter. Discharge needle seat, size .070 inch diameter. Relief passage (vent) to fuel chamber No. 42 (.0935 inch) drill. Discharge relief plug, size No. 55 (.052 inch) drill.

Choke: Carter Climatic® Control, set 1 point rich. Butterfly type—offset choke valve, primary side only. Choke heat suction hole, restriction in piston housing, size No. 38 (.1015 inch) drill.

Vacuum Spark Port: Slot type round end .130 x .055 inch. Bottom of port .020-.030 inch above valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

CAUTION: **Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.**

Spark Plug Gap .035"	Breaker Point Setting .014"-.016"	Ignition Timing Breaker Points to Open: 5° B. T. D. C. At Vibration Damper	Float Setting See Adjustments	Idle Adjustment Screw Setting 1/2 to 1 1/2 Turns Open Idle Engine at 475 to 500 R.P.M. In Neutral

NOTE: **These cars are equipped with Hydraulic Valve Lifters—N Adjustment.**

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CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3688

FLOAT LEVEL: Primary 1/16" (Gauge T109-293); secondary 3/16" (Gauge T109-222) between top of float and machined surface of casting. To adjust: bend float arms.

FLOAT DROP: Primary 9/16", secondary 11/16". To adjust: bend stop tabs on float bracket.

PUMP: Flat on pump arm should parallel straight edge on dust cover boss. To adjust: bend connector rod.

METERING ROD: Metering rod should bottom with throttle valves seated.

BOWL VAPOR VENT: 1/16" (Gauge T109-197) between bowl vapor vent valve and dust cover. To adjust: bend vapor vent arm.

FAST IDLE CAM CLEARANCE: With choke valve closed lip of fast idle cam should lightly contact boss on flange casting. To adjust: set choke shaft lever.

FAST IDLE THROTTLE VALVE CLEARANCE: .030" (Gauge T109-29) between lower edge of valve and bore with adjusting screw on high step of cam.

FAST IDLE ON CAR: 800 R.P.M. with speed screw on lowest (last) step of cam.

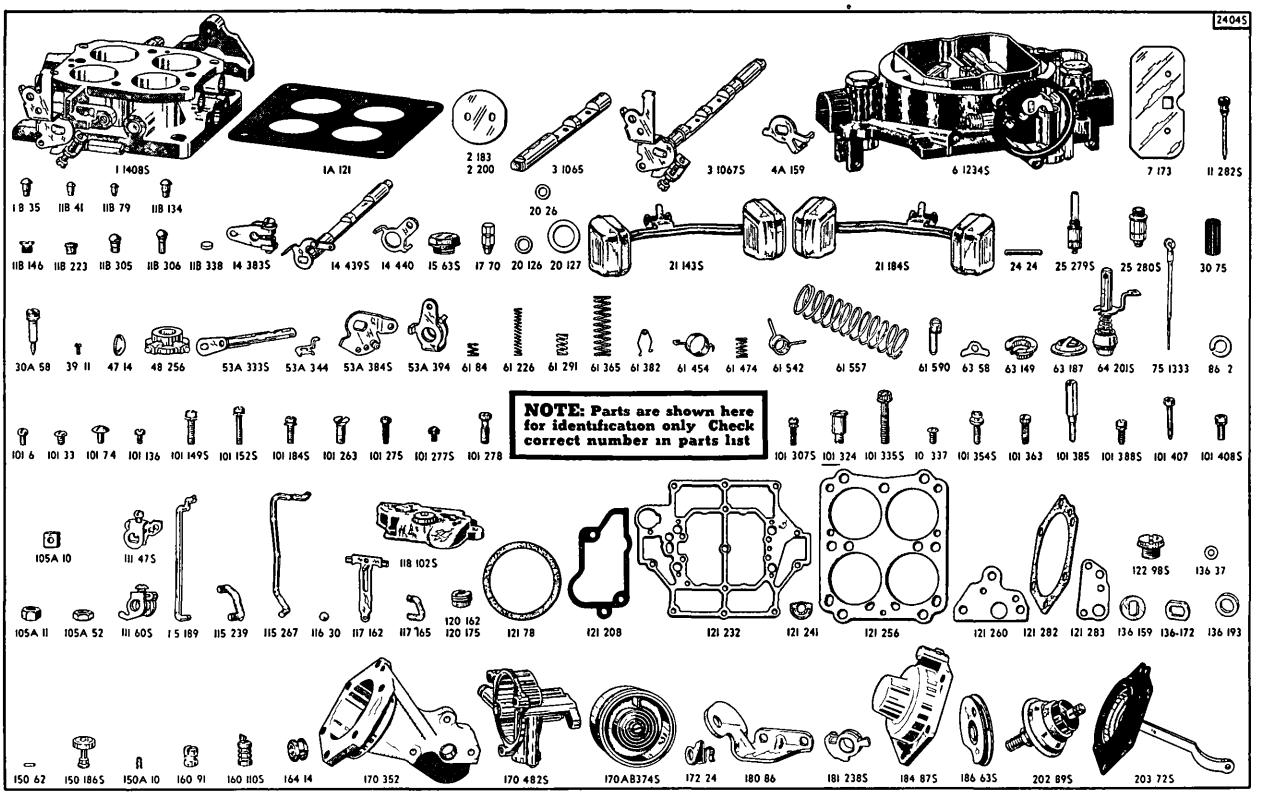
UNLOADER: 1/8" (Gauge T109-36) between upper edge of choke valve and inner wall of air horn. To adjust: bend unloader arm on throttle lever.

PRIMARY THROTTLE SHAFT DOG: 1. Place a .030" (Gauge T109-29) between wide open stop tang on primary throttle lever and stop on flange 2. Adjust upper lug of throttle shaft dog so that upper arm of spring lightly contacts tang of throttle operating lever. 3. Hold both primary and secondary throttles in wide open position. 4. Adjust lower lug of throttle shaft dog so that lower arm of spring lightly contacts center web of throttle operating lever. NOTE: Use bending tool T109-214 to adjust lugs on throttle shaft dog.

SECONDARY OPERATING LEVER: 1. Block choke valve wide open. 2. Back out throttle lever stop screw so that primary valves seat in carbureter bores. 3. When the primary and secondary throttle valves are seated there should be a minimum clearance of .010" between lug on secondary operating lever and stop on primary throttle shaft dog. To adjust, bend lug on secondary operating lever. (Use tool T109-214.) NOTE: Secondary valves seat at top edge only.

DASH POT (SLOW CLOSING THROTTLE): Plunger shaft should bottom with 1/16" (Gauge T109-197) placed between shaft and operating lever with throttle valves seated.

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Lincoln—1957—Carbureters Nos. 2404S-2404SA

WHEN SERVICING, USE GASKET ASSORTMENT No. 294; REPAIR PACKAGE No 1853

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-1408S	Body flange assembly	
1A-121	FLANGE GASKET	
2-183	Primary throttle valve	(2)
2-200	Secondary throttle valve	(2)
3-1065	Secondary throttle shaft	
3-1067S	Primary throttle shaft and lever assembly	
4A-159	Throttle shaft dog	
6-1234S	Air horn assembly (2404S) (Sup by 6 1292S)	
6-1292S	Air horn assembly	
7-173	Choke valve	
11-282S	LOW SPEED JET ASSEMBLY	(2)
11B-35	Rivet plug	(4)
11B-41	Rivet plug	
11B-79	Rivet plug (early prod (4) (late prod (2)	
11B-134	Rivet plug	
11B-146	Level sight plug	(2)
11B-223	Rivet plug	(6)
11B-305	Rivet plug	(2)
11B-306	Rivet plug	
11B-338	Rivet plug	
14-383S	Choke lever and screw assembly	
14-439S	Choke piston lever link and shaft assembly	
14-440	Cam trip lever	
15-63S	Strainer nut assembly	(2)

Part No.	PART NAME	
17-70	PUMP CHECK NEEDLE	
20-26	Pump relief valve gasket	
20-126	Needle seat gasket	(2)
20-127	BOWL STRAINER GASKET	(2)
21-143S	Secondary float and lever assembly	
21-184S	Primary float and lever assembly	
24-24	Float lever pin	(2)
25-279S	SECONDARY NEEDLE AND SEAT ASSEMBLY	
25-280S	PRIMARY NEEDLE AND SEAT ASSEMBLY	
30-75	BOWL STRAINER	
30A 58	Idle adjusting screw	(2)
39-11	Choke valve attaching screw	(2)
47-14	Choke housing welsh plug	
48-256	Pump jet housing	
53A-333S	Pump operating lever and countershaft assembly	
53A-344	VENT ARM	
53A-384S	Secondary throttle operating lever assembly	
53A-394	Primary throttle operating lever	
61-84	Idle adjustment screw spring	(2)
61-226	VACUUM PISTON SPRING	
61-291	Throttle lever adjusting screw spring	
61-365	PUMP SPRING (LOWER)	
61-382	METERING ROD SPRING	
61-454	Fast idle cam spring	

Part No.	PART NAME	
61-474	Bowl vent spring	
61-542	Throttle flex spring	
61-557	Diaphragm return spring	
61-590	Float lifter spring	
63-58	Coil housing retainer	(3)
63-149	Bowl vent spring retainer	
63-187	INTAKE CHECK BALL RETAINER	
64-201S	PUMP PLUNGER AND ROD ASSEMBLY	
75-1333	METERING ROD—STANDARD 072" x 060" x 040"	(2)
75-1354	Metering rod—1 size lean 074" x 064" x 056"	(2)
75-1362U	Metering rod and jet unit—2 sizes lean (Consists of (2) 75 1355 and (2) 120 186)	
86-12	Flange stud lock washer	(4)
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft arm attaching screw	(2)
101-136	Coil housing attaching screw	(3)
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-263	Diaphragm housing attaching screw	(3)
101-275	Piston housing attaching screw	
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet housing attaching screw	
101-307S	Air horn attaching screw and washer assembly	(8)
101-324	Fast idle cam attaching screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Throttle valve attaching screw	(8)
101-354S	Choke lever clamp screw and washer assembly	
101-363	Piston housing attaching screw	(2)
101-385	Throttle lever adjusting screw	
101-388S	Diaphragm housing cover attaching screw and washer assembly	(6)
101-407	Fast idle adjustment screw	
101-408S	Dash pot attaching screw and washer assembly	(2)
103-14	Lead shot (late prod.)	(3)
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
105A-52	Dash pot lock nut	
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	

Part No.	PART NAME	
115-189	Choke connector rod	
115-239	Throttle operating rod	
115-267	THROTTLE CONNECTOR ROD	
116-30	PUMP INTAKE CHECK BALL	
117-162	Vacumeter piston link	
117-165	Pump arm link	
118 102S	Dust cover assembly	
120-162	PRIMARY METERING ROD JET	(2)
120-175	SECONDARY METERING JET	(2)
121-78	COIL HOUSING GASKET	
121-208	DUST COVER GASKET	
121-232	AIR HORN GASKET	
121-241	PUMP JET HOUSING GASKET	
121-256	Body flange gasket (Sup by 121 277)	
121-260	Diaphragm housing to flange gasket (Sup by 121 297)	
121-277	Body flange gasket	
121-282	GASKET (DIAPHRAGM TO LOWER HOUSING)	
121-283	PISTON HOUSING GASKET (small hole) (2404S)	
121-297	DIAPHRAGM HOUSING TO FLANGE GASKET	
121-298	PISTON HOUSING GASKET (large hole) (2404SA)	
122-98S	PUMP RELIEF VALVE ASSEMBLY	
136-37	Throttle operating rod washer	(4)
136-159	Primary throttle shaft washer	
136-172	Secondary throttle shaft washer	
136-193	Fast idle cam washer	
150-62	Choke piston pin	
150-186S	Pin and valve cap assembly	
150A-10	PIN SPRING	(7)
160-91	Choke piston	
160-110S	Vacuum piston and pin assembly	
164-14	Choke tube grommet	
170-352	Diaphragm housing	
170-482S	Piston housing and plug assembly (2404S)	
170-505S	Piston housing and plug assembly (2404SA)	
170AB-374S	Thermostatic coil and housing assembly	
172-24	Throttle connector rod retainer	
180-86	Dash pot bracket	
181-23PS	Fast idle cam and spring assembly	
184-87S	Diaphragm housing cap assembly	
186-63S	Choke baffle plate assembly	
202-89S	Dash pot assembly	
203-72S	Secondary throttle shaft diaphragm assembly	

NOTE Figures in parentheses indicate number f pieces used in one carbureter. Where no figure is shown, only ne is used.

Form 3688
October, 1956

CARTER CARBURETOR

DIVISION OF ACF INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

Fil Under Lincoln

CARTER MODEL WCFB CARBURETER FOR LINCOLN (SERVICE ADJUSTMENT PROCEDURE)

NOTE: The parts and specification pages referred to are catalog pages. These pages can be obtained from Carter Carburetor, Catalog Department, St. Louis (7), Missouri. Specify the carbureter number found on the brass identification tag, when requesting specification pages.

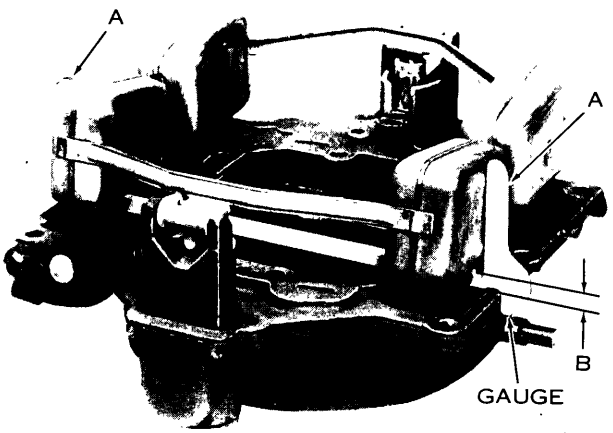


Figure 1

FLOAT ADJUSTMENT (Fig. 1):

1. Lateral - Place float gauge directly under center of floats with notched portion of guage fitted over edge of casting. Side of floats should just clear the vertical uprights (A) of float gauge. To adjust, bend arms of floats.
2. Vertical - With float gauge in same position, floats should just clear the horizontal portion of gauge. Vertical distance (B) between top of float and machined surface of casting must be as listed on carbureter specification page. To adjust, bend center portion of float arms.

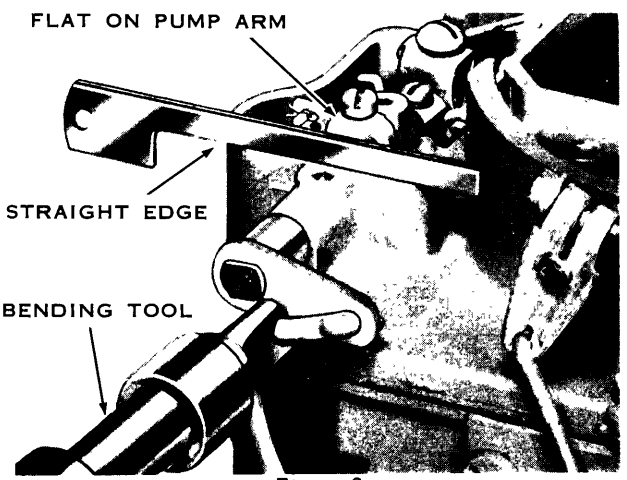


Figure 3

PUMP ADJUSTMENT (Fig. 3):

1. Install pump connector link in outer hole (long stroke) of pump arm with ends extending outward toward countershaft arm.
2. Back out throttl lev r set screw until throttl valves seat in bores of carburet r.
3. H ld straight edge across top of dust cover boss at pump arm. The flat on top of pump arm should be parallel to straight edge. To adjust, bend throttle connector r d at upp r angle. (Use tool T109-213).

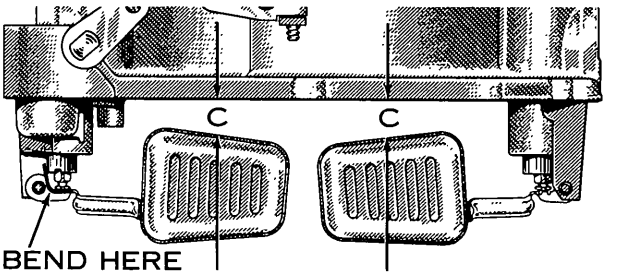


Figure 2

FLOAT DROP ADJUSTMENT (Fig. 2):

With bowl cover held in upright position and measuring from center of floats, the distance (C) betw en top of floats and bowl cover should be as listed on carbureter specification page. To adjust, bend stop tabs on float bracket.

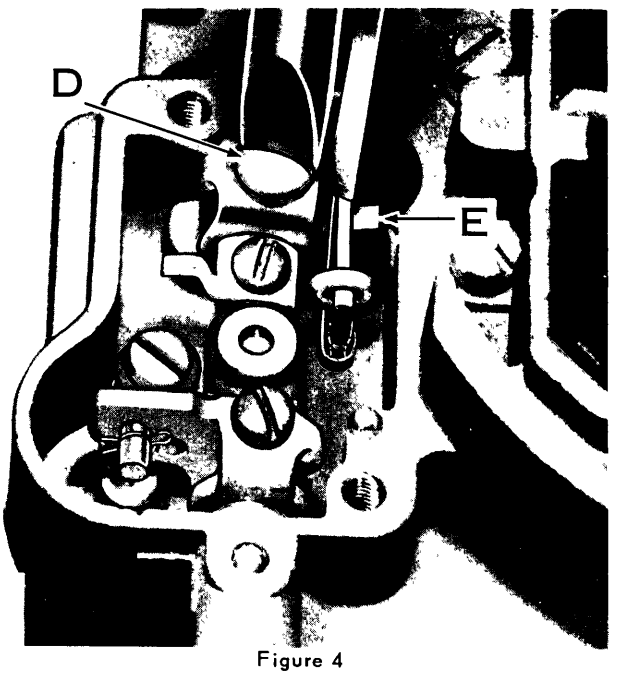


Figure 4

METERING ROD ADJUSTMENT (Fig. 4):

1. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and lo sen metering rod arm clamp screw (D).
2. Press down on vacumeter link until metering rods bottom in carbureter body casting.
3. Holding rods in downward position and throttle valves seated, r volve metering rod arm until finger on arm contacts lip (E) of vacumeter link. Hold in place and carefully tighten clamp screw (D).

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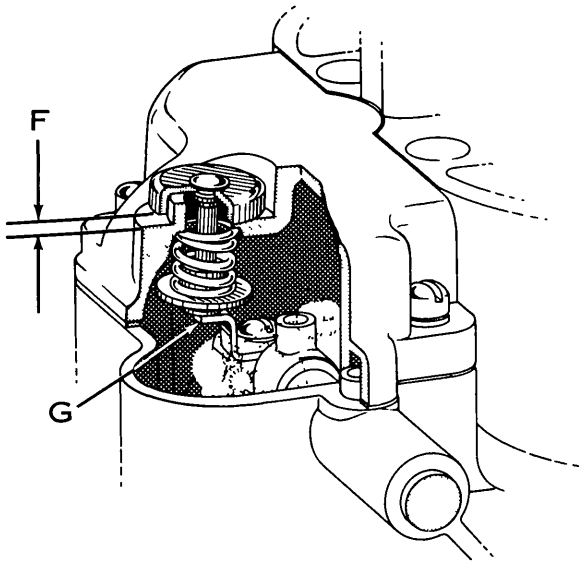


Figure 5

BOWL VAPOR VENT ADJUSTMENT (Fig. 5):

1. Install dust cover and dust cover gasket.
2. With throttle valves seated, there should be the clearance (F) as listed on carbureter specification page between lower edge of bowl vapor vent valve and dust cover. To adjust, remove dust cover and bend vapor vent arm (G).



Figure 6A
Fast Idle Adjustment

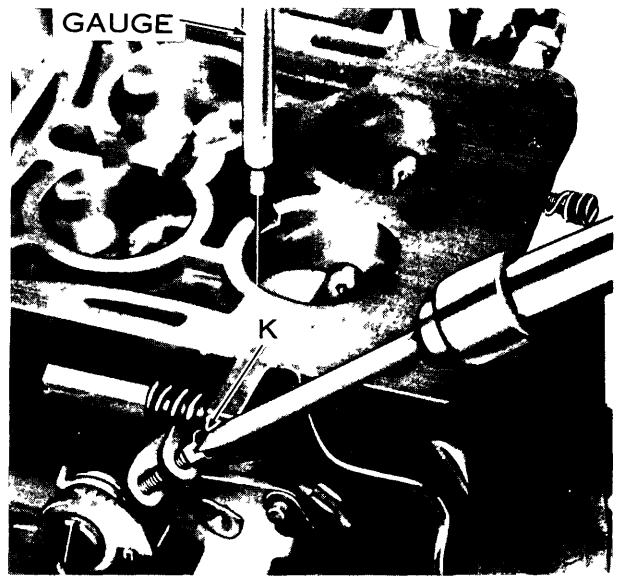


Figure 6B

FAST IDLE CAM CLEARANCE ADJUSTMENT (Fig. 6A):

1. Loosen choke lever clamp screw (H) on choke shaft.
2. Hold choke valve tightly closed. Take slack out of linkage by pressing choke lever towards closed position, so that lip of fast idle cam lightly contacts boss on flange casting (J) - hold in place. Tighten clamp screw (H).

FAST IDLE THROTTLE VALVE CLEARANCE ADJUSTMENT (Fig. 6B):

With choke valve tightly closed, tighten fast idle adjusting screw (K) (on high step of cam) until there is the clearance as listed on carbureter specification page between throttle valve and bore of carbureter, side opposite idle port.

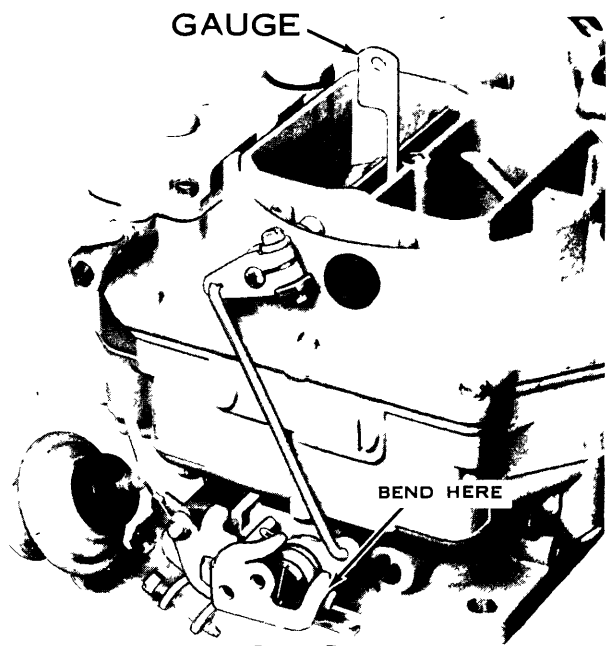


Figure 7

UNLOADER ADJUSTMENT (Fig. 7):

With throttle valve wide open there should be the clearance as listed on carbureter specification page between upper edge of choke valve and inner wall of air horn. To adjust, bend unloader lip on throttle shaft lever. (Us Tool T109-41).

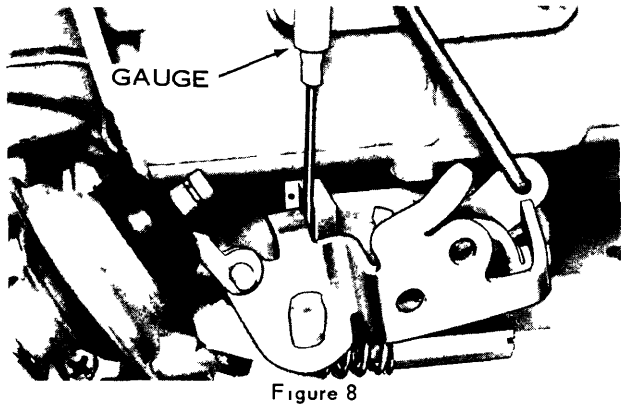


Figure 8

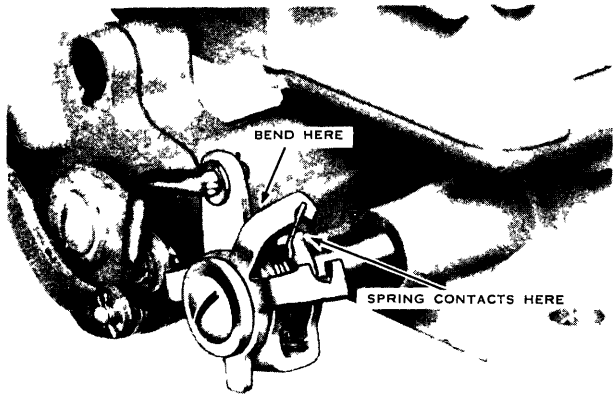


Figure 9

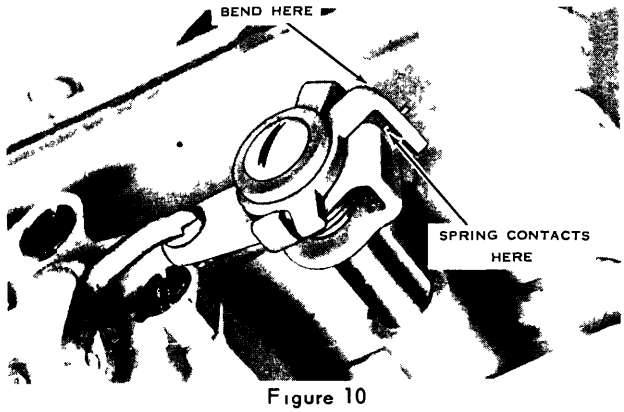


Figure 10

PRIMARY THROTTLE SHAFT DOG ADJUSTMENT (Figs. 8, 9 & 10):

1. Place gauge as listed on carbureter specification page between wide open stop tang on primary throttle lever and stop on flange.
2. Adjust upper lug of throttle shaft dog so that upper arm of spring lightly contacts tang of throttle operating lever.
3. Hold both primary and secondary throttles in wide open position.
4. Adjust lower lug of throttle shaft dog so that lower arm of spring lightly contacts center web of throttle operating lever. NOTE: (Use bending tool T109-214) to adjust lugs on throttle shaft dog.

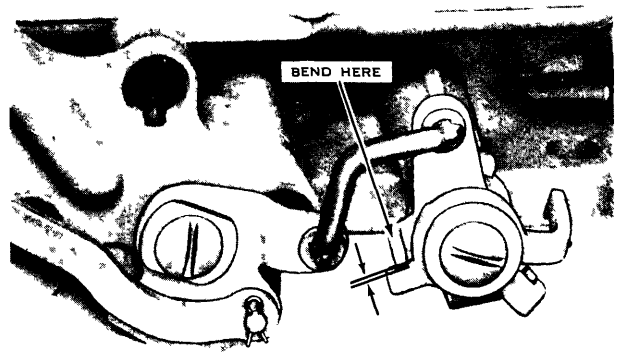


Figure 11

SECONDARY OPERATING LEVER ADJUSTMENT (Fig. 11):

1. Block choke valve wide open.
2. Back out throttle lever stop screw so that primary valves seat in carbureter bores.
3. When the primary and secondary throttle valves are seated there should be the clearance as list d on specification page between lug on secondary operating lever and stop on primary throttle shaft dog. To adjust, bend lug on secondary operating lever. (Us tool T109-214). NOTE: Secondary valv s seat at top edge only.

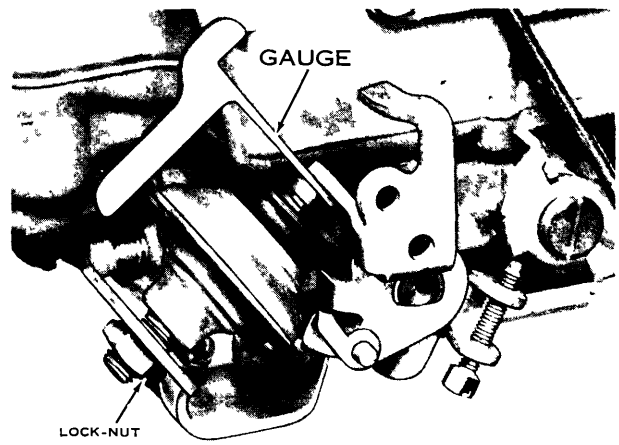


Figure 12

DASH POT (SLOW CLOSING THROTTLE) ADJUSTMENT (Fig. 12):

Plunger shaft sh uld bottom with the gauge list d on carbureter specification page placed betwe n shaft and operating lever with throttle valves tightly closed. To adjust, loosen lock nut and adjust dash pot unit.

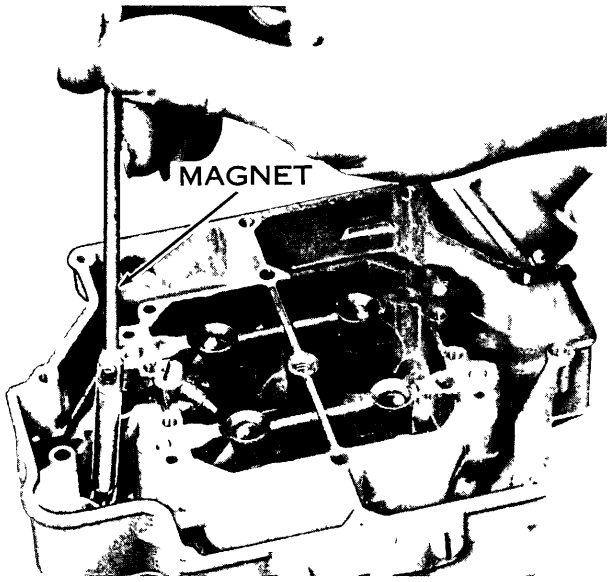


Figure 13

(Fig. 13):

Flooding, stumble on acceleration and other performance complaints are, in many instances, caused by the presence of dirt, water or other foreign matter in the carbureter. To aid in diagnosing the cause of the complaint, the carbureter should be carefully removed from th ngin without draining the fuel from the bowl. The contents of the fuel bowl may then be examined for contamination as the carbureter is disassembled.

Check the fuel in the bowl for contamination by dirt, water, gum or other foreign matter. A magnet moved through the fuel in the bowl will pick up and identify any iron oxide dust that may have caused intake needle and seat leakage. (See Fig. 13.)

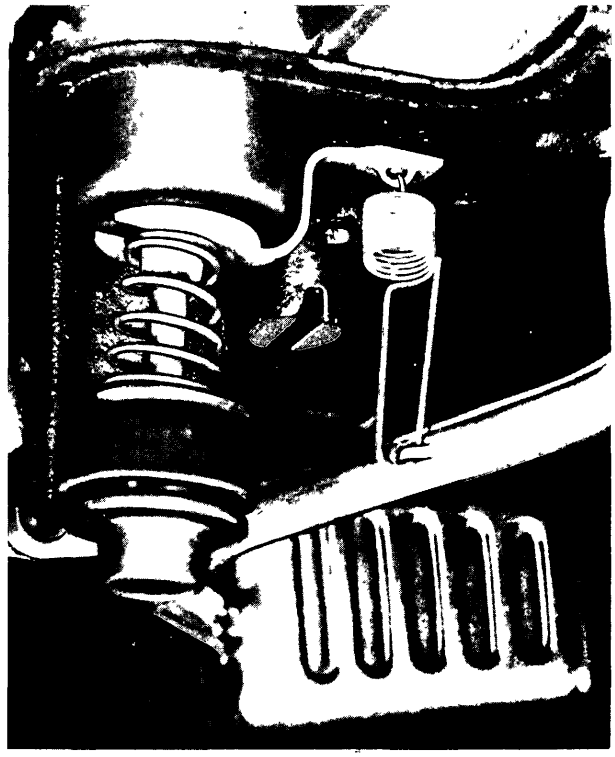


Figure 14

(Fig. 14):

Pump plunger retainer must be parallel with bowl cover.

(Fig. 15):

Secondary throttle valves are seated using a .002" gauge, 1/4" wid (gauge T109-281) between the center of lower edge of throttle valves and bore of carbureter. (S Fig. 15.) With the gauge in position and valve attaching screws loose, tap valve lightly so it will align itself in the bore, hold in position and tighten screws. CAUTION: Turn screws only as much as needed to loosen valve as they are burred over and may break off if forc d. If screws are to be removed, file off staked ends before loosening, then use new screws when reassembling.

NOTE: Primary valves are seated tightly in bore in usual manner. No gauge is used.

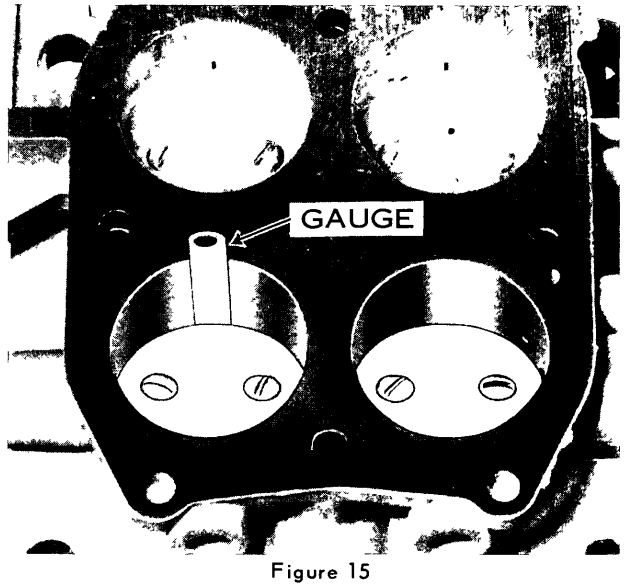


Figure 15

Inspect gask ted surfaces between body and air horn, and between body and flange. Small nicks or burrs should be smoothed down to eliminate air or fuel leakage. Be especially particular when inspecting the top surface of the inner wall of the bowl. A poor seal at this location may contribute to a "cutting-out" on turns complaint.

Fill the carbureter bowl with clean fuel before installing on the manifold. This will help prevent dirt trapped in the fuel system from being dislodged by the free flow of fuel as the carbureter is primed. The operation of the floats and intake n edle and seats may be checked under pressure if a fuel pump is used at the bench to fill the carbureter bowl. Operate the throttle sev ral times and visually check the discharge from the pump jets.

Before installing the carbureter, hold choke valv open and turn the idle speed screw until it just contacts the throttle lever, then 1/2 of a turn more to open the throttle valves nough to keep the engine running until the idle mixture and final R.P.M. adjustment can be mad .

CARTER

AIR CONDITIONING FAST IDLE DEVICE ASSEMBLY (12 VOLT)

No. 202-87S

FOR LINCOLN

CARS EQUIPPED WITH AIR CONDITIONING

Part No.	Part Name	
11B-134	Rivet plug	
49-191S	Electro magnet plunger assembly	
61-438	Diaphragm return spring	
61-502	Electro magnet plunger spring	
86-58	Lock washer	
101-142S	Electro magnet housing attaching screw and washer assembly	(2)
101-213S	Diaphragm cover attaching screw and washer assembly	(6)
105A-12	Lock nut	
105A-53	Adjusting nut	
105A-55	Diaphragm shaft guide nut	
116-13	Check ball	
121-190	Electro magnet housing gasket	
150-168	Diaphragm air bleed pin	
170-190	Inner diaphragm housing	
170-298S	Outer diaphragm housing and plug assembly	
202-87S	—Air conditioning fast idle device assembly (complete) (12 volt)	
202-93S	—Diaphragm and shaft assembly	
213-20S	—Electro magnet and housing assembly (12 volt)	

—Parts so marked are new and listed for the first time

NOTE Figures in parentheses indicate number of pieces used in the idle device assembly. Where no figure is shown, only one is used.

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CARBURETER
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LYCOMING-SPENCER

INDUSTRIAL ENGINE

MODEL C-2-90D

WGD Down-Draft **Carbureter No. 2743S**

CARBURETER SPECIFICATIONS

For Lycoming-Spencer Two Cylinder 88 Cu. In. Engine

Dimensions: Flange size 1 1/8 inch dual 4 bolt type
Primary venturi 11/32 inch I D
Secondary venturi 21/32 inch I D
Main venturi, 1 3/16 inch I D

Vents Outside 1 Inside 1

Low Speed Circuit: Jet, size No 70 (.028 inch) drill
By pass in bowl cover size (.049 inch) diameter
Economizer in bowl cover size No 55 (.052 inch) drill
Idle bleed in bowl cover, size (.057 inch) diameter
Idle port slot type length .160 inch, width .030 inch

Idle Port Opening: .117 to .123 inch above top edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw): Size .068 to .072 inch diameter

Set Idle Adjustment Screw: 1/4 to 1 1/2 turns open For richer mixture turn screw out Do not idle engine below 1000 R P M

Nozzle: Nozzle is installed permanently DO NOT REMOVE
Anti-percolating bleed size No 66 (.033 inch) drill

Accelerating Pump: Discharge jet (twin) size No 72 (.025 inch) drill
Intake ball check seat size .115 to .120 inch diameter
Discharge (needle seat) size No 50 (.070 inch) drill

Choke: Manual Butterfly type, offset valve

Vacuum Spark Port: None

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .030"	Breaker Point Setting .018"-.022"	Ignition Timing Breaker Points to Open: T.D.C. at Idle At Vibration Damper	Valve Setting (Cold) Intake .005"-.007" Exhaust .005"-.007"	Float Setting 11/64 Inch (Use Gauge T109-166)	Idle Adjustment Screw Setting 1/4 t 1 1/2 Turns Open Idle Engine at 1000 R.P.M.

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENTS: With bowl cover gasket removed, bowl cover inverted and needle seated, there should be 11/64 inch (gauge T109-166) between top of float and bowl cover Adjust by bending float arm

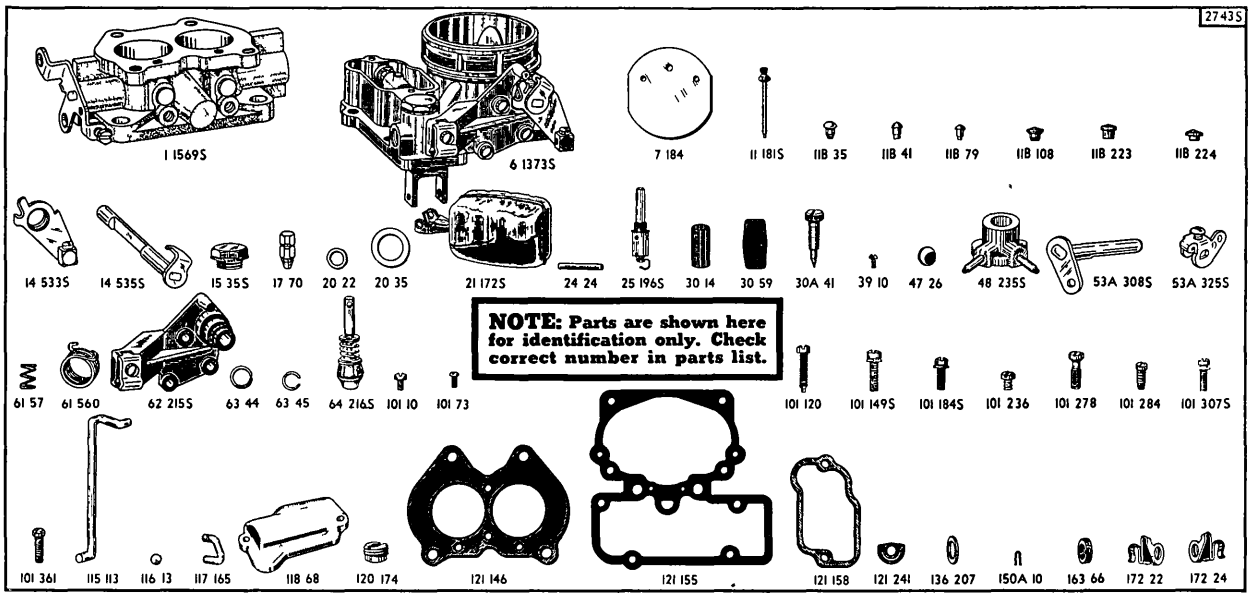
PUMP ADJUSTMENT: Back out throttle lever set screw until throttle valves seat in bores of carbureter Hold straight edge across top of dust cover boss at pump arm The flat on top of pump arm should be parallel to straight edge Adjust by bending throttle connector rod at upper angle Use bending tool T109-213

METERING ROD ADJUSTMENT: NONE

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Lycoming-Spencer—Carbureter No. 2743S

WHEN SERVICING, USE GASKET ASSORTMENT No 306

Part No.	PART NAME	
1-1569S	—Body flange assembly	
6-1373S	—Air horn assembly	
7-184	Choke valve	
11-181S	Low speed jet assembly (.028")	(2)
11B-35	Rivet passage plug	(3)
11B-41	Rivet passage plug	
11B-79	Rivet passage plug	(3)
11B-108	Idle port rivet plug	(2)
11B-223	Nozzle rivet plug	(2)
11B-224	Choke shaft plug	
14-533S	Choke shaft and lever assembly	
14-535S	Choke lever assembly	
15-35S	Strainer nut assembly	
17-70	Pump check needle	
20-22	Needle seat gasket	
20-35	Bowl strainer gasket	
21-172S	Float and lever assembly	
24-24	Float lever pin	
25-196S	Needle and seat assembly (.0935")	
30-14	Bowl cover strainer	
30-59	Strainer	
30A-41	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
47-26	Welsh plug	
48-235S	Pump jet and housing assembly	
53A-308S	Pump operating lever and countershaft assembly	
53A-325S	Pump arm and screw assembly	
61-57	Idle adjustment screw lock spring	(2)
61-560	Choke spring	

Part No.	PART NAME	
62-215S	Choke tube bracket assembly	
63-44	Choke lever retainer ring	
63-45	Pump check ball retainer ring	
64-216S	—Pump plunger rod spring and retainer assembly	
101-10	Wire clamp screw	
101-73	Throttle valve attaching screw	(4)
101-120	Throttle lever adjustment screw	
101-149S	Body flange attaching screw and washer assembly	(4)
101-184S	Dust cover attaching screw and washer assembly	(2)
101-236	Pump arm clamp screw	
101-278	Pump jet housing attaching screw	
101-284	Choke tube bracket attaching screw	(3)
101-307S	Air horn attaching screw and washer assembly	(8)
101-361	Choke tube clamp screw	
115-113	Throttle connector rod	
116-13	Pump intake check ball	
117-165	Pump connector link	
118-68	Dust cover	
120-174	Metering rod jet (.055")	(2)
121-146	Body flange gasket	
121-155	Air horn gasket	
121-158	Dust cover gasket	
121-241	Pump jet housing gasket	
136-207	—Throttle shaft retainer washer	
150A-10	Pin spring	
163-66	—Throttle shaft seal	
172-22	Throttle connector rod retainer (upper)	
172-24	Throttle connector rod retainer (lower)	

—Parts so marked are new and listed for the first time

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

LYCOMING

INDUSTRIAL ENGINE

MODEL CV4-180

YF Down-Draft **Carbureters Nos. 2428S-2428SA**

CARBURETER SPECIFICATIONS

For Lycoming V-4 Cylinder Engine: 4 Inch Bore, 3.5 Inch Stroke

Dimensions: Flange size 1½ inch S A E
Primary venturi, 11/32 inch I D
Secondary venturi 11/16 inch I D
Main venturi, 1⅜ inch I D

Vents: Outside, none Inside balance vent to air horn above choke valve

Gasoline Intake: Spring loaded needle Size No 46 (.081 inch) drill in needle seat

Low Speed Jet Tube: Jet size No 62 (.038 inch) drill By pass in air horn, size No 56 (.0465 inch) drill Economizer size No 53 (.0595 inch) drill Idle bleed in body size No 54 (.055 inch) drill Bleed idle well to bowl size .0292 inch diameter.

Idle Port: Upper port slot type length .189 to .191 inch width .030 inch.

Idle Port Opening: Top of port .134 to .138 inch above top edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw): .0615 to .0655 inch diameter

Set Idle Adjustment Screw: ¼ to 1¾ turns open For richer mixture turn screw out

High Speed Adjustment Needle: (2428S) ¼ to 1¼ turns open Seat size No 53 (.0595 inch) drill (2428SA) None

Main Nozzle: Nozzle is installed permanently DO NOT REMOVE Anti percolator, size No 53 (.0595 inch) drill

Metering Rod: See parts list for size

Metering Rod Jet: See parts list for size

Accelerating Pump: Diaphragm type vacuum and mechanically operated Pump jet size No 69 (.0292 inch) drill Intake ball check seat (in diaphragm housing) size No 40 (.098 inch) drill Discharge ball check seat (in body) size No 42 (.0935 inch) drill Vacuum restriction (in flange) size No 50 (.070 inch) drill Vacuum passage (diaphragm bleed) size No 65 (.035 inch) drill

Choke: Manual, interconnected with throttle Valve offset butterfly type

Vacuum Spark Port: None

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open: 0° at Idle 36° at 2200 R.P.M.	Valve Setting (Cold)	Float Setting	Idle Adjustment Screw Setting
.025"	.020"		Intake .005"-.007" Exhaust .005"-.007"	⅜ Inch (Use Gauge T109-80)	¼ to 1¾ Turns Open

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: With bowl cover assembly inverted and float resting on pin in seated needle, and with gasket removed, the distance from the bowl cover to the top of float should be ⅜ inch (gauge T109 80). Do not depress float lip against spring in needle, but let float rest of its own weight Adjust by bending lip of float, not float arm

FLOAT DROP: With bowl cover assembly held in upright position the distance between free end of float and bowl cover should be 1-3/16 inch. Adjust by bending stop tabs on float arm.

METERING ROD ADJUSTMENT: This adjustment is important and should be checked each time the carbureter is

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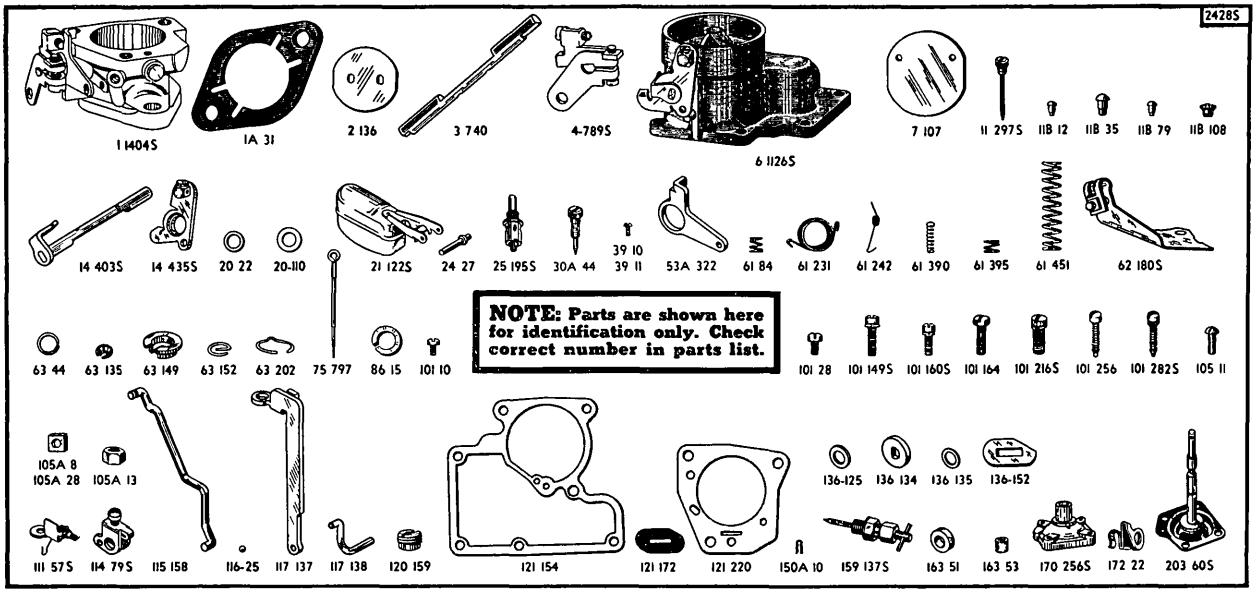
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reassembled With throttle valve seated in bore of carbureter, press down on upper end of diaphragm shaft until diaphragm bottoms in vacuum chamber (Tool T109-212 may be used to hold diaphragm shaft down while adjusting metering rod) Metering rod should contact bottom of metering rod well, and metering rod arm should contact lifter link between spring and at supporting lug Adjust by bending lip up or down

ACCELERATING PUMP If acceleration is not satisfactory, remove pump check retainer ring and pump discharge ball check Then remove pump diaphragm assembly Check diaphragm for wear or damage Be sure inlet hole is not clogged with lint or foreign matter Inspect and replace all worn or damaged parts Clean and blow out all passages with compressed air Make sure discharge check seats in casting as a leak at this point will result in poor acceleration

FAST IDLE ADJUSTMENT With choke held in wide open position, lip on fast idle arm should contact boss on body casting Adjust by bending at offset of fast idle link



Lycoming—Carbureters Nos. 2428S-2428SA

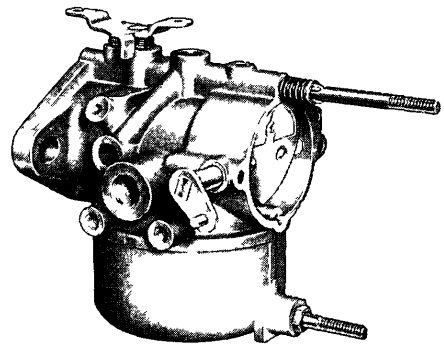
WHEN SERVICING, USE GASKET ASSORTMENT No. 241

Part No.	PART NAME
1-1404S	—Body flange assembly
1A-31	Flange gasket—for use without governor
2-136	Throttle valve
3-740	Throttle shaft
4-789S	—Throttle lever assembly
6-1126S	—Air horn assembly
7-107	Choke valve
11-297S	—Low speed jet assembly
11B-12	Rivet plug
11B-35	Rivet plug
11B-79	Rivet plug (2)
11B-108	Idle port rivet plug
14-403S	Choke shaft and lever assembly
14-435S	Choke lever assembly
20-22	Needle seat gasket
20-110	Adjustable main jet gasket (2428S)
21-122S	Float and lever assembly
24-27	Float lever pin
25-195S	Needle spring pin and seat assembly
30A-44	Idle adjustment screw
39-10	Choke valve attaching screw (2)
39-11	Throttle valve attaching screw (2)
53A-322	Fast idle arm
61-84	Idle adjustment screw spring
61-231	Choke lever spring
61-242	Metering rod spring
61-390	Upper pump spring
61-395	Shaft seal spring
61-451	Pump diaphragm spring
62-180S	Tube clamp assembly
63-44	Choke lever retainer ring
63-135	Upper pump spring retainer
63-149	Pump diaphragm spring retainer
63-152	Pump discharge ball check retainer ring
63-202	Pump intake ball check retainer ring
75-797	Metering rod—standard 070" x 050" x 040" (2428S)
75-1329	—Metering rod—standard 066" x 059" x 054" (2428SA)

Part No.	PART NAME
86-15	Flange stud lock washer (2)
101-10	Wire clamp screw
101-28	Throttle shaft arm attaching screw
101-149S	Body flange attaching screw and washer assembly (3)
101-160S	Bowl cover attaching screw and washer assembly (5)
101-164	Throttle lever clamp screw
101-216S	Air horn attaching screw and washer assembly (2)
101-256	Throttle lever adjusting screw
101-282S	Diaphragm housing attaching screw and washer assembly (4)
105-11	Tube clamp screw
105A-8	Tube clamp nut
105A-13	Flange stud nut (2)
105A-28	Throttle lever clamp screw nut
111-57S	Metering rod arm assembly (2428S)
114-79S	Throttle shaft arm assembly
115-158	Choke connector rod
116-25	Pump intake and discharge ball check (2)
117-137	Pump lifter link (2428S)
117-138	Pump connector link
117-176S	—Pump lifter link spring and metering rod arm assembly (2428SA)
120-159	Metering rod jet 089" (2428S)
120-164	Metering rod jet 0945" (2428SA)
121-154	Bowl cover and air horn gasket
121-172	Lifter link seal gasket (2428S)
121-220	Body flange gasket
136-125	Dust seal retainer
136-134	Throttle shaft washer
136-135	Dust seat retainer washer
136-152	Lifter link seal washer (2428S)
150A-10	Pin spring
159-137S	Adjustable main metering screw assembly (2428S)
163-51	Felt dust seal (2)
163-53	Main metering screw packing (2428S)
170-256S	Pump diaphragm housing and ball check assembly
172-22	Choke connector rod retainer
203-60S	Pump diaphragm assembly

—Parts so marked are new and listed for the first time

NOTE. Figures in parentheses indicate number of pieces used in one carbureter. Where n figure is shown, only one is used.



MARTIN "200" OUTBOARD MOTOR 1953

Horizontal, Model N Type, **Carbureter No. N-2018S**

CARBURETER SPECIFICATIONS

For Martin 2 Cylinder Engine 2½ Inch Bore 2 1/32 Inch Stroke

Dimensions Flange size 1 inch S A E (slotted) Main venturi 15/16 inch I D

Float Level Distance from top of float (at free end) opposite needle seat to outer edge of float chamber cover when needle is seated to be 3/32 inch plus or minus 1/64 inch

Vents Inside None Outside No 50 (.070 inch) drill

Gasoline Intake Size No 36 (.1065 inch) drill in needle seat

Low Speed Jet Tube Jet size No 65 (.035 inch) drill Idle bleed (in side of tube) size No 73 (.024 inch) drill

Idle Port Round type .035 .037 inch diameter

Idle Port Opening With throttle valve tightly closed idle port is wide open above the valve

Idle Screw Seat In low speed passage size No 44 (.086 inch) drill Discharge into bore size .086 inch diameter

Set Idle Adjustment Screw 1/8 to 3/8 turn open For richer mixture turn screw out

Main Nozzle Accelerating jets (in side of nozzle) 4—size No 70 (.028 inch) drill Nozzle passage (nozzle well to air horn) size No 34 (.111 inch) diameter

High Speed Adjusting Needle Seat (in body) size No 44 (.086 inch) drill Setting see adjustments

Choke Manual butterfly type with pressure relief poppet valve

Spark Plug Gap	Breaker Point Setting	Float Setting	High Speed Adj Screw Setting	Turn Open Idle Adjustment Screw Setting
.035"	.020"	3/32" ± 1/64"	1/4 to 3/4 Turn Open	1/8 t 3/8 Turn Open

SERVICE PROCEDURE

CAUTION REMOVE HIGH SPEED NEEDLE BEFORE REMOVING BOWL

To Disassemble

1. Remove carbureter from engine
2. Remove high speed adjusting needle packing nut and packing (SCRIBE MARK ON BODY AND BOWL)
3. Remove bowl nut gasket and bowl
4. Remove float pin float needle and needle seat Check float for dents leaks and wear on float lip or in float pin holes
5. Remove bowl ring gasket
6. Remove idle adjustment screw and spring
7. Remove nozzle
   DO NOT REMOVE LOW SPEED JET TUBE
8. Remove throttle valve screws valve and shaft and lever assembly
9. Clean all parts with solvent making sure all carbon accumulation is removed from bore especially where throttle valve seats in casting Blow out all passages with compressed air Replace all worn and damaged parts Always use new gaskets

To Assemble

10. Install throttle shaft and valve Valve must be installed with trademark C on side toward idle port when viewing from flange side Always use new screws With valve screws loose and throttle lever set screw backed out seat valve by tapping lightly with a small screwdriver Hold in place while tightening screws
11. Install nozzle making sure it seats in casting
12. Install needle seat needle float and float pin
13. Set float level with carbureter casting inverted float resting lightly against needle in its seat There should be 3/32 inch clearance between outer surface of casting and free end of float (side opposite needle seat) Adjust by bending lip of float
14. Install bowl ring gasket bowl (line up scribe marks) bowl nut gasket and bowl nut Tighten securely
15. Install high speed adjusting needle packing nut and new packing Turn needle in until it just seats in body then back out 1/4 to 3/4 turn
16. Install idle adjusting screw finger tight Back out approximately 1/4 turn Do not use pliers or screwdriver as it may damage idle screw
17. Install carbureter on engine and make idle and high speed adjustment as necessary

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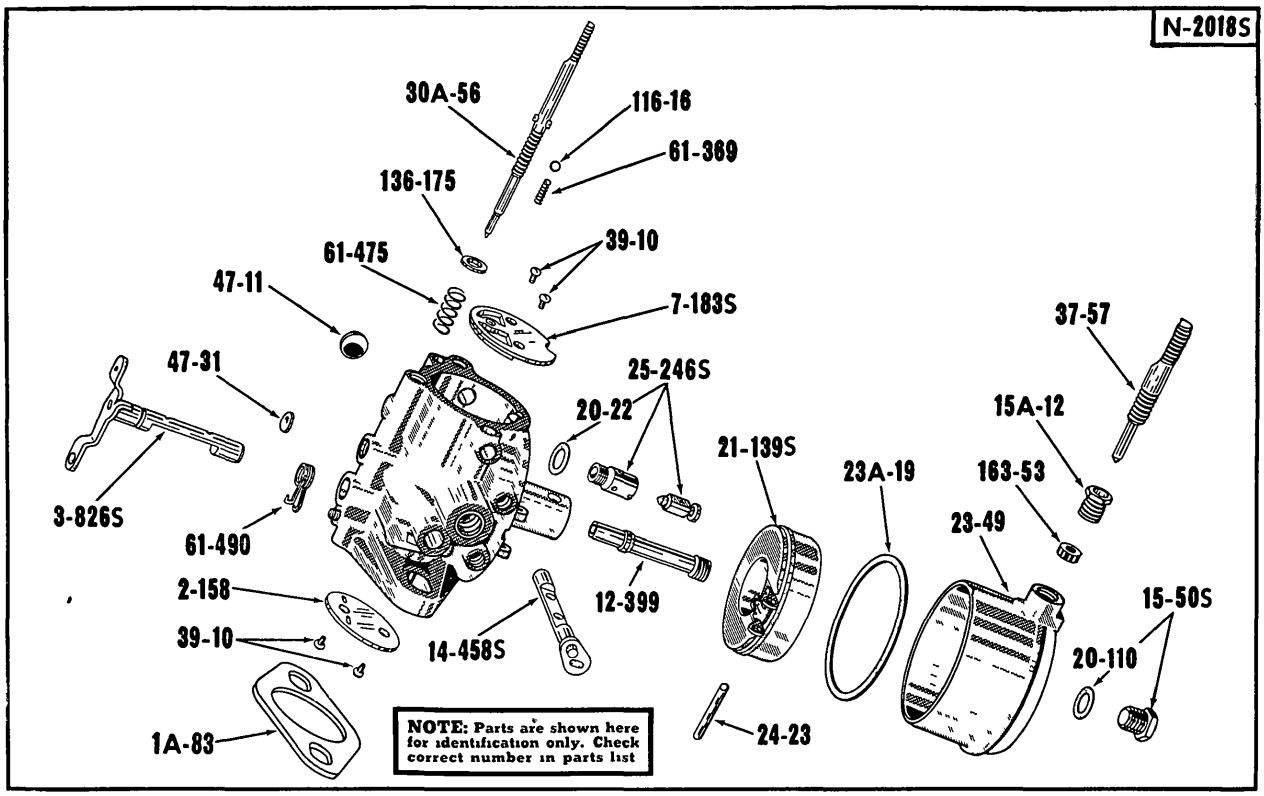
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HIGH SPEED AND IDLE SCREW ADJUSTMENT

After rebuilding and installation on engine is complete, the final high speed and idle screw adjustments must be made Turning the adjustable main metering screw clockwise produces a leaner high speed mixture and turning the idle screw clockwise produces a leaner idle mixture

When adjusting the idle screw, turn approximately 1/8 turn at a time, then wait sufficient time for engine to respond to this adjustment.



Martin—1953—Carbureter No. N-2018S

Part No.	PART NAME
1A-83	Flange gasket
2-158	Throttle valve
3-826S	Throttle shaft and lever assembly
7-183S	Choke valve assembly
12-399	Nozzle
14-458S	Choke shaft and lever assembly
15-50S	Bowl nut assembly
15A-12	Packing nut
20-22	Needle seat gasket
20-34	Packing nut gasket
20-110	Bowl nut gasket
21-139S	Float and lever assembly
23-49	Bowl
23A-19	Bowl ring gasket

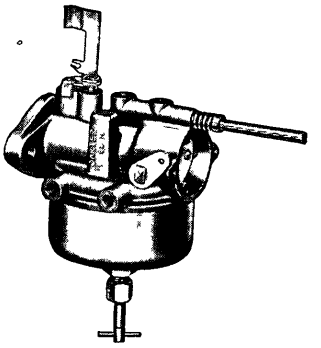
Part No.	PART NAME	
24-23	Float lever pin	
25-246S	Needle and seat assembly	
30A-56	Idle adjustment screw	
37-57	High speed adjusting screw needle	
39-10	Choke and throttle valve attaching screw	(4)
47-11	Idle port welsh plug	
47-31	Idle passage welsh plug	
61-369	Choke shaft spring	
61-475	Idle adjustment screw spring	
61-490	Throttle valve return spring	
116-16	Choke shaft ball	
136-175	Idle adjustment screw washer	
163-53	High speed needle packing	

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

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N-2021S
Model "45", 1951-53

N-2022S
Model "75", 1953



Cut Shows N 2022S Carbureter

MARTIN OUTBOARD MOTOR 1951-1953

Horizontal, Model N Type, **Carbureters Nos. N-2021S, N-2022S**

CARBURETER SPECIFICATIONS

For Martin 2 Cylinder "45" Engine 1-9/16 Inch Bore, 1½ Inch Stroke
For Martin 2 Cylinder '75" Engine 2 Inch Bore, 1¾ Inch Stroke

Dimensions Flange size ½ inch S A E
Main venturi size (N 2021S) 9/16 inch
Main venturi size (N 2022S) 23/32 inch

Float Level Distance from top of float (at free end) opposite needle seat to lower edge of float chamber cover when needle is seated to be ⅛ inch (gauge T109 36) plus or minus 1/64 inch

Vents Inside none Outside No 50 (.070 inch) drill

Gasoline Intake Size No 36 (.1065 inch) drill

Low Speed Jet Tube Jet size No 75 (.021 inch) drill Auxiliary jets (Idle Bleed) in side of tube (N 2021S) size No 70 (.028 inch) drill (N 2022S) none

Idle Port Slot type length .107 inch width .030 inch

Idle Port Opening Top of port to be (N 2021S) .010 to .014 inch (N 2022S) .022 to .026 inch above top edge of valve with valve tightly closed

Idle Screw Seat Size No 44 (.086 inch) drill

Set Idle Adjustment Screw ¼ to 1¾ turns open For richer mixture turn screw in

Main Nozzle Accelerating jets in side of nozzle (N 2021S) 2—size No 62 (.038 inch) drill (N 2022S) none Nozzle passage (nozzle well to air horn) (N 2021S) size No 35 (.110 inch) drill (N 2022S) none

High Speed Adjusting Needle Seat (in base of nozzle) size No 45 (.082 inch) drill Setting see adjustments

Choke Manual butterfly type with poppet valve

Spark Plug Gap	Breaker Point Setting	Float Setting	High Speed Adj Screw Setting	Idle Adjustment Screw Setting
.025"	.020"	⅛" ± 1/64" (Use Gauge T109 36)	¼ to 1¾ Turns Open	¼ to 1¾ Turns Open

SERVICE PROCEDURE

To Disassemble

1. Remove carbureter from engine
2. Remove adjustable main metering screw and needle assembly gasket and bowl
3. Remove float pin float needle and needle seat Check float for dents leaks and wear on float lip or in float pin holes
4. Remove bowl ring gasket
5. Remove low speed jet
6. Remove idle adjustment screw and spring
7. Remove nozzle
8. Remove throttle valve screws valve and shaft and lever assembly
9. Do not remove choke valve and shaft unless replacement of these parts is necessary A spring loaded ball retains choke in wide open position Be sure to use a new ball and spring when replacing choke shaft and lever assembly CAUTION Hold a screw driver handle or a small piece of wood over threaded hole in air horn (side opposite choke lever) to prevent the ball from flying out when shaft is removed
10. Clean all parts in clean solvent making sure all carbon accumulation is removed from bore especially where throttle valve seats in casting Blow out all passages with compressed air Replace all worn and damaged parts Always use new gaskets

To Assemble

11. Install throttle shaft and valve Valve must be installed with trademark c on side toward idle port when viewing from flange side Always use new screws With valve screws loose seat valve by tapping lightly with a small screw driver Hold in place while tightening screws
    Note Throttle valve return spring **opens** throttle
12. Install nozzle making sure it seats in casting
13. Install needle seat needle float and float pin
14. Set float level With carbureter casting inverted and free weight of float on seated needle there should be ⅛" (plus or minus 1/64") clearance (use gauge T109 36) between outer surface of casting and free end of float (side opposite needle seat) Adjust by bending lip of float with small screw driver
15. Install bowl ring gasket bowl adjustable main metering screw and needle assembly Before installing adjustable main metering screw and needle assembly back out adjusting screw needle until tip of needle is flush with end of thread then tighten securely after making certain bowl is centered in gasket Turn adjusting screw needle in until it seats then back out one turn Make sure packing nut is tight
16. Install low speed jet
17. Then install idle adjusting screw Turn inward until screw seats then back out one turn

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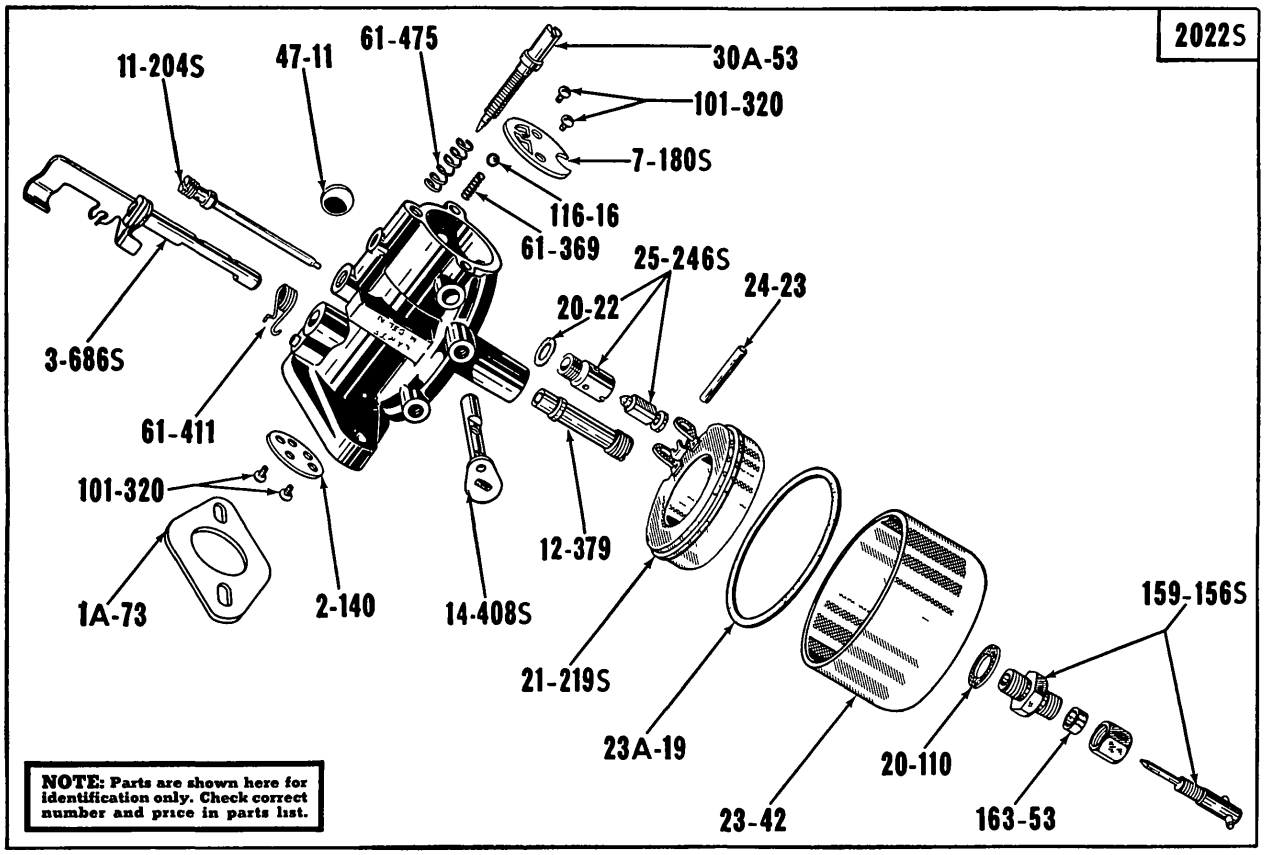
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HIGH SPEED AND IDLE SCREW ADJUSTMENT

After rebuilding and installation on engine is complete the final high speed and idle screw adjustments must be made Turning the adjustable main metering screw clockwise produces a leaner high speed mixture and turning the idle screw clock wise produces a richer idle mixture

When adjusting the idle needle, turn approximately 1/8 turn at a time, then wait sufficient time for engine to respond to this adjustment



MARTIN—1951-1953—CARBURETERS Nos. N-2021S, N-2022S

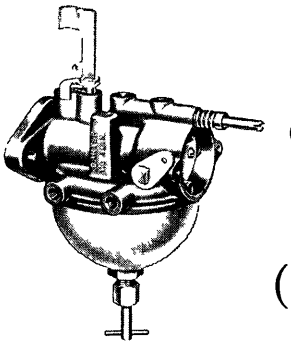
Part No.	PART NAME
1A-73	Flange gasket
2-139	Throttle valve (N 2021S)
2-140	Throttle valve (N 2022S)
3-686S	Throttle shaft and lever assembly (N 2022S)
3-734S	Throttle shaft and lever assembly (N 2021S)
7-180S	Choke valve assembly
11-203S	Low speed jet assembly (N-2021S)
11-204S	Low speed jet assembly (N 2022S)
12-379	Nozzle (N 2022S)
12-387	Nozzle (N 2021S)
14-408S	Choke shaft and lever assembly
20-22	Needle seat gasket
20-34	Packing nut gasket
20-110	Bowl nut gasket
21-139S	Float and lever assembly

Part No.	PART NAME	
23-42	Bowl (Sup by 23 59)	
23A-19	Bowl ring gasket	
23-59	Bowl	
24-23	Float lever pin	
25-223S	Needle and seat assembly (Sup by 25 246S)	
25-246S	Needle and seat assembly	
30A-52	Idle adjustment screw (N 2021S)	
30A-53	Idle adjustment screw (N 2022S)	
47-11	Welsh plug	
61-369	Choke shaft spring	
61-411	Throttle valve return spring	
61-475	Idle adjustment screw spring	
101-320	Choke and throttle valve attaching screw	(4)
116-16	Choke shaft ball	
159-156S	Adjustable main metering screw assembly	
163-53	Packing	

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown only one is used.

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752S-SA used on "45"—1951-53
753S-SA used on "75"—1951-52



MARTIN OUTBOARD MOTORS 1951-1953

(N-2021S can be used in place of N-752S N-752SA)
(N-2022S can be used in place of N-753S, N-753SA)

Horizontal, Model N Type, **Carbureters Nos. N-752S, N-752SA, N-753S, N-753SA**

CARBURETER SPECIFICATIONS

For Martin (752S-752SA) 2 Cylinder "45" Engine 1-9/16 Inch Bore, 1½ Inch Stroke

For Martin (753S-753SA) 2 Cylinder '75' Engine 2 Inch Bore, 1¾ Inch Stroke

Dimensions Flange size ½ inch S A E
Main venturi (752S 752SA) 1 D 9/16 inch
Main venturi (753S 753SA) 1 D 23/32 inch

Float Level Distance from top of float (at free end) opposite needle seat to lower edge of float chamber cover when needle is seated to be ⅛ inch plus or minus 1/64 inch

Vents Inside—none Outside—No 50 (.070") drill

Gasoline Intake Needle seat size No 38 (.1015") drill

Low Speed Jet Tube Jet size No 75 (.021") drill
Auxiliary Jets (752S 752SA) (Idle bleed) inside of tube No 70 (.028") drill (753S 753SA) None

Idle Port Slot type length 107 inch width 030 inch
Idle port opening—Top of port to be (752S 752SA) 012 to 014 inch (753S 753SA) 022 to 026 inch above top edge of valve
(752S 752SA) 1—.116 inch diameter hole in throttle valve
(753S 753SA) 3—.104 inch diameter holes in throttle valve
Idle adjustment screw seat size No 44 (.086") drill

Set Idle Adjustment Screw (752S 752SA) ½ to 1½ turns open (753S 753SA) 1 to 2 turns open For richer mixture turn screw in

Main Nozzle (752S 753S) Accelerating jets 4—No 62 (.038") drill inside of nozzle (in nozzle well) (752SA) 2—No 62 (.038") drill inside of nozzle (in nozzle well) (753SA) None Nozzle passage (752S 752SA 753S) (Nozzle well to air horn) restriction Size No 35 (.110") drill (753SA) None

High Speed Adjusting Needle Seat (in base of nozzle) size .076 inch diameter Setting see Adjustments

Choke Manual—butterfly type with poppet valve

Spark Plug Gap	Breaker Point Setting	Float Setting	High Speed Adj Screw Setting	Idle Adjustment Screw Setting
.030"	.020"	⅛" ± 1/64"	Approx ½ to 1½ Turns Open	(752S-752SA) Approx ½ to 1½ Turns Open (753S 753SA) Approx 1 t 2 Turns Open

SERVICE PROCEDURE

To Disassemble

1 Remove carbureter from engine
2 Remove adjustable main metering screw and needle assembly gasket and bowl
3 Remove float pin float needle and needle seat Check float for dents leaks and wear on float lip or in float pin holes
4 Remove bowl ring gasket
5 Remove low speed jet
6 Remove idle adjustment screw and spring
7 Remove nozzle
8 Remove throttle valve screws valve and shaft and lever assembly
9 Do not remove choke valve and shaft unless replacement of these parts is necessary A spring loaded ball retains choke in wide open position Be sure to use a new ball and spring when replacing choke shaft and lever assembly CAUTION Hold a screw driver handle or a small piece of wood over threaded hole in air horn (side opposite choke lever) to prevent the ball from flying out when shaft is removed
10 Clean all parts in clean gasoline or solvent making sure all carbon accumulation is removed from bore especially where throttle valve seats in casting Blow out all passages with compressed air Replace all worn and damaged parts Always use new gaskets

To Assemble

11 Install throttle shaft and valve Valve must be installed with trademark c on side toward idle port when viewing from flange side Always use new screws With valve screws loose and throttle lever set screw backed out seat valve by tapping lightly with a small screw driver Hold in place while tightening screws
Note Throttle valve return spring **opens** throttle
12 Install nozzle making sure it seats in casting
13 Install needle seat needle float and float pin
14 Set float level With carbureter casting inverted and free weight of float on seated needle there should be ⅛" (plus or minus 1/64") clearance (use gauge T109 36) between machined surface of casting and free end of float (side opposite needle seat) Adjust by bending lip of float with small screw driver
15 Install bowl ring gasket bowl adjustable main metering screw and needle assembly Before installing adjustable main metering screw and needle assembly back out adjusting screw needle until tip of needle is flush with end of thread then tighten securely after making certain bowl is centered in gasket Turn adjusting screw needle in until it seats then back out ¾ turn Make sure packing nut is tight
16 Install low speed jet
17 Then install idle adjusting screw Turn inward until screw seats then back out 1¼ turns

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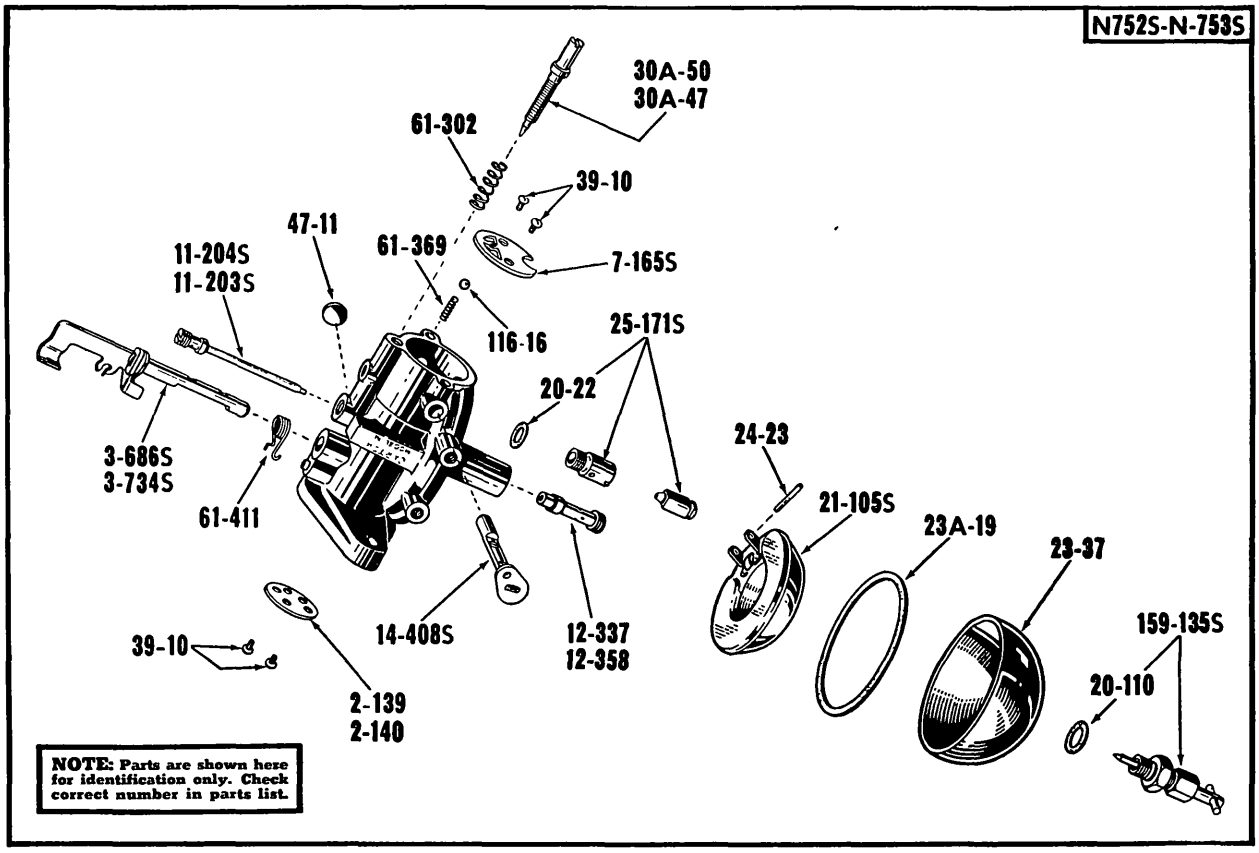
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HIGH SPEED AND IDLE SCREW ADJUSTMENT

After rebuilding and installation on engine is complete, the final high speed and idle screw adjustments must be made. Turning the adjustable main metering screw clockwise produces a leaner high speed mixture, and turning the idle screw clockwise produces a richer idle mixture.

When adjusting the idle needle, turn approximately 1/8 turn at a time, then wait sufficient time for engine to respond to this adjustment.



Martin Carbureters Nos. N-752S, N-752SA, N-753S, N-753SA

WHEN SERVICING, USE REPAIR PACKAGE No. 1725 (N-753S, N-753SA)

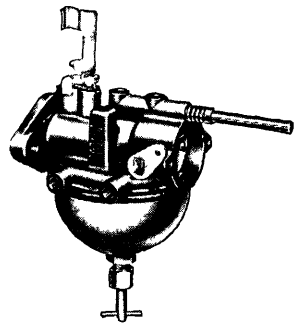
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME
1A-73	FLANGE GASKET
2-139	Throttle valve (752S-752SA)
2-140	Throttle valve (753S-753SA)
3-686S	Throttle shaft and lever assembly (753S-753SA)
3-734S	Throttle shaft and lever assembly (752S-752SA)
7-165S	Choke valve assembly (Sup. by 7-180S)
7-180S	Choke valve assembly
11-203S	Low speed jet assembly (752S-752SA)
11-204S	LOW SPEED JET ASSEMBLY (753S-753SA)
12-337	Nozzle (752S) (Sup. by 12-387)
12-337	Nozzle (753S-753SA) (Sup. by 12-358)
12-358	Nozzle (753S-753SA) (Sup. by 12-379)
12-379	NOZZLE (753S-753SA)
12-387	Nozzle (752S-752SA)
14-408S	Choke lever and shaft assembly
20-22	Needle seat gasket
20-110	BOWL NUT GASKET
21-105S	Float and lever assembly
23-37	Bowl

Part No.	PART NAME
23A-19	BOWL RING GASKET
24-23	Float lever pin
25-171S	NEEDLE AND SEAT ASSEMBLY
30A-47	Idle adjustment screw (753S-753SA) (Sup. by 30A-53)
30A-50	Idle adjustment screw (752S) (Sup. by 30A-52)
30A-52	Idle adjustment screw (752S-752SA)
30A-53	Idle adjustment screw (753S-753SA)
39-10	Valve attaching screw (Sup. by 101-320) (4)
47-11	WELSH PLUG
61-302	Idle adjustment screw spring (Sup. by 61-475)
61-369	Choke shaft spring
61-406	Needle pull clip (Part of 25-171S)
61-411	Throttle valve return spring
61-475	Idle adjustment screw spring
101-320	VALVE ATTACHING SCREW (4)
116-16	Choke shaft ball
159-135S	Adjustable main metering screw assembly (Sup. by 159-156S)
159-156S	Adjustable main metering screw assembly

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used

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Cut shows N 754S carbureter

MARTIN "100" OUTBOARD MOTOR 1950-1953

(N-2011S can be used in place of N-754S, N-754SA)

Horizontal, Model N Type, **Carbureters Nos. N-754S, N-754SA, N-2011S**

CARBURETER SPECIFICATIONS

For Martin 2 Cylinder Engine 2-3/16 Inch Bore, 1¾ Inch Stroke

Dimensions Flange size ½ inch S A E
Main Venturi size 13/16 inch

Float Level Distance from top of float (at free end) opposite needle seat to machined surface of float chamber cover when needle is seated to be ⅛ inch plus or minus 1/64 inch

Vents Inside—none Outside—No 50 (070") drill

Gasoline Intake Needle Seat size (754S SA) No 38 (1015 inch) (2011S) No 36 (1065 inch) drill in needle seat

Low Speed Jet Tube Jet size No 65 (035") drill

Idle Port Slot type length 112 inch width 030 inch
Idle port opening—Top of port to be 015 to 019 inch above top edge of valve
Idle adjustment screw seat size No 44 (086") drill

Set Idle Adjustment Screw Approximately 2 turns open For richer mixture turn screw in

Main Nozzle Accelerating jets (754S) 4—No 62 (038) drill in side of nozzle (in nozzle well)
(754SA 2011S) None
Nozzle passage (754S) (Nozzle well to air horn) restriction size No 35 (110") drill
(754SA 2011S) None

High Speed Adjusting Needle Seat in base of nozzle size 082 inch diameter Setting see adjustment

Choke Manual—butterfly type with poppet valve

Spark Plug Gap	Breaker Point Setting	Float Setting	High Speed Adj Screw Setting	Idle Adjustment Screw Setting
030"	020"	⅛" ± 1/64"	Approx ½ to 2 Turns Open	Approx 2 Turns Open

SERVICE PROCEDURE

To Disassemble

1 Remove carbureter from engine

2 Remove adjustable main metering screw needle assembly and bowl

3 Remove float pin float needle and needle seat Check float for dents leaks and wear on float lip or in float pin holes

4 Remove bowl ring gasket

5 Remove low speed jet

6 Remove idle adjustment screw and spring

7 Remove nozzle

8 Remove throttle valve screws valve snaft and lever assembly and return spring

9 Do not remove choke valve and shaft unless replacement of these parts is necessary A spring loaded ball retains choke in wide open position Be sure to use a new ball and spring when replacing choke shaft and lever assembly CAUTION Hold a screw driver handle or a small piece of wood over threaded hole in air horn (side opposite choke lever) to prevent the ball from flying out when shaft is removed

10 Clean all parts in clean gasoline or solvent making sure all carbon accumulation is removed from bore especially where throttle valve seats in casting Blow out all passages with compressed air Replace all worn and damaged parts Always use new gaskets

To Assemble

11 Install throttle shaft valve and return spring Valve must be installed with trademark c on side toward idle port when viewing from flange side Always use new screws With valve screws loose and throttle lever set screw backed out seat valve by tapping lightly with a small screw driver Hold in place while tightening screws
Note Throttle valve return spring opens throttle

12 Install nozzle making sure it seats in casting

13 Install needle seat needle float and float pin

14 Set float level With carbureter casting inverted float resting lightly against needle in its seat there should be ⅛" (plus or minus 1/64") clearance (use gauge T109 36) between machined surface of casting and free end of float (side opposite needle seat) Adjust by bending lip of float with small screw driver

15 Install bowl ring gasket bowl adjustable main metering screw and needle assembly Before installing adjustable main metering screw needle assembly back out adjusting screw needle until tip of needle is flush with end of thread then tighten securely after making certain bowl is centered in gasket Turn adjusting screw needle in until it seats then back out ¾ turn Make sure packing nut is tight

16 Install low speed jet

17 Then install idle adjusting screw Turn inward until screw seats then back out 2 turns

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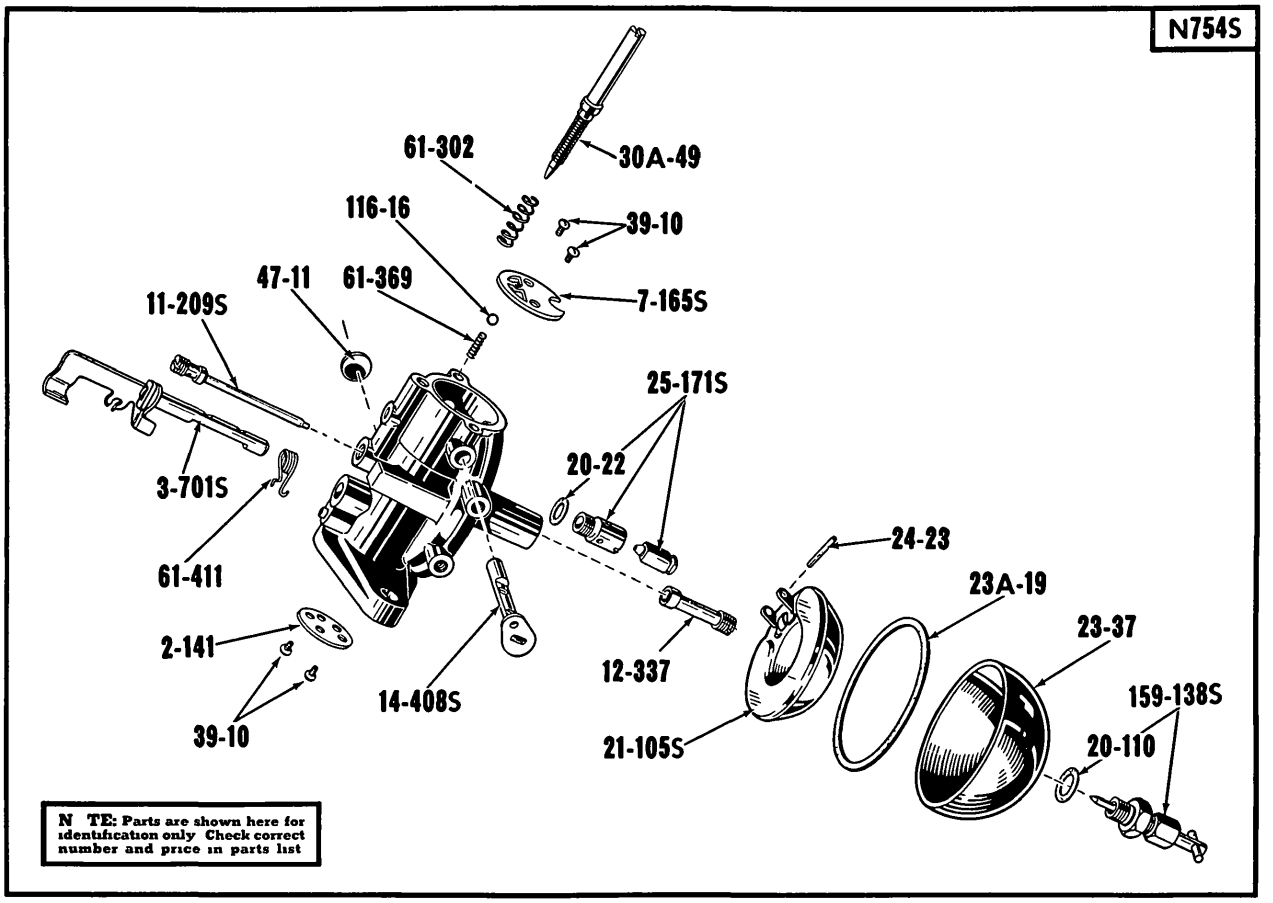
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HIGH SPEED AND IDLE SCREW ADJUSTMENT

After rebuilding and installation on engine is complete the final high speed and idle screw adjustments must be made Turning the adjustable main metering screw clockwise produces a leaner high speed mixture and turning the idle screw clock wise produces a richer idle mixture

When adjusting the idle needle turn approximately 1/8 turn at a time then wait sufficient time for engine to respond to this adjustment



Martin Carbureters 1950-1953—Nos. N-754S, N-754SA, N-2011S

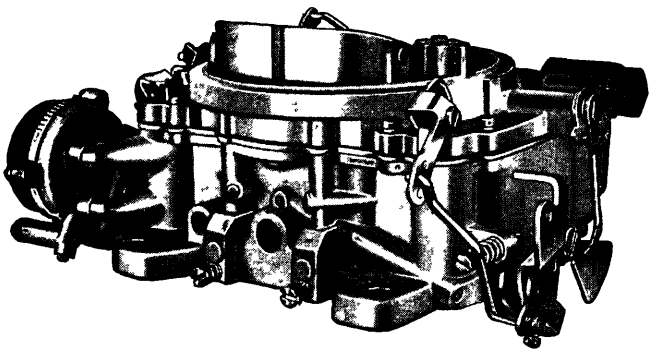
WHEN SERVICING, USE REPAIR PACKAGE No 1726 (N-754S-SA)

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME
1A-73	FLANGE GASKET
2-141	Throttle valve
3-701S	Throttle shaft and lever assembly
7-165S	Choke valve assembly (754SA) (Sup by 7 180S)
7-180S	Choke valve assembly
11-209S	LOW SPEED JET ASSEMBLY
12-337	Nozzle (754S) (Sup by 12 358)
12-358	Nozzle (754S SA) (Sup by 12 379)
12 379	NOZZLE
14-408S	Choke lever and shaft assembly
20 22	Needle seat gasket
20-34	Packing nut gasket
20-110	BOWL NUT GASKET
21-105S	Float and lever assembly (754SA)
21-139S	Float and lever assembly (2011S)
23-37	Bowl (754S SA)
23-42	Bowl (2011S) (Sup by 23 59)
23-59	Bowl (2011S)
23A-19	BOWL RING GASKET

Part No	PART NAME	
24-23	Float lever pin	
25-171S	NEEDLE AND SEAT ASSEMBLY (754S SA)	
25-246S	Needle and seat assembly (2011S)	
30A-49	Idle adjustment screw (754SA) (Sup by 30A 54)	
30A-54	Idle adjustment screw	
39-10	Valve attaching screw (754SA) (Sup by 101 320)	
47-11	WELSH PLUG	
61-302	Idle adjustment screw spring (754SA) (Sup by 61 475)	
61-369	Choke shaft spring	
61-406	Needle pull clip (Part of 25 171S)	
61-411	Throttle valve return spring	
61-475	Idle adjustment screw spring	
101-320	VALVE ATTACHING SCREW	(4)
116 16	Choke shaft ball	
159-138S	Adjustable main metering screw and needle assembly	
163-53	Packing	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used



MERCURY "V-8"
MODELS
"MONTCLAIR," "MONTEREY," "STATION WAGON" and "TURNPIKE CRUISER"
(312 Cu. In. Engine)

1957

("Turnpike Cruiser" with 368 Cu. In. Engine use 2404SA carbureter. See Form 5233 under Lincoln for specifications.)

AFB Four-Bore Down-Draft Climatic® Control **Carbureters Nos. 2441S-2441SA**

CARBURETER SPECIFICATIONS

For Mercury 8 Cylinder Engine: 3.80 Inch Bore, 3.44 Inch Stroke

Dimensions: Flange, four bore—4 bolt type.
Throttle bore 1-7/16 inch I. D.
Primary venturi size, 11/32 inch I. D.
Main Venturi 1-1/16 inch I. D.

Vents: Inside (2) in air horn; Outside (4) in body.

Gasoline Intake: Size No. 38 (.1015 inch) drill hole in needle seat.

Low Speed Jet Tube: (In venturi assembly, primary side only).
Jet, size No. 68 (.031 inch) drill.
By-pass, size No. 53 (.0595 inch) drill.
Economizer, size (.049 inch) diameter.
Idle bleed, size No. 51 (.067 inch) drill.

Idle Port: (Upper) slot type. Primary, length .230 inch; width .030 inch. Secondary, none.

Idle Port Opening: Primary, .187 to .193 inch above top edge of valve with valve tightly closed. Secondary, none.

Lower Port: Primary (for idle adjustment screw), size early prod. .0635 inch, intermediate prod. .065 inch, late prod. .076 inch.

Set Idle Adjustment Screw: 1/2 to 1 1/2 turns open. For richer mixture turn screw out. Idle engine between 475 to 500 r.p.m. (all trans.) in neutral.

Main Nozzle: Installed permanently. DO NOT REMOVE. Anti-percolator bleed, primary, (tube in venturi assembly) size No. 71 (.026 inch) drill. Secondary, (drilled hole in venturi assembly) size No. 60 (.040 inch) drill.

Step-Up Rod: (Vacumeter type) see parts list for size.

Metering Jet: Primary, size .0935 inch diameter (for step-up rod).
Secondary, size .0635 inch diameter (no step-up rod).

Accelerating Pump: Discharge jet (twin) primary side only, size No. 68 (.031 inch) drill. Intake ball check seat (screw plug) size .115 to .120 inch diameter. Discharge needle seat, size .070 inch diameter.

Choke: Carter Climatic® Control set 1 point rich. Butterfly type—offset choke valve, primary side only. Choke heat suction hole, restriction in body size No. 38 (.1015 inch), late prod. No. 44 (.086 inch) drill.

Vacuum Spark Port: Horizontal slot (round end) .055 x .130 inch. Top of port .040 to .050 inch above top edge of valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open: 6° B. T. D. C. At Vibration Damper	Valve Setting (Hot)	Float Setting	Idle Adjustment Screw Setting
.032"-.036"	.014"-.016"		Intake .019" Exhaust .019"	5/32 Inch (Use Gauge T109-154)	1/2 to 1 1/2 Turns Open 475 to 500 R.P.M. In Neutral

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CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3692

FLOAT ALIGNMENT: Side of floats parallel to edge of casting. Minimum clearance between lever and air horn lugs without binding. To adjust, bend float lever.

FLOAT LEVEL: 5/32 inch (Gauge T109-154) between top of floats at outer end and air horn gasket. To adjust, bend float lever.

FLOAT DROP: 23/32 inch between top of floats at outer end and air horn gasket. To adjust, bend stop tabs on floats brackets.

PUMP: 15/32 inch from the top of the bowl cover to the top of the plunger shaft with throttle connector rod in center hole (medium stroke) of pump arm.

COUNTERSHAFT LINKAGE: (1) .086 inch (Gauge T109-215) between choke lever and stop in piston housing with choke held closed. To adjust, take slack out of linkage by setting counter shaft lever.

(2) .010 inch (Gauge T109-200) between lug on outer countershaft lever and stop on inner countershaft lever. To adjust, bend lug on outer countershaft lever.

Optional adjustment (late prod.) with slight clearance between lug on fast idle cam and stop on flange casting, and inner countershaft lever contacting lug on outer countershaft lever align index mark on cam with adjusting screw. To adjust bend fast idle connector rod.

FAST IDLE THROTTLE VALVE CLEARANCE: .020 inch (Gauge T109-29) between lower edge of valve and bore with adjusting screw on high step of cam.

FAST IDLE ON CAR: 1800 to 2000 R.P.M. hot engine —with fast idle screw on high step of cam.

UNLOADER: .067 inch (Gauge T109-234) between upper edge of choke valve and inner wall of air horn. To adjust, bend unloader arm on throttle lever.

PRIMARY THROTTLE SHAFT DOG: (1) With primary throttle valves in wide open position there should be .015 inch (Gauge T109-44) clearance between edge of secondary valves and bore of carbureter adjacent to primary valves. To adjust, bend upper tang on primary throttle shaft dog. If clearance cannot be obtained, bend throttle operating rod slightly.

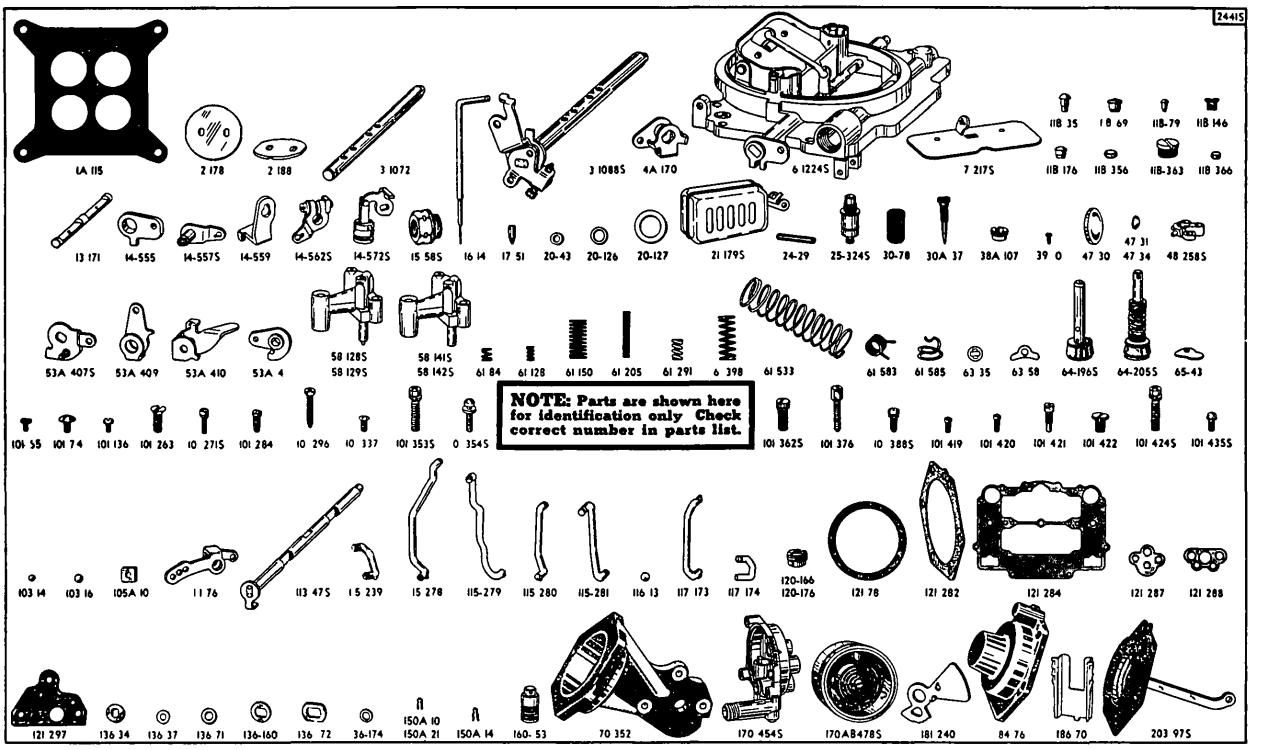
(2) With primary and secondary valves tightly closed there should be .067 inch (Gauge T109-234) clearance between primary throttle shaft flex spring and lower tang on primary throttle shaft dog. To adjust, bend lower tang.

DASH POT: 7/16 inch from top of the bowl cover to the top of the plunger shaft with primary throttle wide open. To adjust, bend stop lug on flat lever.

TOOLS REQUIRED FOR SERVICING CARBURETER:

T109-29	.020" Wire gauge	T109-234	.067" Wire gauge
T109-44	.015" Wire gauge	T109-22	Bending tool
T109-154	5/32" Float gauge	T109-213	Bending tool
T109-200	.010" Wire gauge	T109-214	Bending tool
T109-215	.086" Wire gauge		

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Mercury—1957—Carbureters Nos. 2441S-2441SA

WHEN SERVICING, USE GASKET ASSORTMENT No. 292; REPAIR PACKAGE No 1851

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1A-115	FLANGE GASKET	
2-178	Secondary throttle valve	(2)
2-188	Primary throttle valve	(2)
3-1072	Secondary throttle shaft	
3-1088S	Primary throttle shaft and lever assembly	
4A-170	Primary throttle shaft dog	
6-1224S	†Air horn assembly (2441S) (Sup by 6 1304S)	
6-1304S	Air horn assembly	
7 217S	Choke valve and lever assembly	
11B-35	Rivet plug	
11B-69	Fuel passage plug (Sup by 11B 306)	
11B-79	Rivet plug	(2)
11B-146	Level sight plug (Sup by 11B 372)	
11B-176	Idle port rivet plug	(2)
11B-306	Fuel passage plug	
11B-356	Secondary throttle shaft plug	
11B-363	PUMP INTAKE SCREW PLUG	
11B-366	Nozzle well rivet plug	(4)
11B-372	Level sight plug	(2)
13-171	Choke shaft	
14-555	Inside countershaft lever	
14-557S	Choke lever and shaft assembly (piston housing)	
14-559	Countershaft lever (to choke valve)	
14-562S	Countershaft lever screw and nut assembly	
14-572S	Choke piston lever link and pin assembly (Sup by 14 581S 150 190 160 166)	
14-581S	Choke piston link and lever assembly	
15-58S	Fuel inlet fitting assembly	

Part No.	PART NAME	
16-14	Step up rod 0725" x 063" (Sup by 16 28)	(2)
16-21	Step up rod 0725" x 066" 1 size lean	(2)
16-22	Step up rod 07375" x 068" 2 sizes lean	(2)
16-28	STEP UP ROD 071" x 0635"	(2)
16-53U	Step up rod and jet unit (consists of 2—16 22 and 2—120 186) (for altitude use)	
17-51	PUMP DISCHARGE CHECK NEEDLE	
20-43	PISTON HOUSING GASKET	
20-126	Needle seat gasket	(2)
20-127	FUEL INLET FITTING GASKET	
21-179S	Float and lever assembly	(2)
24-29	Float lever pin	(2)
25-324S	NEEDLE AND SEAT ASSEMBLY	(2)
30-78	FUEL INLET STRAINER	
30A-37	Idle adjustment screw	(2)
38A-107	PUMP INTAKE CHECK BALL SEAT	
39-10	Choke valve attaching screw	(2)
47-30	Piston housing welsh plug	
47-31	Venturi welsh plug (Sup by 47 33)	(4)
47-33	Venturi welsh plug	(4)
47-34	Spark port welsh plug	
48-258S	Pump jet housing	
53A-407S	Secondary throttle operating lever assembly	
53A-409	Primary throttle operating lever	
53A-410	Dash pot arm (inner)	
53A-411	Dash pot arm (outer)	
58-128S	†Primary venturi assembly (choke side) (2441S) (Sup by 58 170S and 6 1304S)	
58-129S	†Primary venturi assembly (pump side) (2441S) (Sup by 58 171S and 6 1304S)	
58-141S	Secondary venturi assembly (pump side)	

Part N .	PART NAME	
58-142S	Secondary venturi assembly (choke side)	
58-170S	Primary venturi assembly (choke side) (Sup by 58 179S)	
58-171S	Primary venturi assembly (pump side) (Sup by 58 180S)	
58-179S	Primary venturi assembly (choke side)	
58-180S	Primary venturi assembly (pump side)	
61-84	Idle adjustment screw spring	(2)
61-128	THROTTLE CONNECTOR ROD SPRING (Use with 115 278)	
61-150	DASH POT RETURN SPRING	
61-205	Vacuum piston spring (Sup by 61 259)	(2)
61-259	VACUUM PISTON SPRING	(2)
61-291	Throttle lever adjusting screw spring	
61-398	PUMP SPRING	
61-533	Diaphragm return spring	
61-583	Throttle flex spring	
61-585	STEP UP ROD RETAINING SPRING	(2)
63-35	THROTTLE CONNECTOR ROD RETAINER (Use with 115 278)	
63-58	Coil housing retainer	(3)
64-196S	DASH POT PLUNGER ROD AND CHECK ASSEMBLY	
64-205S	PUMP PLUNGER ROD AND SPRING ASSEMBLY	
65-43	Step up piston cover plate	(2)
101-65	Piston housing choke shaft lever attaching screw	
101-74	Throttle shaft lever attaching screw	(2)
101-136	Coil housing attaching screw	(3)
101-184S	Pump jet housing attaching screw and washer assembly	(2)
101-263	Diaphragm housing attaching screw	(3)
101-271S	Pump jet housing attaching screw and washer assembly (Sup by 101 184S)	(2)
101-284	Piston housing attaching screw (Sup by 101 436)	(3)
101-296	Fast idle adjustment screw	
101-337	Countershaft lever attaching screw	
101-353S	Air horn attaching screw and washer assembly	(2)
101 354S	Countershaft lever clamp screw and washer assembly	
101-362S	Air horn attaching screw and washer assembly	(8)
101-376	Throttle lever adjusting screw	
101-388S	Diaphragm housing cover attaching screw and washer assembly	(6)
101 419	Secondary throttle valve attaching screw	(4)
101-420	Primary throttle valve attaching screw	(4)
101-421	Pump arm attaching screw	
101-422	Fast idle cam attaching screw	
101-424S	Venturi attaching screw and washer assembly	(8)

Part No.	PART NAME	
101-435S	Step up piston cover plate attaching screw and washer assembly	(2)
101-436	Piston housing attaching screw	(3)
103-14	Lead shot	
103-16	Lead shot	(2)
105A-10	Countershaft lever clamp screw nut	
111-76	Pump arm	
113-47S	Countershaft and lever assembly	
115-239	Throttle operating rod (Sup by 115 309)	
115-278	THROTTLE CONNECTOR ROD (Sup by 115 298 and 172 22)	
115-279	Choke connector rod	
115-280	Fast idle connector rod	
115-281	Dash pot connector rod	
115-298	Throttle connector rod	
115-309	Throttle operating rod	
116 13	PUMP INTAKE CHECK BALL	
117-173	Choke valve connector link	
117-174	PUMP CONNECTOR LINK	
120-166	PRIMARY METERING JET	(2)
120-176	SECONDARY METERING JET	(2)
121-78	COIL HOUSING GASKET	
121-282	GASKET (DIAPHRAGM TO LOWER HOUSING)	
121-284	AIR HORN GASKET	
121-287	PUMP JET HOUSING GASKET	
121-288	VENTURI CLUSTER GASKET	(4)
121-297	DIAPHRAGM HOUSING TO FLANGE GASKET	
136-34	Choke piston lever retaining washer	
136-37	Throttle operating rod washer (Use with 115 239)	(4)
136-71	Dash pot lever retaining washer	
136-160	Secondary throttle shaft washer	
136-172	Primary throttle shaft washer	
136-174	Throttle lever adjusting screw washer	
150-190	Choke piston pin (Use with 14 581S)	
150A-10	PIN SPRING	(7)
150A-14	PIN SPRING	
150A 21	Step up piston	(2)
156 118	Spark fitting	
160-153	PIN SPRING	
160 166	Choke piston (Use with 14 581S)	
170 352	Diaphragm housing	
170-454S	Piston housing and plug assembly	
170AB-478S	Thermostatic coil and housing assembly	
172-22	Throttle connector rod retainer (Use with 115 298)	
181 240	Fast idle cam	
184-76	Diaphragm housing cap	
186-70	Fuel bowl baffle	(2)
203-97S	Secondary throttle shaft diaphragm assembly	

† 244 1S used on l mited production

NOTE Figures in parentheses indicate number of pieces used in one carburetor Where no figure s shown only one is used

Form 3781
November, 1958

CARTER CARBURETOR

DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

File Under Mercury

CARTER MODEL AFB CARBURETOR FOR MERCURY (SERVICE ADJUSTMENT PROCEDURE)

NOTE: The parts and specification pages referred to are catalog pages. These pages can be obtained from Carter-Carburetor, Catalog Department, St. Louis (7), Missouri. Specify the carbureter number found on the base of carbureter, when requesting specification pages.

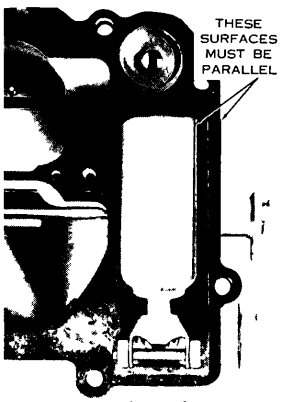
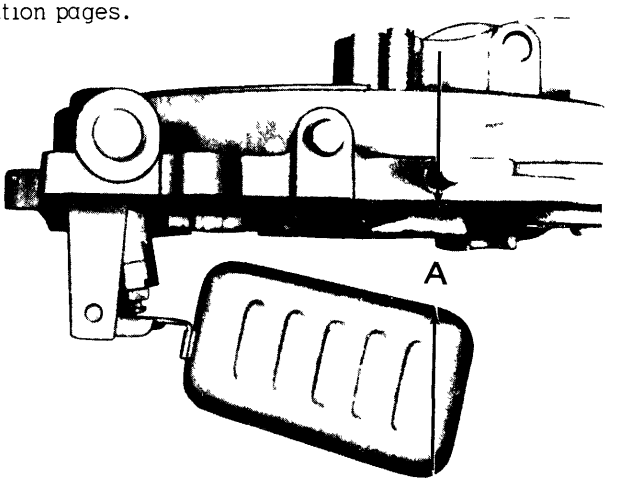


Figure 1 Left



Figure 1 Right



FLOAT ALIGNMENT ADJUSTMENT (Fig. 1):

1. Sight down the side of the float shell to determine if the side of the float is parallel to the outer edge of the air horn casting. TO ADJUST: Bend float lever by applying pressure to the end of the float shell with the fingers while supporting the float lever with the thumb.

CAUTION: To avoid damaging the float, apply only enough pressure to bend float lever.

2. After aligning float, remove as much clearance as possible between arms of float lever and lugs on air horn by bending the float lever. Arms of float lever should be as parallel to the inner surfaces of lugs on air horn as possible.

   Floats must operate freely without excess clearance on its hinge pin.

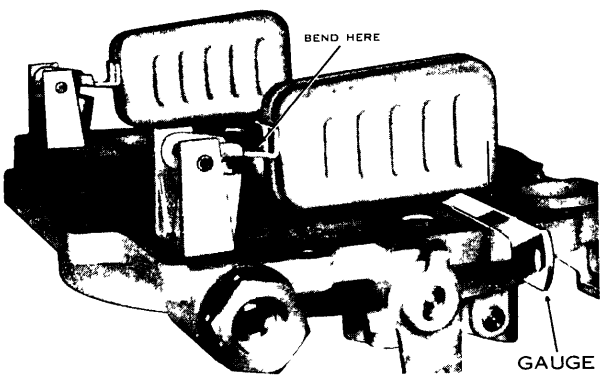


Figure 2

FLOAT LEVEL ADJUSTMENT (Fig. 2):

With air horn inverted, bowl cover gasket in place and needle seated, there should be the clearance as listed on carburetor specification page between outer end of float and air horn gasket. To adjust, bend float arm. Adjust both floats. Recheck float alignment.

FLOAT DROP ADJUSTMENT (Fig. 3):

With bowl cover held in upright position and measuring from outer end of float, the distance (A) between top of floats and bowl cover gasket should be as listed on specification page. To adjust, bend stop tabs on float brackets.

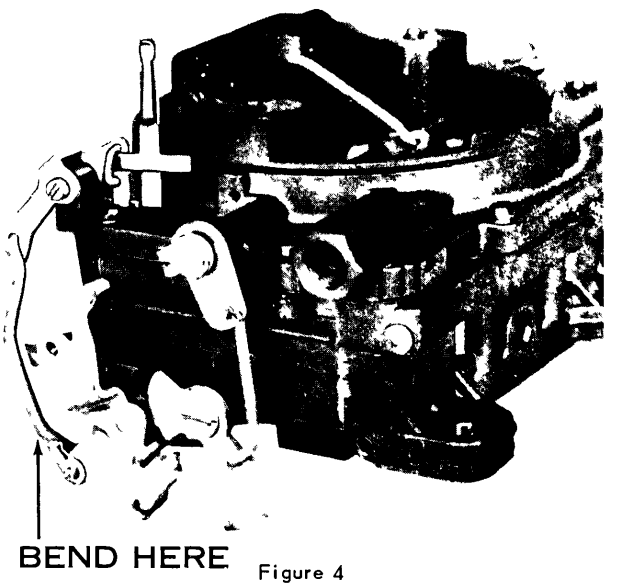


Figure 4

PUMP ADJUSTMENT (Fig. 4):

1. Back out idle speed screw until throttle valves seat in bores of carburetor. NOTE: Be sure choke is wide open so fast idle cam does not hold throttle valve open.
2. With throttle connector rod in inner hole (long stroke) of pump arm, the distance from the top of the bowl cover to the top of the plunger shaft should be as specified on carburetor specification page.
3. Adjust by bending throttle connector rod at lower angle (use tool T109-213).

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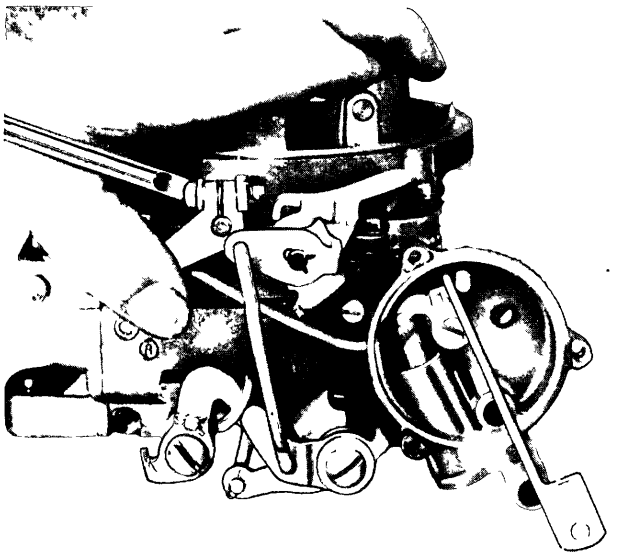


Figure 5

CHOKE PISTON LEVER ADJUSTMENT (Fig. 5):

L osen countershaft lever clamp screw. Take end play out of count rshaft, and hold choke valve tightly closed. Take slack out of linkage by pressing countershaft lever towards closed position with gauge in place between choke lever and stop in piston housing. Hold in plac and tighten clamp screw.

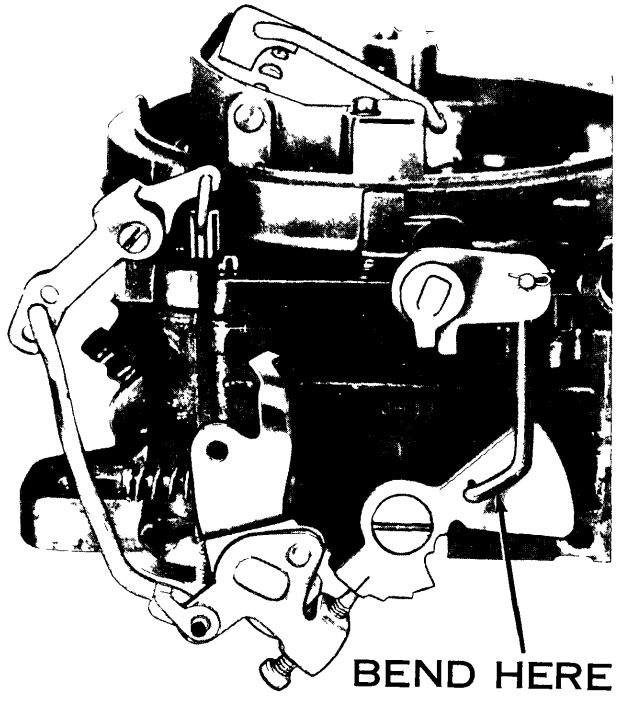


Figure 6

FAST IDLE LINKAGE ADJUSTMENT (Fig. 6):

With choke valve tightly closed and lug on outer choke shaft lever contacting stop on inner choke shaft lever align center of fast idle scr w with index mark on cam. To adjust, bend fast idle connector rod. (Use tool T109-213).

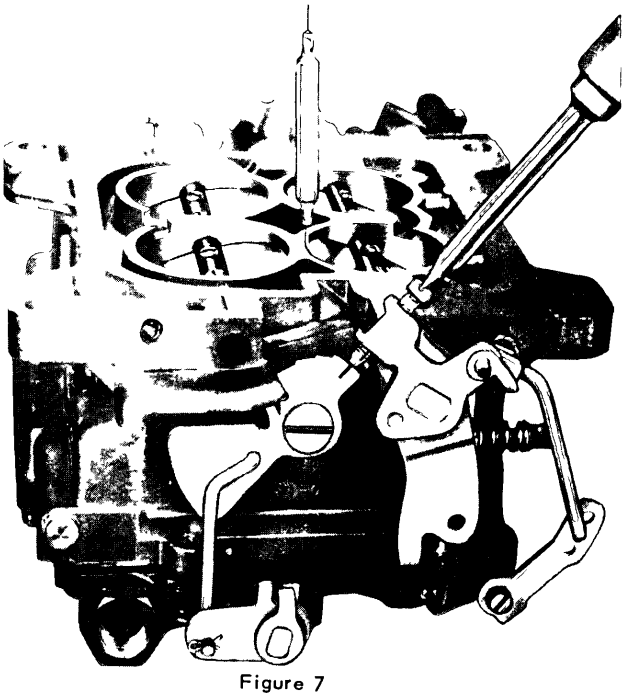


Figure 7

FAST IDLE THROTTLE VALVE CLEARANCE ADJUSTMENT (Fig. 7):

With choke valve tightly closed, tighten fast idle adjusting screw (on index mark of cam) until the clearance between throttle valve and bore of carbureter, side opposite idle port, is as listed on carbureter specification page.

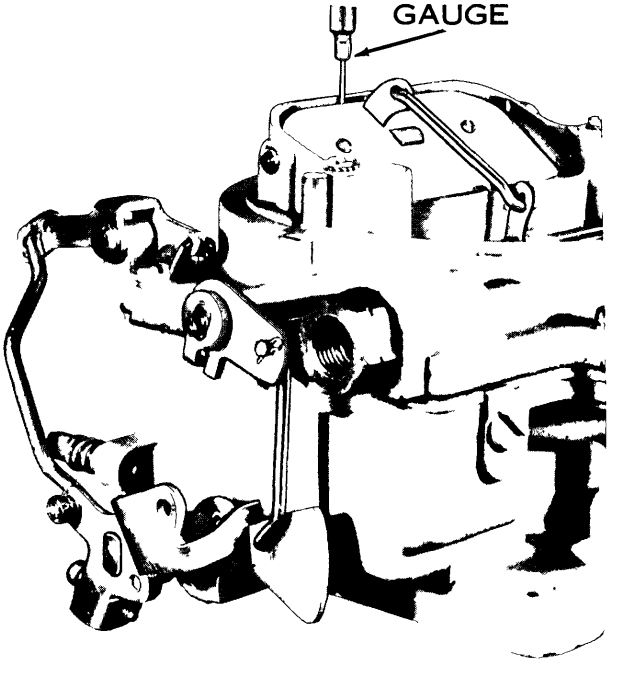


Figure 8

UNLOADER ADJUSTMENT (Fig. 8):

With throttl wide open ther should be the cl arance as listed on carbureter specification pag between upper edge of choke valve and inner wall of air horn. To adjust, bend unloader lip on throttle shaft lever. (Us tool T109-214).

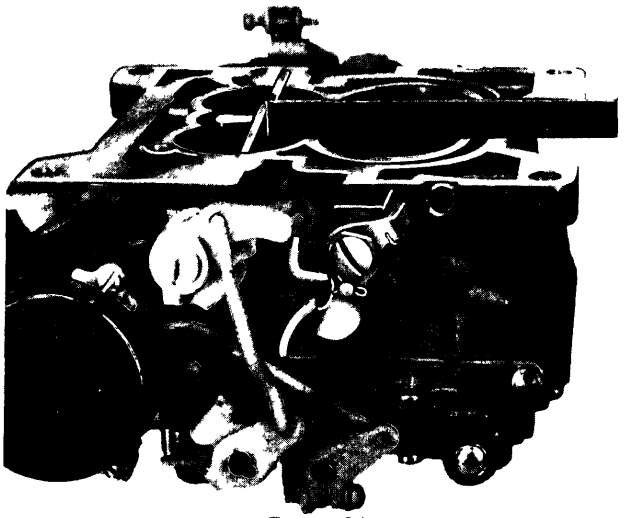


Figure 9A

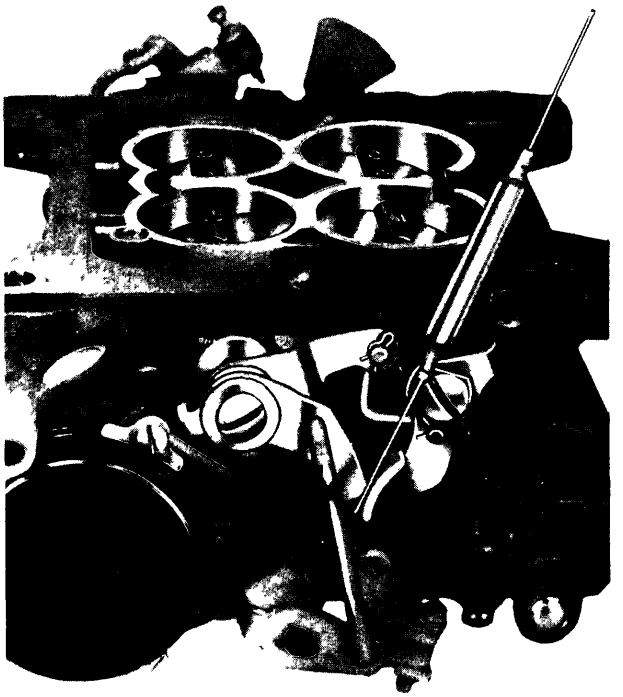


Figure 9B

SECONDARY THROTTLE LEVER ADJUSTMENT (Figs. 9A and 9B):

1. Block choke valve wide open.
2. Secondary throttle valves should just start to open when primary throttle valves are opened to the clearance as listed on specification page between lower edge of valve and bore (opposite idle port). To adjust, bend throttle operating rod. (Use bending tool T109-213). (See Fig. 9A) NOTE: Primary and secondary throttle valves should reach wide open position, full vertical, at the same time.
3. With primary and secondary throttle valves in tightly closed position, there should be the clearance as listed on specification page between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on secondary lever. (See Fig. 9B).

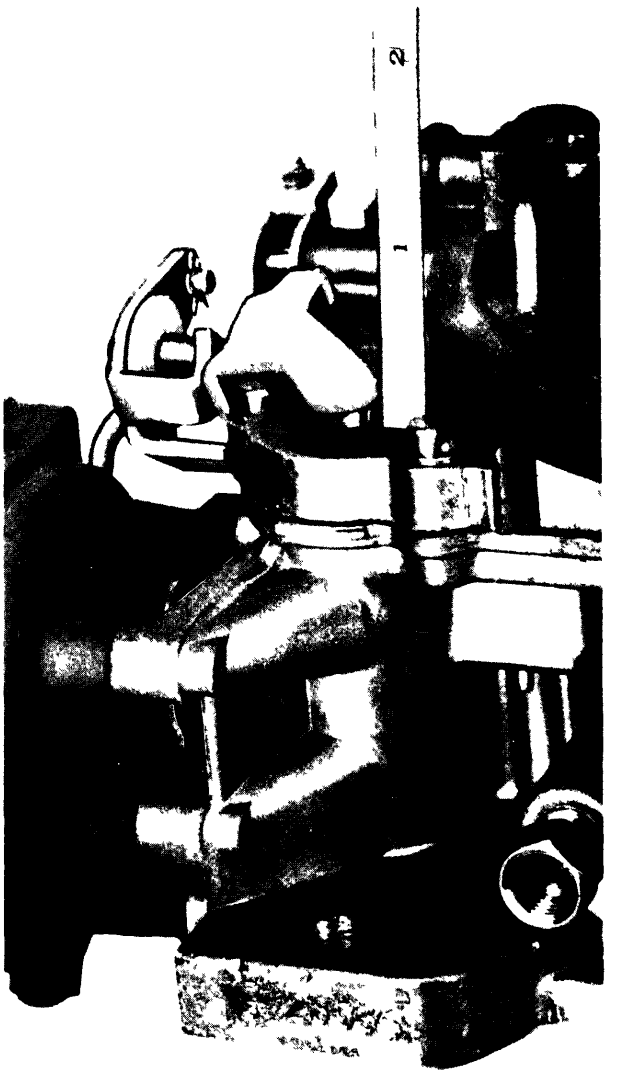


Figure 10

DASH POT ADJUSTMENT (Fig. 10):

1. With primary valves tightly closed there should be the distance as listed on specification page between the top surface of the bowl cover and the top of the plunger shaft. To adjust, bend the flat portion of the dash pot lever. Check to be sure dash pot lever does not contact bowl cover attaching screw.
2. With primary valves wide open there should be the distance as listed on specification page between the top surface of the bowl cover and the top of the plunger shaft. To adjust, bend stop lug on dash pot lever. (Use bending tool T109-22). Check to be sure plunger shaft operates without sticking in hole in bowl cover.

NOTE: See last page for pertinent service information.

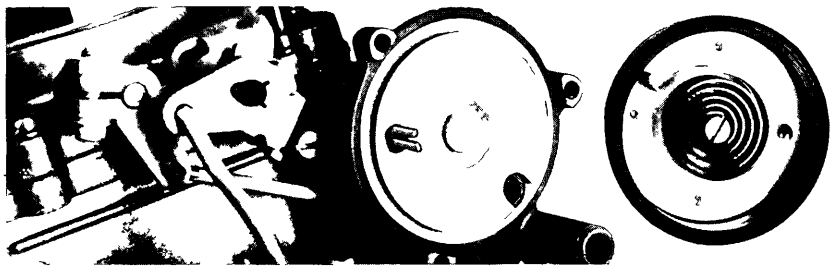


Figure 11

FIGURE 11:

After chok baffle plat assembly has be n properly installed as shown in Fig. 11 install gasket and coil housing with the lip on the coil spring installed in the slot of the piston lever.

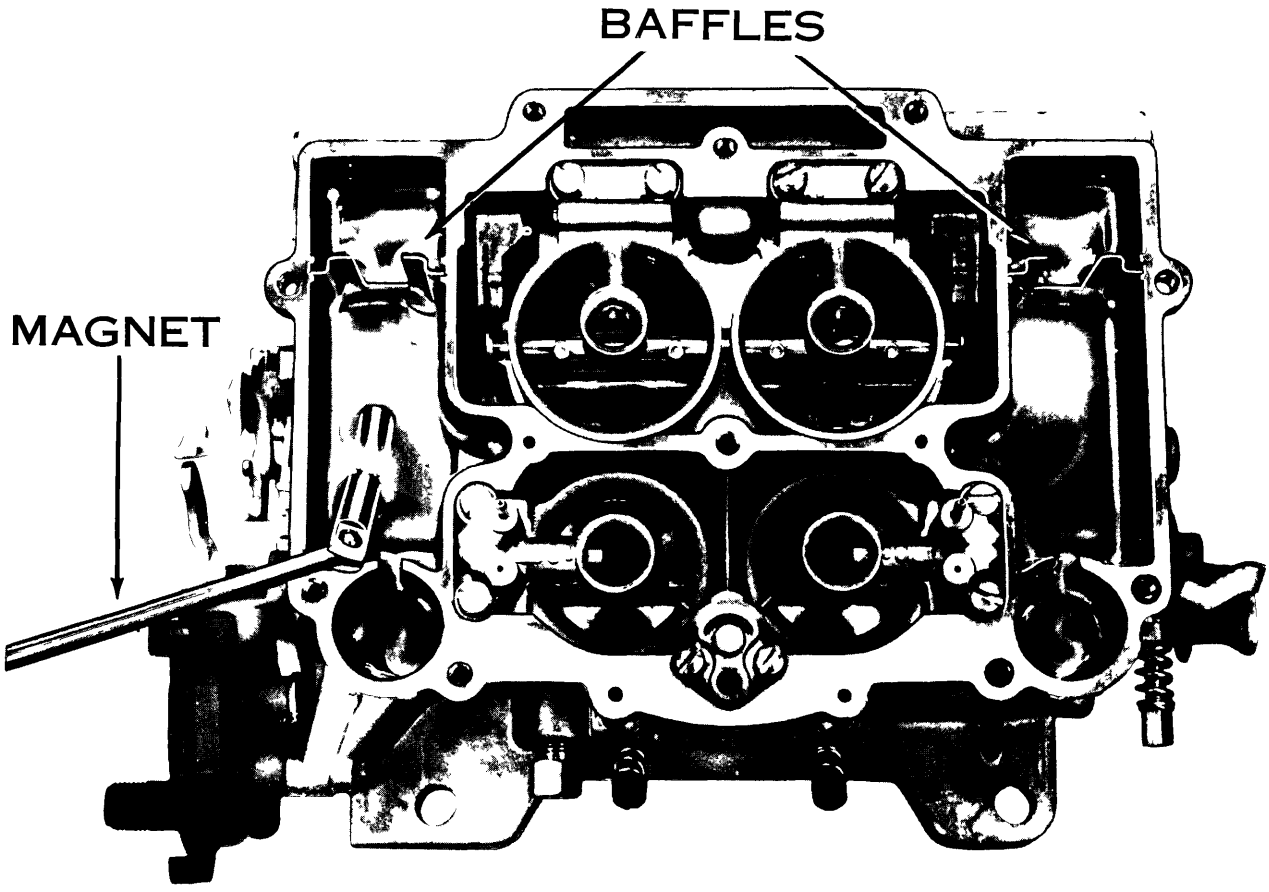


Figure 12

FIGURE 12:

Flooding, stumble on acceleration and other performance complaints are, in many instances, caused by the presence of dirt, water or other foreign matter in the carbureter. To aid in diagnosing the cause of the complaint, the carbureter should be car fully removed from the engine without draining the fuel from the bowl. The contents of the fuel bowl may then be examined for contamination as the carbureter is disassembled.

Check th fuel in the bowl for contamination by dirt, water, gum or other foreign matter. A magnet moved through the fuel in the bowl will pick up and identify any iron oxide dust that may have caused intake needle and seat leakage.

Inspect gasketed surfaces between body and air horn. Small nicks or burrs should be smoothed down to eliminate air or fuel leakage. Be especially particular when inspecting the top surface of the inner wall of the bowl around the vacuum piston passage. A poor seal at this location may contribute to a "cutting-out" on turns complaint.

Install fuel baffles as shown (Fig. 12) to prevent damage of floats.

Fill the carbureter bowl with clean fuel before installing on th manifold. This will help prevent dirt trapped in th fuel syst m from being dislodged by the fr e flow of fuel as the carbur t r is primed. Th operation of the floats and intake needle and seats may be checked under pressure if a fuel pump is used at the bench to fill the carbur t r bowl. Op rate the throttle several times and visually check th discharge from the pump jets.

Before installing the carbureter, hold choke valve open and turn th idle spe d screw until it just contacts th throttl lever, then ½ a turn more to open th throttl valves enough to keep th engine running, until th idle mixture and final R.P.M. adjustment can be made.

Form 3692
October, 1956

CARTER CARBURETOR

DIVISION OF ACF INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

File Under Mercury

CARTER MODEL AFB CARBURETER FOR MERCURY
(SERVICE ADJUSTMENT PROCEDURE)

NOTE: The parts and specification pages referred to are catalog pages. These pages can be obtained from Carter-Carburetor, Catalog Department, St. Louis (7), Missouri. Specify the carbureter number found on the base of carbureter, when requesting specification pages.

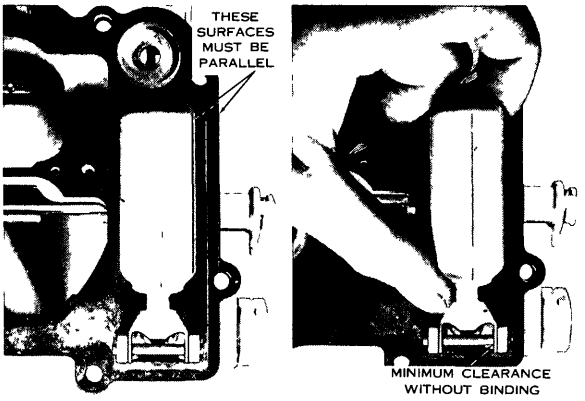


Figure 1

FLOAT ALIGNMENT ADJUSTMENT (Fig. 1)

1. Sight down the side of the float shell to determine if the side of the float is parallel to the outer edge of the air horn casting. TO ADJUST: Bend float lever by applying pressure to the end of the float shell with the fingers while supporting the float lever with the thumb.

   CAUTION: To avoid damaging the float, apply only enough pressure to bend float lever.

2. After aligning float, remove as much clearance as possible between arms of float lever and lugs on air horn by bending the float lever. Arms of float lever should be as parallel to the inner surfaces of lugs on air horn as possible.

   Floats must operate freely without excess clearance on its hinge pin.

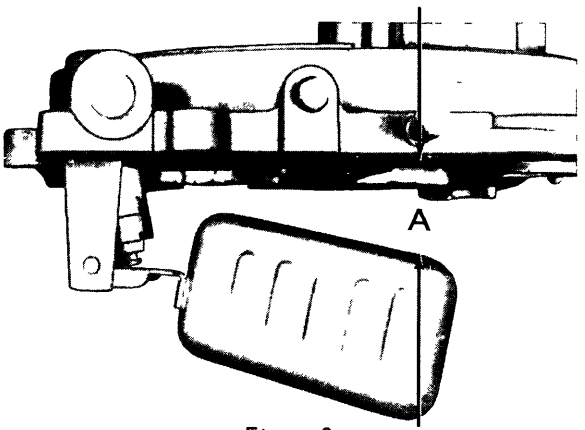


Figure 3

FLOAT DROP ADJUSTMENT (Fig. 3):

With bowl cover held in upright position and measuring from outer nd of float, the distance (A) between top of floats and bowl cover gasket should be as listed on specification page. To adjust, bend stop tabs on float brackets.

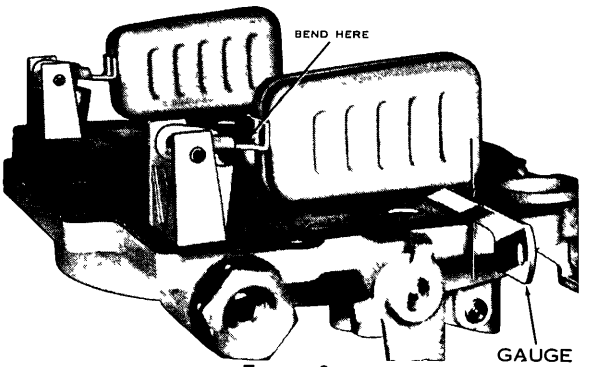


Figure 2

FLOAT LEVEL ADJUSTMENT (Fig. 2):

With air horn inverted, bowl cover gasket in place and needle seated, there should be the clearanc as listed on carburetor specitication page between outer end of float and air horn gasket. To adjust, bend float arm. Adjust both floats. Recheck float alignm nt.

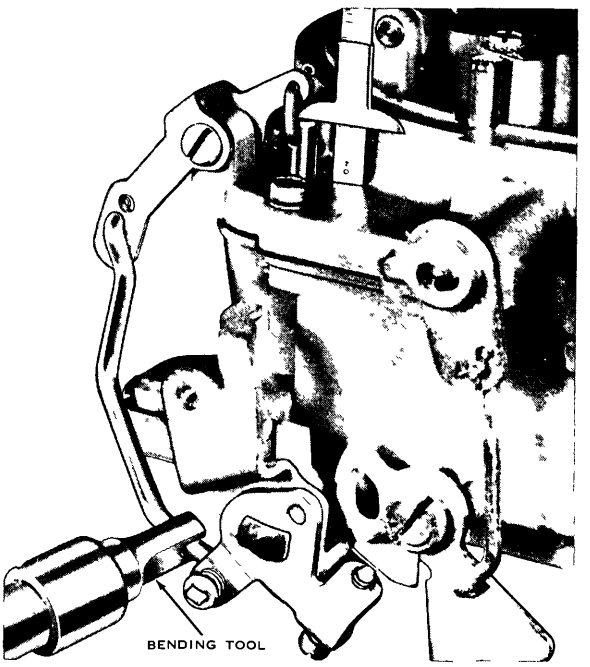


Figure 4

PUMP ADJUSTMENT (Fig. 4)

1. Back out idle speed screw until throttle valves seat in bores of carburetor. NOTE: Be sure choke is wide open so fast idle cam does not hold throttle valve open.
2. With throttle conn ctor rod in center hole (medium stroke) of pump arm, the distance from the top of the bowl cover to the top of the plunger shaft should be as specified on carburetor specification pag .
3. Adjust by bending throttl connector rod at low r angle (use tool T109-213).

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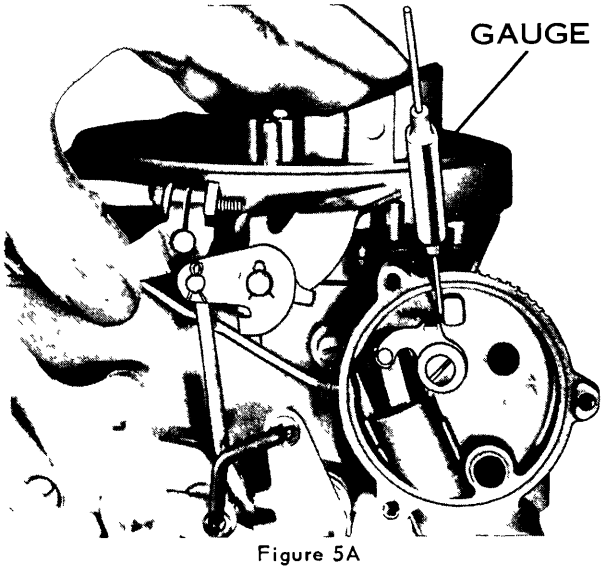


Figure 5A

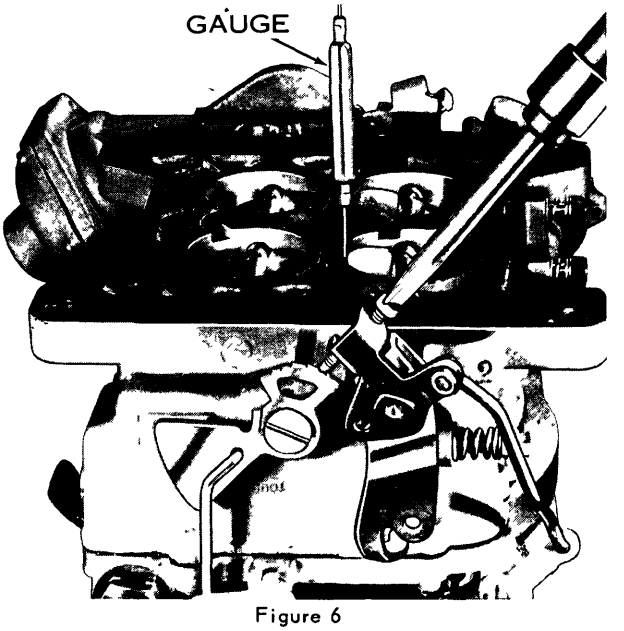


Figure 6

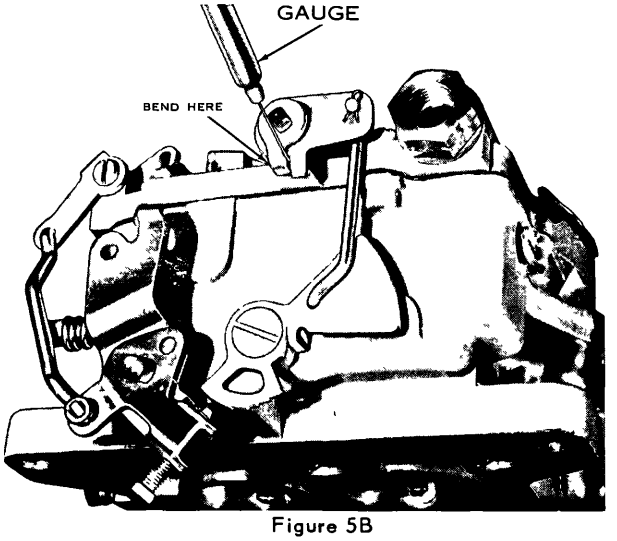


Figure 5B

FAST IDLE THROTTLE VALVE CLEARANCE ADJUSTMENT (Fig. 6):

With choke valve tightly closed, tighten fast idle adjusting screw (on high step of cam) until there is the clearance as listed on carburetor specification page between throttle valve and bore of carburetor, side opposite idle port.

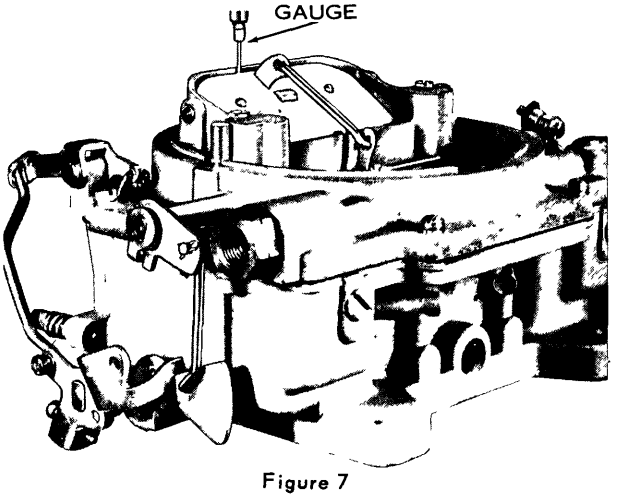


Figure 7

COUNTERSHAFT LINKAGE ADJUSTMENT (Figs. 5A & 5B):

1. Loosen countershaft lever clamp screw. Take end play out of countershaft, and hold choke valve tightly closed. Take slack out of linkage by pressing countershaft lever towards closed position with gauge in place b tween choke lever and stop in piston housing. Hold in place and tighten clamp screw. (Fig. 5A)
2. A. Hold choke valve tighly closed.
   B. Hold fast idle cam against stop on casting.
   C. Th cl arance betwe n lug on outer countershaft lever and stop on inner countershaft lever should be as listed on carbur tor sp cification page. TO ADJUST: Bend lug on outer countershaft lev r. (Use tool T109-214) (Fig. 5B)

UNLOADER ADJUSTMENT (Fig. 7):

With throttle wide open there should be the clearance as listed on carburetor sp cification pag b tw n upp r dge of choke valv and inn r wall of air horn. To adjust, b nd unload r lip on throttl shaft l v r. (Use tool T109-214)

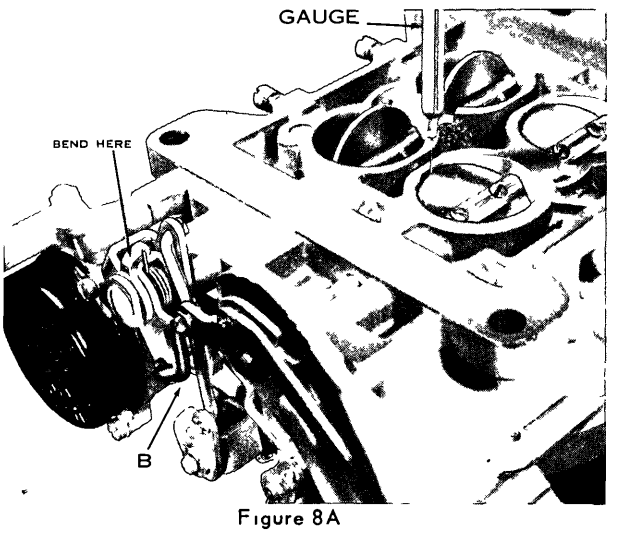


Figure 8A

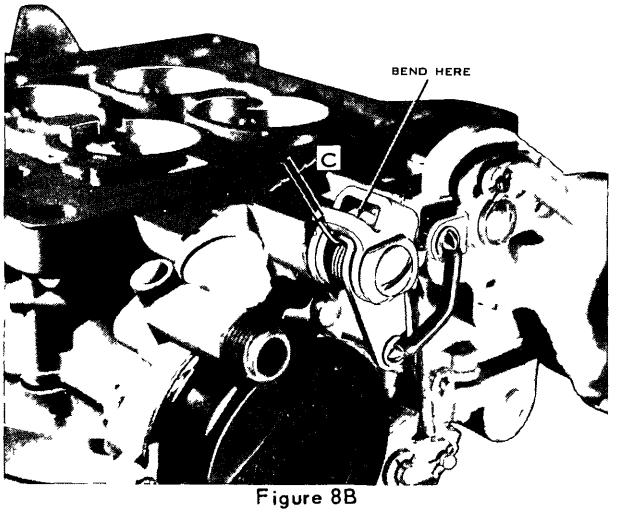


Figure 8B

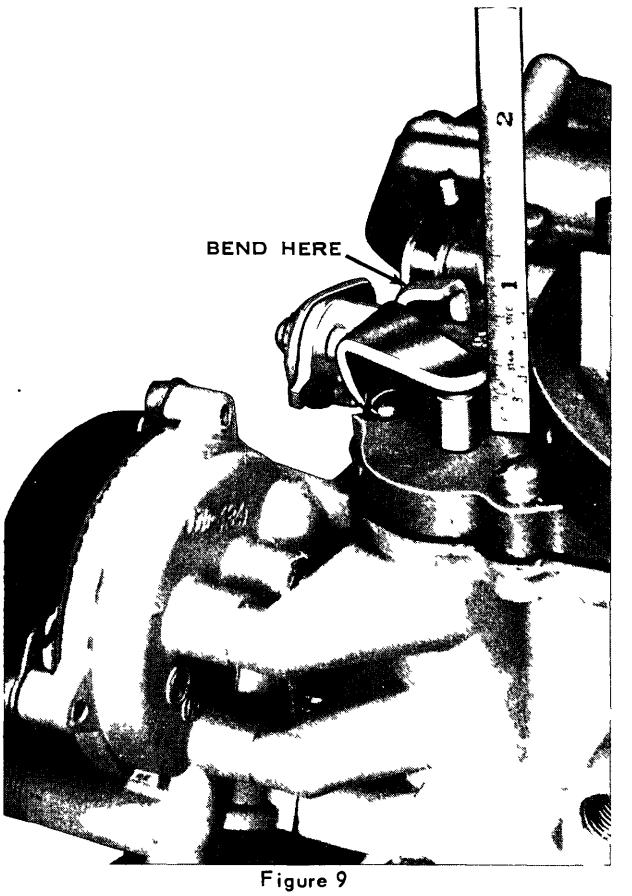


Figure 9

DASH POT ADJUSTMENT (Fig. 9):

With primary throttle valves in wide open position ther should be the distance as listed on specification page between the top surface of the bowl cover and th top of the plunger shaft. To adjust, bend lug. (Use bending tool T109-22)

PRIMARY THROTTLE SHAFT DOG ADJUSTMENT (Figs. 8A & 8B):

1. With primary throttle valves in wide open position there should be the clearance as listed on specification page between edge of secondary valves and bore of carburetor adjacent to primary valves. To adjust, bend tang. (Use bending tool T109-213). If proper clearance between secondary valves and bore cannot be obtained, bend throttle operating rod (B) (Fig. 8A).

2. With primary and secondary throttle valves in tightly closed position there should be the clearance (C) between primary throttle shaft flex spring and tang as listed on specification page. To adjust, bend tang. (Use bending tool T109-213) (Fig. 8B)

NOTE: See last page for pertinent service information.

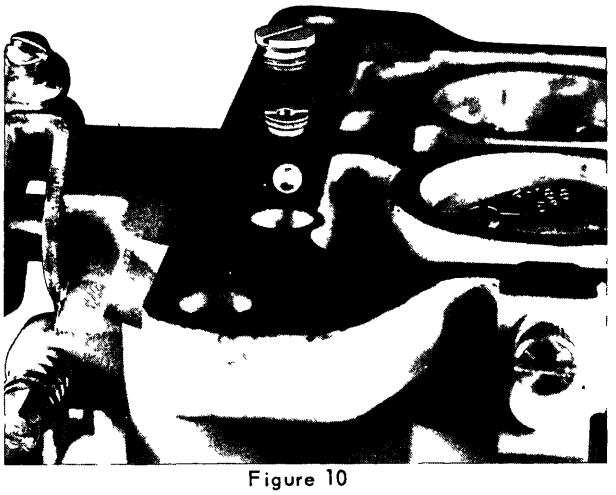


Figure 10

(Fig. 10)

Pump intake check ball, seat and screw plug are removed by inverting carbureter and removing from lower side of flange.

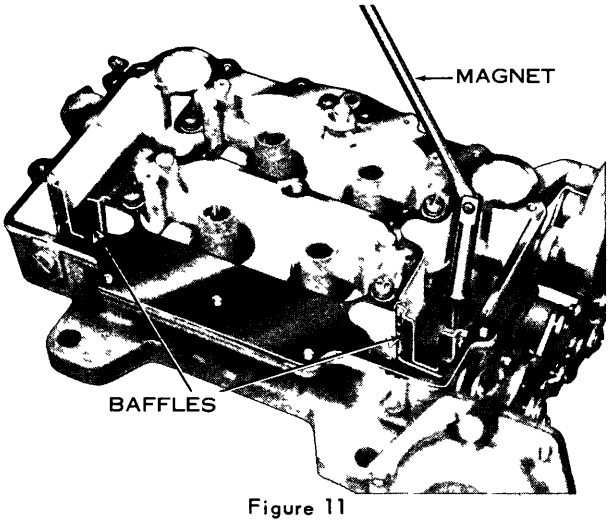


Figure 11

(Fig. 11)

Flooding, stumble on acceleration and other performance complaints are, in many instances, caused by the presence of dirt, water or other foreign matter in the carbureter. To aid in diagnosing the cause of the complaint, the carbureter should be carefully removed from the engine without draining the fuel from the bowl. The contents of the fuel bowl may then be examined for contamination as the carbureter is disassembled.

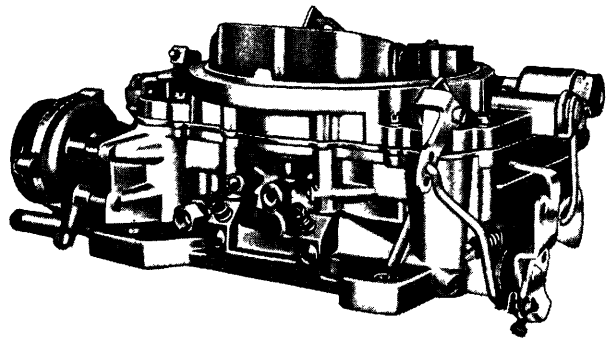
Check the fuel in the bowl for contamination by dirt, water, gum or other foreign matter. A magnet moved through the fuel in the bowl will pick up and identify any iron oxide dust that may have caused intake needle and seat leakage. (See Fig.11.)

Inspect gasketed surfaces between body and air horn. Small nicks or burrs should be smoothed down to eliminate air or fuel leakage. Be especially particular when inspecting the top surface of the inner wall of the bowl around the vacuum piston passage. A poor seal at this location may contribute to a "cutting-out" on turns complaint.

Install fuel baffles as shown (Fig. 11) to prevent damage to floats.

Fill the carbureter bowl with clean fuel before installing on the manifold. This will help prevent dirt trapped in the fuel system from being dislodged by the free flow of fuel as the carbureter is primed. The operation of the floats and intake needle and seats may be checked under pressure if a fuel pump is used at the bench to fill the carbureter bowl. Operate the throttle sev ral times and visually check the discharge from the pump jets.

Before installing the carbureter, hold choke valve open and turn the idle speed screw until it just contacts the throttle lever, then 1/2 of a turn more to open the throttle valves enough to keep the engine running until the idle mixture and final R.P.M. adjustment can be made.



MERCURY
PARKLANE
1959

AFB Four-Bore Down-Draft Climatic® Control **Carbureter No. 2853S**

CARBURETER SPECIFICATIONS

For Mercury 8 Cylinder 430 Cu. In. Engine· Vacuum at Idle 17-18 Inches

Dimensions: Flange four bore—4 bolt type
Throttle bore primary 1 9/16 inch, secondary 1 11/16 inch I D
Primary venturi size primary side, 7/16 inch secondary 11/32 inch I D
Main venturi size primary side 1-3/16 inch secondary side 1 9/16 inch I D

Vents: Inside (2) in air horn Outside (2) in air horn

Low Speed Circuit: (Primary side only)
Jet size No 67 (.032 inch) drill
By-pass size .057 inch diameter
Economizer size No 56 (.0465 inch) drill
Idle bleed size No 54 (.055 inch) drill
Idle port slot type length .220 inch width .030 inch

Idle Port Opening: .152 to .158 inch above top edge of valve with valve tightly closed

Lower Port: (For idle adjustment screw), size .0635 inch diameter

Set Idle Adjustment Screw: 1½ to 2½ turns open For richer mixture turn screw out Idle engine at 450 R P M for Auto Trans in Drive Range

Main Nozzle Installed permanently DO NOT REMOVE Anti percolator bleed primary (tube in venturi assembly) size No 70 (.028 inch) drill Secondary (drilled hole in venturi assembly) size No 57 (.043 inch) drill
Under strut bleed primary side only, size No 42 (.0935 inch) drill

Main Vent Tube. (In venturi assembly) Side holes primary 1—size No 40 (.060 inch) drill secondary no side holes

Secondary Initial Discharge: (In venturi assembly secondary side only)
Pick up tube size No 56 (.0465 inch) drill
Air bleed size No 60 (.040 inch) drill
Discharge port (upper) size No 53 (.0595 inch) (lower) size No 60 (.040 inch) drill

Accelerating Pump Discharge jet (twin) primary side only size No 70 (.028 inch) drill Intake disc check (screw plug) size 115 to 120 inch diameter Disc check bleed size .016" to .020" Discharge needle seat size .070 inch diameter

Choke· Carter Climatic® Control set on index Butterfly type—offset choke valve primary side only Choke heat suction hole restriction in body size No 45 (.082 inch) drill

Vacuum Spark Port: Horizontal slot (round end) .055 x .130 inch Top of port .015 to .025 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap	Breaker Point Setting	Ignition Timing	Float Setting	Idle Adjustment Screw Setting
.032"-.036"	.014"-.016"	Breaker Points to Open. 6° B.T.D.C. At Vibration Damper	3/16 Inch (Use Gauge T109-28)	1½ to 2½ Auto. Trans. 450 R.P.M. in Drive Range

NOTE: These cars are equipped with Hydraulic Valve Lifters—No Adjustment.

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CARBURETER
TRADE MARK REG U S PAT OFF
MARCA REGISTRADA

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CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3781

FLOAT ALIGNMENT: Side of floats, parallel to edge of casting. Minimum clearance between lever and air horn lugs without binding. To adjust, bend float lever.

FLOAT LEVEL: 3/16 inch (Gauge T109-28) plus or minus 1/64 inch between top of floats at outer end and air horn gasket. To adjust, bend float lever.

FLOAT DROP: 23/32 inch plus or minus 1/16 inch between top of floats at outer end and air horn gasket. To adjust, bend stop tabs on float brackets.

PUMP: 17/32 inch from the top of the bowl cover to the top of the plunger shaft with throttle connector rod in inner hole (long stroke) of pump arm.

CHOKE PISTON LEVER ADJUSTMENT: 3/32 inch (Gauge T109-125) between choke lever and stop in piston housing with choke held closed. To adjust, take slack out of linkage by setting counter shaft lever.

FAST IDLE LINKAGE ADJUSTMENT: With slight clearance between lug on fast idle cam and stop on flange casting, and inner countershaft lever contacting lug on outer conutershaft lever align index mark on cam with adjusting screw. To adjust, bend fast idle connector rod. It may be necessary to bend stop lug on fast idle cam.

FAST IDLE THROTTLE VALVE CLEARANCE: .030 inch (Gauge T109-29) between lower edge of valve and bore with adjusting screw on index mark of cam.

FAST IDLE ON CAR: 550 R.P.M. hot engine—with fast idle screw on lowest (last) step of cam.

UNLOADER: 1/8 inch (Gauge T109-36) between upper edge of choke valve and inner wall of air horn. To adjust, bend unloader arm on throttle lever.

SECONDARY THROTTLE LEVER ADJUSTMENT: 1. Block choke valve wide open. 2. with 15/32 inch between lower edge of primary valve and bore (opposite idle port) secondary valves should just start to open. To adjust, bend throttle operating rod. NOTE: At wide open throttle primary and secondary valves will reach vertical position. 3. With primary and secondary throttle valves in tightly closed position there should be .010" to .030" (Gauge T109-29) between positive closing secondary shoe and cam on primary throttle lever. To adjust, bend shoe on secondary lever.

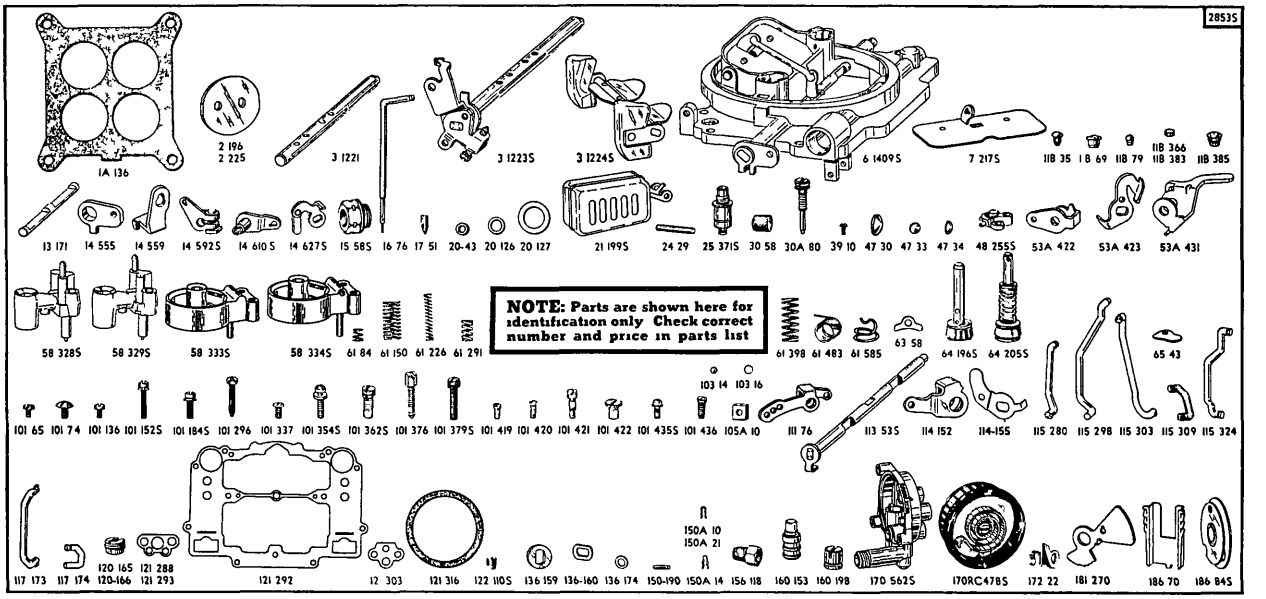
DASH POT: 1. 1/8 inch from the top of the bowl cover to the top of the plunger shaft with primary valves tightly closed. To adjust, bend the flat portion of the dash pot lever. Check to be sure dash pot lever does not contact bowl cover attaching screw. 2. 7/16 inch from the top of the bowl cover to the top of the plunger shaft with primary valves wide open. To adjust, bend stop lug on flat lever. Check to be sure plunger shaft operates without sticking in hole in bowl cover.

TOOLS REQUIRED FOR SERVICING CARBURETERS

T109-28	3/16" Float gauge	T109-22	Bending Tool
T109-29	.020" Wire gauge	T109-213	Bending Tool
T109-36	1/8" Unloader gauge	T109-214	Bending Tool

T109-125 3/32" Unloader gauge (Used for choke piston lever adj.)

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Mercury—1959—Carbureter No. 2853S

WHEN SERVICING USE GASKET ASSORTMENT No 328, RE-CARBURETION KIT No 1974N

PART NAMES IN CAPITAL LETTERS, LISTED BELOW INDICATE CONTENTS OF RE-CARBURETION KIT

Part No	PART NAME	
1A-136	—FLANGE GASKET	
2-196	Secondary throttle valve	(2)
2-225	—Primary throttle valve	(2)
3-1221	—Secondary throttle shaft	
3-1223S	—Primary throttle shaft and lever assembly	
3-1224S	—Auxiliary throttle shaft valve and weight assembly	
6-1409S	—Air horn assembly	
7-217S	Choke valve and lever assembly	
11B-35	Rivet plug	
11B-69	Rivet plug	(2)
11B-79	Rivet plug	(2)
11B-366	Lead plug	(2)
11B-383	Lead plug	(2)
11B-385	Idle port and fuel passage plug	(3)
13-171	Choke shaft	
14-555	Inside countershaft lever	
14-559	Countershaft lever (to choke valve)	
14-592S	Countershaft lever screw and nut assembly	
14-610S	Choke lever and shaft assembly (piston housing)	
14-627S	—Choke piston link and lever assembly	
15-58S	Fuel inlet fitting assembly	
16-76	—STEP UP ROD—STANDARD 0665" x 053"	(2)
17-51	Pump discharge check needle	
20-43	Piston housing gasket	
20-126	Needle seat gasket	(2)
20-127	Fuel inlet fitting gasket	
21-199S	—Float and lever assembly	(2)
24-29	Float lever pin	(2)
25-371S	—NEEDLE AND SEAT ASSEMBLY (1015")	(2)
30-58	Fuel inlet strainer	
30A-80	Idle adjustment screw	(2)

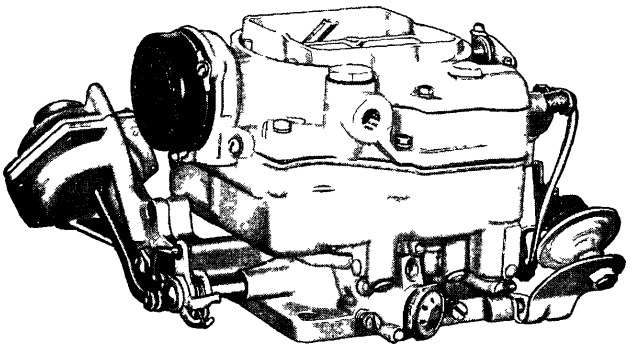
Part No	PART NAME	
39-10	Choke valve attaching screw	(2)
47-30	Piston housing welsh plug	
47-33	Venturi welsh plug	(4)
47-34	Spark port welsh plug	
48-255S	Pump jet housing	
53A-422	Dash pot arm (outer)	
53A-423	Secondary throttle operating lever	
53A-431	Dash pot arm (inner)	
58-328S	—Primary venturi assembly (choke side)	
58-329S	—Primary venturi assembly (pump side)	
58-333S	—Secondary venturi assembly (choke side)	
58-334S	—Secondary venturi assembly (pump side)	
61-84	Idle adjustment screw spring	(2)
61-150	Dash pot return spring	
61-226	STEP UP PISTON SPRING	(2)
61-291	Throttle lever adjusting screw spring	
61-398	Pump spring (lower)	
61-483	Secondary throttle return spring	
61-585	Step up rod retaining spring	(2)
63-58	Coil housing retainer	(3)
64-196S	DASH POT PLUNGER ROD AND CHECK ASSEMBLY	
64-205S	PUMP PLUNGER ROD AND SPRING ASSEMBLY	
65-43	Step up piston cover plate	(2)
101-65	Piston housing choke shaft lever attaching screw	
101-74	Throttle shaft lever attaching screw	(2)
101-136	Coil housing attaching screw	(3)
101-152S	Air horn attaching screw and washer assembly	(2)
101-184S	Pump jet housing attaching screw and washer assembly	(2)
101-296	Fast idle adjustment screw	

Part No.	PART NAME	
101-337	Countershaft lever attaching screw	
101-354S	Countershaft lever clamp screw and washer assembly	
101-362S	Air horn attaching screw and washer assembly	(8)
101-376	Throttle lever adjusting screw	
101-379S	Venturi attaching screw and washer assembly	(8)
101-419	Secondary throttle valve attaching screw	(4)
101-420	Primary throttle valve attaching screw	(4)
101-421	Pump arm attaching screw	
101-422	Fast idle cam attaching screw	
101-435S	Step up piston cover plate attaching screw and washer assembly	(2)
101-436	Piston housing attaching screw	(3)
103-14	Lead shot (180" dia)	
103-16	Lead shot (200" dia)	
105A-10	Countershaft lever clamp screw nut	
111-76	Pump arm	
113-53S	—Countershaft and lever assembly	
114-152	Primary throttle shaft arm (inner)	
114-155	—Primary throttle shaft arm (outer)	
115-280	Fast idle connector rod	
115-298	Throttle connector rod	
115-303	Choke connector rod	
115-309	Throttle operating rod	
115-324	—Dash pot connector rod	
117-173	Choke valve connector link	
117-174	Pump connector link	
120-165	Secondary metering jet (086")	(2)
120-166	PRIMARY METERING JET (0935")	(2)
121-288	PRIMARY VENTURI CLUSTER GASKET	(2)
121-292	AIR HORN GASKET	
121-293	SECONDARY VENTURI CLUSTER GASKET	(2)
121-303	PUMP JET HOUSING GASKET	
121-316	COIL HOUSING GASKET	
122-110S	—Pump intake disk check assembly	
136-159	Primary throttle shaft washer	
136-160	Secondary throttle shaft washer	
136-174	Throttle lever adjusting screw washer	
150-190	Choke piston pin	
150A-10	Pin spring	(6)
150A-14	Pin spring	
150A-21	Pin spring	
156-118	Spark fitting	
160-153	Step up piston	(2)
160-198	—Choke piston	
170-562S	Piston housing and plug assembly	
170RC-478S	—Thermostatic coil and housing assembly	
172-22	Throttle connector rod retainer	
181-270	—Fast idle cam	
186-70	Fuel bowl baffle	(2)
186-84S	—Choke baffle plate assembly	

—Parts so marked are new and listed for the first time

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

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MERCURY

MODELS "MONTCLAIR" & "MONTEREY" (Merc-O-Matic)

1956

WCFB Four-Bore Down-Draft Climatic® Control **Carbureters Nos. 2361S-2361SA**

CARBURETER SPECIFICATIONS

For Mercury 8 Cylinder Engine 3.80 Inch Bore, 3.44 Inch Stroke

Dimensions Flange size 1¼ inch Four Bore—4 bolt type Primary venturi size 11/32 inch I D Main venturi (primary) size 1 1/16 inch Main venturi (secondary) size 15/16 inch I D

Vents Outside none Inside (2) on primary side (3) on secondary side

Gasoline Intake Size No 38 (1015 inch) drill hole in needle seat

Low Speed Jet Tube (Primary side only) Jet size No 69 (0292 inch) drill
By Pass in body size No 46 (081 inch) drill
Economizer in body size (0492 inch) diameter
Idle Bleed in body size No 56 (0465 inch) drill

Idle Port (Upper) slot type Primary length 175 inch width 030 inch Secondary none

Idle Port Opening Primary 107 to 113 inch above top edge of valve with valve tightly closed Secondary none

Lower Port Primary (for idle adjustment screw) size No 53 (0595 inch) drill Secondary none

Set Idle Adjustment Screw ¾ to 1¾ turns open For richer mixture turn screw out Idle engine between 425 and 450 r p m (In Drive Range)

Main Nozzle Installed permanently DO NOT REMOVE Anti-percolating well restriction (primary in plug) size No 67 (032 inch) drill (secondary in body) size No 65 (035 inch) drill

Metering Rod Primary economy step 071 inch diameter Middle step tapers to 057 inch diameter Power step 057 inch diameter Secondary none

Metering Rod Jet Primary size 0935 inch diameter (for metering rod)
Secondary size 057 inch diameter (no metering rod)

Accelerating Pump Discharge jet (twin) primary side only, size No 67 (032 inch) drill Intake ball check seat size 115 to 120 inch diameter Discharge needle seat size 070 inch diameter Relief passage (vent) to fuel chamber No 42 (0935 inch) drill

Choke Carter Climatic® Control set 2 points rich Butterfly type—offset choke valve primary side only Choke heat suction hole restriction in piston housing size No 43 (089 inch) drill

Vacuum Spark Port 051 053 inch diameter Top of port 025 to 035 inch above valve with valve tightly closed Upper spark restriction (in body) size No 58 (042 inch) drill Lower spark restriction (in flange) size No 68 (031 inch) drill

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open	Valve Setting (Hot)	Float Setting	Idle Adjustment Screw Setting
032"-036"	014"-016"	6° B T D C	Intake .019" Exhaust .019"	See Adjustments	¾ to 1¾ Turns Open Idle Engine at 425 to 450 r p m. In Drive Range

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CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3648

FLOAT LEVEL: Primary 1/8" (Gauge T109-232); secondary 3/16" (Gauge T109-222) between top of float and machined surface of casting. To adjust: bend float arms.

FLOAT DROP: Primary 5/8", secondary 11/16". To adjust: bend stop tabs on float bracket.

PUMP: Flat on pump arm should parallel straight edge on dust cover boss. To adjust: bend connector rod.

METERING ROD: Metering rod should bottom with throttle valves seated.

BOWL VAPOR VENT: 1/16" (Gauge T109-197) between bowl vapor vent valve and dust cover. To adjust: bend vapor vent arm.

FAST IDLE CAM CLEARANCE: With choke valve closed lip of fast idle cam should lightly contact boss on flange casting. To adjust: set choke shaft lever.

FAST IDLE THROTTLE VALVE CLEARANCE: .023" (Gauge T109-189) between lower edge of valve and bore with adjusting screw on high step of cam.

FAST IDLE ON CAR: 650 R.P.M. with speed screw on lowest (last) step of cam.

UNLOADER: 1/8" (Gauge T109-36) between upper edge of choke valve and inner wall of air horn. To adjust: bend unloader arm on throttle lever.

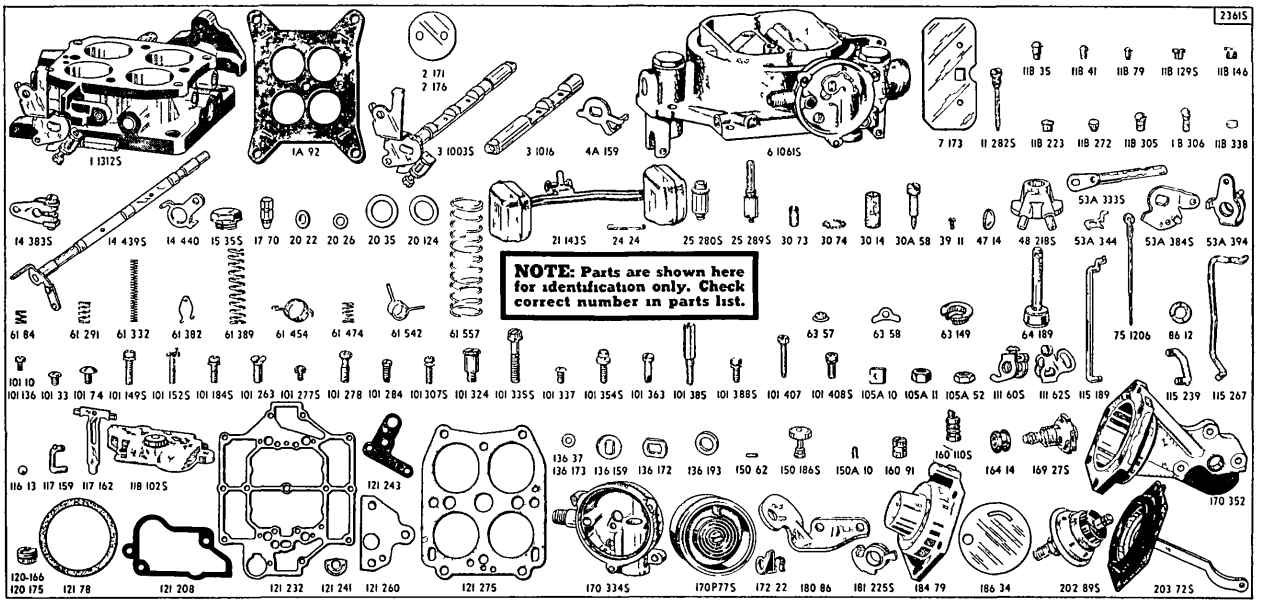
PRIMARY THROTTLE SHAFT DOG: 1. Place a .076" (Gauge T109-215) between wide open stop tang on primary throttle lever and stop on flange. 2. Adjust upper lug of throttle shaft dog so that upper arm of spring lightly contacts tang of throttle operating lever. 3. Hold both primary and secondary throttles in wide open position. 4. Adjust lower lug of throttle shaft dog so that lower arm of spring lightly contacts center web of throttle operating lever. NOTE: Use bending tool T109-214 to adjust lugs on throttle shaft dog.

SECONDARY THROTTLE LEVER: 1. Block choke valve wide open. 2. Back out throttle lever stop screw so that primary valves seat in carbureter bores. 3. While holding the secondary throttle open slightly, close the primary valves. The primary and secondary valves should become closed at the same time. Check to be sure that secondary throttle valves are tightly closed under tension of the primary throttle shaft flex spring by attempting to open the secondary throttle valves while holding the primary throttle valves closed.

NOTE: Secondary valves seat at top edge only.

4. To adjust, bend the throttle operating rod slightly.

DASH POT (SLOW CLOSING THROTTLE): Plunger shaft should bottom with 1/16" (Gauge T109-197) placed between shaft and operating lever with throttle valves seated.



Mercury—1956—Carbureters Nos. 2361S-2361SA

WHEN SERVICING, USE GASKET ASSORTMENT No. 270B; RE-CARBURETION KIT No. 1804N

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF RE-CARBURETION KIT

Part No.	PART NAME	
1-1312S	Body flange assembly	
1A-92	Flange gasket (Sup by 1A 111)	
1A-111	FLANGE GASKET	
2-171	Secondary throttle valve	(2)
2-176	Primary throttle valve	(2)
3-1003S	Primary throttle shaft and lever assembly	
3-1016	Secondary throttle shaft	
4A-159	Throttle shaft dog	
6-1061S	Air horn assembly (Casting No 6 1054) (Sup by 6 1170S)	
6-1170S	—Air horn assembly (Casting No 6 1149)	
7-173	Choke valve	
11-282S	Low speed jet assembly	(2)
11B-35	Rivet plug	(4)
11B-41	Rivet plug (6 1054 (2) (6 1149 (1)	
11B-79	Rivet plug (early prod (5) late prod (2)	
11B-129S	Pump discharge passage plug assembly	
11B-134	Rivet plug	
11B-146	Level sight plug	(2)
11B-223	Rivet plug	(6)
11B-272	Rivet plug	(2)
11B-305	Rivet plug (6 1054 (1) (6 1149 (2)	
11B-306	Rivet plug (6 1054 (2) (6 1149 (1)	
11B-338	Rivet plug	
14-383S	Choke lever and screw assembly	
14-439S	Choke piston lever link and shaft assembly	
14-440	Cam trip lever	
15-35S	Strainer nut assembly	(2)
17-70	Pump check needle	
20-22	Needle seat gasket	(2)
20-26	Pump relief plug gasket	
20-35	Bowl strainer gasket	
20-122	SPARK CONTROL VALVE GASKET	
20-124	Spark control valve gasket (Sup by 20 122)	
21-143S	Float and lever assembly	(2)
24-24	Float lever pin	(2)
25-280S	PRIMARY NEEDLE AND SEAT ASSEMBLY	
25-289S	SECONDARY NEEDLE AND SEAT ASSEMBLY	
30-73	Primary needle seat strainer	
30-74	Secondary fuel inlet strainer	
30-75	Bowl strainer	
30A-58	Idle adjusting screw	(2)
39-11	Choke valve attaching screw	(2)
47-14	Choke housing welsh plug	
48-218S	Pump jet and housing assembly	
53A-333S	Pump operating lever and countershaft assembly	
53A-344	Vent arm	
53A-384S	Secondary throttle operating lever assembly	
53A-394	Primary throttle operating lever	
61-84	Idle adjustment screw spring	(2)
61-291	Throttle lever adjusting screw spring	
61-332	VACUUM PISTON SPRING	
61-382	Metering rod spring	
61-389	Pump spring (upper)	
61-454	Fast idle cam spring	
61-474	Bowl vent spring	
61-516	Countershaft spring	
61-542	Throttle flex spring	

Part No	PART NAME	
61-557	Diaphragm return spring	
63-57	Intake check ball retainer	
63-58	Coil housing retainer	(3)
63-149	Bowl vent spring retainer	
64-189S	PUMP PLUNGER AND ROD ASSEMBLY	
75-1206	METERING ROD	(2)
75-1253	Metering rod—1 size lean	(2)
75-1254	Metering rod—2 sizes lean	(2)
86-12	Flange stud lock washer	(4)
101-10	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft arm attaching screw	(2)
101-136	Coil housing attaching screw (2361S)	(3)
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
P101-198S	Exterior choke baffle attaching screw (2361SA)	(3)
101-263	Diaphragm housing attaching screw	(3)
101 275	Piston housing attaching screw (Use with 6 1170S)	
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet and housing attaching screw	
101-284	Piston housing attaching screw (6 1061S)	(2)
101-307S	Air horn attaching screw and washer assembly	(8)
101-324	Fast idle cam attaching screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Throttle valve attaching screw	(8)
101-354S	Choke lever clamp screw and washer assembly	
101-363	Piston housing attaching screw (6 1061S (1) (6 1170S (2)	
101-385	Throttle lever adjusting screw	
101-388S	Diaphragm housing cover attaching screw and washer assembly	(6)
101-407	Fast idle adjustment screw	
101-408S	Dash pot attaching screw and washer assembly	(2)
101-416	Coil housing attaching screw and spacer (2361SA)	(3)
103 14	Lead shot (late prod	(3)
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
105A-52	Dash pot lock nut	
111-60S	Metering rod arm and screw assembly	
111-62S	Pump arm and screw assembly	
115-189	Choke connector rod	
115-239	Throttle operating rod	

Part No.	PART NAME	
115 267	Throttle connector rod	
116-13	Pump intake check ball	
117-159	Pump arm link	
117-162	Vacumeter piston link	
118-102S	Dust cover assembly	
120-166	PRIMARY METERING ROD JET	(2)
120-176	Secondary metering jet (2361S) (Sup by 120 193)	(2)
120-193	Secondary metering jet	
121-78	COIL HOUSING GASKET	
121 208	DUST COVER GASKET	
121-232	AIR HORN GASKET	
121-241	PUMP JET HOUSING GASKET	
121-243	Piston housing gasket (Use with 6 1061S)	
121-260	Diaphragm housing to flange gasket (Sup by 121 297)	
121-275	BODY FLANGE GASKET	
121-282	Gasket (diaphragm to lower housing)	
121-283	Piston housing gasket (Use with 6 1170S)	
121 297	—Diaphragm housing gasket	
136-37	Throttle operating rod washer	(4)
136 159	Primary throttle shaft washer	
136-172	Secondary throttle shaft washer	
136-173	Pump connector link washer	(2)
136-193	Fast idle cam washer	
150-62	Choke piston pin	
150-186S	Pin and valve cap assembly	
150A-10	Pin spring	(6)
160-91	Choke piston	
160-110S	Vacuum piston and pin assembly	
164-14	Choke tube grommet	
169-27S	Spark control valve assembly (snivey)	
170-352	Diaphragm housing	
170-334S	Piston housing and plug assembly (Use with 6 1061S)	
170-442S	—Piston housing and plug assembly (Use with 6 1170S)	
170AB238S	Thermostatic coil and housing assembly	
172-22	Throttle connector rod retainer	
180-86	Dash pot bracket	
181-225S	Fast idle cam and spring assembly	
184-79	Diaphragm housing cap (Sup by 184 83S)	
184-83S	Diaphragm housing cap assembly	
186-34	Choke baffle plate	
186-57	Exterior choke baffle (2361SA)	
202-89S	Dash pot assembly	
203-72S	Secondary throttle shaft diaphragm assembly	

—Parts so marked are new and listed for the first time

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

CARTER MODEL WCFB CARBURETER FOR MERCURY (SERVICE ADJUSTMENT PROCEDURE)

NOTE: The parts and specification pages referred to are catalog pages. These pages can be obtained from Carter Carburetor, Catalog Department, St. Louis (7), Missouri. Specify the carbureter number found on the brass identification tag, when requesting specification pages.

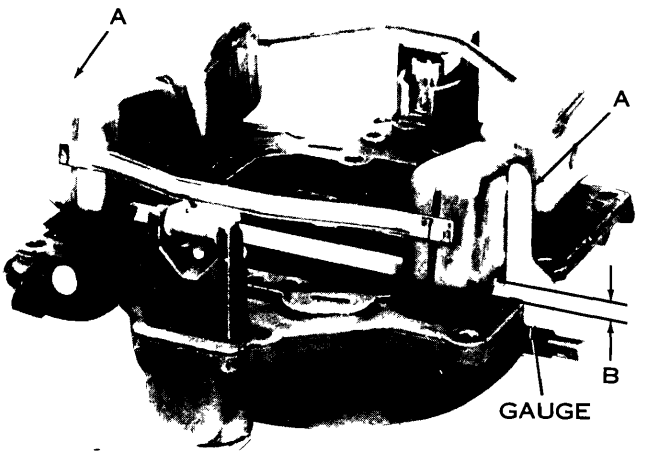


Figure 1
Float Adjustment

FLOAT ADJUSTMENT (Fig. 1):

1. Lateral - Place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting. Side of floats should just clear the vertical uprights (A) of float gauge. To adjust, bend arms of floats.
2. Vertical - With float gauge in same position, floats should just clear the horizontal portion of gauge. Vertical distance (B) between top of float and machined surface of casting must be as listed on carbureter specification page. To adjust, bend center portion of float arms.

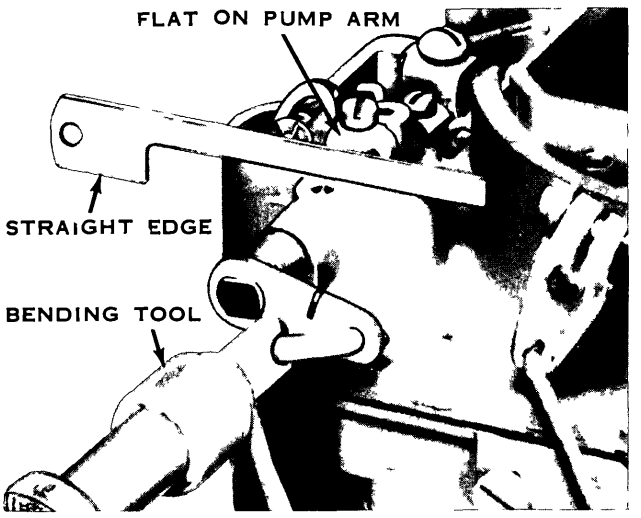


Figure 3
Pump Adjustment

PUMP ADJUSTMENT (Fig. 3):

1. Install pump conn ctor link in top h le (sh rt strok) f pump plung r with ends xt nding outward t ward c unter-sh aft arm.
2. Bcck ut thr ttl lev r set scr w until thr ttle valv s s at in bor s of carbur t r.
3. Hold straight dg across top of dust c ver boss at pump arm. The flat n top f pump arm should be parallel t straight edge. To adjust. bend thr ttl c nnect r r d at l w r angle. (Us t l T109-213.)

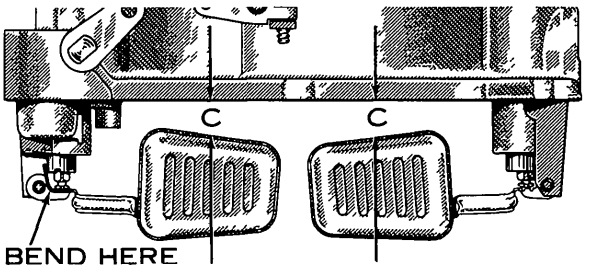


Figure 2
Float Drop Adjustment

FLOAT DROP ADJUSTMENT (Fig. 2):

With bowl cover held in upright position and m asuring from center of floats, the distance (C) between top of fl ats and bowl cover should be as listed on carburet r sp cification page. To adjust, bend stop tabs on float brac ket.

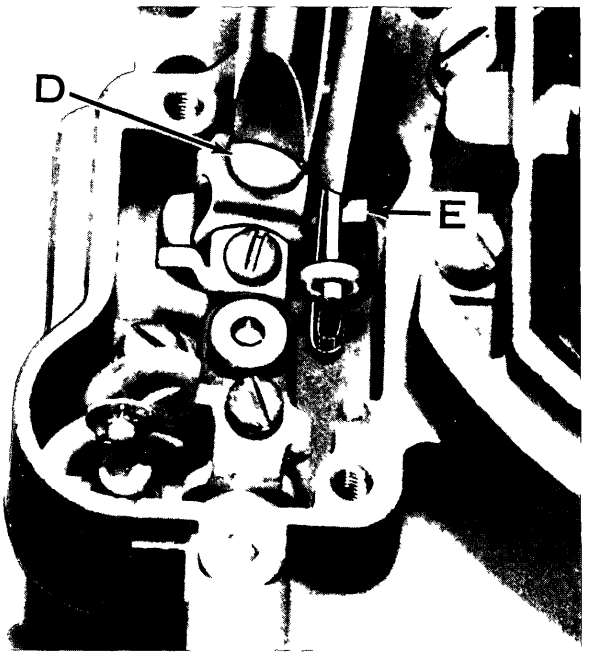


Figure 4
Metering Rod Adjustment

METERING ROD ADJUSTMENT (Fig. 4):

1. Back out throttle lever set screw to allow thr ttl valves to seat in bores of carbureter and lo sen met ring r d arm clamp screw (D).
2. Press down on vacumeter link until metering rods bott m in carbureter body casting.
3. Holding r ds in d wnward p siti n and throttl valv s s ated, rev lv met ring rod arm until finger n arm c ntacts lip (E) f vacum ter link. Hold in place and car - fully tight n clamp screw (D).

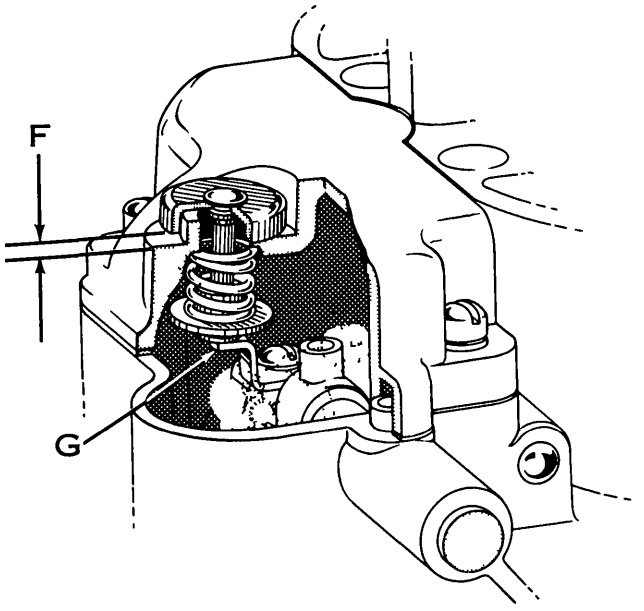


Figure 5
B wl Vapor Vent Adjustment

BOWL VAPOR VENT ADJUSTMENT (Fig. 5):

1. Install dust cover and dust cover gasket.
2. With thr ttl valves seated, there should be the clearanc (F) as listed on carbureter specification page betwe n l wer edge of bowl vapor vent valve and dust cov r. To adjust, remove dust cover and bend vapor vent arm (G).



Figur 6A
Fast Idl Adjustment



Figure 6B
Fast Idle Adjustment

FAST IDLE CAM CLEARANCE ADJUSTMENT (Fig. 6A):

1. Loosen choke lever clamp screw (H) on choke shaft.
2. Hold choke valve tightly closed. Take slack out of linkage by pressing choke lever towards closed position, s that lip of fast idle cam lightly contacts boss on flang casting (J) - hold in place. Tighten clamp screw (H).

FAST IDLE THROTTLE VALVE CLEARANCE ADJUSTMENT (Fig. 6B):

With choke valve tightly closed, tighten fast idle adjusting screw (K) (on high step of cam) until there is the clearance as listed on carbureter specification page between thr ttl valve and bore of carbureter, side opposite idle port.

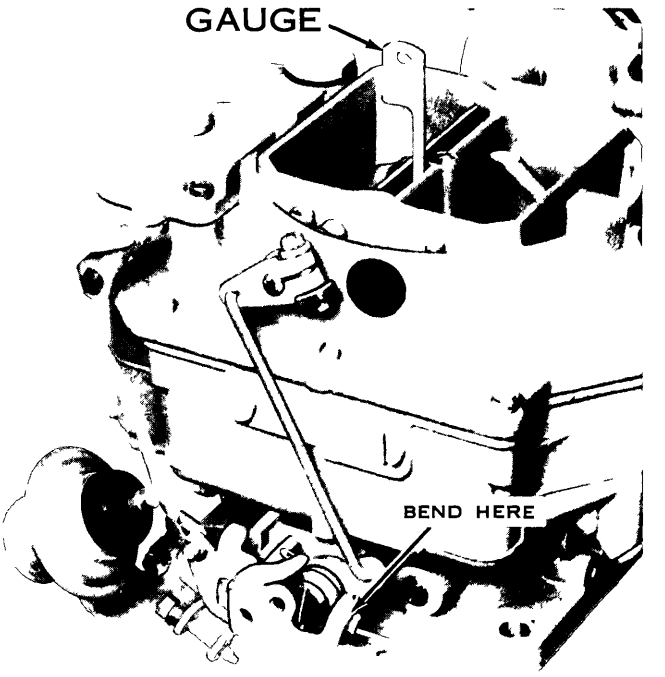


Figure 7
Unl ader Adjustment

UNLOADER ADJUSTMENT (Fig. 7):

With throttle wid op n th r should b the clearance as list d n carbur ter sp cificati n pag betw n upp r dge of chok valv and inn r wall of air horn. To adjust, b nd unload r lip on throttl shaft l ver. (Use tool T109-41.)

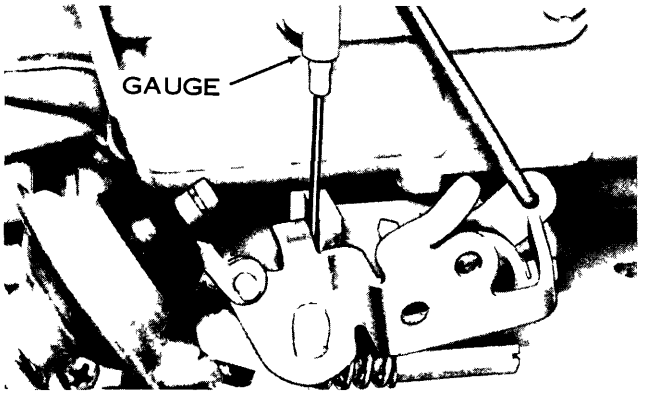


Figure 8

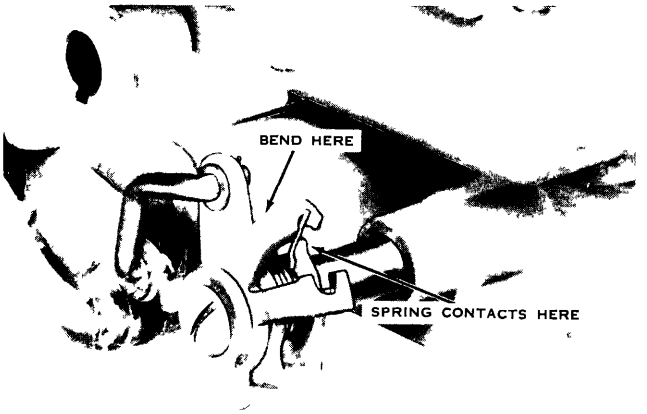


Figure 9

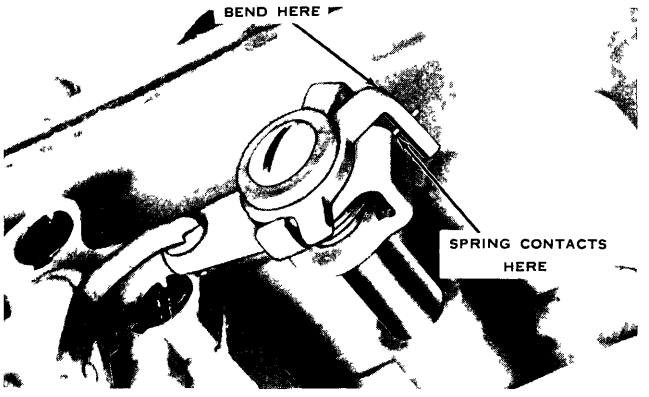


Figure 10

PRIMARY THROTTLE SHAFT DOG ADJUSTMENT (Figs. 8, 9, & 10):

1. Place gauge as listed on carbureter specification page between wide open stop tang on primary throttle lever and stop on flange.
2. Adjust upper lug of throttle shaft dog so that upper arm of spring lightly contacts tang of throttle operating lever.
3. Hold both primary and secondary throttles in wide open position.
4. Adjust lower lug of throttle shaft dog so that lower arm of spring lightly contacts center web of throttle operating lever. NOTE: Use bending tool T109-214 to adjust lugs on throttle shaft dog.

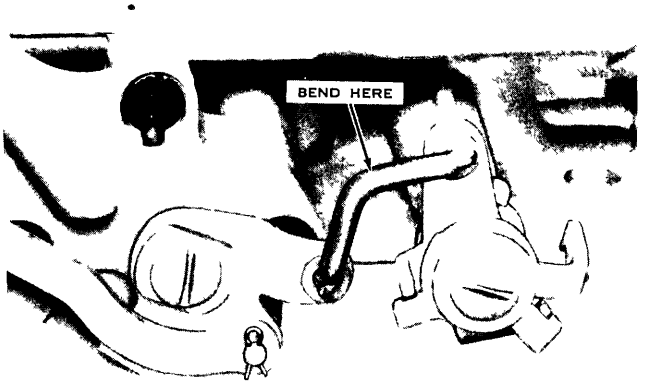


Figure 11
Secondary Throttle Lever Adjustment

SECONDARY THROTTLE LEVER ADJUSTMENT (Fig. 11):

1. Block choke valve wide open.
2. Back out throttle lever stop screw so that primary valves seat in carbureter bores.
3. While holding the secondary throttle open slightly, close the primary valves. The primary and secondary valves should become tightly closed at the same time. Check to be sure that secondary throttle valves are tightly closed under tension of primary throttle shaft flex spring by attempting to open the secondary throttle valves while holding the primary throttle valves closed. NOTE: Secondary valves seat at top edge only. To adjust, bend the throttle operating rod slightly. (Use tool T109-213.)

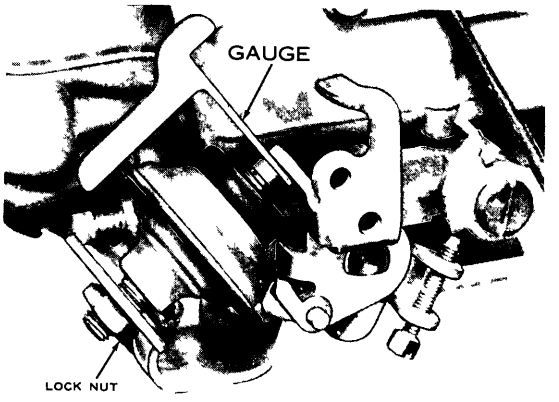


Figure 12
Dashpot Adjustment

DASH POT (SLOW CLOSING THROTTLE) ADJUSTMENT (Fig. 12):

Plunger shaft should bottom with the gauge listed on carbureter specification page placed between shaft and operating lever with throttle valves tightly closed. To adjust, loosen lock nut and adjust dash pot unit.

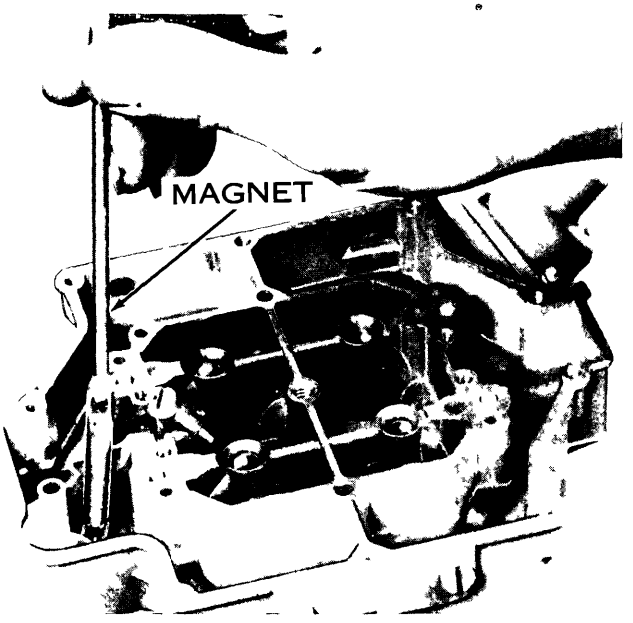


Figure 13

(Fig. 14):

Inspect gasketed surfaces between body and air horn, and between body and flange. Small nicks or burrs should be smoothed down to eliminate air or fuel leakage. Be especially particular when inspecting the top surface of the inner wall of the bowl around the choke suction passage. (See Fig. 14.) A poor seal at this location may contribute to a "cutting-out" on turns complaint.

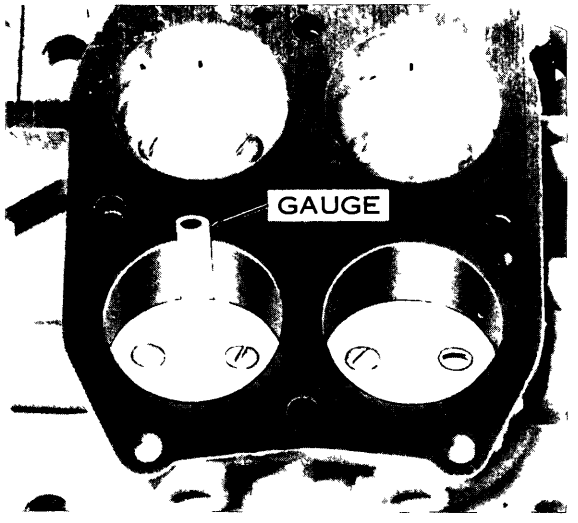


Figure 15

(Fig. 13):

Flooding, stumble on acceleration and other performance complaints are, in many instances, caused by the presence of dirt, water or other foreign matter in the carburetor. To aid in diagnosing the cause of the complaint, the carburetor should be carefully removed from the engine without draining the fuel from the bowl. The contents of the fuel bowl may then be examined for contamination as the carburetor is disassembled.

Check the fuel in the bowl for contamination by dirt, water, gum or other foreign matter. A magnet moved through the fuel in the bowl will pick up and identify any iron oxide dust that may have caused intake needle and seat leakage. (See Fig. 13.)

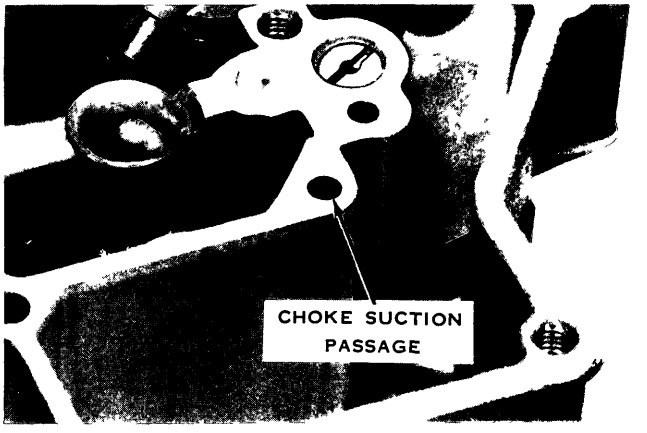


Figure 14

(Fig. 15):

Secondary throttle valves are seated using a .002" gauge, 1/4" wide (gauge T109-281) between the center of lower edge of throttle valves and bore of carburetor. (See Fig. 15.) With the gauge in position and valve attaching screws loose, tap valve lightly so it will align itself in the bore, hold in position and tighten screws. CAUTION: Turn screws only as much as needed to loosen valve as they are burred over and may break off if forced. If screws are to be removed, file off staked ends before loosening, then use new screws when reassembling.

NOTE: Primary valves are seated tightly in bore in usual manner. No gauge is used.

Fill the carburetor bowl with clean fuel before installing on the manifold. This will help prevent dirt trapped in the fuel system from being dislodged by the free flow of fuel as the carburetor is primed. The operation of the floats and intake needle and seats may be checked under pressure if a fuel pump is used at the bench to fill the carburetor bowl. Operate the throttle several times and visually check the discharge from the pump jets.

Before installing the carburetor, hold choke valve open and turn the idle speed screw until it just contacts the throttle lever, then 1/2 of a turn more to open the throttle valves enough to keep the engine running until the idle mixture and final RPM adjustment can be made.

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KIEKHAEFER

MERCURY OUTBOARD MOTOR

MODELS
(N-2150S) MARK 20H 2 Cylinder
(N-2537S) MARK 55H 4 Cylinder

Horizontal, Model N Type, **Carbureters Nos. N-2150S, N-2537S**

CARBURETER SPECIFICATIONS

For Mercury 2 Cylinder Engine 2-7/16 Inch Bore 2⅛ Inch Stroke (N-2150S)
For Mercury 4 Cylinder Engine 2-7/16 Inch Bore, 2⅛ Inch Stroke (N-2537S)

Dimensions Flange size 1 inch S A E (slotted)
Main venturi 15/16 inch I D

Float Level Distance from top of float (at free end) opposite needle seat to outer edge of float chamber cover when needle is seated to be 3/32 inch plus or minus 1/32 inch

Vents Inside None Outside No 50 (.070 inch) drill

Gasoline Intake Size No 48 (.076 inch) drill in needle seat

Low Speed Jet Tube Jet size No 68 (.031 inch) drill

Idle Port Round type .035 .037 inch diameter

Idle Port Opening With throttle valve tightly closed idle port is wide open above the valve

Idle Screw Seat In low speed passage size No 44 (.086 inch) drill Discharge into bore size .086 inch diameter

Set Idle Adjustment Screw (N 2150S) 1 to 2½ (N 2537S) ¼ to 1¾ turns open For richer mixture turn screw out

Main Nozzle Inside diameter No 44 (.086 inch) drill

High Speed Adjusting Needle Seat (in body) size No 50 (.070 inch) drill Setting see adjustments

Choke Manual butterfly type

Spark Plug Gap	Breaker Point Setting	Float Setting	High Speed Adj Screw Setting	Idle Adjustment Screw Setting
.025"	(N-2150S) .018"-.020" (N-2537S) .008"-.010"	3/32 Inch	(N-2150S) ½ to 2 (N-2537S) ¾ to 2¼ Turns Open	(N-2150S) 1 to 2½ (N-2537S) ¼ to 1¾ Turns Open

SERVICE PROCEDURE

CAUTION REMOVE HIGH SPEED NEEDLE BEFORE REMOVING BOWL

To Disassemble

1 Remove carbureter from engine

2 Remove high speed adjusting needle packing nut and packing (SCRIBE MARK ON BODY AND BOWL)

3 Remove bowl nut gasket and bowl

4 Remove float pin float spring needle and needle seat Check float for dents leaks and wear on float lip or in float pin holes

5 Remove bowl ring gasket

6 Remove idle adjustment screw and spring

7 Remove nozzle
DO NOT REMOVE LOW SPEED JET TUBE

8 Remove throttle valve screws valve and shaft and lever assembly

9 Clean all parts with solvent making sure all carbon accumulation is removed from bore especially where throttle valve seats in casting Blow out all passages with compressed air Replace all worn and damaged parts Always use new gaskets

To Assemble

10 Install throttle shaft and valve Valve must be installed with trademark C on side toward idle port when viewing from flange side Always use new screws With valve screws loose and throttle lever set screw backed out seat valve by tapping lightly with a small screwdriver Hold in place while tightening screws

11 Install nozzle making sure it seats in casting

12 Install needle seat spring needle float and float pin

13 Set float level with carbureter casting inverted float resting lightly against needle in its seat There should be (N 2150S) 3/32 inch (N 2537S) 11/64 inch clearance between outer surface of casting and free end of float (side opposite needle seat) Adjust by bending lip of float

14 Install bowl ring gasket bowl (line up scribe marks) bowl nut gasket and bowl nut Tighten securely

15 Install high speed adjusting needle packing nut and new packing Turn needle in until it just seats in body then back out 1¼ turns

16 Install idle adjusting screw finger tight Back out approximately 1¼ turns Do not use pliers or screwdriver as it may damage idle screw

17 Install carbureter on engine and make idle and high speed adjustment as necessary

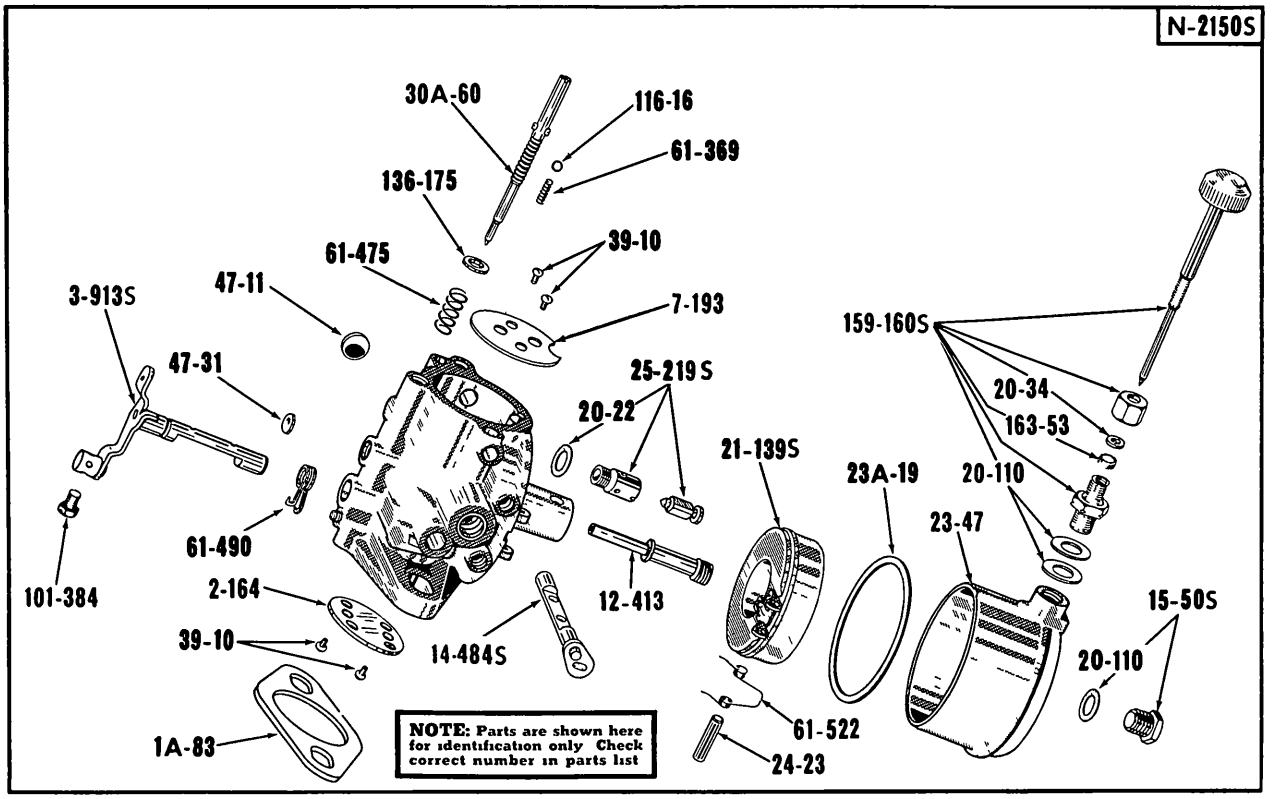
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HIGH SPEED AND IDLE SCREW ADJUSTMENT

After rebuilding and installation on engine is complete the final high speed and idle screw adjustments must be made Turning the adjustable main metering screw clockwise produces a leaner high speed mixture and turning the idle screw clock wise produces a richer idle mixture

When adjusting the idle needle turn approximately 1/8 turn at a time then wait sufficient time for engine to respond to this adjustment



Mercury—Carbureters Nos. N-2150S, N-2537S

WHEN SERVICING, USE REPAIR PACKAGE No. 1772 (N-2150S)

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME
1A-93	FLANGE GASKET
2-164	Throttle valve
3-913S	Throttle shaft and lever assembly (N 2150S)
3-1083S	Throttle shaft and lever assembly (N 2537S)
7-193	Choke valve
12-413	Nozzle (N 2150S)
12-483	Nozzle (N 2537S)
14-484S	Choke lever and shaft assembly (N 2150S)
14-546S	Choke lever and shaft assembly (N 2537S)
15-50S	Bowl nut assembly (N 2150S) (Sup by 15 54S)
15-54S	Bowl nut assembly (Sup by 15 64S)
15-64S	Bowl nut assembly
15A-11	Packing nut
20-22	Needle seat gasket
20-34	PACKING NUT GASKET
20-110	BOWL NUT AND HIGH SPEED ADJUSTING NEEDLE PACKING GASKET (3)
21-139S	Float and lever ass y (N 2150S) (Sup by 21 162S)
21-162S	Float and lever assembly (N 2150S)
21-163S	Float and lever assembly (N 2537S)
23-47	Bowl
23A-19	BOWL RING GASKET
24-23	FLOAT LEVER PIN (N 2150S) (Sup by 24 30)
24-30	Float lever pin

Part No.	PART NAME
25-219S	NEEDLE AND SEAT ASSEMBLY (N 2150S)
25 317S	Needle and seat assembly (N 2537S)
30A-60	Idle adjustment screw (N 2150S)
30A-70	Idle adjustment screw (N 2537S)
37 66S	HIGH SPEED ADJUSTING NEEDLE AND KNOB ASSEMBLY (N 2150S)
37-74	High speed adjusting needle (N 2537S)
39-10	CHOKE AND THROTTLE VALVE ATTACHING SCREW (4)
47-11	Idle port welsh plug
47-31	Idle passage welsh plug
61-369	Choke snaft spring
61-475	Idle adjustment screw spring
61-490	Throttle return spring
61-522	Float spring
101-384	Wire clamp screw
116-16	Choke shaft ball
136-175	Idle adjustment screw washer (N 2150S)
159-160S	Adjustable main metering screw assembly (N 2150S)
159-161	High speed screw nut
159 166S	Adjustable main metering screw assembly (N 2537S)
163-53	Main metering screw packing

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

CARTER

AIR CONDITIONING FAST IDLE DEVICE ASSEMBLY (12 VOLT)

No. 202-96S

FOR MERCURY

CARS EQUIPPED WITH AIR CONDITIONING

Part No.	Part Name	
11B-134	Rivet plug	
49-191S	Electro magnet plunger assembly	
61-438	Diaphragm return spring	
61-502	Electro magnet plunger spring	
86-58	Lock washer	
101-142S	Electro magnet housing attaching screw and washer assembly	(2)
101-213S	Diaphragm cover attaching screw and washer assembly	(6)
105A-12	Lock nut	
105A-49	Diaphragm shaft guide nut	
105A-53	Adjusting nut	
105A-55	Diaphragm shaft guide nut (Sup by 105A-49)	
116-13	Check ball	
121-190	Electro magnet housing gasket	
150-168	Diaphragm air bleed pin	
170-190	Inner diaphragm housing	
170-298S	Outer diaphragm housing and plug assembly	
202-95S	—Diaphragm and shaft assembly	
202-96S	—Air conditioning fast idle device assembly (complete) (12 volt)	
213-20S	—Electro magnet and housing assembly (12 volt)	

—Parts so marked are new and listed for the first time

NOTE Figures in parentheses indicate number of pieces used in the idle device assembly Where no figure is shown, nly ne is used

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Form 5311A

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST LOUIS, MO, U. S. A

NASH 2014S-2757S
December, 1957
Revised March, 1958

RAMBLER AMERICAN

2014S
STD. & O. D.
TRANS.

MODEL 5801
1958

2757S
AUTOMATIC
TRANS.

YF Down-Draft Climatic® Control **Carbureters Nos. 2014S-2757S**

CARBURETER SPECIFICATIONS

For Rambler 6 Cylinder 196 Cu. In. Engine: Vacuum at Idle 19 Inches

Dimensions: Flange size 1¼ inch S A E
Primary venturi 11/32 inch I D
Secondary venturi, 11/16 inch I D
Main venturi, 1¼ inch I D

Vents: Outside, none Inside balance vent to air horn above choke valve

Low Speed Circuit: Jet size No 70 (.028 inch) drill
By-pass, in air horn size No 55 (.052 inch) drill
Economizer in body size No 53 (.0595 inch) drill
Idle bleed in body size No 52 (.0635 inch) drill
Idle port, slot type, length 200 inch, width 030 inch

Idle Port Opening: Top of port 142 to 146 inch above top edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw): 0615 to 0655 inch diameter

Set Idle Adjustment Screw: ½ to 1½ turns open For richer mixture turn screw out Do not idle engine below 450 r p m (Auto Trans—in neutral), 500 r p m (Std and O D Trans)

Main Nozzle: Nozzle is installed permanently DO NOT RE MOVE Anti percolator air bleed, size No 70 (.028 inch) drill

Accelerating Pump: Diaphragm type vacuum and mechanically operated Discharge restriction (in housing), size No 65 (.035 inch) diameter Intake ball check seat (in diaphragm housing) size No 40 (.098 inch) drill Discharge ball check seat (in diaphragm housing) size No 32 (.116 inch) drill Vacuum restriction (in flange), size No 55 (.052 inch) drill Vacuum passage (diaphragm bleed) size No 65 (.035 inch) drill

Choke: Carter Climatic® Control set one point lean offset butterfly type Choke heat suction hole in body size No 46 (.081 inch) drill

Vacuum Spark Port: Round type size .040 inch diameter Bottom of port .021 to .029 inch above top edge of valve with valve tightly closed

Transmission Vacuum Control Port (2757S only): Round type size .041 inch diameter Bottom of port .022 to .030 inch below lower edge of valve with valve tightly closed Bleed to cavity size No 58 (.042 inch) drill

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .016"	Ignition Timing Breaker Points to Open: 3° B. T. D. C. At Vibration Damper	Valve Setting (Hot) Intake .015" Exhaust .015"	Float Setting ½ Inch (Use Gauge T109-83)	Idle Adjustment Screw Setting ½ to 1½ Auto. Trans. 450 R.P.M. In Neutral 500 R.P.M. Std. & O. D.

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: With gasket removed, bowl cover assembly inverted and float resting on seated needle the distance from the bowl cover to the top of float at free end should be ½ inch (gauge T109-83) Adjust by bending lip of float not float arm

METERING ROD ADJUSTMENT. This adjustment is important and should be checked each time the carbureter is reassembled or lean rods are installed With throttle valve seated in bore of carbureter press down on upper end of diaphragm shaft until diaphragm bottoms in vacuum chamber Tool T109-212 may be used to hold diaphragm shaft down while adjusting metering rod Metering rod should contact bottom of metering rod well and metering rod arm should contact lifter link at the outer end nearest the springs and at supporting lug Adjust by bending lip of metering rod arm to which metering rod is attached up or down

ACCELERATING PUMP. If acceleration is not satisfactory remove pump housing intake check assembly and discharge check ball and spring Examine diaphragm for wear or damage Be sure intake screen intake check and discharge check are not clogged with lint or foreign matter Discharge check ball must

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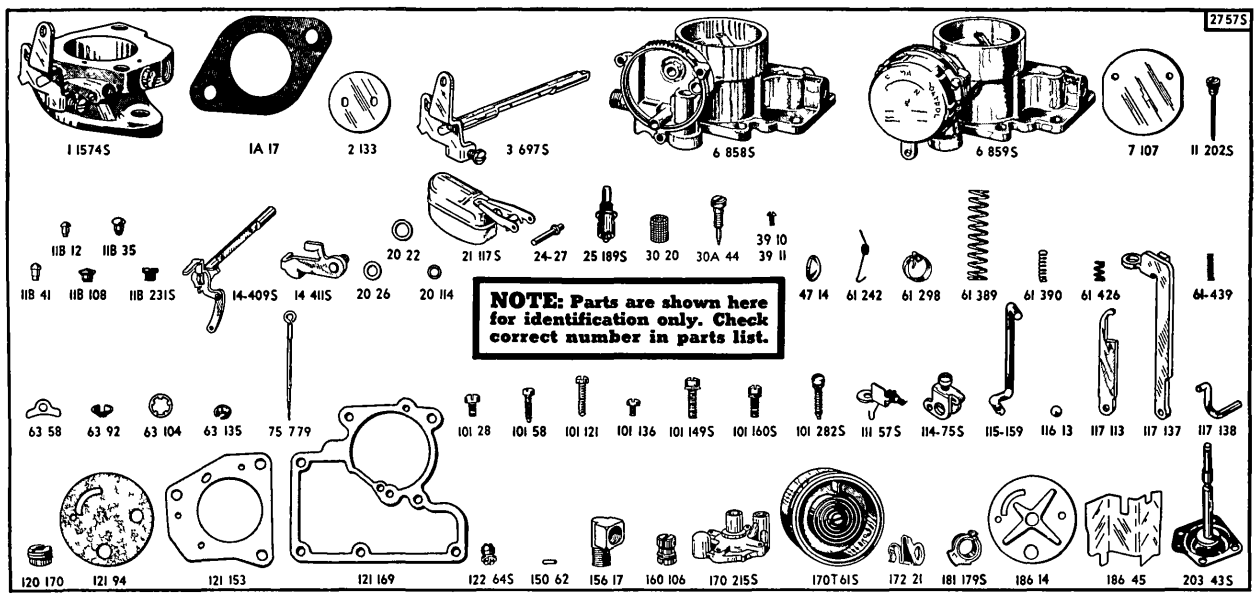
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seat as a leak at this point will result in poor acceleration Inspect and replace all worn parts clean and blow out all passages with compressed air

FAST IDLE ADJUSTMENT Remove thermostatic coil housing gasket and baffle plate Crack throttle valve and hold choke valve fully closed then close throttle This will allow fast idle cam to revolve to fast idle position With choke valve held tightly closed and throttle closed as far as possible there should now be 054 inch clearance (gauge T109 193) between throttle valve and bore of carbureter (side opposite idle port) Adjust by bending connector link at lower angle (Use bending tool T109 213)

UNLOADER ADJUSTMENT This adjustment must be made after fast idle adjustment Hold throttle valve in wide open position and close choke valve as far as possible without forcing There should be 9/32 inch clearance between lower edge of choke valve and inner wall of air horn (gauge T109 126) Adjust by bending arm of choke trip lever (Use tool T109 214)



Rambler 6—1958—Carbureters Nos. 2014S-2757S

WHEN SERVICING, USE GASKET ASSORTMENT No. 216, RE-CARBURETION KIT No. 1590N

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF RE-CARBURETION KIT

Part No	PART NAME	
1-1574S	Body flange assembly (2757S)	
1-847S	Body flange assembly (2014S)	
1A-17	FLANGE GASKET	
2-133	Throttle valve	
3-697S	Throttle shaft and lever assembly	
6-858S	Air horn and climatic® control assembly	
6-859S	Air horn assembly	
7-107	Choke valve	
11-202S	Low speed jet assembly (.028")	
11B-12	Flange passage plug	
11B-35	Nozzle passage rivet plug	
11B-41	Rivet plug	
11B-108	Idle port rivet plug	
11B-231S	Ball retainer screw plug assembly	
14-409S	Choke piston lever and shaft assembly	
14-411S	Choke trip lever and pin assembly	
20-22	Needle seat gasket	
20-26	Ball retainer screw plug gasket	
20-114	Diaphragm housing attaching screw gasket	
21-117S	Float and lever assembly	
24-27	Float lever pin	
25-189S	NEEDLE AND SEAT ASSEMBLY (.076")	
30-20	Pump intake strainer	
30A-44	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	Throttle valve attaching screw	(2)
47-14	Welsh plug	
61-242	Metering rod spring	
61-298	Fast idle cam spring	
61-389	Pump diaphragm spring	
61-390	Upper pump spring	
61-426	Idle adjustment screw spring	
61-439	Pump discharge spring	
61-451	†Pump diaphragm spring	
63-58	Coil housing retainer	(3)
63-92	Diaphragm spring retainer	
63-104	Throttle shaft retaining ring	

Part No.	PART NAME	
63-135	Upper pump spring retainer	
75-779	METERING ROD—STANDARD .078" x .07325" x .047"	
75-793	Metering rod—1 size lean .078" x .0745" x .050"	
75-794	Metering rod—2 sizes lean .080" x .076" x .053"	
101-28	Throttle shaft arm attaching screw	
101-58	Diaphragm housing attaching screw	
101-121	Throttle lever adjustment screw	
101-136	Coil housing attaching screw	(3)
101-149S	Body flange attaching screw and washer assembly	(3)
101-160S	Air horn attaching screw and washer assembly	(7)
101-282S	Diaphragm housing attaching screw and washer assembly	(3)
111-57S	Metering rod arm assembly	
114-75S	Throttle shaft arm assembly	
115-159	Choke connector rod	
116-13	Pump check ball	
117-113	Fast idle link	
117-137	Pump lifter link	
117-138	Pump connector link	
120-170	METERING ROD JET (.102")	
121-94	THERMOSTATIC COIL HOUSING GASKET	
121-153	BODY FLANGE GASKET	
121-169	BOWL COVER AND AIR HORN GASKET	
122-64S	Intake ball check assembly	
150-62	Choke piston pin	
156-17	Fuel line elbow	
160-106	Choke piston	
170-215S	Pump diaphragm housing assembly	
170T-61S	Thermostatic coil and housing assembly	
172-21	Throttle connector rod retainer	
181-179S	Fast idle cam assembly	
186-14	Coil housing baffle plate	
186-45	Fuel bowl baffle plate	
203-43S	PUMP DIAPHRAGM ASSEMBLY	

†For use at 5000 ft Altitude

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.

CARTER CARBURETOR

DIVISION OF ACF INDUSTRIES
INCORPORATED
ST. LOUIS 7, MO., U.S.A.

GENERAL BULLETIN

CARBURETER CONTRACT ACCOUNTS
FACTORY, P.I. AND P.C.T. GRADUATES

BULLETIN NO. 14 American Motors
(File Under Nash)

DATE May 12, 1958

SUBJECT: 1958 Rambler "6" Carter WCD-2350S and 2586S (Dual) Carbureters Stumble on Acceleration Complaints

A new metering rod part 75-1431 has been released to correct a stumble on light part throttle acceleration at car speeds under 25 M.P.H.

The new rod has the lower end of its idle stabilizing flat located .050" closer to the bottom of the rod. This change speeds up the flow of fuel upon light acceleration.

The metering rods may be installed without removing the carbureter from the engine. The metering rod adjustment should be checked when the new rods are installed.

Two metering rods are required. American Motors has assigned part number 3201205 to a package consisting of (2) 75-1431 metering rods. An initial shipment of a limited quantity of part 75-1431 will be made to Carter Central Distributors.

Carter warranty is not involved

R. J. Mullin

R. J. Mullin
Service Supervisor

RJM:dg

cc: Personnel and Extra Copies - Canada and U.S.A.

IMPORTANT: THIS BULLETIN CONTAINS INFORMATION OF VALUE TO YOU AND WAS PREPARED AT CONSIDERABLE EXPENSE TO BE OF SERVICE TO YOU. FAILURE TO USE THIS INFORMATION MAY COST YOU MONEY. WE SUGGEST THAT YOU ISSUE COPIES OF IT TO THOSE OF YOUR STAFF INTERESTED, SO THAT THEY CAN BE FILED IN REGULAR CARTER SALES AND SERVICE MANUAL.

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FORM C-2914E

CARBURETER
TRADE MARK REG. U. S PAT. OFF.
MARCA REGISTRADA

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CARTER CARBURETOR

DIVISION OF ACF INDUSTRIES
INCORPORATED
ST. LOUIS 7, MO., U.S.A.

GENERAL BULLETIN

CARBURETER CONTRACT ACCOUNTS
FACTORY, P.I. AND P.C.T. GRADUATES

BULLETIN NO. 13 American Motors
(File Under Nash)
DATE May 12, 1958

SUBJECT: 1958 Rambler "6" Carter Model AS (Single Bore) Carbureter-Percolation Complaints

A portion of a bulletin sent by American Motors to their Zones and Dealers on this subject is quoted below:

"This condition usually occurring after a 10 to 30 minute engine shut down may be attributed to a number of factors.

"During cold weather operation, light volatile fuels are generally used. These highly volatile fuels with their low boiling point characteristics vaporize readily and form small bubbles in the passages of the carburetor. During engine operation, gasoline flows constantly and is replenished with relatively cool fuel. However, after engine shut down, the static fuel confined in the carburetor passages is heated by heat transmitted from the engine block until the fuel boils and is forced out the nozzle into the intake manifold.

"A similar condition occurs during warm weather operation with less volatile fuels. The higher ambient temperatures create higher operating temperatures which in turn also cause the fuel to boil.

"These carburetors are equipped with anti-percolator devices which will take care of normal fuel expansion. However, it is impossible to control the type of gasoline the owner is to use and its characteristics.

"This hard hot start can become an aggravated owner complaint if the owner is not aware of the carburetor unloader feature. It is important when attempting to start the engine after a short period shut down to open the throttle and allow sufficient fresh air to enter the manifold for a more combustible mixture.

"In extreme cases where the car is constantly operated under this short period shut down condition, a 3/16" thick gasket, AMC part #3147641, may be installed between the carburetor gasket and the manifold cover. The standard corebestos gasket must be used at the carburetor flange side on automatic transmission equipped cars with vacuum control ports in base of the carburetor. Part 3147641 will serve as an insulator against heat normally transmitted to the carburetor under these conditions."

(over)

IMPORTANT: THIS BULLETIN CONTAINS INFORMATI N OF VALUE TO YOU AND WAS PREPARED AT CONSIDERABLE EXPENSE TO BE OF SERVICE TO YOU. FAILURE TO USE THIS INFORMATION MAY COST YOU M NEY. WE SUGGEST THAT YOU ISSUE COPIES OF IT TO THOSE OF YOUR STAFF INTERESTED, SO THAT THEY CAN BE FILED IN REGULAR CARTER SALES AND SERVICE MANUAL.

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Part 3147641 corresponds to Carter 1A-112. The standard hard steel reinforced gasket is Carter part 1A-131 which will be available shortly. As noted above, the 1A-131 gasket should be used between the 1A-112 and the carbureter on automatic transmission cars to avoid blocking the transmission vacuum passage in the carbureter flange surface. The 1A-112 is soft and may be compressed into this passage when the carbureter attaching nuts are tightened.

Carter warranty is not involved.

R J Mullin

R. J. Mullin
Service Supervisor

RJM:dg

cc: Personnel and Extra Copies - U.S.A. and Canada

Form 5272B

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

NASH 2664S-2665S-2748S-2749S
February, 1957
Revised October, 1957

RAMBLER SIX

(2664S-2748S) Automatic Transmission

MODELS "5710" & "5810" 1957 - 1958

(2665S-2749S) Standard and Overdrive Transmissions

(2748S can be used in place of 2664S-2665S-2749S)

AS Down-Draft Climatic® Control Carbureters Nos. 2664S-2665S-2748S-2749S

CARBURETER SPECIFICATIONS

For Rambler 6 Cylinder 195 Cu. In. Engine: Vacuum at Idle 19 Inches

Dimensions: Flange size 1¼ inch S A E.
Throttle bore, 1-7/16 inch I D
Primary venturi, ⅜ inch I D.
Main venturi, 1¼ inch I D

Vents: Outside, none Inside balance vent to air horn above valve

Low Speed Jet Tube: Jet size No 69 (.0292 inch) drill
By-pass (2), in idle tube plug, size No 58 (.042 inch) drill
Economizer, size No 56 (.0465 inch) drill
Idle bleed in body, size No. 66 (.033 inch) drill

Idle Port: Slot type length (2664S-2665S) 065 inch (2748S 2749S) 102 inch, width 030 inch

Idle Port Opening: Top of port (2664S 2665S) 058 to 062 inch (2748S-2749S) 063 to 067 inch above top edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw): Size No 52 (.0635 inch) drill Auxiliary idle feed, No 52 (.0635 inch) drill

Set Idle Adjustment Screw: ¼ to 1¼ turns open For richer mixture, turn screw out Do not idle engine below 475 R P M. (Automatic Trans—in neutral), 500 R P M (Standard and Overdrive Trans) For cars with air conditioning set idle at 500 R P M with compressor in operation.

Main Nozzle: Nozzle is installed permanently DO NOT REMOVE Anti-percolator bleed tube, off center in plug DO NOT REMOVE Plug has milled flat on one side

Accelerating Pump: Pressure type, mechanically operated Pump jet size No 70 (.028 inch) drill Intake disk check seat (in plunger assembly) size No 40 (.098 inch) drill Discharge ball check seat (in body) size No 42 (.0935 inch) drill

Choke. Carter Climatic® Control, set two points rich Offset butterfly type Choke heat suction hole in air horn size No 36 (.1065 inch) drill

Vacuum Spark Port: Round type, 052 inch diameter Top of port to be 040 to 050 inch above top edge of valve with valve tightly closed

Transmission Vacuum Control Hole: (2664S 2748S only) Flush with throttle valve (manifold side) size No 56 (.046 inch) drill Bleed to flange cavity size No 56 (.0465 inch) drill

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter

Spark Plug Gap .035"	Breaker Point Setting .016"	Ignition Timing Breaker Points to Open: T. D. C. At Vibration Damper	Valve Setting (Hot) Intake .012" Exhaust .015"	Float Setting ¼ Inch (Use Gauge T109-282)	Idle Adjustment Screw Setting ¼ to 1¼ Auto. Trans. 475 R.P.M. Std. & O'Drive 500 R.P.M.

CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3662

Float: ¼" (Gauge T109 282) from top of each float (at free end) to top of casting To adjust, bend float lip. After float adjustment has been made there should be .010" to .015" clearance between overlapping tangs on float levers To adjust bend long tang on left hand float

Pump: Pump arm on lifter link should parallel top of casting To adjust Bend pump arm

Metering Rod Rod should just bottom at wide open throttle To adjust Bend metering rod arm

Fast Idle: .030" (Gauge T109-29 may be used) between lower edge of valve and bore with fast idle link on high step of cam To adjust Bend choke connector rod.

Fast Idle on Car: 1800 R P M (Hot)

Unloader: 3/16" (Gauge T109-28) between top edge of valve and inner wall of air horn To adjust Bend arm on choke trip lever

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Rambler 6—1957-1958—Carbureters Nos. 2664S-2665S-2748S-2749S

WHEN SERVICING, USE GASKET ASSORTMENT No 276, RE-CARBURETION KIT No 1921N (2664S 2665S), No 1936N (2748S-2749S)

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF RE-CARBURETION KIT

Part No.	PART NAME	
1A-112	FLANGE GASKET	
2-199	Throttle valve	
3-1100S	Throttle shaft and lever assembly	
6-1256S	Air horn assembly	
7-203	Choke valve	
11-303S	Low speed jet assembly (0292")	
11B-69	Spark port rivet plug	
11B-194	Pipe plug	
14-494S	Choke piston lever link and shaft assembly	
16 16	POWER JET ROD 074" x 063" (2664S 2665S)	
16 33	POWER JET ROD 074" x 068" (2748S 2749S) (Sup by 16 16 on 2664S 2665S)	
20-31	Needle seat gasket	
21-173S	Float and lever assembly (right hand)	
21-174S	Float and lever assembly (left hand)	
24-14	Float lever pin	
25-313S	NEEDLE AND SEAT ASSEMBLY (086")	
30A-64	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
47-14	Welsh plug	
54 21	Needle seat lock	
61-130	Pump spring	
61-226	STEP UP PISTON SPRING	
61 291	Throttle lever adjusting screw spring	
61 298	Fast idle cam spring	
61 426	Idle adjustment screw spring	
63-58	Coil housing retainer	(3)
63-208	Float lever pin retainer	
63-209	Metering rod retainer	
63-213	Discharge ball check retainer	
64-178S	PUMP PLUNGER ROD AND CHECK ASSEMBLY	
75-1384S	METERING ROD ASSEMBLY 078" x 0665"	
75-1388S	Metering rod assembly 077" x 062" (2664S 2665S) (Sup by 75 1384S)	
75-1389S	Metering rod assembly—1 size lean (2664S 2665S)	
75-1408U	Unitized package (consists of 1—16 33 and 1—75 1390S)—2 sizes lean (2664S 2665S)	
101-136	Coil housing attaching screw	(3)
101-160S	Air horn attaching screw and washer assembly	(7)
101-307S	Air horn attaching screw and washer assembly	(2)
101-365	Throttle lever adjusting screw	
P101-378	Dust cover screw	(2)
101-393	Throttle shaft screw	
101-419	Throttle valve attaching screw	(2)
103-14	Lead shot	(2)
103-15	Lead shot	
114-130S	Throttle shaft arm and pin assembly	
115-241	Choke connector rod	
116-25	Pump discharge check ball	
117-168	Fast idle link	
117-169	Pump lifter link	
118 107	Dust cover	
120 171	METERING ROD JET (1065")	
121-78	COIL HOUSING GASKET	
121-262	BODY GASKET	
121-263	DUST COVER GASKET	
150 62	Choke piston pin	
150A-10	Pin spring	
156-17	Elbow	
160-91	Choke piston	
160 133	Step up piston	
170T-61S	Thermostatic coil and housing assembly	
181-234S	Fast idle cam assembly	
186-24	Choke baffle plate	
230-10	POWER JET (076")	

NOTE **Figures in parentheses indicate number of pieces used in** one carbureter **Where no figure is shown, only one is used.**

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Form 5268A

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO, U. S A

NASH 2586S
February, 1957
Revised July, 1957

RAMBLER SIX

MODEL "5710"

1957

WCD DUAL DOWN-DRAFT CLIMATIC® CONTROL **CARBURETER No. 2586S**

CARBURETER SPECIFICATIONS

For Rambler 6 Cylinder 195 Cu. In. Engine: Vacuum at Idle 19 Inches

Dimensions: Flange size 1 1/8 inch dual, 4 bolt type
Primary venturi, 11/32 inch I D
Secondary venturi, 21/32 inch I D
Main venturi, 1-1/16 inch I D

Vents: Inside, (in air horn) (1).
Outside, (in dust cover) (1)

Gasoline Intake: Square vertical needle Size No 38 (1015 inch) drill in needle seat

Low Speed Jet Tube: Jet size No 71 (026 inch) drill
By-pass, size 051 inch diameter
Economizer, size No 56 (0465 inch) drill
Idle bleed, size 051 inch diameter

Idle Ports: Upper port, length, 105 inch Width, 030 inch

Idle Port Opening: 074 to 080 inch above upper edge of valve with valve closed tight

Lower Port (For Idle Adjustment Screw): Size 0615 to 0655 inch diameter

Set Idle Adjustment Screw: 1/2 to 1 1/2 turns open For richer mixture turn screw out Do not idle engine below 450 r p m (Hydra Trans) in neutral, 500 r p m (Std and Overdrive Trans)

Main Nozzle: In primary venturi, closed tip Nozzle is installed permanently Do not remove

Metering Rod. Economy step 0725 inch diameter, middle step tapers to 064 inch diameter Power step 0618 inch diameter These rods are designed with idle stabilizing flat on economy step

Metering Rod Jet· 089 inch diameter

Accelerating Pump: Discharge jet (twin) size, No 67 (032 inch) drill
Intake ball check seat size 115 to 120 inch diameter
Discharge (needle seat) size No 50 (070 inch) drill

Choke Carter Climatic® Control, set on index Offset butterfly type Choke heat suction hole in bowl cover Size No 36 (1065 inch) drill

Vacuum Spark Port Round type 040 inch diameter Top of port 033 to 043 inch above valve with valve tightly closed

Transmission Vacuum Control Hole Flush with throttle valve (manifold side) size 0492 inch diameter Bleed to flange cavity (early prod) No 56 (0465 inch) drill, (late prod) 0472 inch diameter

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .016"	Ignition Timing Breaker Points to Open: T. D. C. At Vibration Damper	Valve Setting (Hot) Intake .012" Exhaust .015"	Float Setting 5/32 Inch (Use Gauge T109-196)	Idle Adjustment Screw Setting 1/2 to 1 1/2 Hydramatic Trans. (In Neutral) 450 R.P.M. Std. & O'Drive 500 R.P.M.

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: Two separate float adjustments must be made—lateral and vertical.

LATERAL ADJUSTMENT. With bowl cover assembly inverted, bowl cover gasket removed, place float gauge directly under floats with notched portions of gauge fitted over edges of casting. Sides of floats should barely touch the vertical uprights of float gauge. Adjustment should be made by bending arms of floats

VERTICAL ADJUSTMENT· With float gauge in same position, floats should just clear the horizontal portion of gauge. (Vertical distance between top of float and machined surface of casting must be 5/32 inch.) (Gauge T109-196) Adjust by bending float arms Remove floats, install bowl cover gasket and then reinstall floats.

PUMP ADJUSTMENT: Install pump connector link in outer hole (long stroke) of pump arm, with ends extending away from countershaft arm Back out throttle lever set screw until throttle valves seat in bores of carbureter Be sure fast idle adjusting screw does not hold throttle open Hold straight edge across top of dust cover boss at pump arm. The flat on top of pump arm should be parallel to straight edge Adjust by bending throttle connector rod at upper angle Use tool T109-213

METERING ROD ADJUSTMENT: Metering rod adjustment is important and must be made after completing the pump adjustment No metering rod gauges are necessary Procedure is as follows 1 Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw. 2 With metering rods in place, press down on vacumeter link until metering rods bottom in carbureter body casting 3 Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link Hold in place and carefully tighten clamp screw

FAST IDLE ADJUSTMENT: Loosen choke lever clamp screw on choke shaft Insert 010 inch feeler gauge T109-200 between lip of fast idle cam and boss of flange casting Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw

With choke valve tightly closed, tighten fast idle adjusting screw until there is 020 inch (gauge T109-29) opening between throttle valve and bore of carbureter (side opposite idle port) Be sure fast idle adjusting screw is on high step of cam while making this adjustment

UNLOADER ADJUSTMENT: With throttle wide open there should be 3/16 inch (gauge T109-28) clearance between upper edge of choke valve and inner wall of air horn Adjust by bending unloader lip on throttle shaft lever (Use bending tool T109-41)

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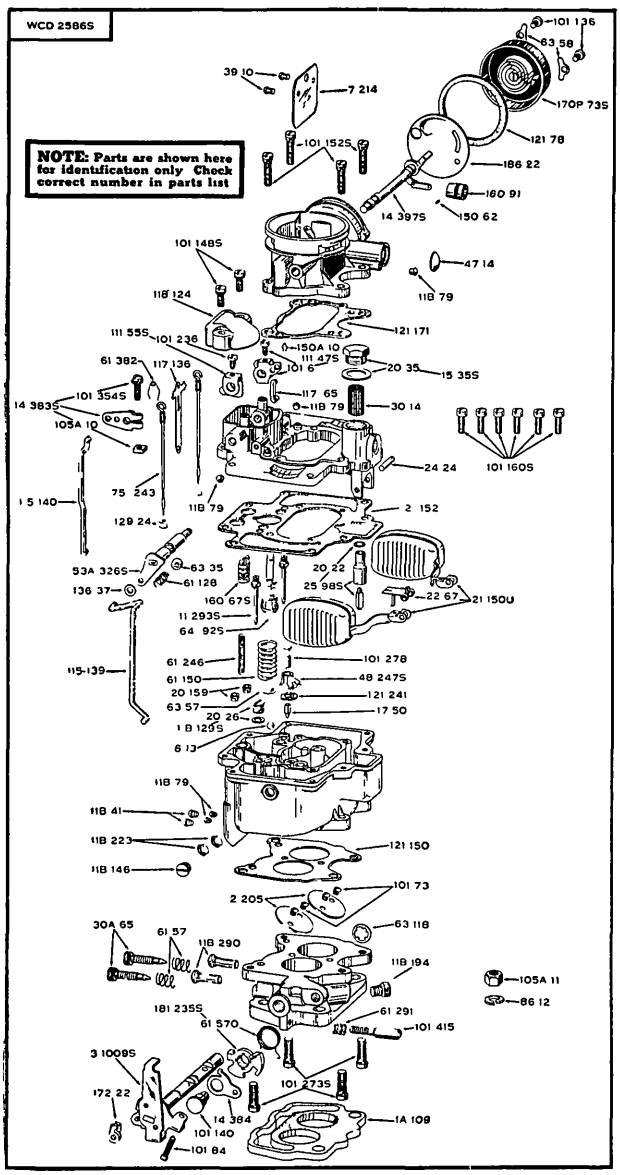
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Rambler 6—1957—Carbureter No. 2586S

WHEN SERVICING, USE GASKET ASSORTMENT No. 285; REPAIR PACKAGE No. 1836

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1495S	—Body flange assembly	
1A-109	FLANGE GASKET	
2-205	—Throttle valve	(2)
3-1009S	Throttle shaft and lever assembly	
6-1107S	Air horn and plug assembly	
7-214	Choke valve	
11-293S	LOW SPEED JET ASSEMBLY	(2)
11B-41	Rivet plug	(2)
11B-79	Rivet plug	(7)
11B-129S	PUMP DISCHARGE PASSAGE PLUG ASSEMBLY	
11B-146	Level sight plug	
11B-194	Pipe plug	
11B-223	Nozzle passage rivet plug	(2)
11B-290	IDLE PORT RIVET PLUG	(2)
14-383S	Choke lever and screw assembly	
14-384	Cam trip lever	
14-397S	Choke piston lever, link and shaft assembly	
15-35S	Strainer nut assembly	
17-50	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	
20-26	Gasket	
20-35	BOWL STRAINER GASKET	
21-150U	Unitized package	



Part No.	PART NAME	
22-67	Auxiliary float lever	
24-24	Float lever pin	
25-98S	NEEDLE AND SEAT ASSEMBLY	
30-14	BOWL COVER STRAINER	
30A-65	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
47-14	Welsh plug	
48-247S	Pump jet and housing assembly	
53A-326S	Pump operating lever and countershaft assembly	
61-57	Idle adjustment screw spring	(2)
61-128	Connector rod spring	
61-150	LOWER PUMP SPRING	
61-246	Vacuum piston spring	
61-291	Throttle lever adjusting screw spring	
61-382	METERING ROD SPRING	
61-570	Fast idle cam spring	
63-35	Connector rod retainer	
63-57	Intake check ball retainer	
63-58	Coil housing retainer	(2)
63-118	Throttle shaft retaining ring	
64-192S	PUMP PLUNGER, ROD, SPRING AND RETAINER ASSEMBLY	
75-1243	METERING ROD—STANDARD	(2)
75-1290	Metering rod—1 size lean	(2)
75-1291	Metering rod—2 sizes lean	(2)
75-1292	Metering rod—3 sizes lean	(2)
86-12	Flange stud lock washer	
101-6	Pump arm clamp screw	
101-73	Throttle valve attaching screw	(4)
101-84	Fast idle adjustment screw	
101-136	Coil housing attaching screw	(2)
101-140	Fast idle cam attaching screw	
101-148S	Dust cover attaching screw and washer assembly	(2)
101-152S	Air horn attaching screw and washer assembly	(4)
101-160S	Bowl cover attaching screw and washer assembly	(6)
101-236	Metering rod arm clamp screw	
101-273S	Body flange attaching screw and washer assembly	(4)
101-278	Pump jet housing attaching screw	
101-354S	Choke lever clamp screw and washer assembly	
101-415	Throttle lever adjusting screw	
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	
111-47S	Pump arm and screw assembly	
111-55S	Metering rod arm and screw assembly	
115-139	THROTTLE CONNECTOR ROD	
115-140	Choke connector rod	
116-13	Ball	
117-136	Vacumeter piston link	
117-165	Pump connector link	
118-124	Dust cover	
120-159	METERING ROD JET	(2)
121-78	COIL HOUSING GASKET	
121-150	BODY FLANGE GASKET	
121-152	BOWL COVER GASKET	
121-171	AIR HORN GASKET .	
121-241	PUMP JET HOUSING GASKET	
129-24	Metering rod disk	(2)
136-37	Connector rod washer..	
146-239S	Bowl cover and strainer assembly	
150-62	Piston pin ..	
150A-10	PIN SPRING	(2)
160-67S	Vacuum piston and pin assembly	
160-91	Choke piston	
170P-73S	Thermostatic coil and housing assembly	
172-22	THROTTLE CONNECTOR ROD RETAINER	
181-235S	Fast idle cam assembly	
186-22	Baffle plate	

—Parts so marked are new and listed for the first time

NOTE· Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.

Form 5241B

CARTER CARBURETOR
DIVISION OF ACF INDUSTRIES INCORPORATED
ST LOUIS, MO, U. S. A

NASH 2564S-2580S
October, 1956
Revised May, 1957

RAMBLER SIX

MODEL "5710"

1957

(2564S) Automatic Transmission

(2580S) Standard Transmission

(2664S can be used in place of 2564S, 2580S)

AS Down-Draft Climatic® Control **Carbureters Nos. 2564S-2580S**

CARBURETER SPECIFICATIONS

For Rambler 6 Cylinder Engine 3⅛ Inch Bore, 4¼ Inch Stroke

Dimensions: Flange size, 1¼ inch S. A. E.
Throttle bore, 1-7/16 inch I. D.
Primary venturi, ⅜ inch I. D.
Main venturi, 1¼ inch I. D.

Vents: Outside, none Inside balance vent to air horn above valve

Gasoline Intake· Horizontal needle Size No. 44 (.086 inch) drill in needle seat.

Low Speed Jet Tube: Jet size No. 69 (.0292 inch) drill By-pass (2), in idle tube plug, size No. 58 (.042 inch) drill Economizer size No. 56 (.0465 inch) drill Idle bleed in body, size No. 66 (.033 inch) drill

Idle Port Upper port, slot type, length .065 inch, width .030 inch

Idle Port Opening: Top of port .058 to .062 inch above top edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw): Size No. 52 (.0635 inch) drill Auxiliary idle feed No. 52 (.0635 inch) drill

Set Idle Adjustment Screw: ¼ to 1¼ turns open For richer mixture, turn screw out Do not idle engine below 450 R.P.M. (Automatic Trans.—in neutral), 500 R.P.M. (Standard and Overdrive Trans.) For cars with air conditioning set idle at 500 R.P.M. with compressor in operation

Main Nozzle· Nozzle is installed permanently DO NOT REMOVE Anti-percolator bleed tube off center in plug DO NOT REMOVE Plug has milled flat on one side

Power Jet: Size .076 inch diameter

Power Jet Rod Size Economy step .074 inch diameter power step .063 inch diameter

Metering Rod. .078 inch diameter tapers to .0665 inch diameter

Metering Rod Jet. .1065 inch diameter

Accelerating Pump Pressure type mechanically operated Pump jet size No. 70 (.028 inch) drill Intake disk check seat (in plunger assembly) size No. 40 (.098 inch) drill Discharge ball check seat (in body) size No. 42 (.0935 inch) drill

Choke· Carter Climatic® Control set two points rich Offset butterfly type Choke heat suction hole in air horn size No. 36 (.1065 inch) drill

Vacuum Spark Port· Round type .052 inch diameter Top of port to be .040 to .050 inch above top edge of valve with valve tightly closed

Transmission Vacuum Control Hole (2564S only) Flush with throttle valve (manifold side) size No. 56 (.046 inch) drill Bleed to flange cavity size No. 56 (.0465 inch) drill

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open: T. D. C. At Vibration Damper	Valve Setting (Hot)	Float Setting	Idle Adjustment Screw Setting
.035"	.016"		Intake .012" Exhaust .015"	¼ Inch (Use Gauge T109-282)	¼ to 1¼ Auto.Trans. 450 R.P.M. Std. & O'Drive 500 R.P.M.

CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3662

Float ¼" (Gauge T109-282) from top of each float (at free end) to top of casting To adjust, bend float lip After float adjustment has been made there should be .010" to .015" clearance between overlapping tangs on float levers To adjust bend long tang on left hand float

Pump: Pump arm on lifter link should parallel top of casting To adjust Bend pump arm

Metering Rod: Rod should just bottom at wide open throttle To adjust Bend metering rod arm

Fast Idle· .030" (Gauge T109-29 may be used) between lower edge of valve and bore with fast idle link on high step of cam To adjust Bend choke connector rod

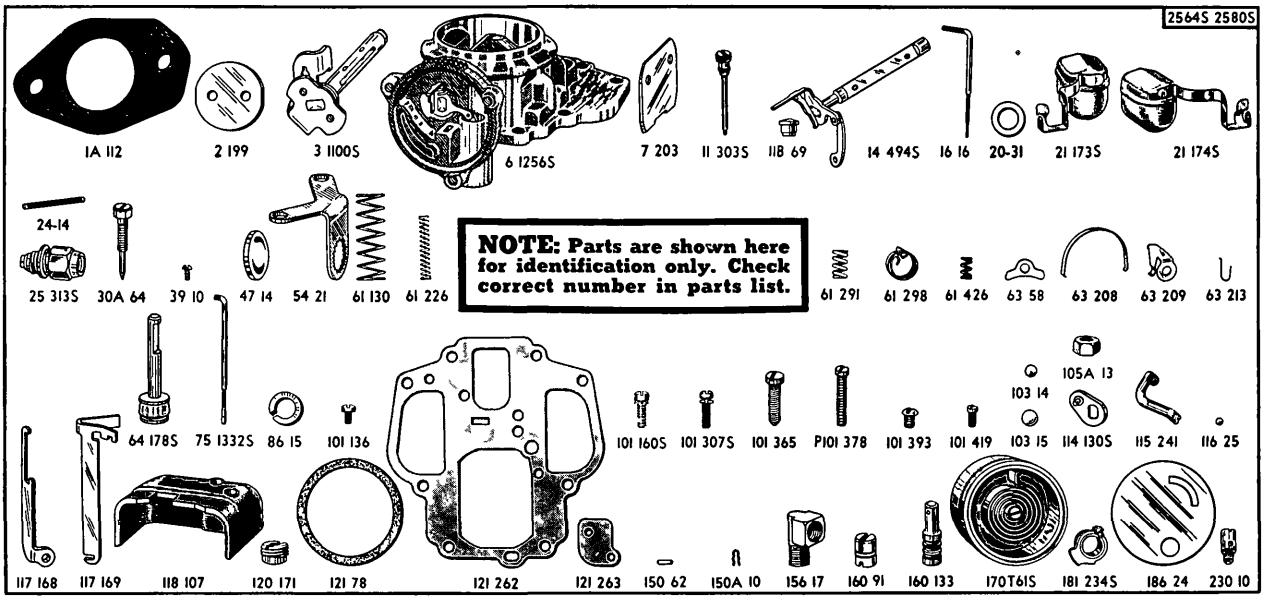
Fast Idle on Car: 1600 to 1800 R.P.M. (Hot)

Unloader. 9/64" (Gauge T109-34) between top edge of valve and inner wall of air horn To adjust Bend arm on choke trip lever

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Rambler 6—1957—Carbureters Nos. 2564S-2580S

WHEN SERVICING, USE GASKET ASSORTMENT No 276, REPAIR PACKAGE No. 1854

PART NAMES IN CAPITAL LETTERS LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1A-112	FLANGE GASKET	
2-199	Throttle valve	
3-1100S	Throttle shaft and lever assembly	
6 1256S	Air horn assembly	
7-203	Choke valve	
11-303S	LOW SPEED JET ASSEMBLY	
11B-69	Spark port rivet plug	
14-494S	Choke piston lever link and shaft assembly	
16 16	POWER JET ROD	
20-31	Needle seat gasket	
21-173S	Float and lever assembly (Right Hand)	
21-174S	Float and lever assembly (Left Hand)	
24-14	Float lever pin	
25-313S	NEEDLE AND SEAT ASSEMBLY	
30A-64	Idle adjustment screw	
39-10	CHOKE VALVE ATTACHING SCREW	(2)
47-14	Welsh plug	
54-21	Needle seat lock	
61-130	Pump spring	
61-226	STEP UP PISTON SPRING	
61 291	Throttle lever adjusting screw spring	
61-298	Fast idle cam spring	
61-426	Idle adjustment screw spring	
63-58	Coil housing retainer	(3)
63 208	FLOAT LEVER PIN RETAINER	
63-209	METERING ROD RETAINER	
63-213	DISCHARGE BALL CHECK RETAINER	
64-178S	PUMP PLUNGER ROD AND CHECK ASSEMBLY	
75 1332S	Metering rod assembly (Sup by 75 1366S)	
75 1366S	METERING ROD ASSEMBLY (Sup by 75 1384S)	
75-1384S	Metering rod assembly	
75-1389S	Metering rod—1 size lean	

Part No.	PART NAME	
75 1408U	Unitized package (Consists of 1—16 33 and 1—75 1390S)—2 sizes lean	
86-15	Flange stud lock washer	(2)
101-136	Coil housing attaching screw	(3)
101-160S	Air horn attaching screw and washer assembly	(7)
101-307S	Air horn attaching screw and washer assembly	(2)
101-365	Throttle lever adjusting screw	
P101-378	Dust cover screw	(2)
101-393	Throttle shaft screw	
101-419	Throttle valve attaching screw	(2)
103-14	Lead shot	(2)
103-15	Lead shot	
105A-13	Flange stud nut	(2)
114-130S	Throttle shaft arm and pin assembly	
115 241	Choke connector rod	
116-25	PUMP DISCHARGE CHECK BALL	
117-168	Fast idle link	
117-169	Pump lifter link	
118-107	Dust cover	
120-171	METERING ROD JET	
121-78	COIL HOUSING GASKET	
121-262	BODY GASKET	
121-263	DUST COVER GASKET	
150-62	Choke piston pin	
150A-10	PIN SPRING	
156-17	Elbow	
160-91	Choke piston	
160-133	Step up piston	
170T-61S	Thermostatic coil and housing assembly	
181-234S	Fast idle cam assembly	
186-24	Choke baffle plate	
230-10	POWER JET	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used.

Form 3662A
December, 1955
Revised May, 1957

CARTER CARBURETOR
DIVISION OF ACF INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

File Under Hudson–Nash

CARTER MODEL AS CARBURETER FOR HUDSON–NASH SERVICE ADJUSTMENT PROCEDURE

NOTE: The parts and specification pages referred to are catalog pages. These pages can be obtained from Carter Carburetor, Catalog Department, St. Louis (7), Missouri. Specify the carbureter number found on the brass identification tag, when requesting specification pages.

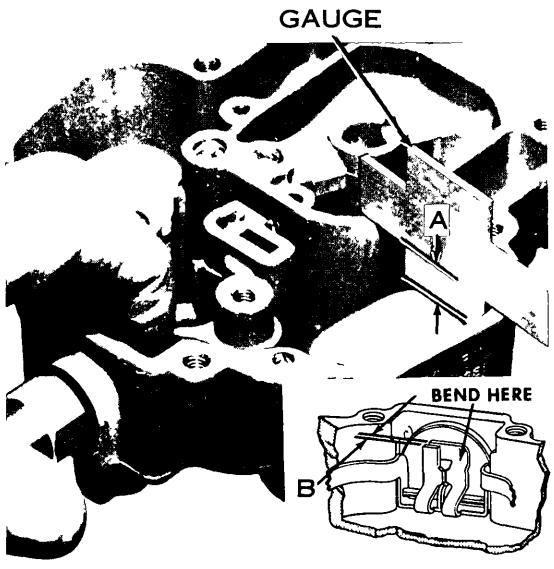


Figure 1

FLOAT ADJUSTMENT (Fig. 1)

The bowl cover gasket and float pin retainer must be removed. Gauge and adjust each float separately.

1. Hold the lip on float arm against the seated needle making sure the float pin is at the bottom of its guide slots.
2. The distance from the top surface of the body casting to the top of the float (A) should be as listed on carbureter specification page under float adjustment.
3. Adjust by bending lip on float arm. If necessary, bend float arms slightly to provide clearance on all sides of floats.
4. After float adjustment has been made and with both float lips resting against seated needle, there should be the clearance (B) listed on carbureter specification page between overlapping tangs on float levers. This can be checked by installing float pin retainer and turning carbureter upside down allowing floats to drop and make contact against seated needle. Adjust by bending long tang on left hand float.
5. Recheck float level adjustment.

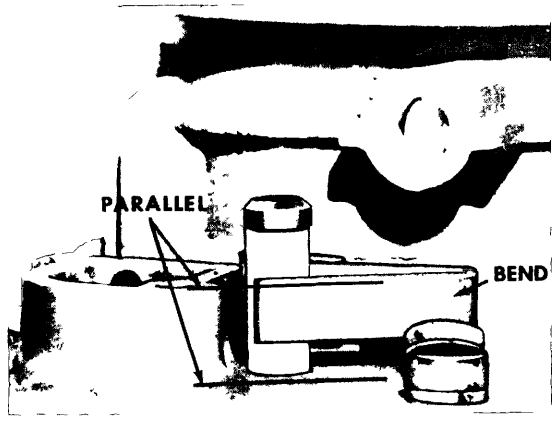


Figure 2

PUMP ADJUSTMENT (Fig. 2)

1. Open throttle valv to wide open position. Top of pump arm on lifter link should be parallel to top surface of bowl cover.
2. To adjust, bend pump arm.

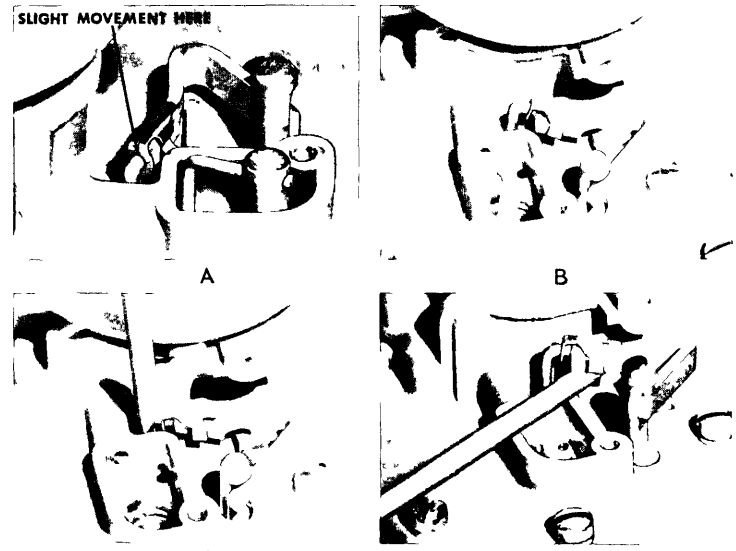


Figure 3

METERING ROD ADJUSTMENT (Fig. 3)

With throttle valve wide open the metering rod should just bottom in carbureter casting.

1. If the rod is properly adjusted, some movement can b noted around rod in the eye of metering rod retainer clip when the throttle is moved slightly from wide open position (Fig. 3A).
2. If the rod is too low it will tend to push the metering rod retainer clip up (Fig. 3B).
3. If the rod is too high it will be possible to push the rod down (Fig. 3C).
4. To adjust bend metering rod arm (Fig. 3D).

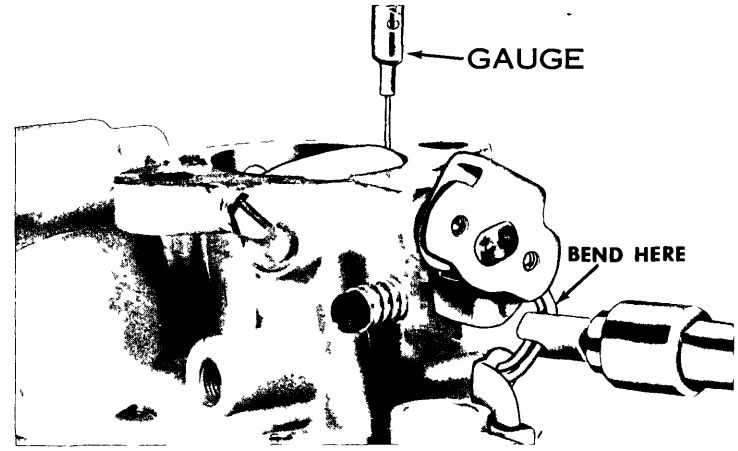


Figure 4

FAST IDLE ADJUSTMENT (Fig. 4)

1. Remove thermostatic coil housing assembly, gasket and baffle plate.
2. With throttle adjustment screw backed out, crack throttle valve and hold choke valve in fully closed position. Then close throttle. This will allow fast idle cam to revolve to fast idle position.
3. There should now be the clearance listed on carbureter specification page b tw en throttl valv and bore of carbureter (Sid opposit idl port).
4. Adjust by bending choke connector rod. (use tool T109-213).

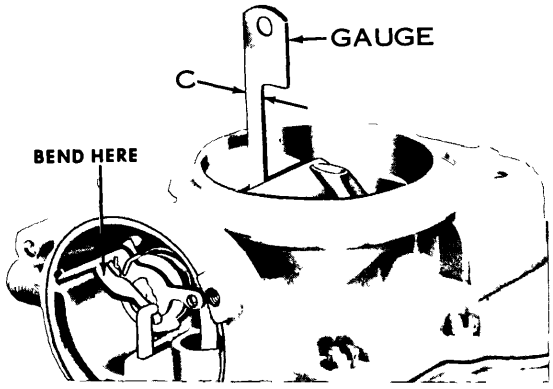


Figure 5

SERVICE INFORMATION

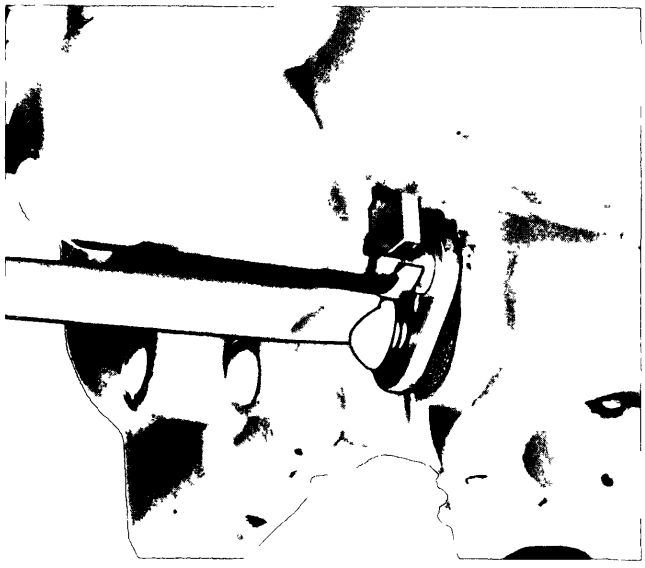


Figure 1

1. Throttle shaft arm must be removed before carbureter can be disassembled. (Fig. 1).

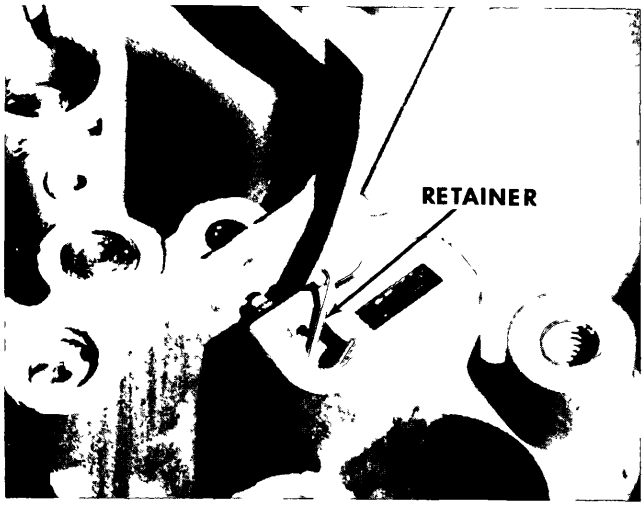


Figure 2

2. Accel rating pump discharge ch ck ball retainer is removed, using tool T109-56 (Fig. 2). (Intake ch ck is in pump plunger and not removable.)

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UNLOADER ADJUSTMENT (Fig. 5)

1. Hold throttle valve wide open and close choke valve as far as possible without forcing.
2. There should now be the clearance (C) listed on carbureter specifiifation page between upper edg of choke valve and inner wall of air horn.
3. Adjust by bending arm on choke piston lever. (Use bending tool T109-214.)

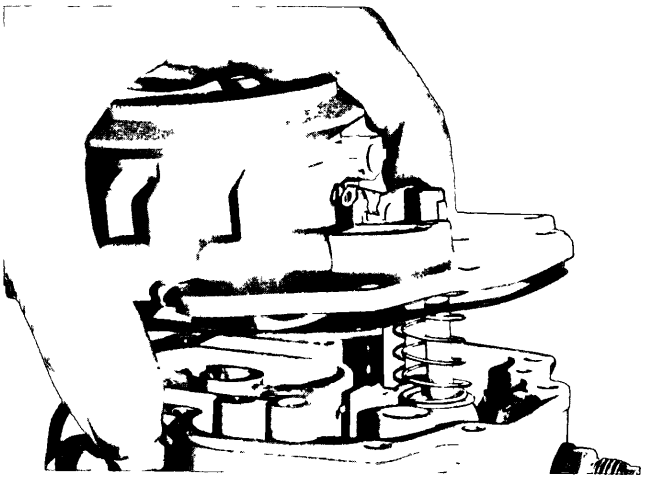


Figure 3

ASSEMBLING AIR HORN TO BODY (Fig. 3)

1. Place body gasket on air horn.
2. Install metering rod retainer on pump lifter link. (Do not install metering rod at this time.) Insert pump lifter link through opertaing slot in air horn.
3. Place pump spring over pump plunger and install plung r in air horn.
4. Install fast idle link in choke piston housing.
5. Holding plunger, lifter link and gasket in position, lower bowl cover onto carbureter body (Fig.3).

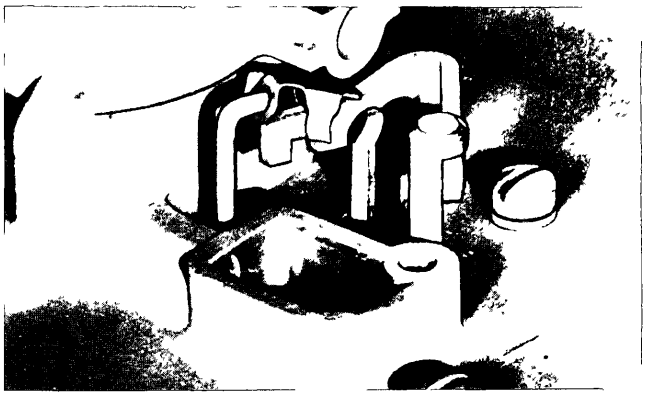


Figure 4

INSTALLATION OF METERING ROD (Fig. 4)

1. Place metering rod retainer in position shown in Fig. 4.
2. Lower rod into place until the end of rod enters hole in retainer.
3. Push metering rod and retainer down to operating position. Push retainer toward rod until ears on retainer fit into slot in pump arm on lifter link.

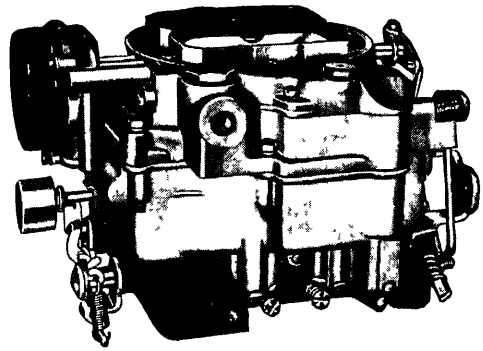
Fill carbur t r bowl with clean fu l b for installing on manifold. Operation of the float and intak ne dle and s at may be checked under pressure if the fuel pump is used at the bench to fill the carbur ter bowl. Operate the throttle several times and visually check the discharge from th pump jet.

CARBURETER
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S S PRINTED IN U.S.A.

(NASH)
Ambassador
Model 5780

(HUDSON)
Hornet
Model 35780



NASH-HUDSON
"V-8"
1957

WCFB Four-Bore Down-Draft Climatic® Control **Carbureters Nos. 2593S-2593SA**

CARBURETER SPECIFICATIONS

For Nash-Hudson 8 Cylinder Engine: 4 Inch Bore, 3¼ Inch Stroke

Dimensions: Flange Four Bore—4 bolt type.
Throttle bore 1-7/16 inch.
Primary venturi size, 11/32 inch I. D.
Main venturi size, 1-3/16 inch I. D.

Vents: Outside, 4. Inside, 5.

Gasoline Intake: Size No. 42 (.0935 inch) drill hole in needle seat.

Low Speed Jet Tube: (Primary side only). Jet, size No. 68 (.031 inch) drill.
By-pass, in body, size No. 54 (.055 inch) drill.
Economizer, in low speed jet, size .049 inch diameter.
Idle bleed, in body, size .065 inch diameter.

Idle Port: (Upper) slot type. Primary, length .185 inch; width .030 inch. Secondary, none.

Idle Port Opening: Primary, .130 to .136 inch above top edge of valve with valve tightly closed. Secondary, none.

Lower Port: Primary (for idle adjustment screw), size No. 53 (.0595 inch) drill. Secondary, none.

Set Idle Adjustment Screw: ¼ to 1¼ turns open. For richer mixture turn screw out. Do not idle engine below 450 r.p.m. Automatic Trans.—in neutral; 500 r.p.m. for Standard and Overdrive Trans. For cars with air conditioning set idle at 500 r.p.m. with compressor in operation.

Main Nozzle: Installed permanently. **DO NOT REMOVE.** Anti-percolating jet, primary size No. 70 (.028 inch) drill. Secondary size No. 72 (.025 inch) drill.

Metering Rod: (Vacumeter Type) see parts list for size.

Metering Rod Jet: Primary size .098 inch; secondary size .0635 inch diameter.

Accelerating Pump: Discharge jet (Twin) primary side only, size No. 72 (.025 inch) drill. Intake ball check seat, size .115 to .120 inch diameter. Discharge needle seat, size No. 50 (.070 inch) drill.

Choke: Carter Climatic® Control, set on index. Butterfly type—offset choke valve, primary side only. Choke heat suction hole, restriction in piston housing, size No. 43 (.089 inch) drill.

Vacuum Spark Port: Horizontal, slot, round end type—.130 x .040 inch. Top of port to be .040 to .046 inch above top edge of valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .016"	Ignition Timing Breaker Points to Open: 5° B. T. D. C. At Vibration Damper	Float Setting See Adjustments	Idle Adjustment Screw Setting ¼ to 1¼ Auto. Trans. 450 R.P.M. Std. & O'Drive 500 R.P.M.

NOTE: These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3689.

FLOAT LEVEL: Primary 1/8" (Gauge T109-232); secondary 3/16" (Gauge T109-222) between top of float and machined surface of casting. To adjust: bend float arms.

FLOAT DROP: Primary 5/8", secondary 11/16". To adjust: bend stop tabs on float bracket.

PUMP: Flat on pump arm should parallel straight edge on dust cover boss. To adjust: bend connector rod.

METERING ROD: Metering rod should bottom with throttle valves seated.

BOWL VAPOR VENT: 1/16" (Gauge T109-197) between bowl vapor vent valve and dust cover. To adjust: bend vapor vent arm.

FAST IDLE CAM CLEARANCE: .026" (Gauge T109-189) between lip of fast idle cam and boss on flange casting with choke valve closed. To adjust: set choke shaft lever.

FAST IDLE THROTTLE VALVE CLEARANCE: .023" (Gauge T109-189) between lower edge of valve and bore with adjusting screw on high step of cam.

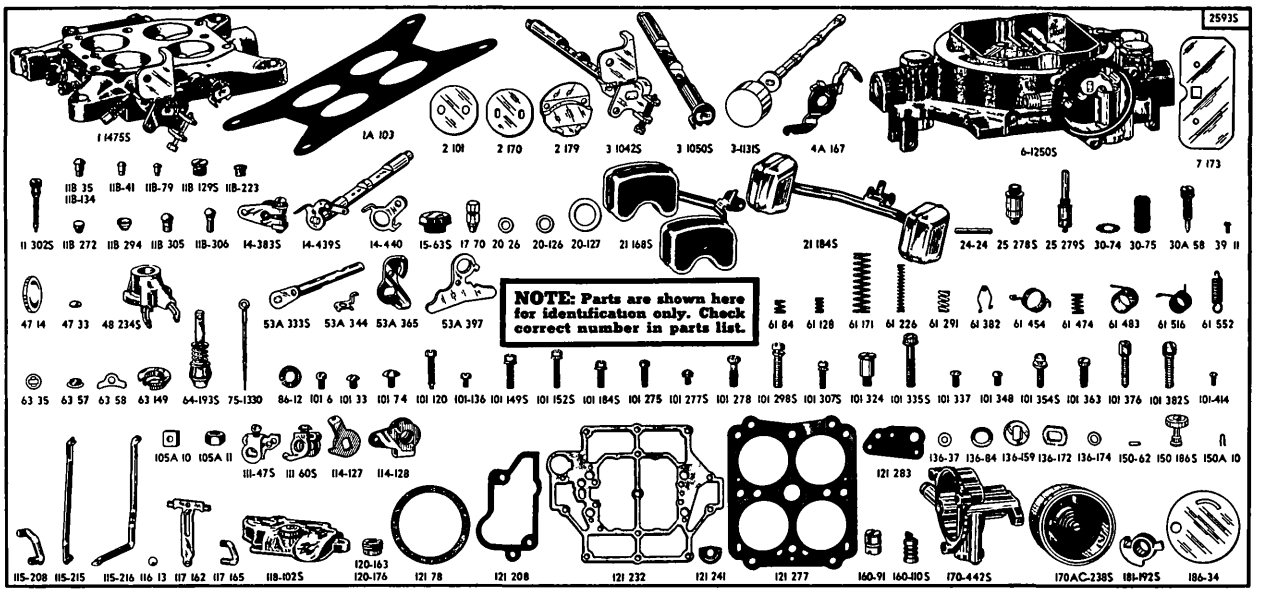
FAST IDLE ON CAR: 1600 to 1800 R.P.M. hot engine with fast idle screw on high step of cam.

UNLOADER: 9/32" (Gauge T109-126) between upper edge of choke valve and inner wall of air horn. To adjust: bend unloader arm on throttle lever.

SECONDARY THROTTLE LEVER: 1. Block choke valve wide open. 2. Back out throttle lever stop screw so that primary valves seat in bores of carbureter. 3. With primary valves open 11/64" (Gauge T109-166) secondary valves should just start to open. To adjust, bend throttle operating rod. NOTE: Secondary valves will be a few degrees from wide open, when primary valves are wide open. 4. With primary and secondary throttle valves tightly closed there should be .008" to .013" (Gauge T109-200) between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on primary throttle lever.

SECONDARY THROTTLE LOCK-OUT: Crack throttle valves and manually open and close choke valve. Tang on secondary throttle lever should freely engage in notch of lock-out dog. To adjust, bend tang on secondary throttle lever.

CARBURETER
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Nash-Hudson "V-8"—1957—Carbureters Nos. 2593S-2593SA

WHEN SERVICING, USE GASKET ASSORTMENT No. 301; REPAIR PACKAGE No. 1861A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1475S	Body flange assembly (Sup by 1 1511S)	
1-1511S	Body flange assembly	
1A-103	FLANGE GASKET	
2-101	Primary throttle valve	(2)
2-170	Secondary throttle valve	(2)
2-179	Auxiliary throttle valve	(2)
3-1042S	Primary throttle shaft and lever assembly	
3-1050S	Secondary throttle shaft and dog assembly	
3-1131S	Auxiliary throttle shaft and weight assembly	
4A-167	Throttle shaft dog	
6-1250S	Air horn assembly (2593S) (Sup by 6-1281S)	
6-1281S	Air horn assembly	
7-173	Choke valve	
11-302S	LOW SPEED JET ASSEMBLY	(2)
11B-35	Rivet plug	(4)
11B-41	Rivet plug	
11B-79	Rivet plug (early prod (4) (late prod (1)	
11B-129S	Pump discharge passage plug assembly	
11B-134	Rivet passage plug	
11B-223	Nozzle passage rivet plug	(4)
11B-272	Rivet plug	(2)
11B-294	Idle port rivet plug	(2)
11B-305	Rivet plug	(2)
11B-306	Rivet plug	
14-383S	Choke lever and screw assembly	
14-439S	Choke piston lever link and shaft assembly	
14-440	Cam trip lever	
15-63S	Strainer nut assembly	(2)
17-70	PUMP CHECK NEEDLE	
20 26	PUMP PLUG GASKET	
20-126	Needle seat gasket	(2)
20-127	BOWL STRAINER GASKET	(2)
21-168S	Secondary float and lever assembly	

Part No.	PART NAME	
21-184S	Primary float and lever assembly	
24-24	Float lever pin	(2)
25-278S	PRIMARY NEEDLE AND SEAT ASSEMBLY	
25-279S	SECONDARY NEEDLE AND SEAT ASSEMBLY	
30-73	PRIMARY NEEDLE SEAT STRAINER	
30-74	SECONDARY FUEL INLET STRAINER	
30-75	Bowl strainer (early prod)	
30A-58	Idle adjustment screw	(2)
39-11	Choke valve attaching screw	(2)
47-14	Welsh plug (choke housing)	
47-33	Welsh plug (spark port)	
48-234S	Pump jet and housing assembly	
53A-333S	Pump operating lever and countershaft assembly	
53A-344	VENT ARM	
53A-365	Secondary operating lever	
53A-397	Lockout arm	
61-84	Idle adjustment screw spring	(2)
61-128	Connector rod spring	
61-171	PUMP SPRING (LOWER)	
61-226	VACUUM PISTON SPRING	
61-291	Throttle lever adjusting screw spring	
61-382	METERING ROD SPRING	
61-454	Fast idle cam spring	
61-474	Bowl vent spring	
61-483	Secondary throttle return spring	
61-516	Countershaft spring	
61-552	Throttle flex spring	
63-35	Connector rod spring retainer	
63-57	INTAKE CHECK BALL RETAINER	
63-58	Coil housing retainer	(3)
63-149	Bowl vent spring retainer	
64-193S	PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY	

Part No.	PART NAME	
75-1330	Metering rod—standard 070" x 047" x 040" (Sup by 75 1364)	(2)
75-1364	METERING ROD—STANDARD 074" x 050" x 044"	(2)
75-1392	Metering rod 077" x 054" x 050"—1 size lean	(2)
75-1393U	Metering rod and jet unit (Consists of 2—75 1404 and 2—120 196)—2 sizes lean	
86-12	Flange stud lock washer	(4)
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	(2)
101-120	Fast idle adjustment screw	
101-136	Coil housing attaching screw	(3)
101-149S	Body flange attaching screw and washer assembly	
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-275	Piston housing attaching screw	
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet and housing attaching screw	
101-298S	Body flange attaching screw and washer assembly	(2)
101-307S	Air horn attaching screw and washer assembly	(8)
101-324	Fast idle cam attaching screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-348	Primary throttle valve attaching screw	(4)
101-354S	Choke lever clamp screw assembly	
101-363	Piston housing attaching screw	(2)
101-376	Throttle lever adjusting screw	
101-382S	Body flange attaching screw and washer assembly	(3)
101-414	Auxiliary throttle valve attaching screw	(4)
103-14	Lead shot (late prod)	(3)
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
114-127	Throttle shaft arm (outer)	
114-128	Throttle shaft arm (inner)	
115-208	Throttle operating rod	
115-215	Choke connector rod	
115-216	THROTTLE CONNECTOR ROD	
116-13	PUMP INTAKE CHECK BALL	
117-162	Vacumeter piston link	
117-165	Pump connector link	
118-102S	Dust cover assembly	
120-163	PRIMARY METERING ROD JET	(2)
120-176	SECONDARY METERING JET	(2)
121-78	COIL HOUSING GASKET	
121-208	DUST COVER GASKET	
121-232	AIR HORN GASKET	
121-241	PUMP JET HOUSING GASKET	
121-277	BODY FLANGE GASKET	
121-283	Piston housing gasket (2593S) (Sup by 121 298)	
121-298	PISTON HOUSING GASKET	
136-37	Throttle connector rod and operating rod washer	(5)
136-84	Spring washer	
136-159	Throttle shaft washer	
136-172	Secondary throttle shaft washer	
136-174	Throttle lever adjusting screw washer	
150-62	Choke piston pin	
150-186S	Pin and valve cap assembly	
150A-10	PIN SPRING	(5)
160-91	Choke piston	
160-110S	Vacuum piston and pin assembly	
170-442S	Piston housing and plug assembly (2593S)	
170-507S	Piston housing and plug assembly (2593SA)	
170AC-238S	Thermostatic coil and housing assembly	
181-192S	Fast idle cam and spring assembly	
186-34	Choke baffle plate	

NOTE **Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.**

CARBURETER
TRADE MARK REG U S PAT OFF
MARCA REGISTRADA

Form 3689
October, 1956

CARTER CARBURETOR

DIVISION OF ACF INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

CARTER MODEL WCFB CARBURETER FOR NASH (SERVICE ADJUSTMENT PROCEDURE)

NOTE: The parts and specification pages referred to are catalog pages. These pages can be obtained from Carter Carburetor, Catalog Department, St. Louis (7), Missouri. Specify the Carbureter number found on the brass identification tag, when requesting specification pages.

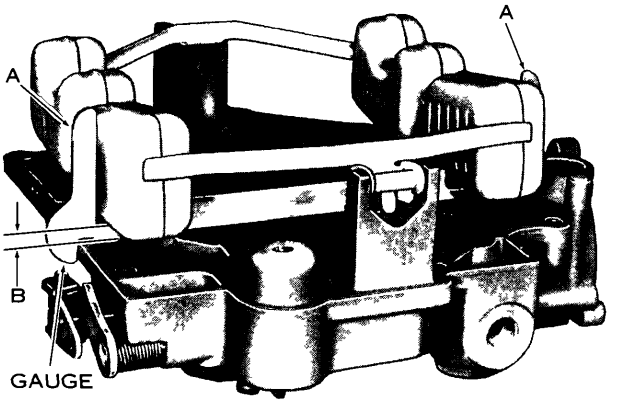


Figure 1

FLOAT ADJUSTMENT (Fig. 1):

1. Lateral – Place float guage directly under center of floats with notched portion of gauge fitted over edge of casting. Side of floats should just clear the vertical uprights (A) of float gauge. To adjust, bend arms of floats.
2. Vertical – With float gauge in same position, floats should just clear the horizontal portion of gauge. Vertical distance (B) between top of float and machined surface of casting must be as listed on carbureter specification page. To adjust, bend center portion of float arms.

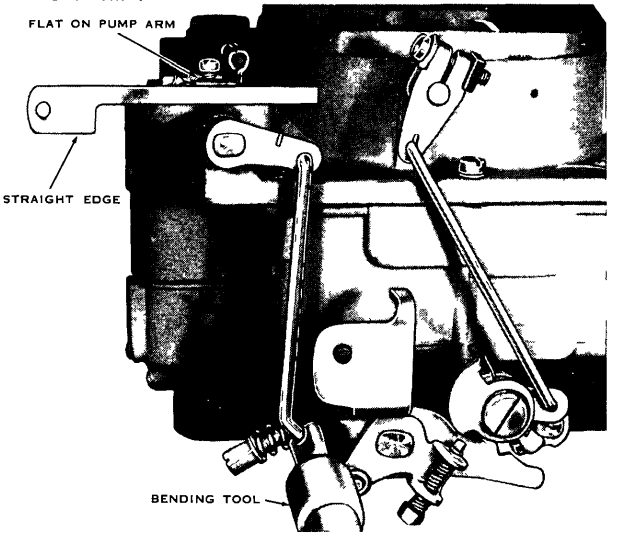


Figure 3

PUMP ADJUSTMENT (Fig. 3):

1. Install pump connector link in outer hole (long stroke) of pump arm with ends extending outward toward countershaft arm.
2. Back out throttle lever set screw until throttle valves seat in bores of carbureter.
3. Hold straight edg across top of dust cov r boss at pump arm. The flat on top of pump arm should b parall l to straight dg . To adjust, b nd throttle conn ctor rod at low r angle. (Us tool T109-213.)

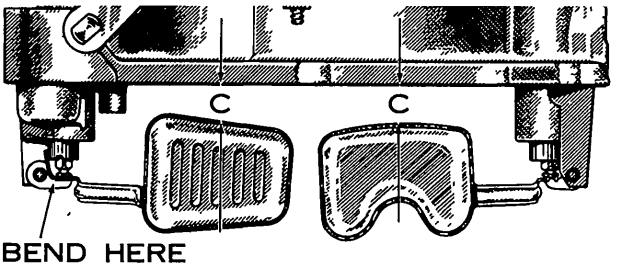


Figure 2

FLOAT DROP ADJUSTMENT (Fig. 2):

With bowl cover held in upright position and m asuring from center of floats, the distance (C) b tween top of floats and bowl cover should be as listed on carbur ter specification page. To adjust, bend stop tabs on float bracket.

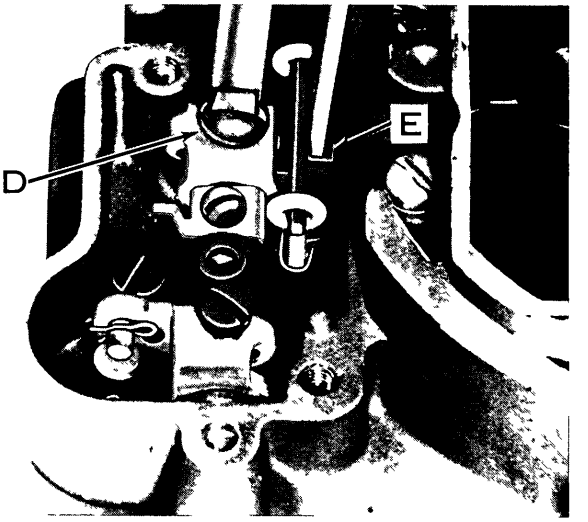


Figure 4

METERING ROD ADJUSTMENT (Fig. 4):

1. Back out throttle lever set screw to allow throttl valves to seat in bores of carbur t r and loos n metering rod arm clamp screw (D).
2. Press down on vacumeter link until m tering rods bottom in carbureter body casting.
3. Holding rods in downward position and throttl valv s s at d, r volv m t ring rod arm until finger on arm contacts lip (E) of vacumeter link. Hold in plac and car fully tighten clamp screw (D).

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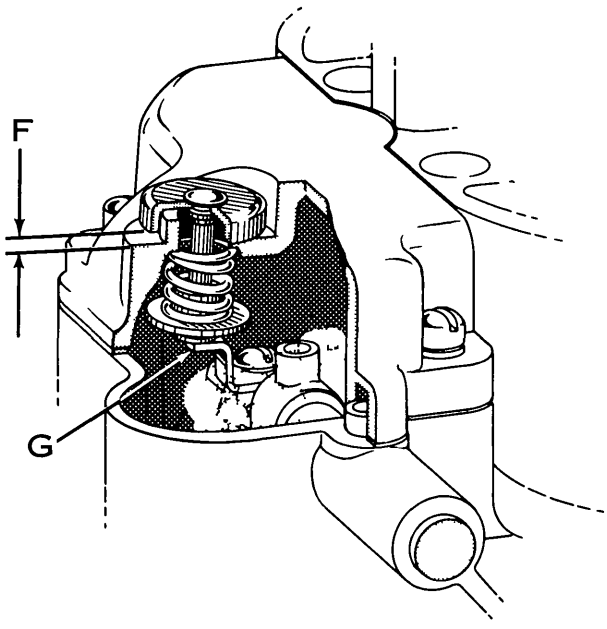


Figure 5

BOWL VAPOR VENT ADJUSTMENT (Fig. 5):

1. Install dust cover and dust cover gasket.

2. With throttle valves seated, there should be the clearance (F) as listed on carbureter specification page between lower edge of bowl vapor vent valve and dust cover. To adjust, remove dust cover and bend vapor vent arm (G).

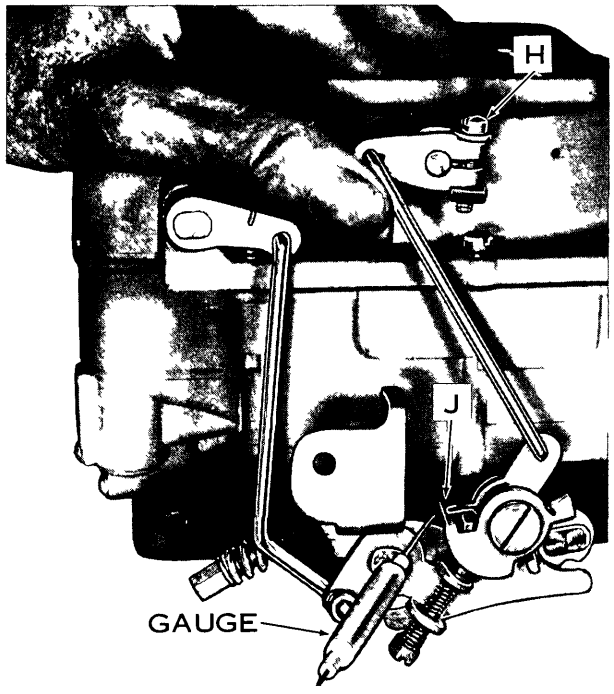


Figure 6A

FAST IDLE CAM CLEARANCE ADJUSTMENT (Fig. 6A):

1. Loosen choke lever clamp screw (H) on choke shaft and insert gauge as listed on specification page between lip of fast idle cam and boss of flange casting (J).

2. Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position - hold in place and tighten clamp screw (H).

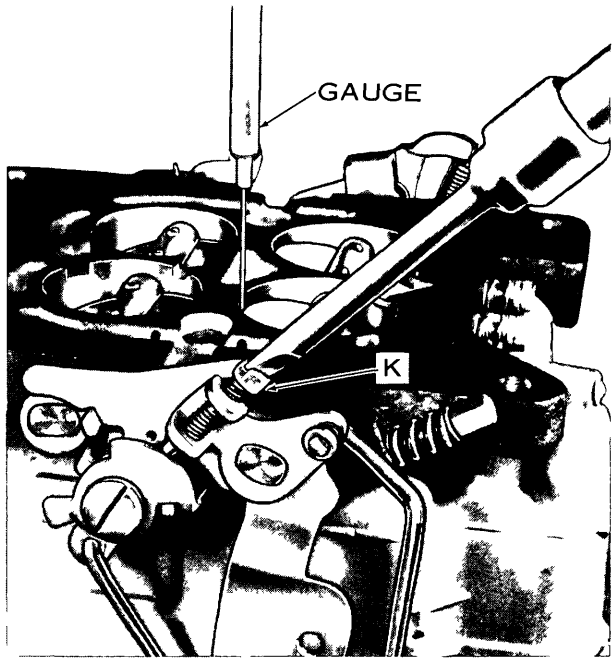


Figure 6B

FAST IDLE THROTTLE VALVE CLEARANCE ADJUSTMENT (Fig. 6B):

With choke valve tightly closed, tighten fast idle adjusting screw (K) (on high step of cam) until there is the clearance as listed on carbureter specification page between throttle valve and bore of carbureter, side opposite idle port.

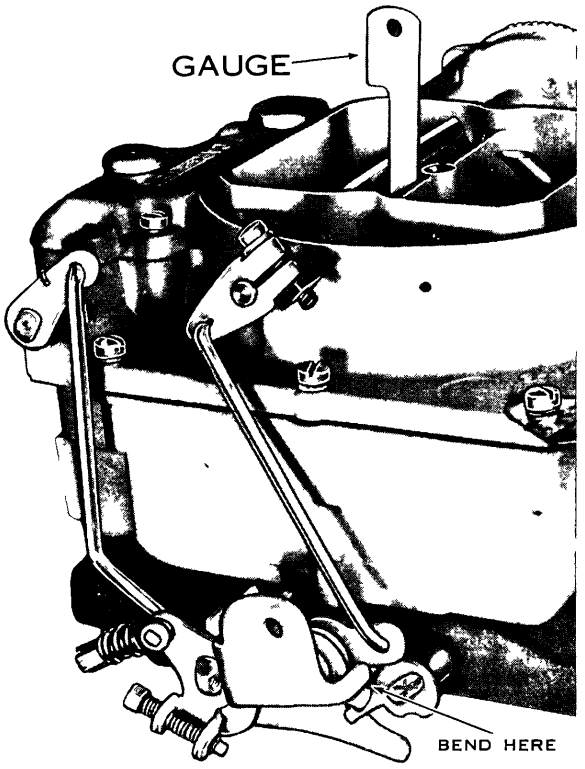


Figure 7

UNLOADER ADJUSTMENT (Fig. 7):

With throttle wide open there should be the clearance as listed on carbureter specification page between upper edge of choke valve and inner wall of air horn. To adjust, bend unloader lip on throttle shaft lever. (Use tool T109-41)

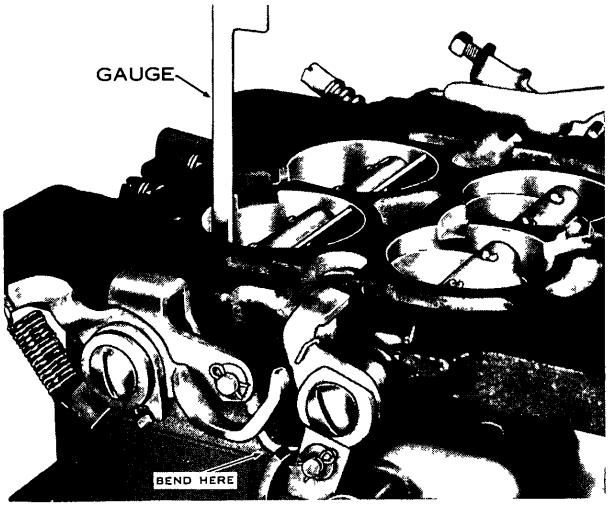


Figure 8A

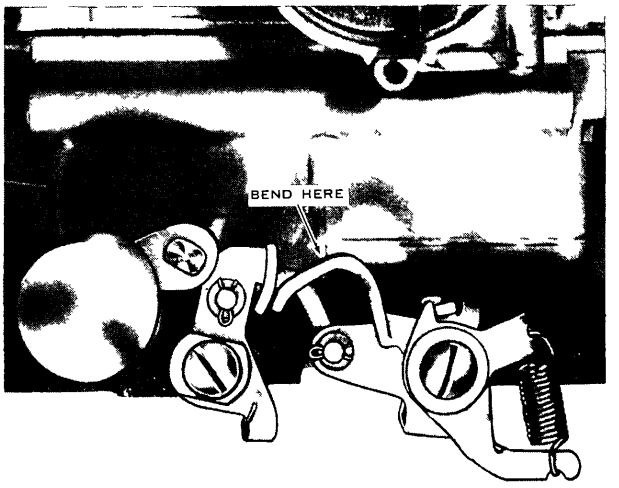


Figure 8B

SECONDARY THROTTLE LEVER ADJUSTMENT (Figs. 8A & 8B):

1. Block choke valve wide open.
2. Back out throttle lever stop screw so that primary valves seat in bores of carbureter.
3. Secondary throttle valves should just start to open when primary throttle valves are opened to the clearance as listed on specification page between upper edge of valve and bore (next to idle port). To adjust, bend throttle operating rod. (Use bending tool T109-213.) (See Fig. 8A.) NOTE: Secondary throttle valves will be a few degrees from wide open position, when primary valves are wide open.
4. With primary and secondary throttle valves in tightly closed position, there should be the clearance as listed on specification page between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on primary lever. (See Fig. 8B.)

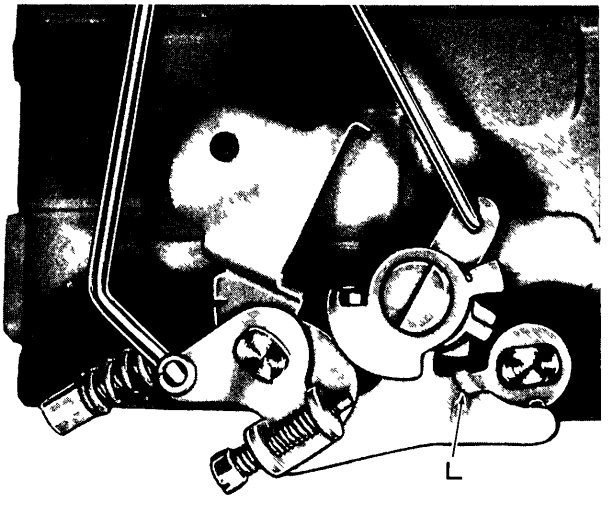


Figure 9

SECONDARY THROTTLE LOCK-OUT ADJUST ADJUSTMENT (Fig. 9):

Crack throttle valves and manually open and close the choke valve. Tang (L) on secondary throttle lever should freely engage in notch of lock-out dog. If necessary to adjust, bend tang (L) on secondary throttle lever.

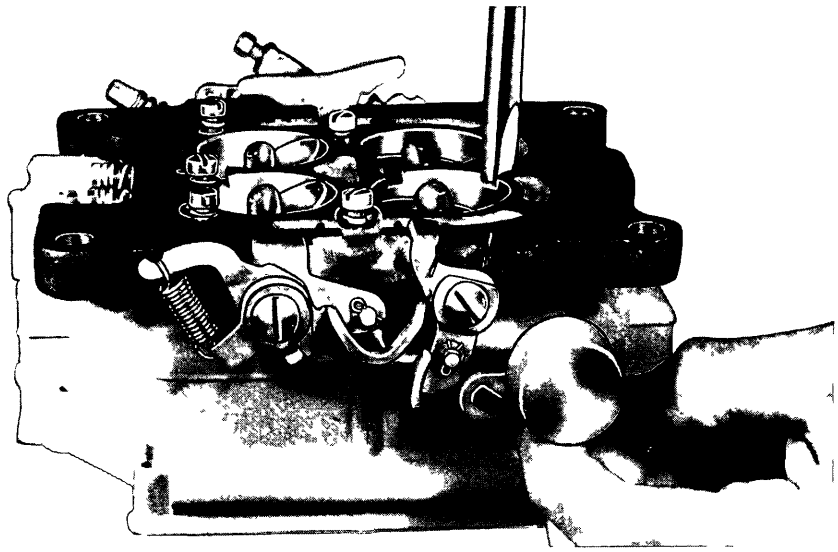


Figure 10

When assembling carbureter make sure auxiliary throttle valves are in closed position before tightenting flange attaching scr ws. (See Fig. 10)

Inspect gasketed surfaces between body and air horn, and between body and flange. Small nicks or burrs should be smoothed down to eliminate air or fuel leakage. Be especially particular when inspecting the top surface of the inner wall of the bowl around the choke suction passage. A poor seal at this location may contribute to a "cutting-out" on turns complaint.

Fill th carbureter bowl with clean fuel before installing on the manifold. This will help prevent dirt trapped in the fuel system from being dislodged by the free flow of fuel as the carbureter is primed. The operation of the floats and intake needle and seats may be checked under pressure if a fuel pump is used at the bench to fill the carburet r bowl. Operate the throttle several times and visually check the discharge from the pump jets.

Before installing the carbureter, hold choke valve open and turn the idle speed screw until it just contacts the throttle lever, then 1/2 of a turn more to open the throttle valves enough to keep the engine running until the idle mixture and final R.P.M. adjustment can be made.

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NASH

STATESMAN SIX – 1956

RAMBLER SIX – 1957

(2586S can also be used)

WCD DUAL DOWN-DRAFT CLIMATIC® CONTROL **CARBURETER N . 2350S**

CARBURETER SPECIFICATIONS

For Nash 6 Cylinder Engine: 3 1/8 Inch Bore, 4 1/4 Inch Stroke

Dimensions: Flange size, 1 1/4 inch dual, 4 bolt type.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 21/32 inch I. D.
Main venturi, 1-1/16 inch I. D.

Vents: Inside, (in air horn) (1).
Outside, (in dust cover) (1).

Gasoline Intake: Square vertical needle. Size No. 38 (.1015 inch) drill in needle seat.

Low Speed Jet Tube: Jet size, No. 71 (.026 inch) drill.
By-pass, size .051 inch diameter.
Economizer, size No. 56 (.0465 inch) drill.
Idle bleed, size .051 inch diameter.

Idle Ports: Upper port, length, .105 inch. Width, .030 inch.

Idle Port Opening: .074 to .080 inch above upper edge of valve with valve closed tight.

Lower Port (For Idle Adjustment Screw): Size .0615 to .0655 inch diameter.

Set Idle Adjustment Screw: 1/2 to 1 1/2 turns open. For richer mixture turn screw out. Do not idle engine below 475 r.p.m. (Hydra. Trans.) in neutral, 550 r.p.m. (Std. and Overdrive Trans.).

Main Nozzle: In primary venturi, closed tip. Nozzle is installed permanently. Do not remove.

Metering Rod: Economy step .0725 inch diameter, middle step tapers to .064 inch diameter. Power step .0618 inch diameter. These rods are designed with idle stabilizing flat on economy step.

Metering Rod Jet: .089 inch diameter.

Accelerating Pump: Discharge jet (twin) size, No. 67 (.032 inch) drill.
Intake ball check seat size .115 to .120 inch diameter.
Discharge (needle seat) size, No. 50 (.070 inch) drill.

Choke: Carter Climatic® Control, set on index. Offset butterfly type. Choke heat suction hole, in bowl cover. Size No. 36 (.1065 inch) drill.

Vacuum Spark Port: Round type, .040 inch diameter. Top of port .033 to .043 inch above valve, with valve tightly closed.

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .030"	Breaker Point Setting .020"	Ignition Timing Breaker Points to Open: T. D. C. At Vibration Damper	Valve Setting (Hot) Intake .012" Exhaust .016"	Float Setting 5/32 Inch (Use Gauge T109-196)	Idle Adjustment Screw Setting 1/2 to 1 1/2 Hydramatic Trans. (In Neutral) 475 R.P.M. Std. & O'Drive 550 R.P.M.

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: Two separate float adjustments must be made—lateral and vertical.

LATERAL ADJUSTMENT: With bowl cover assembly inverted, bowl cover gasket removed, place float gauge directly under floats with notched portions of gauge fitted over edges of casting. Sides of floats should barely touch the vertical uprights of float gauge. Adjustment should be made by bending arms of floats.

VERTICAL ADJUSTMENT: With float gauge in same position, floats should just clear the horizontal portion of gauge. (Vertical distance between top of float and machined surface of casting must be 5/32 inch.) (Gauge T109-196.) Adjust by bending float arms. Remove floats, install bowl cover gasket and then reinstall floats.

PUMP ADJUSTMENT: Install pump connector link in outer hole (long stroke) of pump arm, with ends extending away from countershaft arm. Back out throttle lever set screw until throttle valves seat in bores of carbureter Be sure fast idle adjusting screw does not hold throttle open. Hold straight edge across top of dust cover boss at pump arm. The flat on top of pump arm should be parallel to straight edge. Adjust by bending throttle connector rod at upper angle. Use tool T109-213.

METERING ROD ADJUSTMENT: Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows: 1. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw. 2. With metering rods in place, press down on vacumeter link until metering rods bottom in carbureter body casting. 3. Holding rods in

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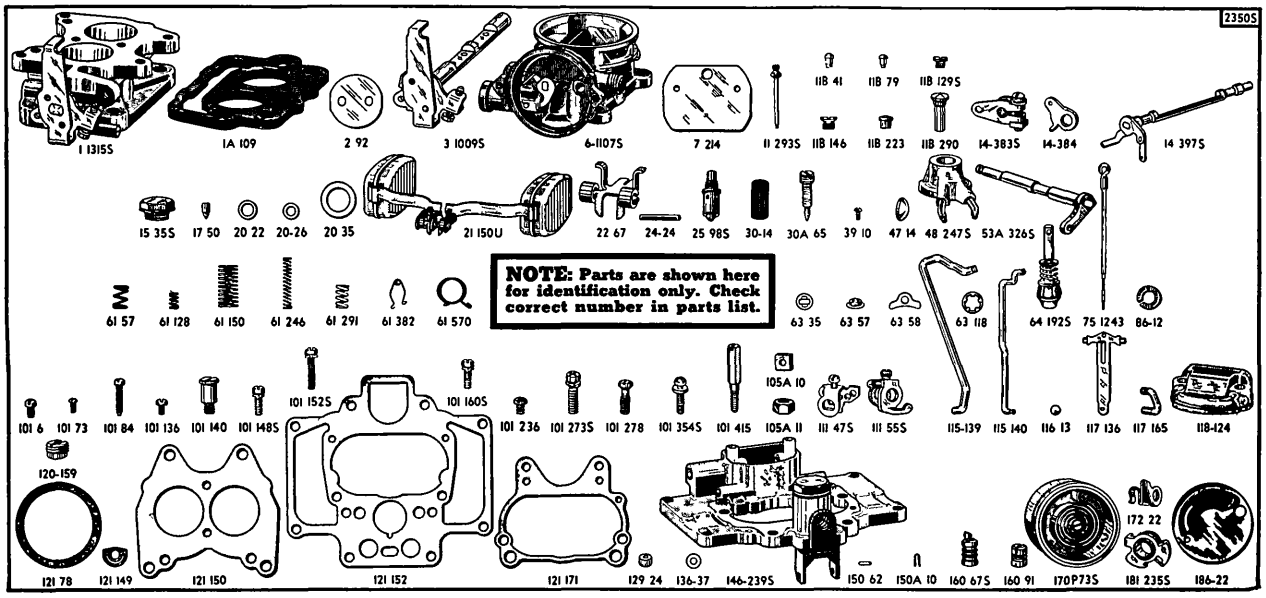
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downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link Hold in place and carefully tighten clamp screw

FAST IDLE ADJUSTMENT Loosen choke lever clamp screw on choke shaft Insert 010 inch feeler gauge T109-200 between lip of fast idle cam and boss of flange casting Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw

With choke valve tightly closed, tighten fast idle adjusting screw until there is 020 inch (gauge T109-29) opening between throttle valve and bore of carbureter (side opposite idle port) Be sure fast idle adjusting screw is on high step of cam while making this adjustment

UNLOADER ADJUSTMENT With throttle wide open there should be 3/16 inch (gauge T109-28) clearance between upper edge of choke valve and inner wall of air horn Adjust by bending unloader lip on throttle shaft lever (Use bending tool T109-41)



Nash 6—1956-1957—Carbureter No. 2350S

WHEN SERVICING, USE GASKET ASSORTMENT No. 285; REPAIR PACKAGE No 1836

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1315S	Body flange assembly (Sup by 1-1495S)	
1-1495S	Body flange assembly	
1A-109	FLANGE GASKET	
2-92	Throttle valve	(2)
3-1009S	Throttle shaft and lever assembly	
6-1107S	Air horn and plug assembly	
7 214	Choke valve	
11-293S	LOW SPEED JET ASSEMBLY	(2)
11B-41	Rivet plug	(2)
11B-79	Rivet plug	(7)
11B-129S	PUMP DISCHARGE PASSAGE PLUG ASSEMBLY	
11B-146	Level sight plug	
11B-194	Pipe plug	
11B-223	Nozzle passage rivet plug	(2)
11B-290	IDLE PORT RIVET PLUG	(2)
14-383S	Choke lever and screw assembly	
14-384	Cam trip lever	
14-397S	Choke piston lever, link and shaft assembly	
15-35S	Strainer nut assembly	
17 50	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	
20-26	Gasket	
20-35	BOWL STRAINER GASKET	
21-150U	Unitized package	
22-67	Auxiliary float lever	
24-24	Float lever pin	
24-29	Float lever pin (Sup by 24-24)	
25-98S	NEEDLE AND SEAT ASSEMBLY	
30-14	BOWL COVER STRAINER	
30A 65	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
47-14	Welsh plug	
48 247S	Pump jet and housing assembly	
53A 326S	Pump operating lever and countershaft assembly	
61 57	Idle adjustment screw spring	(2)
61-128	Connector rod spring	
61-150	LOWER PUMP SPRING	
61-246	Vacuum piston spring	
61-291	Throttle lever adjusting screw spring	
61-382	METERING ROD SPRING	
61-570	Fast idle cam spring	
63-35	Connector rod retainer	
63-57	Intake check ball retainer	
63-58	Coil housing retainer	(2)
63-118	Throttle shaft retaining ring	
64-192S	PUMP PLUNGER ROD, SPRING AND RETAINER ASSEMBLY	
75 1243	METERING ROD—STANDARD	(2)
75-1290	Metering rod—1 size lean	(2)
75-1291	Metering rod—2 sizes lean	(2)
75-1292	Metering rod—3 sizes lean	(2)
86 12	Flange stud lock washer	
101-6	Pump arm clamp screw	
101-73	Throttle valve attaching screw	(4)
101 84	Fast idle adjustment screw	
101-136	Coil housing attaching screw	(2)
101-140	Fast idle cam attaching screw	
101-148S	Dust cover attaching screw and washer assembly	(2)
101-152S	Air horn attaching screw and washer assembly	(4)
101-160S	Bowl cover attaching screw and washer assembly	(6)
101-236	Metering rod arm clamp screw	
101-273S	Body flange attaching screw and washer assembly	(4)
101-278	Pump jet housing attaching screw	
101-354S	Choke lever clamp screw and washer assembly	
101-415	Throttle lever adjusting screw	
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	
111-47S	Pump arm and screw assembly	
111-55S	Metering rod arm and screw assembly	
115-139	THROTTLE CONNECTOR ROD	
115-140	Choke connector rod	
116-13	Ball	
117-28	Pump connector link (Sup by 117-165)	
117-136	Vacumeter piston link	
117-165	Pump connector link	
118-124	Dust cover	
120-159	METERING ROD JET	(2)
121-78	COIL HOUSING GASKET	
121-149	Pump jet housing gasket (Sup by 121-241)	
121-150	BODY FLANGE GASKET	
121-152	BOWL COVER GASKET	
121-171	AIR HORN GASKET	
121-241	PUMP JET HOUSING GASKET	
129 24	Metering rod disk	(2)
136 37	Connector rod washer	
146-239S	Bowl cover and strainer assembly	
150 62	Piston pin	
150A-10	PIN SPRING	(2)
160 67S	Vacuum piston and pin assembly	
160-91	Choke piston	
170P73S	Thermostatic coil and housing assembly	
172-22	THROTTLE CONNECTOR ROD RETAINER	
181-235S	Fast idle cam assembly	
186-22	Baffle plate	

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used

NASH

AMBASSADOR DUAL JET-FIRE

(Twin Installation)

1956

YH Horizontal Climatic® Control **Carbureter No. 2369S**

CARBURETER SPECIFICATIONS

For Nash 6 Cylinder Engine 3½ Inch Bore, 4⅜ Inch Stroke

Dimensions Flange size 1¼ inch 3 bolt
Primary venturi 11/32 inch I D
Secondary venturi 11/16 inch I D
Main venturi 1 5/16 inch I D

Vents Outside none Inside balance vent tube to air horn ahead of choke valve

Gasoline Intake Spring loaded needle Size No 51 (067 inch) drill hole in needle seat

Low Speed Jet Tube Jet size No 65 (035 inch) drill
By pass in body size No 55 (052 inch) drill
Economizer size No 58 (042 inch) drill

Idle Ports Upper port slot type length 162 inch Width 030 inch

Idle Port Opening Top of port 124 to 128 nch above top edge of valve with valve tightly closed Lower port size 0615 to 0655 inch diameter (for idle adjusting screw)

Set Idle Adjustment Screw ¼ to 1¾ turns open For richer mixture turn screw out Do not idle engine below 550 r p m (std and Overdrive Trans) 475 r p m (Hydramatic—in neutral) For cars with air conditioning set idle at 500 r p m with compressor in operation

Main Nozzle In primary venturi DO NOT REMOVE Anti percolating jet (in tube) to nozzle size No 70 (028 inch) drill

Metering Rod (Diaphragm Type) Economy step 071 inch diameter middle step tapers to 063 inch diameter, power step 063 inch diameter

Metering Rod Jet 089 inch diameter

Accelerating Pump Diaphragm type vacuum and mechanically operated Discharge (pump) jet size No 76 (020 inch) drill Intake ball check (in diaphragm housing) seat size 115 120 inch diameter Discharge needle check (in body) seat size 092 inch diameter Vacuum passage restriction (plug in body) size No 46 (081 inch) drill Vacuum bleed (to throttle bore) size No 65 (035 inch) drill

Choke Carter Climatic® Control set two points lean Butterfly type offset choke valve Choke heat suction hole in piston housing size No 42 (0935 inch) drill

Vaccum Spark Port Slot type Size 125 by 041 inch Bottom of horizontal port 026 to 036 inch above top edge of valve in closed position

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open	Valve Setting (Hot)	Float Setting	Idle Adjustment Screw Setting
030"	020"	4° A T D C	Intake 012" Exhaust 016"	7/16 Inch (Use Gauge T109-81)	¼ to 1¾ Std and O Drive 550 R P M Hydramatic (In Neutral) 475 R P M

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT With gasket removed bowl cover assembly inverted and float resting on pin in seated needle the distance from the bowl cover to the top of float should be 7/16 inch (gauge T109-81) Do not depress float lip against spring loaded pin in needle but let float rest of its own weight Adjust by bending float lever Float setting must be checked with bowl cover held at eye height in a level position

FLOAT DROP With bowl cover assembly held in upright position the distance between bottom of float (at free end) and bowl cover should be 2⅜ Adjust by bending stop tab on float arm

METERING ROD ADJUSTMENT This adjustment is important and should be checked each time the carbureter is reassembled Insert gauge (Tool T109 104) in place of metering rod seating tapered end of gauge in metering rod jet

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Hold gauge vertical to insure seating in jet With throttle valve tightly closed, press down on diaphragm shaft until metering rod arm contacts lifter link at diaphragm stem With diaphragm shaft held in this position metering rod pin must rest lightly on metering rod gauge To adjust, bend metering rod arm Use bending tool T109-22

ACCELERATING PUMP If acceleration is not satisfactory, remove pump housing, intake rivet plug and ball check Examine diaphragm for wear or damage Be sure intake check ball and discharge check needle seats are not clogged with lint or foreign matter Intake ball check and discharge needle must seat, as a leak at these points will result in poor acceleration Inspect and replace all worn parts, clean and blow out all passages with compressed air Pump jet is permanently installed, do not remove

FAST IDLE ADJUSTMENT With thermostatic coil housing gasket and baffle plate removed, partial open throttle close choke valve and then close throttle valve This will allow the fast idle cam to revolve to fast idle position With choke valve held tightly closed and slight tension on throttle lever there should be 018 (Gauge T109-44) clearance between throttle valve and bore of carbureter (side opposite idle port) Adjust by bending connector link at lower angle

UNLOADER ADJUSTMENT This adjustment must be made after fast idle adjustment Hold throttle valve in wide open position and close choke valve as far as possible without forcing There should be 5/8 inch clearance between lower edge of choke valve (vent tube side) and inner wall of air horn (Gauge T109-85) Adjust by bending choke shaft unloader arm (Use bending tool T109-105)

Nash 6—1956—Carbureter No. 2369S

WHEN SERVICING, USE GASKET ASSORTMENT No. 284A

Part No.	PART NAME	
1-1027S	Body flange assembly	
2-134	Throttle valve	
3-749S	Throttle shaft and lever assembly	
7-107	Choke valve	
11B-69	Rivet plug	
11B-79	Rivet plug	(3)
11B-220	Rivet plug	
11B-223	Nozzle passage rivet plug	
11B-271	Idle port rivet plug	
14-433S	Choke piston lever link and shaft assembly	
15-35S	Strainer nut assembly	
20-22	Needle seat gasket	
20-35	Bowl strainer gasket	
20-43	Piston housing gasket	
21-128S	Float and lever assembly	
24-27	Float lever pin	
25-276S	Needle pin spring and seat assembly	
30-14	Bowl strainer gauze	
30A-44	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	Throttle valve attaching screw	(2)
47-14	Welsh plug	
61-242	Metering rod spring	
61-291	Thottle lever adjusting screw spring	
61-389	Pump diaphragm spring	
61-426	Idle adjustment screw spring	
61-503	Fast idle cam spring	
61-504	Upper pump spring	
61-512	Fast idle link spring	
63-58	Coil housing retainer	(3)
63-104	Throttle shaft retaining ring	
63-135	Upper pump spring retainer	
63-178	Diaphragm spring retainer	

Part No.	PART NAME	
75-1250	—Metering rod—Standard	
100-16	Throttle lever adjusting screw	
101-136	Coil housing attaching screw	(3)
101-149S	Body flange attaching screw and washer assembly	(3)
101-160S	Bowl cover attaching screw and washer assembly	(6)
101-282S	Diaphragm housing attaching screw and washer assembly	(4)
101-284	Piston housing attaching screw	(3)
101-399	Throttle shaft arm attaching screw	
111-59S	Metering rod arm assembly	
114-121S	Throttle shaft arm assembly	
115-165	Choke connector rod	
116-13	Pump intake check ball	
117-146	Pump lifter link	
117-154	Throttle shaft arm connector link	
117-167	Fast idle link	
120-159	Metering rod jet	
121-185	Coil housing gasket	
121-209	Body flange gasket	
121-278	—Body gasket	
146-242S	—Bowl cover assembly	
150-170	Choke piston pin	
150A-10	Pin spring	
160-123	Choke piston	
170-253S	Piston housing and plug assembly	
170-274S	Pump diaphragm housing assembly	
170P-250S	Thermostatic coil and housing assembly	
172-24	Choke connector rod retainer	
181-202S	Fast idle cam and spring assembly	
186-24	Choke baffle plate	
186-54	—Fuel bowl baffle plate	
203-53S	Pump diaphragm assembly	

—Parts so marked are new and listed for the first time

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

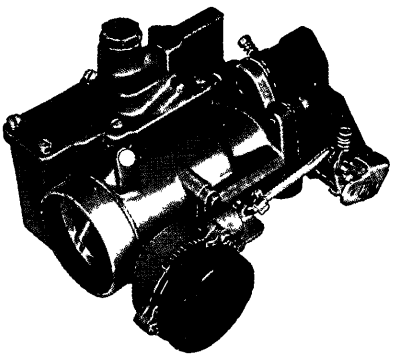
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Form 5189B

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST LOUIS, MO, U S A

NASH 2368S
November, 1955
Revised February, 1957

MODEL
"5660"



NASH
AMBASSADOR SIX
1956

YH Horizontal Climatic® Control **Carbureter No. 2368S**

CARBURETER SPECIFICATIONS

For Nash 6 Cylinder Engine 3½ Inch Bore, 4⅜ Inch Stroke

Dimensions Flange size 1¼ inch 3 bolt
Primary venturi, 11/32 inch I D
Secondary venturi 11/16 inch I D
Main venturi, 1-5/16 inch I D

Vents: Outside none Inside balance vent tube to air horn ahead of choke valve

Gasoline Intake: Spring loaded needle Size No 48 (.076 inch) drill hole in needle seat

Low Speed Jet Tube: Jet size No 69 (.0292 inch) drill
By pass in body size No 56 (.0465 inch) drill
Economizer, size No 56 (.0465 inch) drill

Idle Port: Upper port slot type, length .162 inch Width .030 inch

Idle Port Opening Top of port .124 to .128 inch, above top edge of valve with valve tightly closed Lower port size .0615 to .0655 inch diameter (for idle adjusting screw)

Set Idle Adjustment Screw: ¼ to 1¾ turns open For richer mixture turn screw out Do not idle engine below 550 r p m (std and Overdrive Trans.) 450 r p m (Hydramatic—in neutral) For cars with air conditioning set idle at 500 r p m with compressor in operation

Main Nozzle: In primary venturi, DO NOT REMOVE Anti-percolating jet (in tube) to nozzle size No 70 (.028 inch) drill

Metering Rod (Diaphragm Type): Economy step .071 inch diameter middle step tapers to .066 inch diameter power step .055 inch diameter

Metering Rod Jet. .089 inch diameter

Accelerating Pump: Diaphragm type vacuum and mechanically operated Discharge (pump) jet size No 70 (.028 inch) drill Intake ball check (in diaphragm housing) seat size .115-.120 inch diameter Discharge needle check (in body) seat size .092 inch diameter Vacuum passage restriction (in body) size No 46 (.081 inch) drill Vacuum bleed (to throttle bore) size No 65 (.035 inch) drill

Choke: Carter Climatic® Control, set one point rich Butterfly type offset choke valve Choke heat suction hole in piston housing size No 42 (.0935 inch) drill

Vacuum Spark Port. Slot type Size .125 by .041 inch Bottom of horizontal port .026 to .036 inch above top edge of valve in closed position

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .030"	Breaker Point Setting .020"	Ignition Timing Breaker Points to Open: 4° A. T. D. C. At Vibration Damper	Valve Setting (Hot) Intake .012" Exhaust .016"	Float Setting (See Adjustments)	Idle Adjustment Screw Setting ¼ to 1¾ Hydra.—in neutral 450 R.P.M. Std. and O'Drive 550 R.P.M.

CARBURETER ADJUSTMENTS

Float Adjustment: With gasket removed, bowl cover assembly inverted and float resting on pin in seated needle, the distance from the bowl cover to the top of float should be 5/16 inch (gauge T109-107) Do not depress float lip against spring loaded pin in needle, but let float rest on its own weight Adjust by bending float lever Float setting must be checked with bowl cover held at eye height in a level position

Float Drop: With bowl cover assembly held in upright position, the distance between bottom of float (at free end) and bowl cover should be 2⅜" Adjust by bending stop tab on float arm

Metering Rod Adjustment: This adjustment is important and should be checked each time the carbureter is reassembled Insert gauge (T109-104) in place of metering rod, seating tapered end of gauge in metering rod jet Hold gauge vertical to insure seating in jet With throttle valve tightly closed, press down on diaphragm shaft until metering rod arm contacts lifter link at diaphragm stem With diaphragm shaft held in this position, metering rod pin must rest lightly on metering rod gauge To adjust, bend metering rod arm Use bending tool T109-22

Accelerating Pump. If acceleration is not satisfactory, remove pump housing, intake rivet plug and ball check Examine diaphragm for wear or damage Be sure intake check ball and discharge check needle seats are not clogged with lint or foreign matter Intake ball check and discharge needle must seat, as a leak at these points will result in poor acceleration Inspect and replace all worn parts, clean and blow out all passages with compressed air Pump jet is permanently installed, do not remove

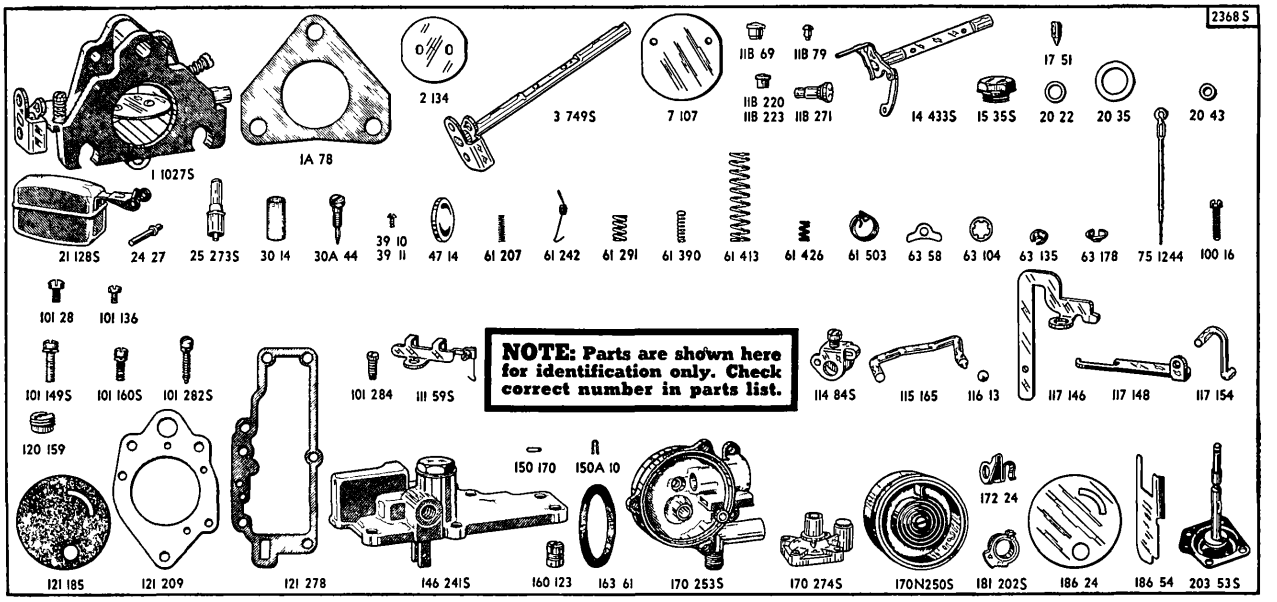
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CARBURETER
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MARCA REGISTRADA

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Fast Idle Adjustment With thermostatic coil housing gasket and baffle plate removed, partial open throttle close choke valve and then close throttle valve This will allow the fast idle cam to revolve to fast idle position With choke valve held tightly closed and slight tension on throttle lever there should be .030" (Gauge T109-29) clearance between throttle valve and bore of carbureter (side opposite idle port) Adjust by bending connector link at lower angle

Unloader Adjustment This adjustment must be made after fast idle adjustment Hold throttle valve in wide open position and close choke valve as far as possible without forcing There should be ½ inch clearance between lower edge of choke valve (vent tube side) and inner wall of air horn (Gauge T109-83) Adjust by bending choke shaft unloader arm (Use bending tool T109 105)



Nash 6—1956—Carbureter No. 2368S

WHEN SERVICING, USE GASKET ASSORTMENT No 284A, REPAIR PACKAGE No 1830A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

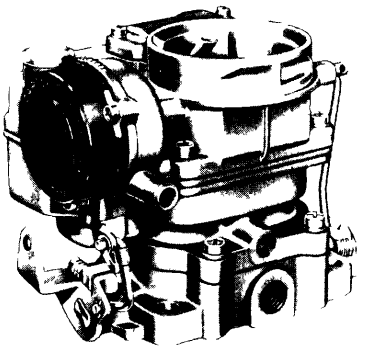
Part No	PART NAME	
1-1027S	Body flange assembly	
1A-78	FLANGE GASKET	
2-134	Throttle valve	
3-749S	Throttle shaft and lever assembly	
7-107	Choke valve	
11B-69	Rivet plug	
11B-79	Rivet plug	(3)
11B-220	RIVET PLUG	
11B-223	Rivet plug	
11B-271	IDLE PORT RIVET PLUG	
14-433S	Choke piston lever link and shaft assembly	
15-35S	Strainer nut assembly	
17-51	Pump check needle	
20-22	Needle seat gasket	
20-35	BOWL STRAINER GASKET	
20-43	PISTON HOUSING GASKET	
21-128S	Float and lever assembly	
24-27	Float lever pin	
25-273S	NEEDLE PIN SPRING AND SEAT ASSEMBLY	
30-14	BOWL STRAINER GAUZE	
30A-44	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	THROTTLE VALVE ATTACHING SCREW	(2)
47-14	WELSH PLUG	
61-207	Intake needle spring	
61-242	Metering rod spring	
61-291	Throttle lever adjusting screw spring	
61-389	PUMP DIAPHRAGM SPRING	
61-390	UPPER PUMP SPRING	
61-413	Pump diaphragm spring (Sup by 61 389)	
61-426	Idle adjustment screw spring	
61-503	Fast idle cam spring	
63-58	Coil housing retainer	(3)
63-104	THROTTLE SHAFT RETAINING RING	
63-135	Upper pump spring retainer	
63-178	Diaphragm spring retainer	
75-1244	METERING ROD—STANDARD	

Part No.	PART NAME	
75 1294	Metering rod—1 size lean	
75-1295	Metering rod—2 sizes lean	
75-1306U	Unitized package—for altitude use (Consists of 1—61 413 and 1—75 1294) (Sup by 75 1294)	
100-16	Throttle lever adjusting screw	
101-28	Throttle shaft arm attaching screw	
101-136	Coil housing attaching screw	(3)
101-149S	Body flange attaching screw and washer assembly	(3)
101-160S	Bowl cover attaching screw and washer assembly	(6)
101-282S	Diaphragm housing attaching screw and washer assembly	(4)
101-284	Piston housing attaching screw	(3)
111-59S	Metering rod arm assembly	
114-84S	THROTTLE SHAFT ARM ASSEMBLY	
115-165	Choke connector rod	
116-13	PUMP INTAKE CHECK BALL	
117-146	PUMP LIFTER LINK	
117-148	Fast idle link	
117-154	THROTTLE SHAFT ARM CONNECTOR LINK	
120-159	METERING ROD JET	
121-78	COIL HOUSING GASKET (late production)	
121-185	COIL HOUSING GASKET (Use with 186 24)	
121-209	BODY FLANGE GASKET	
121-278	BODY GASKET	
146-241S	Bowl cover and strainer assembly	
150-170	Choke piston pin	
150A-10	Pin spring	
160-123	Choke piston	
163-61	SEAL RING	
170-253S	*Piston housing and plug assembly	
170-274S	Pump diaphragm housing assembly	
170N-250S	Thermostatic coil and housing assembly	
172-24	CHOKE CONNECTOR ROD RETAINER	
181-202S	Fast idle cam assembly	
186-24	Coil housing baffle plate (early production)	
186-54	Fuel bowl baffle plate	
186-60S	Coil housing baffle plate assembly (late production)	
203-53S	PUMP DIAPHRAGM ASSEMBLY	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

*When used on late production carbureters with rotating baffle plate assembly 186 60S heat inlet boss should be filed off until flush with inner baffle plate

MODELS
"5580"
&
"5680"



NASH "V-8" AMBASSADOR 1955-1956

WGD Dual Down-Draft Climatic® Control **Carbureters Nos. 2231S-2231SA**

CARBURETER SPECIFICATIONS

For Nash 8 Cylinder Engine: 3-13/16 Inch Bore, 3½ Inch Stroke

Dimens ons: Flange size 1¼ inch dual, 4 bolt type
Primary venturi 11/32 inch I D
Secondary venturi 21/32 inch I D
Main venturi 1 3/16 inch I D

Float Level: See adjustments

Vent: Outside, none Inside balance vent tube above choke valve

Gasoline Intake: Size No 42 (0935 inch) drill in needle seat

Low Speed Jet Tube: Jet size No 69 (0292 inch) drill
By pass in bowl cover, size No 56 (0465 inch) drill
Economizer in bowl cover size No 55 (052 inch) drill
Idle bleed in bowl cover, size No 53 (0595 inch) drill

Idle Port: Upper, slot type length 160 inch width 030 inch

Idle Port Opening: 109 to 115 inch above top edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw): Size 065 to 069 inch diameter

Set Idle Adjustment Screw: ½ to 1½ turns open For richer mixture turn screw out Do not idle engine below 450 RPM in neutral

Nozzle: Nozzle is installed permanently DO NOT REMOVE Anti-percolating well jet size No 70 (028 inch) drill

Metering Rod (Vacumeter Type): Economy step, 0665 inch di ameter Power step 040 inch diameter These rods designed with idle stabilizing flats on economy step

Metering Rod Jet: Size 089 inch diameter

Metering Rod Setting: See adjustments

Accelerating Pump: Discharge jet (twin) size No 72 (025 inch) drill
Intake ball check in plunger shaft
Discharge (needle seat) size No 50 (070 inch) drill

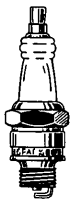
Pump Adjustment: See adjustments

Choke: Carter Climatic® Control—set one point rich butterfly type offset valve Choke heat suction hole in piston housing size No 42 (0935 inch) drill

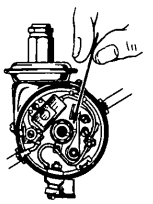
Vacuum Spark Port: Horizontal slot (round end) 040 x 130 inch Bottom of port to be (2231S) 038 to 044 inch, (2231SA) 018 to 024 inch above upper edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



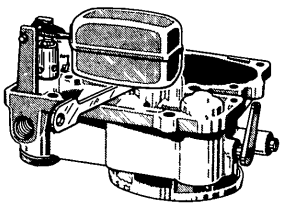
Spark Plug Gap .035"



Breaker Point Setting .016"



Ignition Timing Breaker Points to Open: 5° B.T.D.C.



Float Setting See Adjustments

Idle Adjustment Screw Setting ½ to 1½ Turns Open Idle engine at 450 R.P.M. in neutral.

NOTE: These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

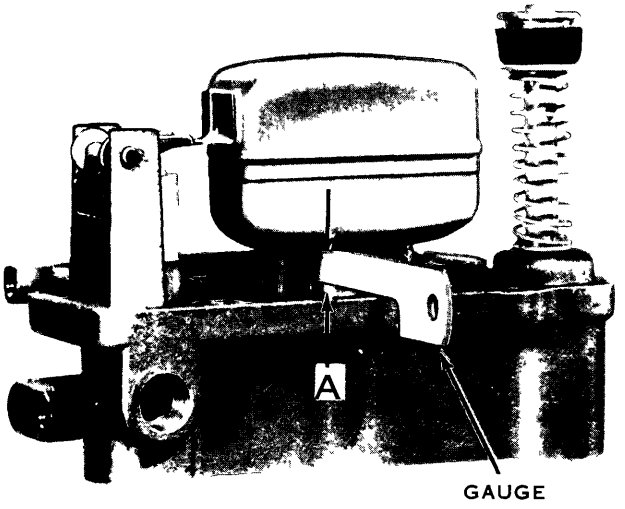


Figure 1
Float Adjustment

FLOAT ADJUSTMENT (Fig. 1):

With bowl cover gasket removed, bowl cover inverted and needle seated, there should be 1/4 inch (A) (gauge T109-31) between top of float and bowl cover. Adjust by bending float arm.

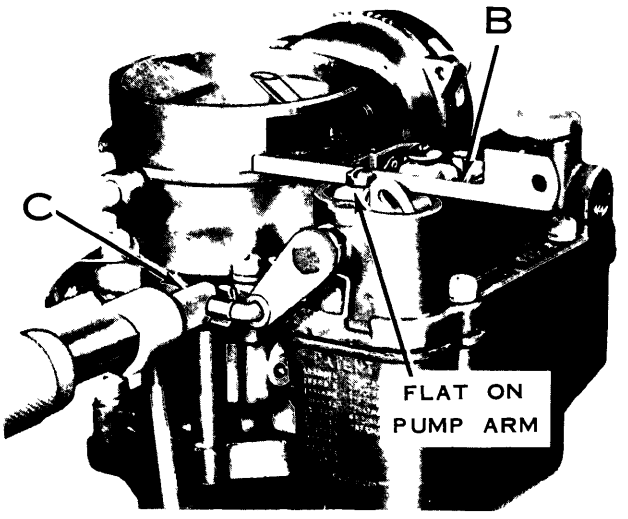


Figure 2
Pump Adjustment

PUMP ADJUSTMENT (Fig. 2):

Back out throttle lever set screw until throttle valves seat in bores of carbureter. Hold straight edge (B) across top of dust cover at pump arm. The flat on top of pump arm should be parallel to straight edge. Adjust by bending throttle connector rod at upper angle (C). Use bending tool T109-213.

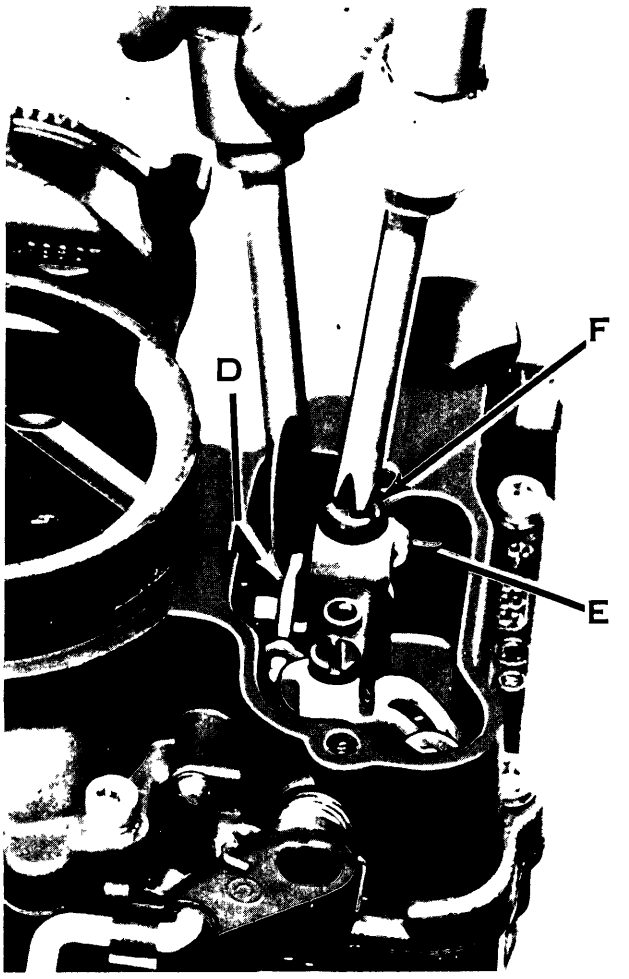


Figure 3
Metering Rod Adjustment

METERING ROD ADJUSTMENT (Fig. 3):

The metering rods must be adjusted after the pump adjustment No metering rod gauges are necessary; procedure is as follows: With the throttle lever set screw backed out and throttle valves seated in bores of carbureter, press down on vacumeter link (D) until metering rods bottom in casting. With rods held in this position, revolve metering rod arm (E) until lip contacts vacumeter link. Hold in place and carefully tighten metering rod arm set screw (F).

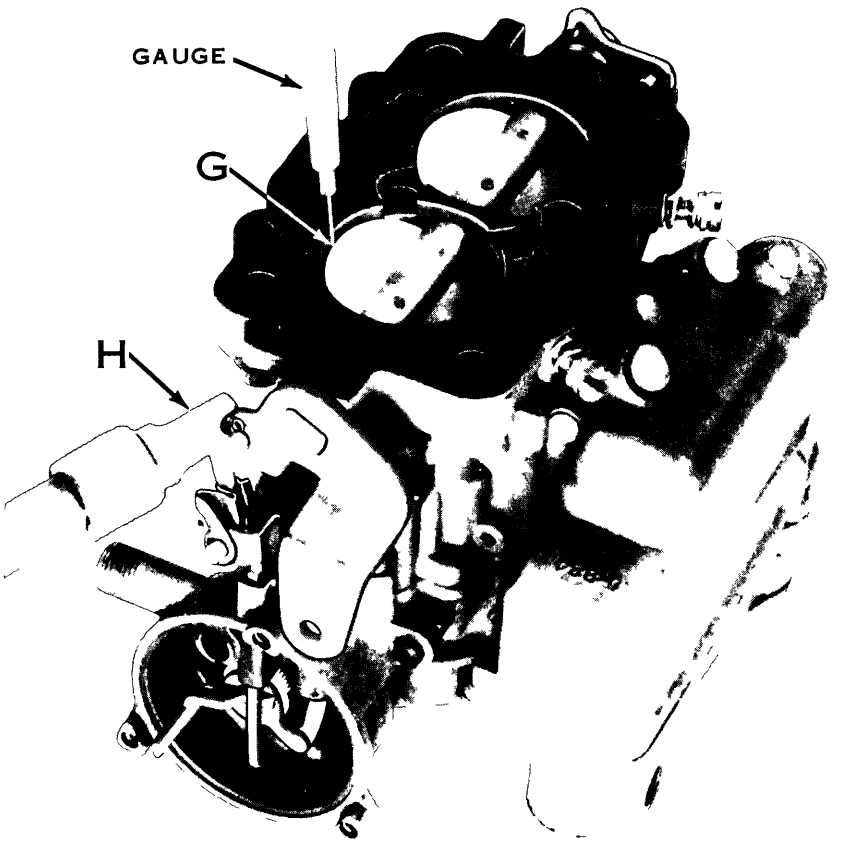


Figure 4
Fast Idle Adjustment

FAST IDLE ADJUSTMENT (Fig. 4):

With the thermostatic coil housing gasket and baffle plate removed crack throttle valve and hold choke valve closed Then close throttle There should now be 030 inch clearance (G) (gauge T109 29) between throttle valve and bore of carbureter (side opposite idle port) Adjust by bending the choke connector rod at lower angle (H)

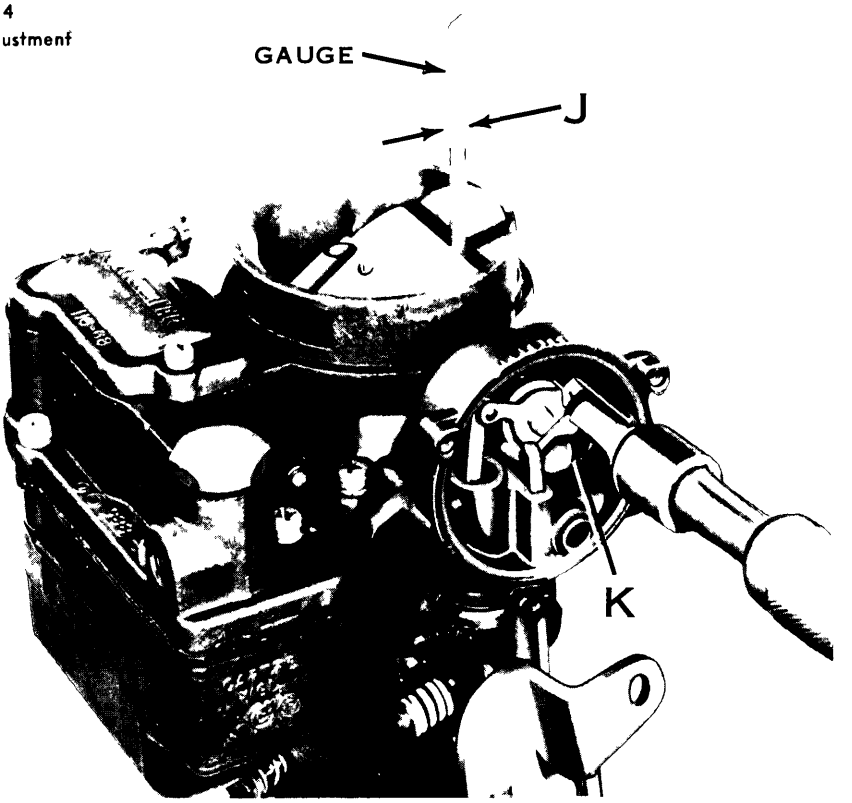
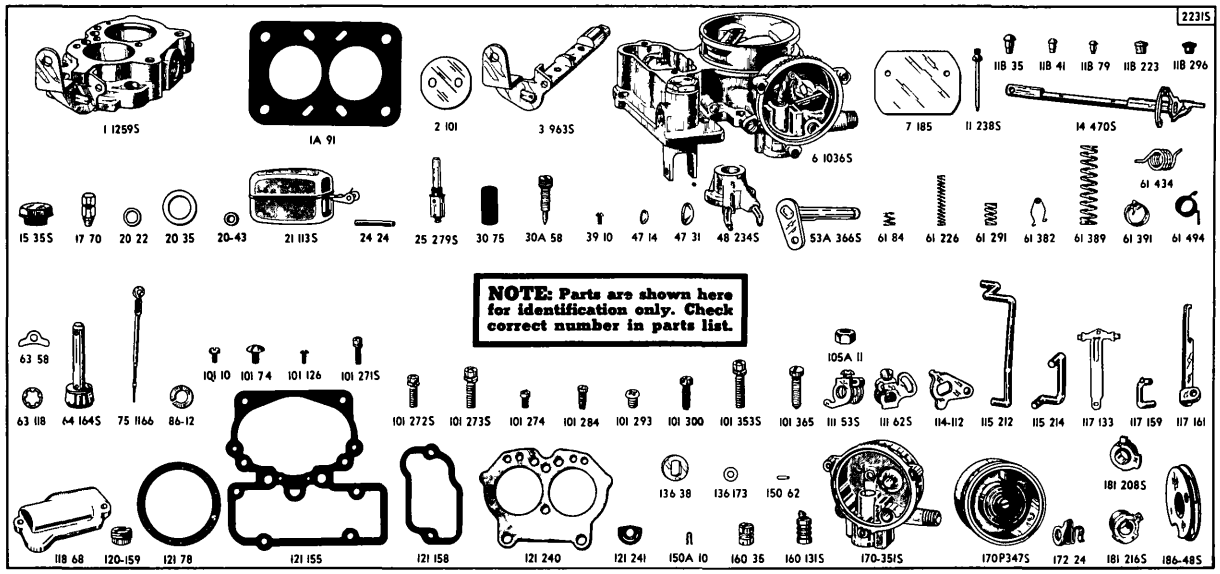


Figure 5
Unloader Adjustment

UNLOADER ADJUSTMENT (Fig. 5):

This adjustment must be made after fast idle adjustment Hold throttle valve in wide open position and close choke valve as far as possible without forcing There should be 3/16 inch (gauge T109-28) clearance (J) between upper edge of choke valve and inner wall of air horn Adjust by bending choke shaft unloader arm (K) (Use bending tool T109 213).



Nash 8—1955-1956—Carbureters Nos. 2231S-2231SA

WHEN SERVICING, USE GASKET ASSORTMENT No. 249, REPAIR PACKAGE No. 1802A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

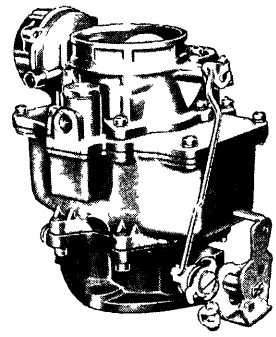
Part No.	PART NAME	
1-1259S	Body flange assembly (2231S) (Sup by 1 1394S)	
1-1394S	Body flange assembly	
1A-91	FLANGE GASKET	
2-101	Throttle valve	(2)
3-963S	Throttle shaft and lever assembly	
6-1036S	Air horn assembly	
7-185	Choke valve	
11-238S	LOW SPEED JET ASSEMBLY	(2)
11B-35	Rivet plug	(3)
11B-41	Rivet plug	(3)
11B-79	Rivet plug	
11B-223	Nozzle passage rivet plug	(2)
11B-296	IDLE PORT RIVET PLUG	(2)
14-470S	Choke piston lever link and shaft assembly	
15-35S	Strainer nut assembly	
17-70	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	
20-35	BOWL STRAINER GASKET	
20-43	Piston housing gasket	
21-113S	Float and lever assembly (2231S) (Sup by 21 172S)	
21-172S	Float and lever assembly	
24-24	Float lever pin	
25-279S	NEEDLE AND SEAT ASSEMBLY (Sup by 25 322S)	
25 322S	Needle and seat assembly	
30-75	BOWL COVER STRAINER	
30A-58	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
47-14	Piston housing welsh plug	
47-31	Spark port welsh plug	
48-234S	Pump jet and housing assembly	
53A-366S	Pump operating lever and countershaft assembly	
61-84	Idle adjustment screw spring	(2)
61-226	Vacuum piston spring (Sup by 61 332)	
61-291	Throttle adjusting screw spring	
61-332	VACUUM PISTON SPRING	
61-382	METERING ROD SPRING	
61-389	UPPER PUMP SPRING	
61-391	Fast idle cam spring	
61-434	Throttle return spring	
61-494	Countershaft spring	
63-58	Coil housing retainer	(3)
63-118	Throttle shaft retaining ring	
64-164S	Plunger rod and check assembly (Sup by 64 185S)	
64-185S	PLUNGER ROD AND CHECK ASSEMBLY	
75-1166	METERING ROD—STANDARD	(2)
75-1191	Metering rod—1 size lean	(2)
75-1192	Metering rod—2 sizes lean	(2)
75-1271U	Unitized package (Consists of 1—61 332 and 2—75 1166)	
86-12	Flange stud lock washer	(4)

Part No.	PART NAME	
101-10	Pump arm clamp screw	
101-74	Throttle shaft arm attaching screw	
101-126	Throttle valve attaching screw	(4)
101-271S	Dust cover attaching screw and washer assembly (Use with 118 68)	(2)
101-272S	Air horn attaching screw and washer assembly	(8)
101-273S	Body flange attaching screw and washer assembly	(2)
101-274	Coil housing attaching screw	(3)
101-284	Piston housing attaching screw	(3)
101-293	Metering rod arm clamp screw	
101-300	Pump jet housing attaching screw	
101-353S	Body flange attaching screw and washer assembly	(2)
101-365	Throttle lever adjustment screw	
101-412S	Dust cover attaching screw and washer assembly (Use with 118 121S with vapor vent valve)	(2)
105A-11	Flange stud nut	(4)
111-53S	Metering rod arm and screw assembly	
111-62S	Pump arm and screw assembly	
114-112	THROTTLE SHAFT ARM	
115-212	THROTTLE CONNECTOR ROD	
115-214	Choke connector rod	
117-133	Vacumeter piston link	
117-159	Pump connector link	
117-161	Fast idle link	
118-68	Dust cover (Sup by 118 121S)	
118-121S	Dust cover assembly (with vapor vent valve)	
118-122U	Unitized package (Consists of (2) 101 412S and (1) 118 121S)	
120-159	METERING ROD JET	(2)
121-78	COIL HOUSING GASKET	
121-155	AIR HORN GASKET	
121-158	DUST COVER GASKET	
121-240	BODY FLANGE GASKET	
121-241	PUMP JET HOUSING GASKET	
136-38	Throttle shaft washer	
136-173	Pump connector link washer	(2)
150-62	Choke piston pin	
150A-10	Pin spring	(2)
160-35	Choke piston	
160-131S	Vacuum piston and pin assembly	
170-351S	Piston housing and plug assembly	
170P347S	Thermostatic coil and housing assembly	
172-24	CHOKE AND THROTTLE CONNECTOR ROD RETAINER	(3)
181-214S	Fast idle cam assembly (Sup by 181 216S)	
181-216S	Fast idle cam assembly	
186-48S	Choke baffle plate assembly	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

MODEL

"5540"



Casting No. 1025 on face of flange

NASH

STATESMAN SIX

1955

WCD DUAL DOWN-DRAFT CLIMATIC® CONTROL **CARBURETER No. 2061S**

CARBURETER SPECIFICATIONS

For Nash 6 Cylinder Engine. 3 1/8 Inch Bore, 4 1/4 Inch Stroke

Dimensions: Flange size 1 inch dual 3 bolt type
Primary venturi, 11/32 inch I D
Secondary venturi, 21/32 inch I D
Main venturi 1-1/16 inch I D

Float Level: See adjustments

Gasoline Intake: Size No 42 (0935 inch) drill

Vent: Inside two-balance vent tube in air horn Outside, none

Low Speed Jet Tube: Jet, size No 70 (028 inch) drill By pass, size 051 inch diameter
Economizer size No 58 (042 inch) drill
Idle bleed size 051 inch diameter

Idle Port: Upper, slot type, length 162 inch, width 030 inch

Idle Port Opening: 117 to 123 inch above upper edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw). Size 0615 to 0655 inch diameter

Set Idle Adjustment Screw: 1/2 to 1 1/2 turns open For richer mixture turn screw out Do not idle engine below 550 r.p m (Syncro-mesh trans), 450 r p m. (Hydra-matic trans.) in neutral 500 r p m (Hydra matic with air conditioner) in neutral.

Main Nozzle: Nozzle is installed permanently Do Not Remove

Metering Rod (Vacumeter Type): Economy step 0772 inch diameter Middle step tapers to 071 inch diameter Power step 057 inch diameter

Metering Rod Jet: Size 091 inch diameter

Metering Rod Setting: See adjustments

Accelerating Pump: Discharge jet (twin), size No 74 (0225 inch) drill
Intake disk check size No 30 (1285 inch) drill
Discharge needle seat size No 50 (052 inch) drill

Pump Adjustment: See adjustments

Choke: Carter Climatic® Control set 2 points lean Butterfly type offset valve Choke heat suction hole in bowl cover, size No 44 (086 inch) drill

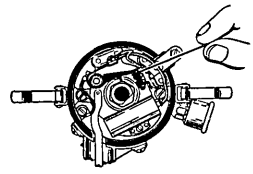
Vacuum Spark Port: Round type 039 to 041 inch diameter Top of port 033 to 038 inch above valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

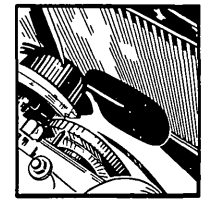
CAUTION. Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



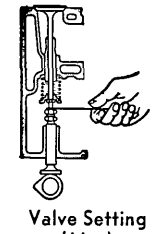
Spark Plug Gap .030"



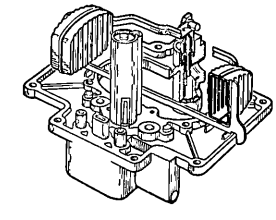
Breaker Point Setting .020"



Ignition Timing Breaker Points to Open: 4° A.T.D.C.



Valve Setting (Hot) Intake .015" Exhaust .015"



Float Setting See Adjustments

Idle Adjustment Screw Setting 1/2 to 1 1/2 Turns Open Idle Engine at 550 R.P.M. (Syncromesh Trans) 450 R P.M. (Hydramatic Trans) in Neutral, 500 R.P.M. (Hydramatic with Air Conditioner) in Neutral

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CARBURETER
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CARBURETER ADJUSTMENTS

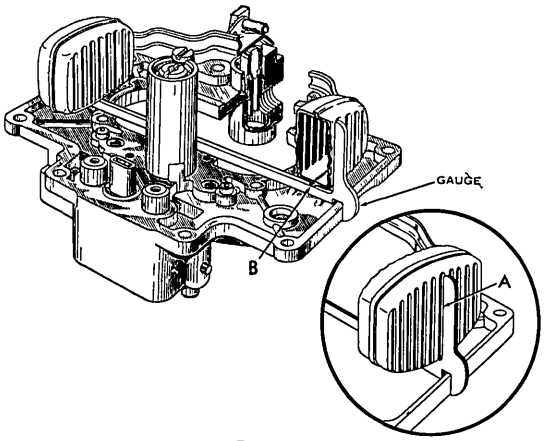


Figure 1
Float Adjustment

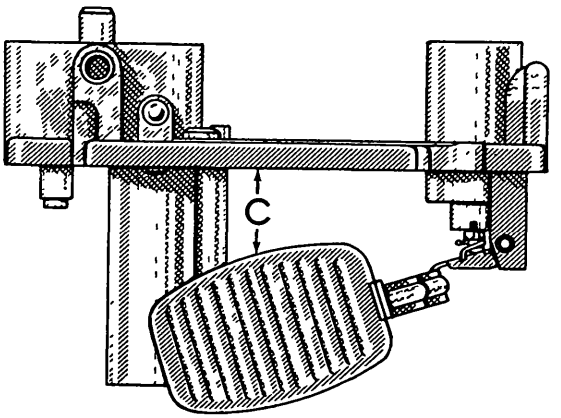


Figure 2
Float Drop Adjustment

FLOAT ADJUSTMENT (Fig. 1)

Two separate float adjustments must be made—lateral and vertical

LATERAL ADJUSTMENT: With bowl cover assembly inverted bowl cover gasket removed, place float gauge (T109 196) directly under floats with notched portions of gauge fitted over edges of casting Sides of floats should barely touch the vertical uprights of float gauge (A) Adjustment should be made by bending arms of floats

VERTICAL ADJUSTMENT: With float gauge in same position, floats should just clear the horizontal portion of gauge (Vertical distance (B) between top of float and machined surface of casting must be 5/32 inch) Adjust by bending float arms Remove floats install bowl cover gasket and then reinstall floats

FLOAT DROP ADJUSTMENT (Fig. 2):

With bowl cover held in upright position, the distance (C) between top of floats at center and bowl cover should be 5/8 inch Adjust by bending stop tab on float bracket

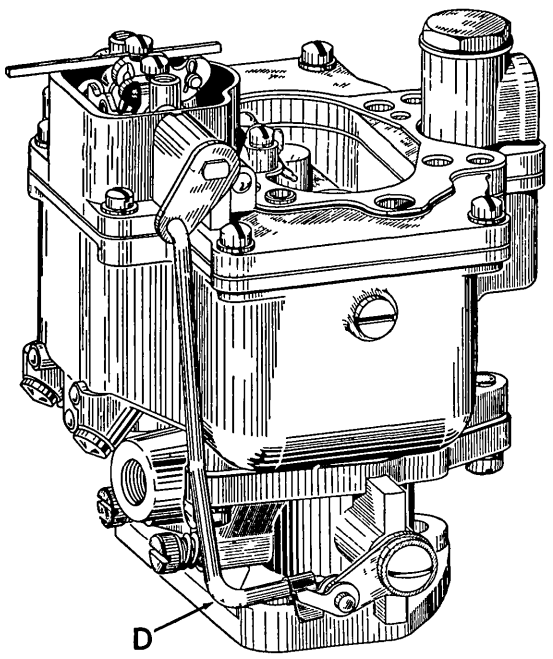


Figure 3
Pump Adjustment

PUMP ADJUSTMENT (Fig. 3).

Back out throttle lever set screw until throttle valves seat in bores of carbureter Be sure fast idle adjusting screw does not hold throttle open Hold straight edge across top of dust cover boss at pump arm The flat on top of pump arm should be parallel to straight edge Adjust by bending throttle connector rod at lower angle (D) Use Tool T109-213

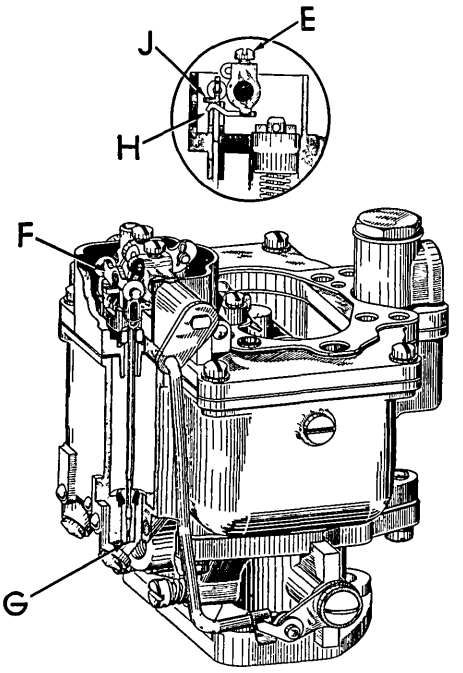


Figure 4
Metering Rod Adjustment

METERING ROD ADJUSTMENT (Fig. 4):

Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows:

1. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw (E).
2. With metering rods in place, press down on vacumeter link (F) until metering rods bottom in carbureter body casting (G).
3. Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger (H) on arm contacts lip (J) of vacumeter link. Hold in place and carefully tighten clamp screw (E).

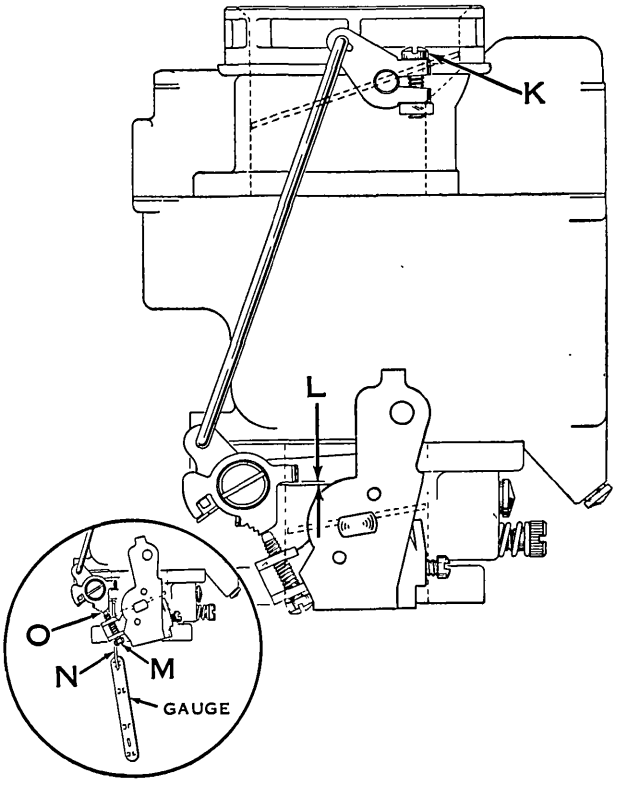


Figure 5
Fast Idle Adjustment

FAST IDLE ADJUSTMENT (Fig. 5):

Loosen choke lever clamp screw (K) on choke shaft. Insert .005 inch feeler gauge T109-237 between lip of fast idle cam and boss of flange casting (L). Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw (K).

With choke valve tightly closed, tighten fast idle adjusting screw (M) until there is .026 inch (gauge T109-189) opening between throttle valve and bore of carbureter (side opposite idle port) (N). Be sure fast idle adjusting screw is on high step of cam (O) while making this adjustment.

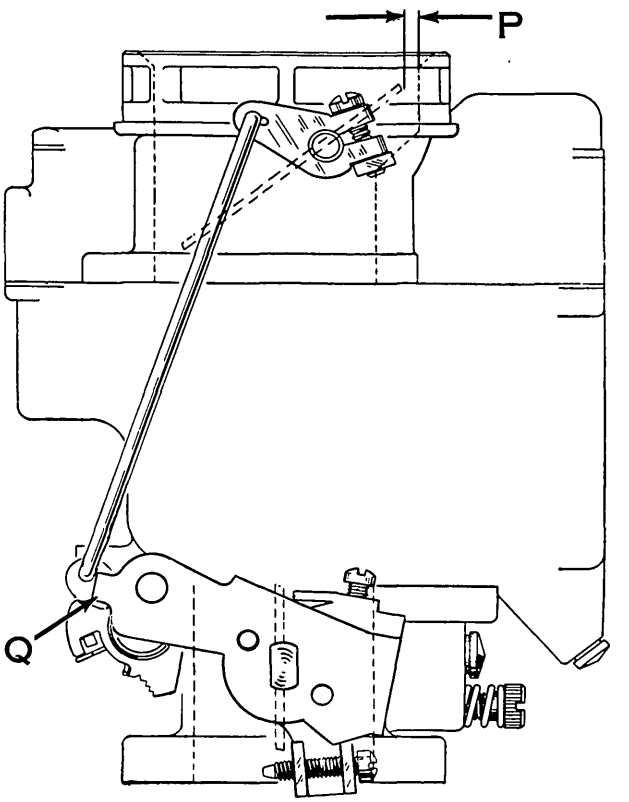
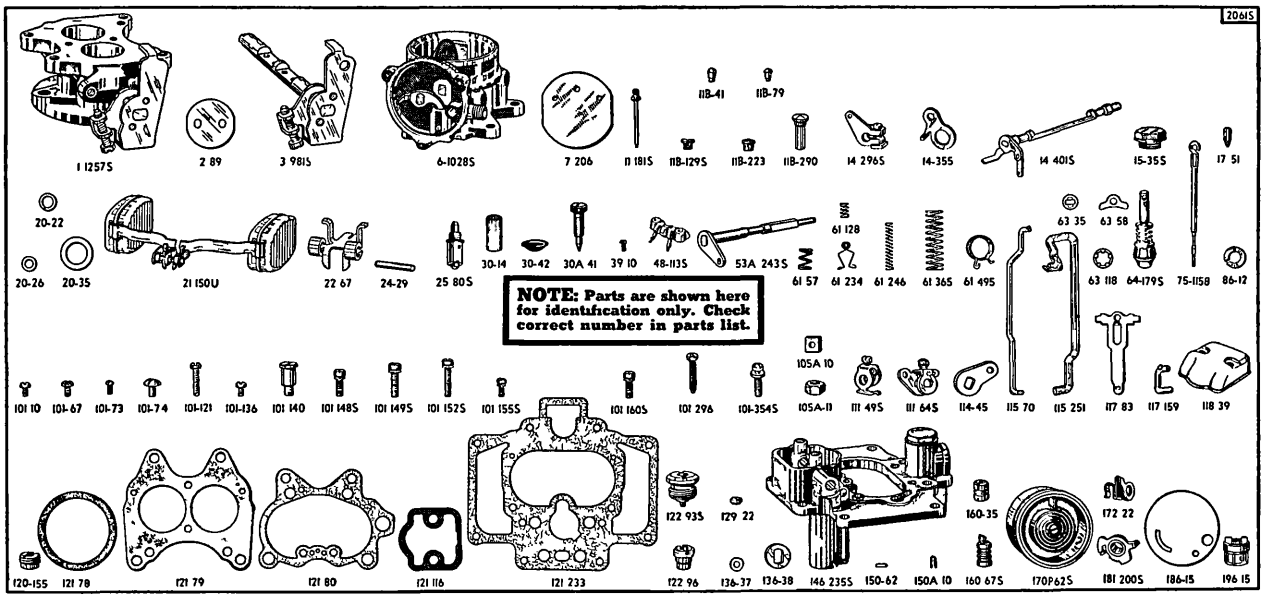


Figure 6
Unloader Adjustment

UNLOADER ADJUSTMENT (Fig. 6):

With throttle wide open there should be 11/64 inch (Gauge T109-166) clearance (P) between upper edge of choke valve and inner wall of air horn. Adjust by bending unloader lip (Q) on throttle shaft lever (Use bending tool T109-41).



Nash 6—1955—Carbureter No. 2061S

WHEN SERVICING, USE GASKET ASSORTMENT No. 268, REPAIR PACKAGE No. 1807A

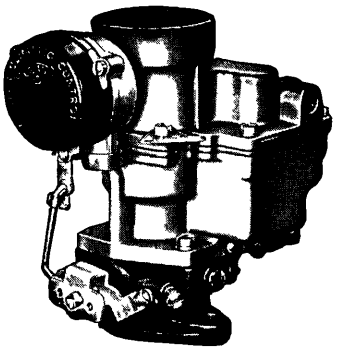
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1257S	Body flange assembly	
2-89	Throttle valve	(2)
3-981S	Throttle shaft and lever assembly	
6-1028S	Air horn assembly	
7-206	Choke valve	
11-181S	LOW SPEED JET ASSEMBLY	(2)
11B-41	Rivet plug	(2)
11B-79	Rivet plug	(3)
11B-129S	PUMP DISCHARGE PASSAGE PLUG ASSEMBLY	
11B-223	Nozzle passage rivet plug	(2)
11B-290	Idle port rivet plug	(2)
14-296S	Choke lever and screw assembly	
14-355	Cam trip lever	
14-401S	Choke piston lever link and shaft assembly	
15-35S	Strainer nut assembly	
17-51	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	
20-26	Pump discharge passage gasket	
20-35	Bowl strainer gasket	
21-150U	Unitized package—consists of 1—21 147S 1—21 148S and 1—22 67)	
22-67	Auxiliary float lever	
24-29	Float lever pin	
25-80S	NEEDLE AND SEAT ASSEMBLY	
30-14	BOWL COVER STRAINER	
30-42	PUMP STRAINER	
30A-41	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
48 113S	Pump jet and housing assembly	
53A-243S	Pump operating lever and countershaft assembly	
61-57	Idle adjustment screw spring	(2)
61-128	Connector rod spring	
61-234	METERING ROD SPRING	
61-246	VACUUM PISTON SPRING	
61-365	LOWER PUMP SPRING	
61-495	Fast idle cam spring	
63-35	Connector rod retainer	
63-58	Coil housing retainer	(3)
63-118	Throttle shaft retaining ring	
64-179S	PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
75-1158	METERING ROD	(2)
75-1256	Metering rod—1 size lean	
75-1257	Metering rod—2 sizes lean	
86-12	Flange stud lock washer	(3)
101-10	Metering rod and pump arm clamp screw	(2)
101-67	Pump plunger guide retainer screw	
101-73	Throttle valve attaching screw	(4)
101-74	Throttle shaft arm attaching screw	
101-121	Throttle lever adjusting screw	
101-136	Coil housing attaching screw	(3)
101-140	Fast idle cam attaching screw	
101-148S	Dust cover attaching screw and washer assembly	(2)
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	(4)
101-155S	Pump jet housing attaching screw and washer assembly	(2)
101-160S	Bowl cover attaching screw and washer assembly	(6)
101-296	Fast idle adjustment screw	
101-354S	Choke lever clamp screw and washer assembly	
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(3)
111-49S	Metering rod arm and screw assembly	
111-64S	Pump arm and screw assembly	
114-45	Throttle shaft arm	
115-70	Choke connector rod	
115-251	THROTTLE CONNECTOR ROD	
117-83	Vacumeter piston link	
117-159	Pump connector link	
118-39	Dust cover	
120-155	METERING ROD JET	(2)
121-78	COIL HOUSING GASKET	
121-79	BODY FLANGE GASKET	
121-80	AIR HORN GASKET	
121-116	DUST COVER GASKET	
121-233	BOWL COVER GASKET	
122-93S	PUMP INTAKE DISK CHECK ASSEMBLY	
122-96	PUMP DISCHARGE CHECK SEAT PLUG	
129-22	Metering rod disk	(2)
136-37	Connector rod washer	
136-38	Throttle shaft arm washer	
146-235S	Bowl cover assembly (Sup by 146 237S)	
146-237S	Bowl cover assembly	
150-62	Choke piston pin	
150A-10	PIN SPRING	(2)
160-35	Choke piston	
160-67S	Vacuum piston and pin assembly	
170P62S	Thermostatic coil and housing assembly	
172-22	THROTTLE CONNECTOR ROD RETAINER	
181-200S	Fast idle cam and spring assembly	
186-15	Choke baffle plate	
196-15	Pump plunger guide	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used.

MODELS
2098S-2137S-2137SA-2163S
"5440"—1954

2258S
"5540"—1955
(Two carbureters per engine)



Cut Shows 2098S Carbureter

NASH STATESMAN SIX 1954-1955

(2258S can be used in place of 2098S 2137S 2137SA and 2163S)

YF Down-Draft Climatic® Control **Carbs. Nos. 2098S-2137S-2137SA-2163S-2258S**

CARBURETER SPECIFICATIONS

For Nash 6 Cylinder Engine 3⅛ Inch Bore 4¼ Inch Stroke

Dimensions Flange size 1¼ inch S A E
Primary venturi 11/32 inch I D
Secondary venturi 11/16 inch I D
Main venturi 1¼ inch I D (2098S 2137S 2137SA 2163S)
1 3/16 inch (2258S)

Float Setting See adjustments

Vents Outside none Inside balance vent to air horn above choke valve

Gasoline Intake Solid needle size No 48 (076 inch) drill in needle seat
Spring loaded needle size No 46 (081 inch) drill in needle seat

Low Speed Jet Tube Jet size (2098S 2163S) No 71 (026 inch) (2137S SA 2258S) No 70 (028 inch) drill By pass in air horn size 045 inch diameter Economizer in body size No 54 (055 inch) drill Idle bleed in body size No 52 (0635 inch) drill

Idle Port Upper slot type length (2098S) 200 inch (2137S SA 2163S 2258S) 160 inch width 030 inch

Idle Port Opening Top of port (2098S) 142 to 146 inch (2137S SA 2163S 2258S) 115 to 119 inch above top edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw) 0615 to 0655 inch diameter

Set Idle Adjustment Screw ½ to 1¾ turns open For richer mixture turn screw out Idle engine 475 r p m (hydramatic —in neutral) 550 r p m (standard and overdrive transmission)

Main Nozzle Nozzle is installed permanently DO NOT REMOVE Anti percolator air bleed size No 70 (028 inch) drill

Metering Rod Economy step (2098S) 077 inch (2137S SA) 074 inch (2163S) 071 inch (2258S) 069 inch diameter Middle step (2258S) tapers to 061 inch diameter Power step (2098S) 066 inch (2137S SA 2163S) 060 inch (2258S) 0545 inch diameter

Metering Rod Jet (2098S) 102 inch (2137S SA) 098 inch (2163S 2258S) 090 inch diameter

Metering Rod Setting See adjustments

Accelerating Pump Discharge through nozzle Diaphragm type vacuum and mechanically operated Discharge restriction (in housing) size (2098S 2137S SA) No 69 (029 inch) diameter (2163S 2258S) No 68 (031 inch) drill Intake disk check (in diaphragm housing) size No 40 (098 inch) drill Discharge ball check seat (in diaphragm housing) size No 32 (116 inch) drill Vacuum restriction (in flange) size No 55 (052 inch) drill Vacuum passage (diaphragm bleed) size No 65 (035 inch) drill (2163S 2258S) Relief ball check size 110 inch diameter

Pump Adjustment None

Choke Carter Climatic® Control set two points lean Choke heat suction hole in body size (2098S 2137SA 2163S 2258S) No 46 (081 inch) drill (2137S) No 42 (0935 inch) drill

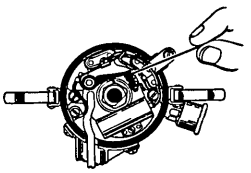
Vacuum Spark Port Round type size 040 inch diameter Bottom of port 001 to 009 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



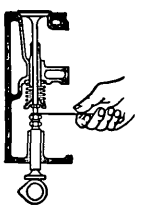
Spark Plug Gap 030"



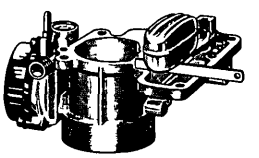
Breaker Point Setting 020"



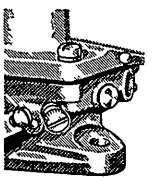
Ignition Timing Breaker Points to Open 4° A T D C



Valve Setting (Hot) Intake 015" Exhaust 015"



Float Setting (See Adjustments)



Idle Adjustment Screw Setting ½ to 1¾ Turns Open

CARBURETER ADJUSTMENTS

Float Adjustment With gasket removed bowl cover assembly inverted and float resting on seated needle, the distance from the bowl cover to the top of float at free end should be (2098S-2137S-2137SA) (solid needle) ⅜ inch (gauge T109-80), (2098S-2137S-2137SA-2163S) (spring loaded needle) ¼ inch (gauge T109-31) (2258S) (spring loaded needle) 5/16 inch (gauge T109-220) Adjust by bending lip of float not float arm Float setting must be checked with the bowl cover held at eye height in a level position

Metering Rod Adjustment This adjustment is important and should be checked each time the carbureter is reassembled or lean rods are installed With throttle valve seated in bore of carbureter press down on upper end of diaphragm shaft until diaphragm bottoms in vacuum chamber Tool T109-212 may be used to hold diaphragm shaft down while adjusting metering rod Metering rod should contact bottom of metering rod well and metering rod arm should contact lifter link at the outer end nearest the springs and

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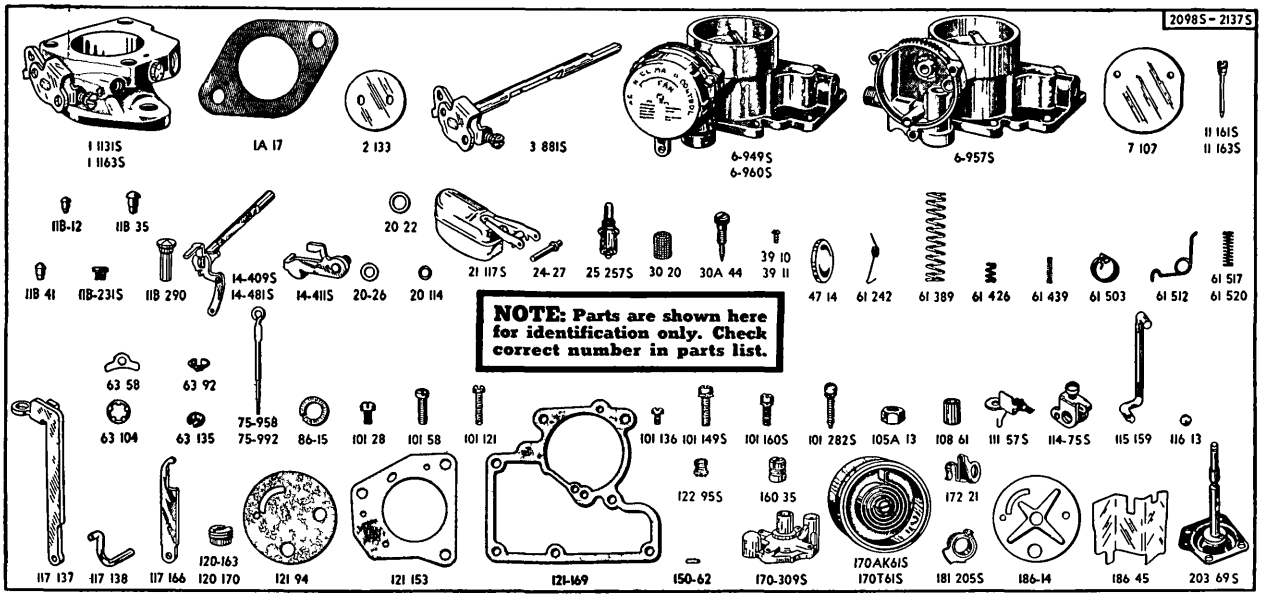
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at supporting lug Adjust by bending lip of metering rod arm to which metering rod is attached, up or down

Accelerating Pump If acceleration is not satisfactory remove pump housing, intake check assembly and discharge check ball and spring Examine diaphragm for wear or damage Be sure intake screen intake check and discharge check are not clogged with lint or foreign matter Discharge check ball must seat, as a leak at this point will result in poor acceleration Inspect and replace all worn parts, clean and blow out all passages with compressed air

Fast Idle Adjustment. Remove thermostatic coil housing gasket and baffle plate Crack throttle valve, and hold choke valve fully closed then close throttle This will allow fast idle cam to revolve to fast idle position. With choke valve held tightly closed and throttle closed as far as possible, there should now be .024 inch clearance (gauge T109-189 may be used) between throttle valve and bore of carbureter (side opposite idle port) Adjust by bending connector link at lower angle (Use bending tool T109-213)

Unloader Adjustment This adjustment must be made after fast idle adjustment Hold throttle valve in wide open position and close choke valve as far as possible without forcing There should be 29/64 inch clearance between lower edge of choke valve and inner wall of air horn (gauge T109-81 may be used). Adjust by bending arm of choke trip lever (Use tool T109-214)



Nash 6—1954-1955—Carbureters Nos. 2098S-2137S-2137SA-2163S-2258S

WHEN SERVICING, USE GASKET ASST. No. 216; REPAIR PKG No. 1767 (2137S-SA), No. 1760 (2163S), No. 1848 (2258S)

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME
1-1131S	Body flange assembly (2098S)
1-1163S	Body flange assembly (2137S-SA-2163S-2258S)
1A-17	FLANGE GASKET
2-133	Throttle valve
3-881S	Throttle shaft and lever assembly
6-949S	Air horn and Climatic® control assembly (2098S)
6-957S	Air horn assembly
6-960S	Air horn and Climatic® control assembly (2137S-SA-2163S)
6-1033S	—Air horn assembly (2258S)
7-107	Choke valve
11-161S	LOW SPEED JET ASSEMBLY (2098S-2163S)
11-163S	LOW SPEED JET ASSEMBLY (2258S) (Sup. by 11-202S on 2137S)
11-202S	LOW SPEED JET ASSEMBLY (2137S-SA)
11B-12	Rivet plug
11B-35	Rivet plug
11B-41	Rivet plug
11B-231S	Ball retainer screw plug ass'y (2098S-2137S-SA)
11B-290	Idle port rivet plug
14-409S	Choke piston lever and shaft assembly (2098S)
14-411S	Choke trip lever and pin assembly
14-481S	Choke piston lever and shaft assembly (2137S-SA-2163S-2258S)
20-22	Needle seat gasket
20-26	Ball retainer screw plug gasket
20-114	Diaphragm housing attaching screw gasket
21-117S	Float and lever ass'y (2098S-2137S-SA) (Sup by 21-122S)
21-122S	*Float and lever assembly
24-27	Float lever pin
25-189S	Needle and seat ass'y (2098S-2137S-SA) (Sup by 25-239S)
25-239S	*NEEDLE, SPRING, PIN AND SEAT ASSEMBLY
25-257S	Needle and seat ass'y (2098S) (Sup by 25-189S)
30-20	PUMP INTAKE STRAINER
30A-44	Idle adjustment screw
39-10	Choke valve attaching screw (2)
39-11	Throttle valve attaching screw (2)
47-14	Welsh plug
61-242	Metering rod spring
61-389	PUMP DIAPHRAGM SPRING (2098S-2137S-SA)
61-426	Idle adjustment screw spring
61-439	PUMP DISCHARGE CHECK BALL SPRING
61-451	PUMP DIAPHRAGM SPRING (2163S-2258S)
61-503	Fast idle cam spring
61-512	Fast idle link spring
61-517	Upper pump spring
61-520	Upper pump spring (2137S) (Sup by 61-517)
63-58	Coil housing retainer (3)
63-92	DIAPHRAGM SPRING RETAINER
63-104	Throttle shaft retainer ring
63-135	UPPER PUMP SPRING RETAINER
75-958	Metering rod—standard (2098S)
75-992	METERING ROD—STANDARD (2137S-SA)
75-1111	Metering rod—standard (2163S) (Sup by 75-1128)
75-1128	METERING ROD—STANDARD (2163S)
75-1130	Metering rod—1 size lean (2163S)
75-1131	Metering rod—2 sizes lean (2163S)
75-1162	—METERING ROD—STANDARD (2258S)
86-15	Flange stud lock washer (2)
101-28	Throttle shaft arm attaching screw
101-58	Diaphragm housing attaching screw
101-121	Throttle lever adjustment screw
101-136	Coil housing attaching screw (3)
101-149S	Body flange attaching screw and washer assembly (3)
101-160S	Air horn attaching screw and washer assembly (7)
101-282S	Diaphragm housing attaching screw and washer assembly (3)
105A-13	Flange stud nut (2)
108-61	Upper pump spring spacer
111-57S	Metering rod arm assembly
114-75S	THROTTLE SHAFT ARM ASSEMBLY
115-159	Choke connector rod
116-13	PUMP DISCHARGE CHECK BALL
117-137	PUMP LIFTER LINK
117-138	PUMP CONNECTOR LINK
117-166	Fast idle link
120-155	Metering rod jet (2163S) (Sup by 120-203)
120-163	METERING ROD JET (2137S-SA)
120-170	Metering rod jet (2098S)
120-203	METERING ROD JET (2163S-2258S)
121-94	COIL HOUSING GASKET
121-153	BODY FLANGE GASKET
121-169	BOWL COVER AND AIR HORN GASKET
122-95S	INTAKE DISK CHECK ASSEMBLY
122-100S	Pump relief valve ass'y (2163S-2258S)
150-62	Choke piston pin
160-35	Choke piston
170-309S	Diaphragm housing assembly (2098S-2137S-SA)
170-338S	Pump diaphragm housing ass'y (2163S-2258S)
170AK-61S	Thermostatic coil and housing assembly (2137S-SA-2163S-2258S)
170T-61S	Thermostatic coil and housing assembly (2098S)
172-21	Choke connector rod retainer
181-205S	Fast idle cam assembly
186-14	Choke baffle plate
186-45	Fuel bowl baffle plate
203-43S	PUMP DIAPHRAGM ASSEMBLY (2163S-2258S)
203-69S	PUMP DIAPHRAGM ASSEMBLY (2098S-2137S-SA)

—Parts so marked are new and listed for the first time

*When installing 25-239S needle and seat assembly (2098S-2137S 2137SA), 21 122S float and lever assembly must be used and float level setting changed to ¼ inch

NOTE: Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

CARTER CARBURETOR
DIVISION OF ACF INDUSTRIES INCORPORATED
ST LOUIS, MO, U. S. A.

NASH 973S-974S
January, 1953
Revised November, 1956

NASH

HEALEY
MODEL "25260" – 1952-53
AMBASSADOR DUAL JET-FIRE
MODELS "5260"-"5360"-"5460"-"5560"
1952-1955

(2369S can be used in place of 973S-974S)

YH Horizontal Climatic® Control Carbureters **Nos. 973S** (Front), **974S** (Rear)

CARBURETER SPECIFICATIONS

For Nash 6 Cylinder Engine: 3½ Inch Bore, 4⅜ Inch Stroke

Dimensions Flange size Special 1¼ inch 3 bolt
Primary venturi, 11/32 inch I. D.
Secondary venturi, 11/16 inch I. D
Main venturi, 1-5/16 inch I. D

Float Level: See Adjustments

Vents: Outside, none Inside balance vent tube to air horn ahead of choke valve

Gasoline Intake: Spring loaded needle size 067 inch diameter hole in needle seat

Low Speed Jet Tube: Jet size No. 70 (.028 inch) drill. By-pass in body, size .0492 inch drill Idle bleed size No. 58 (.042 inch) drill Economizer, size No. 54 (055 inch) drill.

Idle Port: Upper port, slot type; length 162 inch. Width 030 inch

Idle Port Opening: Top of port: .124 to .128 inch above top edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw): Size .0615 to .0655 inch diameter

Set Idle Adjustment Screw: ¾ to 1¾ turns open. For richer mixture, turn screw out. Do not idle engine below 550 r.p.m (Std and Overdrive Trans) 450 r p m. (Hydramatic — in neutral) For cars with air conditioning set idle at 500 r p m. with compressor in operation

Main Nozzle: Nozzle is installed permanently **Do Not Remove.**

Metering Rod: Economy step 068 inch diameter; power step 051 inch diameter

Metering Rod Jet: 089 inch diameter

Metering Rod Setting: See Adjustments

Accelerating Pump: Diaphragm type, vacuum and mechanically operated Intake ball check (in diaphragm housing) seat size 115-.120 inch diameter Discharge ball check (in body) seat size 115-120 inch diameter. Vacuum passage restriction (in body) size No 46 (081 inch) drill. Vacuum bleed (to throttle bore) size No 65 (035 inch) drill.

Pump Adjustment: None

Choke: Carter Climatic® Control (170N 250S) set one point lean (170P-250S) set 2 points lean Butterfly type offset choke valve Choke heat suction hole, size No 42 (0935 inch) drill

Vacuum Spark Port: Slot type Size .125 by .041 inch. Lower edge of port .026 to .036 inch above top edge of valve, with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open:	Valve Setting (Hot)	Float Setting	Idle Adjustment Screw Setting
.030"	.020"	1952-54—T. D. C. 1955—4° A. T. D. C.	Intake .012" Exhaust .016"	7/16 Inch (Use Gauge T109-81)	¾ to 1¾ Turns Open

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: With gasket removed, bowl cover assembly inverted and float resting on pin in seated needle, the distance from the bowl cover to the top of float should be 7/16 inch (gauge T109-81) Do not depress float lip against spring loaded pin in needle, but let float rest of its own weight. Adjust by bending float lever. Float setting must be checked with bowl cover held at eye height in a level position.

FLOAT DROP: With bowl cover assembly held in upright position, the distance between float seam (at free end) and bowl cover should be 2 inches. Adjust by bending stop tab on float arm

METERING ROD ADJUSTMENT: This adjustment is important and should be checked each time the carbureter is reassembled Insert (gauge T109-104) in place of metering rod, seating tapered end of gauge in metering rod jet. Hold

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CARBURETER
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gauge vertical to insure seating in jet With throttle valve **tightly closed, press down on diaphragm shaft until metering** rod arm contacts lifter link at diaphragm stem With diaphragm shaft held in this position metering rod pin must rest lightly on metering rod gauge To adjust bend metering rod arm Use bending tool T109-22

ACCELERATING PUMP If acceleration is not satisfactory remove pump housing, intake rivet plug and ball check Then remove discharge ball check and spring Examine diaphragm for wear or damage Be sure intake check and discharge check are not clogged with lint or foreign matter Intake and discharge ball checks must seat, as a leak at these points will result in poor acceleration Inspect and replace all worn parts, clean and blow out all passages with compressed air **Pump jet is permanently installed, do not remove**

FAST IDLE ADJUSTMENT With thermostatic coil housing, gasket and baffle plate removed, crack throttle valve, and **hold choke valve fully closed, then close throttle valve This** will allow the fast idle cam to revolve to fast idle position With choke valve held tightly closed and slight tension on throttle lever, there should be 015 inch (gauge T109-44) **clearance between throttle valve and bore of carbureter (side** opposite idle port) Adjust by bending connector link at lower angle (Use tool T109-213)

UNLOADER ADJUSTMENT This adjustment must be made after fast idle adjustment Hold throttle valve in wide open **position and close choke valve as far as possible without** forcing There should be 5/8 inch (gauge T109-85) clearance between lower edge of choke valve (vent tube side) and inner wall of air horn Adjust by bending choke shaft unloader arm (Use Bending Tool T109-105)

Nash 6—1952-1955—Carbureters Nos. 973S-974S

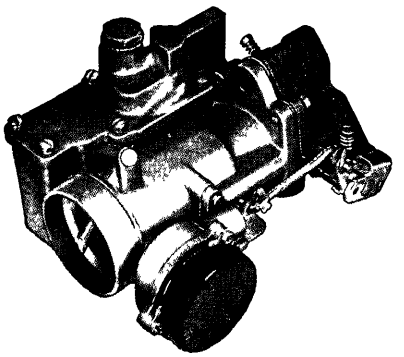
WHEN SERVICING, USE GASKET ASSORTMENT No 227 REPAIR PACKAGE No 1754

PART NAMES IN CAPITAL LETTERS LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-874S	Body flange assembly (Sup by 1 1027S)	
1-1027S	Body flange assembly	
2-134	Throttle valve	
3 749S	Throttle shaft and lever assembly	
7-107	Choke valve	
11-202S	LOW SPEED JET ASSEMBLY	
11B-33	Pipe plug	
11B-69	Rivet plug	
11B-79	Rivet plug	(3)
11B-220	RIVET PLUG	
11B-223	Nozzle passage rivet plug	
11B-253	Pump discharge plug	
11B-271	IDLE PORT RIVET PLUG	
14-433S	Choke piston lever link and shaft assembly	
15-35S	Strainer nut assembly	
20-22	Needle seat gasket	
20-35	BOWL STRAINER GASKET	
20-43	PISTON HOUSING GASKET	
21-128S	Float and lever assembly	
24-27	Float lever pin	
25-228S	Needle pin spring and seat assembly (Sup by 25 276S)	
25-276S	NEEDLE PIN SPRING AND SEAT ASSEMBLY	
30-14	BOWL STRAINER GAUZE	
30A-44	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	THROTTLE VALVE ATTACHING SCREW	(2)
47-14	WELSH PLUG	
61-207	Intake needle spring	
61-242	Metering rod spring	
61-291	Throttle lever adjusting screw spring	
61-298	Fast idle cam spring (Sup by 61 503)	
61-390	UPPER PUMP SPRING	
61-426	Idle adjustment screw spring	
61-463	PUMP DIAPHRAGM SPRING	
61-464	PUMP DISCHARGE SPRING	
61 503	Fast idle cam spring	
61 512	Fast idle link spring	
63-58	Coil housing retainer	(3)
63-104	THROTTLE SHAFT RETAINING RING	
63-135	Upper pump spring retainer	
63-178	Diaphragm spring retainer	
75-845	Metering rod—standard (Sup by 75 1127)	
75-894	Metering rod—1 size lean	
75-895	Metering rod—2 sizes lean	
75-1127	METERING ROD—STANDARD	

Part No.	PART NAME	
100-16	Throttle lever adjusting screw	
101-28	Throttle shaft arm attaching screw	
101-136	Coil housing attaching screw	(3)
101-149S	Body flange attaching screw and washer assembly	(3)
101-160S	Bowl cover attaching screw and washer assembly	(6)
101-282S	Diaphragm housing attaching screw and washer assembly	(4)
101-284	Piston housing attaching screw	(3)
101-367	Throttle shaft arm clamp screw (974S) (Part of 114 121S)	
105A-10	Throttle shaft arm clamp screw nut (974S) (Part of 114 121S)	
111-59S	Metering rod arm assembly	
114-84S	Throttle shaft arm assembly (973S)	
114-106S	Throttle shaft arm assembly (974S) (Sup by 114 121S)	
114-121S	Throttle shaft arm assembly (974S)	
115-165	Choke connector rod	
116-13	PUMP INTAKE AND DISCHARGE CHECK BALL	(2)
117-146	PUMP LIFTER LINK	
117-148	Fast idle link (Sup by 117 167)	
117-154	THROTTLE SHAFT ARM CONNECTOR LINK	
117-167	Fast idle link	
120-159	METERING ROD JET	
121-183	BODY GASKET	
121-185	COIL HOUSING GASKET	
121-209	BODY FLANGE GASKET	
146-216S	Bowl cover assembly	
150-62	Choke piston pin (Sup by 150 170)	
150-170	Choke piston pin	
150A-10	Pin spring	
160-116S	Choke piston and bushing assy (Sup by 160 123)	
160-123	Choke piston	
170-253S	Piston housing and plug assembly	
170-274S	Pump diaphragm housing assembly	
170N-250S	Thermostatic coil and housing assembly (Sup by 170P 250S)	
170P 250S	Thermostatic coil and housing assembly	
172-24	CHOKE CONNECTOR ROD RETAINER	
181-190S	Fast idle cam assembly (Sup by 181 202S)	
181-202S	Fast idle cam and spring assembly	
186-24	Choke baffle plate	
186-35	Fuel bowl baffle plate	
203 53S	PUMP DIAPHRAGM ASSEMBLY	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used



Casting Number 873 on Face of Flange

NASH AMBASSADOR SIX MODELS "5260", "5360", "5460", "5560" 1952-1955

(2368S can also be used)

YH Horizontal **Carbureters Nos. 895S-895SA** With Climatic® Control

CARBURETER SPECIFICATIONS

For Nash 6 Cylinder Engine: 3½ Inch Bore, 4⅜ Inch Stroke

Dimensions: Flange size, 1¼ inch 3 bolt.
Primary venturi, 11/32 inch I. D
Secondary venturi, 11/16 inch I. D.
Main venturi, 1-5/16 inch I. D.

Float Level: Distance from float (at free end) to float chamber cover, with free weight of float on needle and spring to be ⅜ inch

Vents: Outside, none. Inside balance vent tube to air horn ahead of choke valve.

Gasoline Intake: Spring loaded needle. Size .076 inch diameter hole in needle seat.

Low Speed Jet Tube: Jet size No. 70 (.028 inch) drill.
By-pass in body, size 1.25 mm (.0492 inch) drill.
Economizer, size No. 54 (.055 inch) drill.
Idle bleed size No. 58 (.042 inch) drill.

Idle Ports: Upper port, slot type; length .162 inch. Width, .030 inch.

Idle Port Opening: Top of port: .124 to .128 inch, above top edge of valve with valve tightly closed. Lower port size: .0615 to .0655 inch diameter (for idle adjusting screw).

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture, turn screw out. Do not idle engine below 550 r.p.m (Std. and Overdrive Trans.); 450 r.p.m. (Hydramatic—in neutral). For cars with air conditioning set idle at 500 r.p.m. with compressor in operation.

Main Nozzle: In primary venturi, angle 35° off vertical. Discharge jet size: .086 inch inside diameter.

Metering Rod (Diaphragm Type): Economy step, .0785 inch diameter; middle step tapers to .074 inch diameter; power step, .046 inch diameter. Length 2-31/32 inches.

Metering Rod Jet: .098 inch diameter.

Metering Rod Setting: See adjustments.

Accelerating Pump: Diaphragm type, vacuum and mechanically operated. Discharge (pump) jet size No. 68 (.031 inch) drill (discharges in nozzle passage). Intake ball check (in diaphragm housing) seat size .115-.120 inch diameter. Discharge ball check (in body) seat size .115-.120 inch diameter. Vacuum passage restriction (in body) size No. 46 (.081 inch) drill. Vacuum bleed (to throttle bore) size No. 65 (.035 inch) drill.

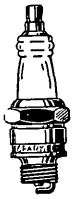
Pump Stroke: No adjustment.

Choke: Carter Climatic® Control; With 160-35 (one piece) choke piston, **set one point lean;** with 160-116S (two piece) choke piston **set one point rich.** Butterfly type, offset choke valve.

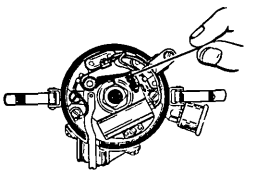
Vacuum Spark Port: Slot type. Size .125 by .041 inch. Bottom of horizontal port .026 to .036 inch above top edge of valve in closed position.

Motor Tune-Up—Be Accurate!

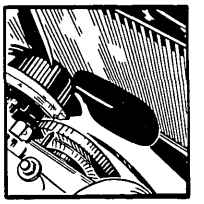
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



Spark Plug Gap .030"



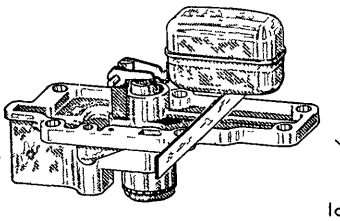
Breaker Point Setting .020"



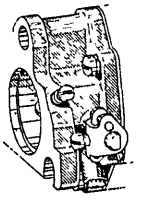
Ignition Timing Breaker Points to Open:
(1952-53) T. D. C.
(1954-55) 4° A. T. D. C.



Valve Setting (Hot)
Intake .012"
Exhaust .016"



Float Setting ⅜ Inch (Use gauge T109-80)



Idle Adjustment Screw Setting ½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

Float Adjustment: With gasket removed, bowl cover assembly inverted and float resting on pin in seated needle, the distance from the bowl cover to the top of float should be ⅜ inch (gauge T109-80). Do not depress float lip against spring loaded pin in needle, but let float rest of its own weight. Adjust by bending float lever. Float setting must be checked with bowl cover held at eye height in a level position.

Float Drop: With bowl cover assembly held in upright position, the distance between float seam (at free end) and bowl cover should be 2". Adjust by bending stop tab on float arm.

Metering Rod Adjustment: This adjustment is important and should be checked each time the carbureter is reassembled. Insert gauge (Tool T109-104) in place of metering rod,

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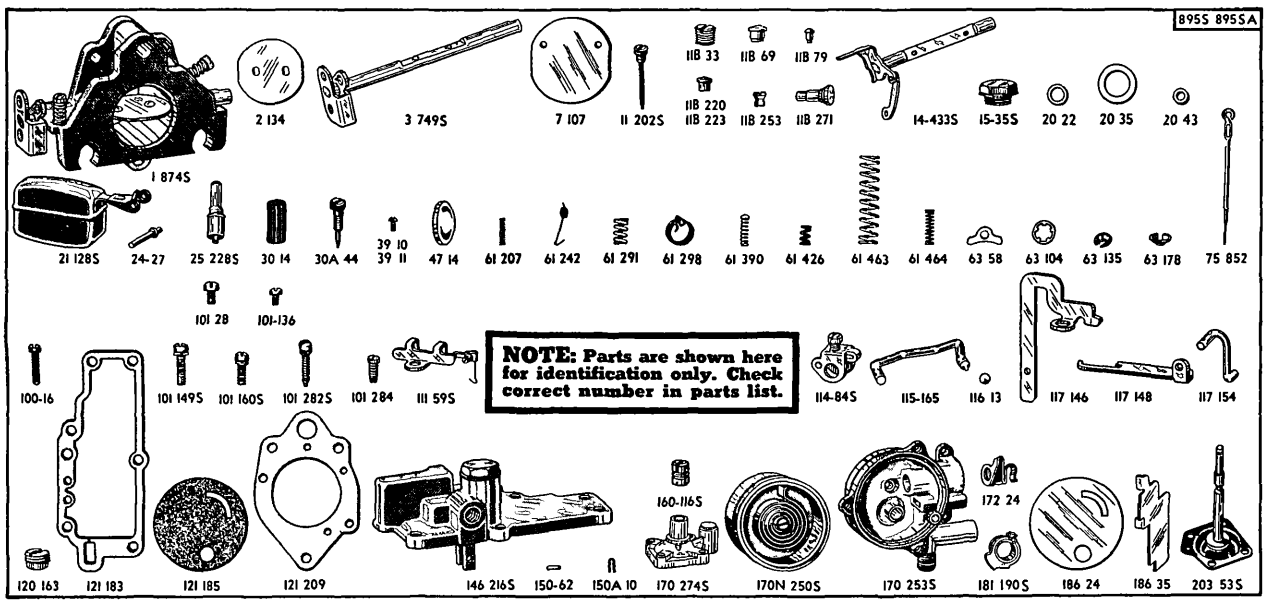
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seating tapered end of gauge in metering rod jet Hold gauge vertical to insure seating in jet With throttle valve tightly closed, press down on diaphragm shaft until metering rod arm contacts lifter link at diaphragm stem With diaphragm shaft held in this position, metering rod pin must rest lightly on metering rod gauge To adjust, bend metering rod arm Use bending tool T109-22

Accelerating Pump If acceleration is not satisfactory remove pump housing intake rivet plug and ball check Then remove discharge ball check and spring Examine diaphragm for wear or damage Be sure intake check and discharge check are not clogged with lint or foreign matter Intake and discharge ball checks must seat, as a leak at these points will result in poor acceleration Inspect and replace all worn parts clean and blow out all passages with compressed air **Pump jet is permanently installed, do not remove**

Fast Idle Adjustment With thermostatic coil housing, gasket and baffle plate removed partial open throttle, close choke valve and then close throttle valve This will allow the fast idle cam to revolve to fast idle position With choke valve held tightly closed and slight tension on throttle lever, there should be 030' (Gauge T109-29) clearance between throttle valve and bore of carbureter (side opposite idle port) Adjust by bending connector link at lower angle

Unloader Adjustment This adjustment must be made after fast idle adjustment Hold throttle valve in wide open position and close choke valve as far as possible without forcing There should be 5/8 inch clearance between lower edge of choke valve (vent tube side) and inner wall of air horn (Gauge T109-85) Adjust by bending choke shaft unloader arm (Use Bending Tool T109-105)



Nash 6—1952-55—Carbureters Nos. 895S-895SA

WHEN SERVICING, USE GASKET ASSORTMENT No. 227, REPAIR PACKAGE No 1719A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME
1-874S	Body flange assembly (Sup by 1-1027S)
1-1027S	Body flange assembly
1A-78	FLANGE GASKET
2-134	Throttle valve
3-749S	Throttle shaft and lever assembly
7-107	Choke valve
11-202S	LOW SPEED JET ASSEMBLY
11B 33	Pipe plug
11B 69	Rivet plug
11B-79	Rivet plug (3)
11B-220	RIVET PLUG
11B 223	Rivet plug
11B 253	Pump discharge plug
11B-271	IDLE PORT RIVET PLUG
14 433S	Choke piston lever, link and shaft assembly
15-35S	Strainer nut assembly
20-22	Needle seat gasket
20-35	BOWL STRAINER GASKET
20-43	PISTON HOUSING GASKET
21-128S	Float and lever assembly
24-27	Float lever pin
25-208S	Needle, spring and seat assembly (Sup by 25-228S)
25 228S	Needle spring and seat assembly (Sup by 25-273S)
25-273S	NEEDLE PIN, SPRING AND SEAT ASSEMBLY
30-14	BOWL STRAINER GAUZE
30A-44	Idle adjustment screw
39-10	Choke valve attaching screw (2)
39-11	THROTTLE VALVE ATTACHING SCREW (2)
47-14	WELSH PLUG
61-207	Intake needle spring
61-242	Metering rod spring
61-291	Throttle lever adjusting screw spring
61-298	Fast idle cam spring (Sup by 61-503)
61-390	UPPER PUMP SPRING
61-413	†Pump diaphragm spring
61-426	Idle adjustment screw spring
61-463	PUMP DIAPHRAGM SPRING
61-464	PUMP DISCHARGE SPRING
61-503	Fast idle cam spring
63-58	Coil housing retainer (3)
63-104	THROTTLE SHAFT RETAINING RING
63-135	Upper pump spring retainer
63-149	Diaphragm spring retainer (Sup by 63-178)
63-178	Diaphragm spring retainer

Part No.	PART NAME
75-831	Metering rod—standard (895S) (Sup by 75-852)
75-852	METERING ROD—STANDARD
75 865	Metering rod—1 size lean
75-866	†Metering rod—2 sizes lean
75-868U	Unitized package (Consists of 1—75-865 and 1—75-866)
100 16	Throttle lever adjusting screw
101 28	Throttle shaft arm attaching screw
101-136	Coil housing attaching screw (3)
101 149S	Body flange attaching screw and washer assembly (3)
101-160S	Bowl cover attaching screw and washer assembly (6)
101-282S	Diaphragm housing attaching screw and washer assembly (4)
101 284	Piston housing attaching screw (3)
111-59S	Metering rod arm assembly
114 84S	THROTTLE SHAFT ARM ASSEMBLY
115-165	Choke connector rod
116-13	PUMP DISCHARGE AND PUMP INTAKE CHECK BALL (2)
117-146	PUMP LIFTER LINK
117-148	Fast idle link
117-154	THROTTLE SHAFT ARM CONNECTOR LINK
120-163	METERING ROD JET
121-183	BODY GASKET
121-185	THERMOSTATIC COIL HOUSING GASKET
121-209	BODY FLANGE GASKET
146-216S	Bowl cover and strainer assembly
150-62	Choke piston pin (Sup by 150-170)
150-170	Choke piston pin
150A-10	Pin spring
160 35	Choke piston (Sup by 160-116S)
160-116S	Choke piston and bushing assembly (Sup by 160-123)
160 123	Choke piston
163-61	SEAL RING
170-253S	Piston housing and plug assembly
170-274S	Pump diaphragm housing assembly
170N-250S	Thermostatic coil and housing assembly
172-24	CHOKE CONNECTOR ROD RETAINER
181-190S	Fast idle cam assembly (Sup by 181-202S)
181-202S	Fast idle cam assembly
186-24	Coil housing baffle plate
186-35	Fuel bowl baffle plate
203-53S	PUMP DIAPHRAGM ASSEMBLY

†For use at 5000 ft altitude

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

CARTER CARBURETOR

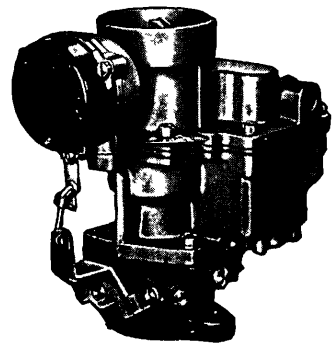
DIVISION OF ACF INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

NASH 876S-876SA-877S-877SA-2014S
April, 1951
Revised June, 1956

MODELS

RAMBLER
876S-SA, "5110"-"5210"
1951-1952
2014S, "5310"-"5410"-"5510"
1953-1955

STATESMAN
877S-SA, "5140"-"5240"
1951-1952



Cut shows 876S Carbureter

NASH RAMBLER SIX 1951-1955

STATESMAN SIX 1951-1952

(2014S can be used in place of 876SA)

YF Down-Draft Climatic® Control **Carbureters Nos. 876S-876SA-877S-877SA-2014S**

CARBURETER SPECIFICATIONS

For Nash 6 Cylinder Engine: 3⅛ Inch Bore, 3¾ Inch Stroke (Rambler 1951-1952)
For Nash 6 Cylinder Engine: 3⅛ Inch Bore, 4 Inch Stroke (Statesman 1951, Rambler 1953)
For Nash 6 Cylinder Engine: 3⅛ Inch Bore, 4¼ Inch Stroke (Statesman 1952, Rambler 1954-1955)

Dimensions: Flange size, 1¼ inch S. A. E.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 11/16 inch I. D.
Main venturi, 1¼ inch I. D.

Float Setting: See adjustments.

Vents: Outside, none. Inside, balance vent to air horn above choke valve.

Gasoline Intake: Size No. 46 (.081 inch) drill in needle seat.

Low Speed Jet Tube: Jet, size No. 70 (.028 inch) drill. By-pass in air horn, size No. 55 (.052 inch) drill. Economizer in body, size No. 53 (.0595 inch) drill. Idle bleed in body, size No. 52 (.0635 inch) drill.

Idle Port: Upper port, slot type, length .200 inch; width .030 inch.

Idle Port Opening: Top of port .142 to .146 inch above top edge of valve with valve tightly closed.

Lower Port (For Idle Adjustment Screw): .0615 to .0655 inch diameter.

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture turn screw out. Do not idle engine below 550 r.p.m. (Std. and Overdrive trans.); 450 r.p.m. (Hydramatic—in neutral).

Main Nozzle: Nozzle is installed permanently. DO NOT REMOVE. Anti-percolator air bleed, size No. 70 (.028 inch) drill.

Metering Rod: Economy step .078 inch diameter; middle step tapers to 07325 inch diameter; power step .047 inch diameter.

Metering Rod Jet: .102 inch diameter.

Metering Rod Setting: See adjustments.

Accelerating Pump: Diaphragm type, vacuum and mechanically operated. Discharge restriction (in housing), size No. 65 (.035 inch) diameter. Intake ball check seat (in diaphragm housing), size No. 40 (.098 inch) drill. Discharge ball check seat (in diaphragm housing), size No. 32 (.116 inch) drill. Vacuum restriction (in flange), size No. 55 (.052 inch) drill. Vacuum passage (diaphragm bleed), size No. 65 (.035 inch) drill.

Pump Adjustment: None.

Choke: Carter Climatic® Control, set one point lean, offset butterfly type. Choke heat suction hole in body, size No. 46 (.081 inch) drill.

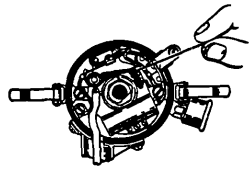
Vacuum Spark Port: Round type, size .040 inch diameter. Bottom of port .021 to .029 inch above top edge of valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



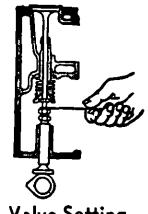
Spark Plug Gap .030"



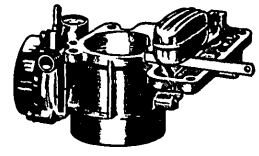
Breaker Point Setting .020"



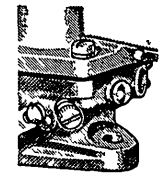
Ignition Timing Breaker Points to Open:
1951-53—T. D. C.
1954-55—4° A. T. D. C.



Valve Setting (Hot)
Intake .015"
Exhaust .015"



Float Setting
(876S-877S) 5/16 Inch
(876SA-877SA-2014S)
½ Inch



Idle Adjustment Screw Setting
½ to 1½
Turns Open

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CARBURETER
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CARBURETER ADJUSTMENTS

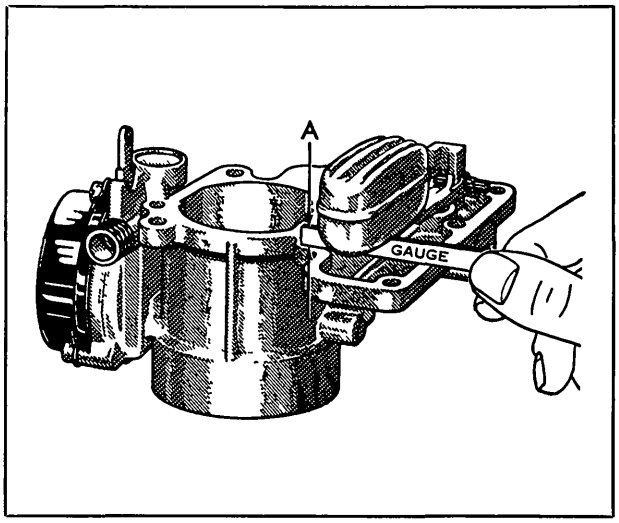


Figure 1
Float Adjustment

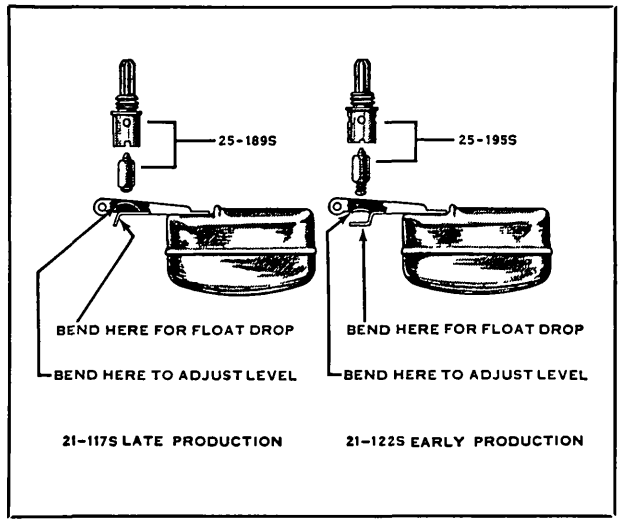


Figure 2
Float and Needle and Seat Assembly

FLOAT ADJUSTMENT (Fig. 1):

With gasket removed, bowl cover assembly inverted, and float resting on seated needle, the distance (A) from the bowl cover to the top of float should be (876S-877S) 5/16 inch (gauge T109-107), (876SA-877SA-2014S) 1/2 inch (gauge T109-83). Adjust by bending lip of float, not float arm

FLOAT AND NEEDLE AND SEAT ASSEMBLY (Fig. 2):

876S and 877S may be brought up to 876SA and 877SA specifications by changing 21-122S float to 21-117S float, and 25-195S needle, seat, spring and pin assembly to 25-189S needle and seat assembly. Then reset float level to 1/2 inch.

When installing 25-189S needle and seat assembly, float and lever assembly 21-117S must be used.

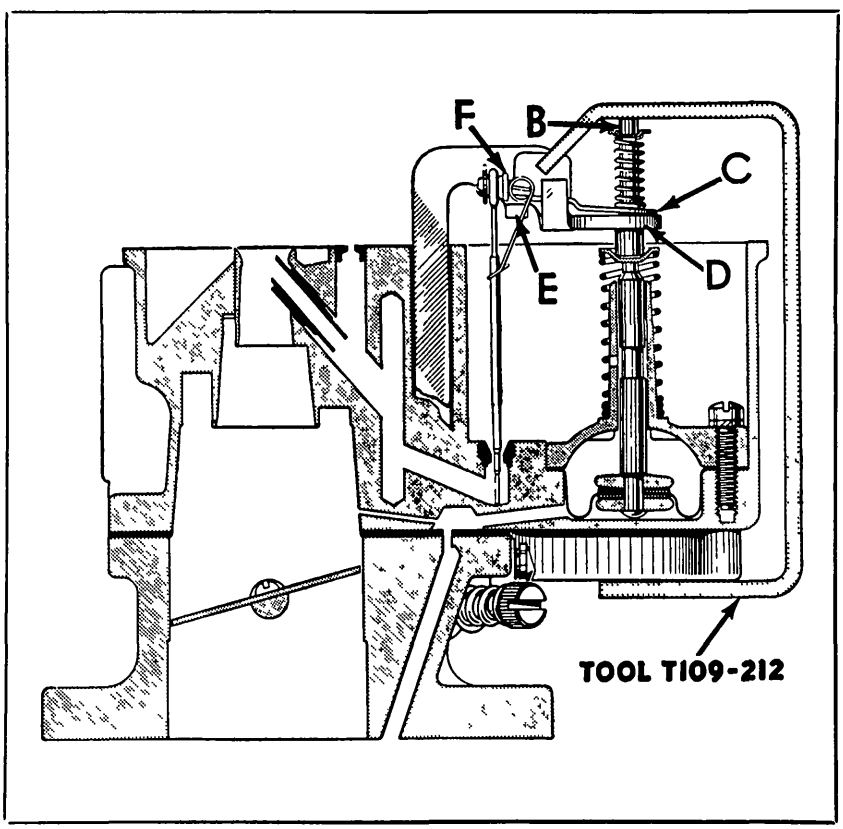


Figure 3
Metering R d Adjustment

METERING ROD ADJUSTMENT (Fig. 3):

This adjustment is important and should be checked each time the carbureter is reassembled or lean rods are installed. With throttle valve seated in bore of carbureter, press down on upper end of diaphragm shaft (B) until diaphragm bottoms in vacuum chamber. (Tool T109-212 may be used to hold diaphragm shaft down while adjusting metering rod.)

Metering rod should contact bottom of metering rod well, and metering rod arm (C) should contact lifter link (D) between springs and at supporting lug (E). Adjust by bending lip (F) up or down

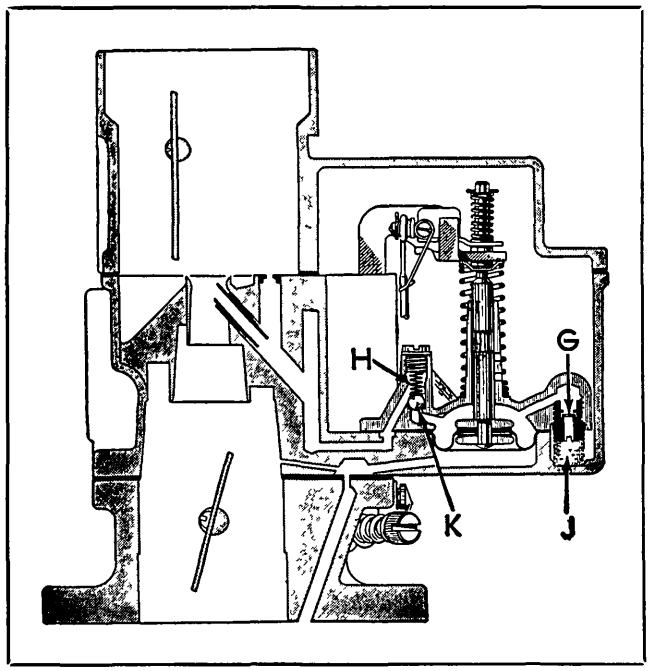


Figure 4
Accelerating Pump

ACCELERATING PUMP (Fig. 4):

If acceleration is not satisfactory, remove pump housing, intake check assembly (G) and discharge check ball (K) and spring (H). Examine diaphragm for wear or damage. Be sure intake screen (J), intake check and discharge check are not clogged with lint or foreign matter. Discharge check ball (K) must seat, as a leak at this point will result in poor acceleration. Inspect and replace all worn parts, clean and blow out all passages with compressed air.

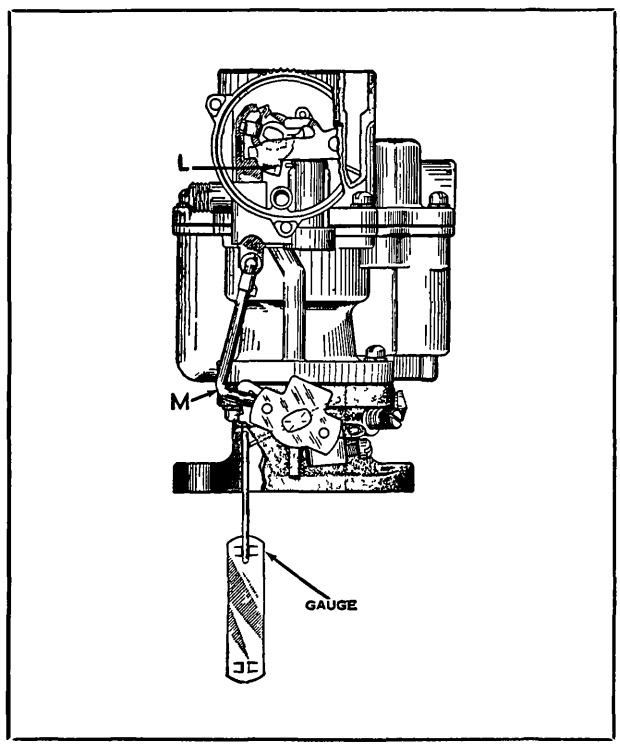


Figure 5
Fast Idle Adjustment

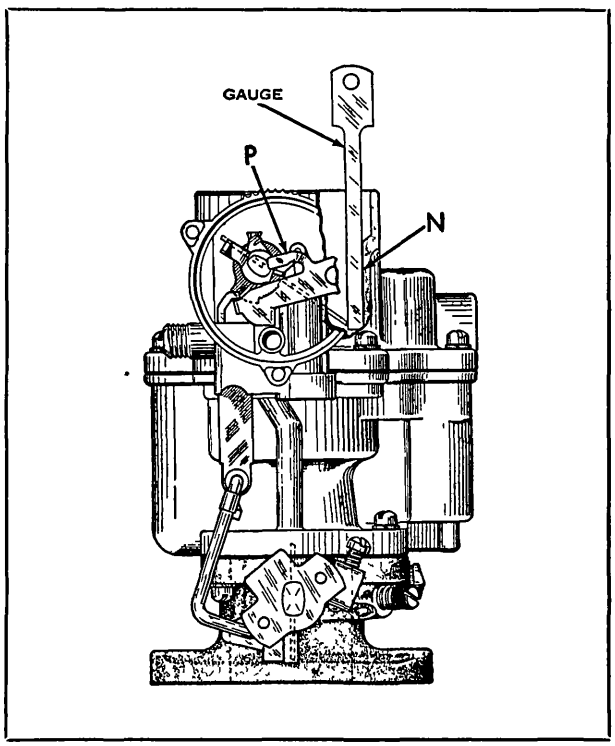


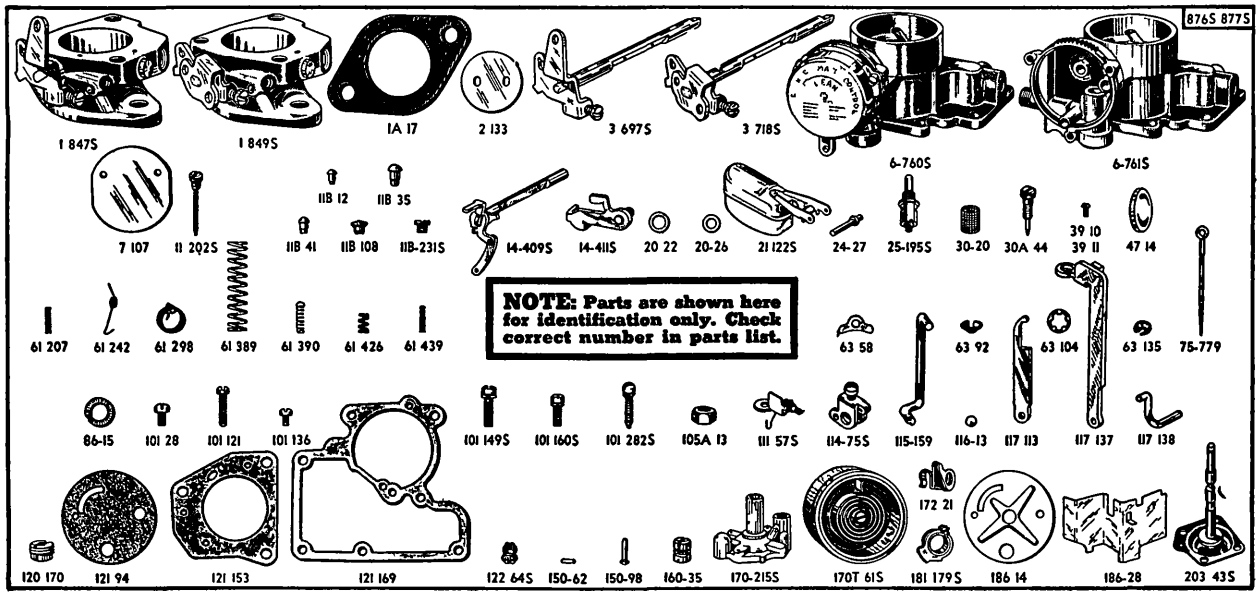
Figure 6
Unloader Adjustment

FAST IDLE ADJUSTMENT (Fig. 5):

Remove thermostatic coil housing, gasket and baffle plate. Crack throttle valve, and hold choke valve fully closed, then close throttle. This will allow fast idle cam to revolve to fast idle position (L). With choke valve held tightly closed and slight tension on throttle lever, there should now be .054 inch clearance (gauge T109-193) between throttle valve and bore of carbureter (side opposite idle port). Adjust by bending connector link at lower angle (M). Use bending tool T109-213.

UNLOADER ADJUSTMENT (Fig. 6):

This adjustment must be made after fast idle adjustment. Hold throttle valve in wide open position and close choke valve as far as possible without forcing. There should be 9/32 inch clearance between lower edge of choke valve and inner wall or air horn (N) (gauge T109-126). Adjust by bending arm of choke trip lever (P) (Us tool T109-214).



Nash 6—1951-1955—Carbureters Nos. 876S-876SA-877S-877SA-2014S

WHEN SERVICING, USE GASKET ASSORTMENT No 216; REPAIR PACKAGE No 1590A

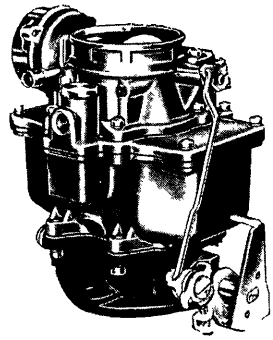
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-847S	Body flange assembly (876S 876SA 2014S)	
1-849S	Body flange assembly (877S 877SA)	
1A-17	FLANGE GASKET	
2-133	Throttle valve	
3-697S	Throttle shaft and lever assembly (876S 876SA 2014S)	
3-718S	Throttle shaft and lever assembly (877S 877SA)	
6 760S	Air horn and Climatic® control assembly	
6-761S	Air horn assembly	
6-858S	Air horn and Climatic® control assembly (2014S)	
6-859S	Air horn assembly (2014S)	
7-107	Choke valve	
11-202S	LOW SPEED JET ASSEMBLY	
11B-12	Flange passage plug	
11B-35	Nozzle passage rivet plug	
11B-41	Rivet plug	
11B-108	IDLE PORT RIVET PLUG	
11B-231S	Ball retainer screw plug assembly	
14-409S	Choke piston lever and shaft assembly	
14-411S	Choke trip lever and pin assembly	
20-22	Needle seat gasket	
20-26	Ball retainer screw plug gasket	
20-114	Diaphragm housing attaching screw gasket	
21-117S	Float and lever assembly (876SA 877SA 2014S)	
21-122S	Float and lever assembly (876S 877S)	
24-27	Float lever pin	
25-189S	NEEDLE AND SEAT ASSEMBLY (876SA 877SA 2014S)	
25-195S	Needle spring and seat assembly (876S 877S)	
30-20	PUMP INTAKE STRAINER	
30A-44	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	THROTTLE VALVE ATTACHING SCREW	(2)
47-14	Welsh plug	
61-207	Intake needle spring (876S 877S)	
61-242	Metering rod spring	
61-298	Fast idle cam spring	
61-389	PUMP DIAPHRAGM SPRING	
61-390	Upper pump spring	
61-426	Idle adjustment screw spring	
61-439	PUMP DISCHARGE SPRING	
61-451	†Pump diaphragm spring	
63-58	Coil housing retainer	(3)
63-92	DIAPHRAGM SPRING RETAINER	
63-104	THROTTLE SHAFT RETAINING RING	
63-135	UPPER PUMP SPRING RETAINER	
75-779	METERING ROD STANDARD	
75-793	Metering rod 1 size lean	
75-794	†Metering rod 2 sizes lean	
75 802U	Unitized package (Consists of 1—75 793 and 1—75 794)	
86-15	Flange stud lock washer	(2)
101-28	Throttle shaft arm attaching screw	
101-58	Diaphragm housing attaching screw	
101-121	Throttle lever adjustment screw	
101-136	Coil housing attaching screw	(3)
101-149S	Body flange attaching screw and washer assembly	(3)
101-160S	Air horn attaching screw and washer assembly	(7)
101-282S	Diaphragm housing attaching screw and washer assembly	(3)
105A-13	Flange nut	(2)
111-57S	Metering rod arm assembly	
114-75S	THROTTLE SHAFT ARM ASSEMBLY	
115 159	Choke connector rod	
116-13	PUMP CHECK BALL	
117-113	Fast idle link	
117-137	PUMP LIFTER LINK	
117-138	PUMP CONNECTOR LINK	
120-170	METERING ROD JET	
121-94	THERMOSTATIC COIL HOUSING GASKET	
121-153	BODY FLANGE GASKET	
121-169	BOWL COVER AND AIR HORN GASKET	
122-64S	INTAKE BALL CHECK ASSEMBLY	
150-62	Choke piston pin	
150-98	Intake needle pin (876S 877S)	
156-17	Fuel line elbow	
160-35	Choke piston (876S 877S) (Sup by 160 106)	
160-106	Choke piston	
170-215S	Pump diaphragm housing assembly	
170T-61S	Thermostatic coil and housing assembly	
172-21	Throttle connector rod retainer	
181-179S	Fast idle cam assembly	
186-14	Coil housing baffle plate	
186-27	Fuel bowl baffle plate (Sup by 186 45)	
186-28	Fuel bowl baffle plate (Sup by 186 27)	
186-45	Fuel bowl baffle plate	
203-43S	PUMP DIAPHRAGM ASSEMBLY	

†For use at 5000 Ft Altitude

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

MODEL
"5340"



Casting No 1025 on face of flange

NASH
STATESMAN SIX
1953

WCD DUAL DOWN-DRAFT CLIMATIC® CONTROL **CARBURETER No. 2034S**

CARBURETER SPECIFICATIONS

For Nash 6 Cylinder Engine 3⅛ Inch Bore 4¼ Inch Stroke

Dimensions Flange size 1 inch dual 3 bolt type
Primary venturi 11/32 inch I D
Secondary venturi 21/32 inch I D
Main venturi 1 1/16 inch I D

Float Level See adjustments

Gasoline Intake Size No 42 (0935 inch) drill

Vent Inside two balance vent tube in air horn Outside none

Low Speed Jet Tube Jet size No 68 (031 inch) drill
By pass size 0492 inch diameter
Economizer (early production) size No 05 (035 inch) drill
(late production) size No 63 (037 inch) drill
Idle bleed size 0492 inch diameter

Idle Port Upper slot type length 162 inch width 030 inch

Idle Port Opening 117 to 123 inch above upper edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw) Size 0615 to 0655 inch diameter

Set Idle Adjustment Screw ½ to 1½ turns open For richer mixture screw out Do not idle engine below 550 rpm (Syncro mesh trans) 375 rpm (Hydra matic trans)

Main Nozzle Nozzle is installed permanently Do Not Remove

Metering Rod (Vacumeter Type) Economy step 066 inch diameter Middle step tapers to 058 inch diameter Power step 043 inch diameter

Metering Rod Jet Size 082 inch diameter

Metering Rod Setting See adjustments

Accelerating Pump Discharge jet (twin) size No 74 (0225 inch) drill
Intake disk check size No 30 (1285 inch) drill
Discharge needle seat size No 50 (052 inch) drill

Pump Adjustment See adjustments

Choke Carter Climatic ® Control set at index Butterfly type offset valve Choke heat suction hole in bowl cover size No 44 (086 inch) drill

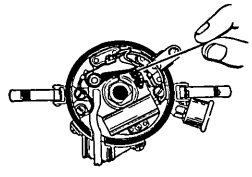
Vacuum Spark Port Round type 039 to 041 inch diameter Top of port 033 to 038 inch above valve with valve tightly closed

Motor Tune-Up—Be Accurate!

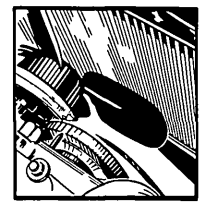
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



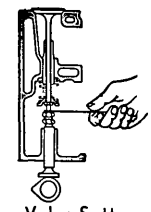
Spark Plug
Gap
030'



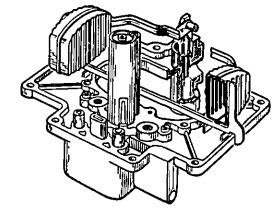
Breaker Point
Setting
020"



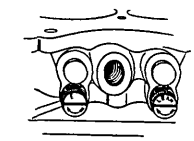
Ignition Timing
Breaker Points to Open
4° A T C



Valve Setting
(Hot)
Intake 015"
Exhaust 015"



Float Setting
(See Adjustments)



Idle Adjustment
Screw Setting
½ to 1½
Turns Open

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CARBURETER
TRADE MARK REG U S PAT OFF
MARCA REGISTRADA

PRINTED IN U.S.A.

CARBURETER ADJUSTMENTS

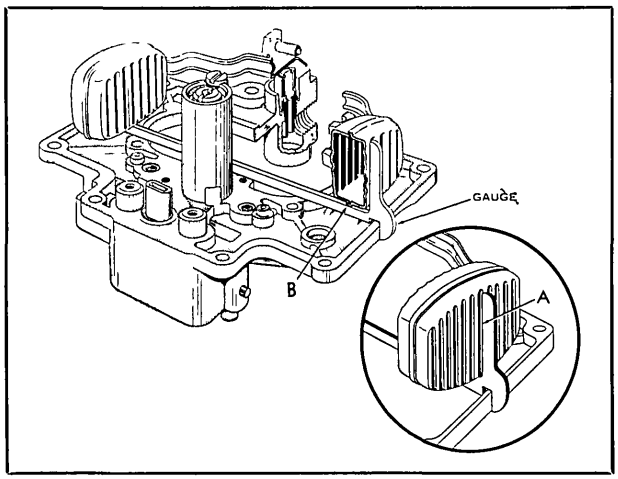


Figure 1
Float Adjustment

FLOAT ADJUSTMENT (Fig. 1):

Two separate float adjustments must be made—lateral and vertical.

LATERAL ADJUSTMENT: With bowl cover assembly inverted, bowl cover gasket removed, place float gauge (T109-196) directly under floats with notched portions of gauge fitted over edges ot casting. Sides of floats should barely touch the vertical uprights of float gauge (A). Adjustment should be made by bending arms of floats.

VERTICAL ADJUSTMENT: With float gauge in same position, floats should just clear the horizontal portion of gauge (Vertical distance (B) between tcp of float and machined surface of casting must be 5/32 inch) Adjust by bending float arms. Remove floats install bowl cover gasket and then reinstall floats.

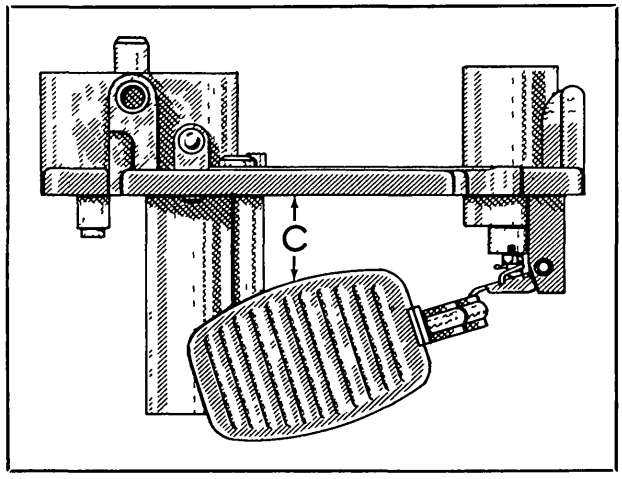


Figure 2
Float Drop Adjustment

FLOAT DROP ADJUSTMENT (Fig. 2):

With bowl cover held in upright position, the distance (C) between top of floats at center and bowl cover should be 5/8 inch. Adjust by bending stop tab on float bracket.

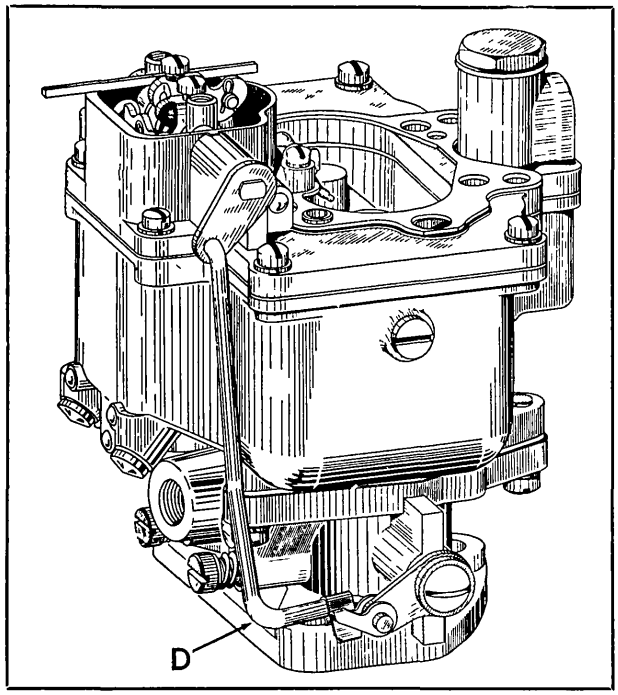


Figure 3
Pump Adjustment

PUMP ADJUSTMENT (Fig. 3):

Back out throttle lever set screw until throttle valves seat in bores of carbureter. Be sure fast idle adjusting screw does not hold throttle open. Hold straight edge across top of dust cover boss at pump arm The flat on top of pump arm should be parallel to straight edge. Adjust by bending throttle connector rod at lower angle (D). Use Tool T109-213.

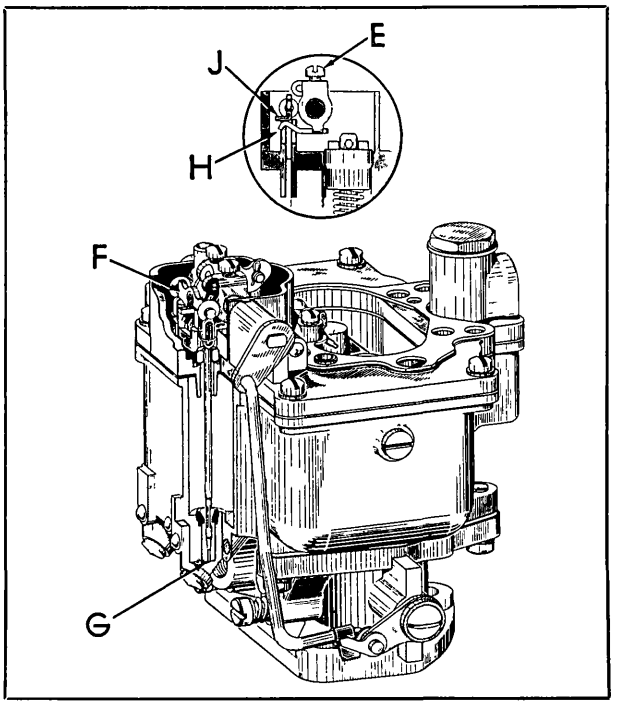


Figure 4
Metering Rod Adjustment

METERING ROD ADJUSTMENT (Fig. 4):

Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows:

1. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw (E).
2. With metering rods in place, press down on vacumeter link (F) until metering rods bottom in carbureter body casting (G).
3. Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger (H) on arm contacts lip (J) of vacumeter link. Hold in place and carefully tighten clamp screw (E).

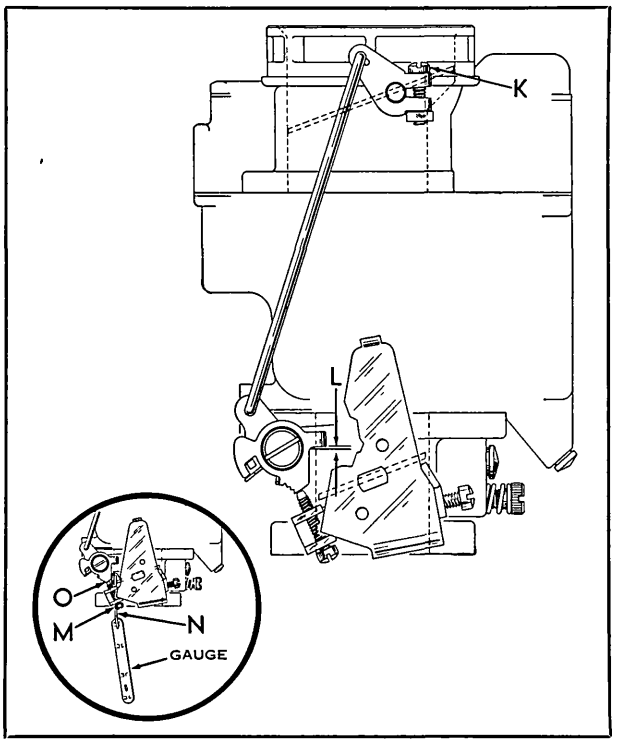


Figure 5
Fast Idle Adjustment

FAST IDLE ADJUSTMENT (Fig. 5):

Loosen choke lever clamp screw (K) on choke shaft. Insert .005 inch feeler gauge T109-237 between lip of fast idle cam and boss of flange casting (L). Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw (K).

With choke valve tightly closed, tighten fast idle adjusting screw (M) until there is .026 inch (gauge T109-189) opening between throttle valve and bore of carbureter (side opposite idle port) (N). Be sure fast idle adjusting screw is on high step of cam (O) while making this adjustment.

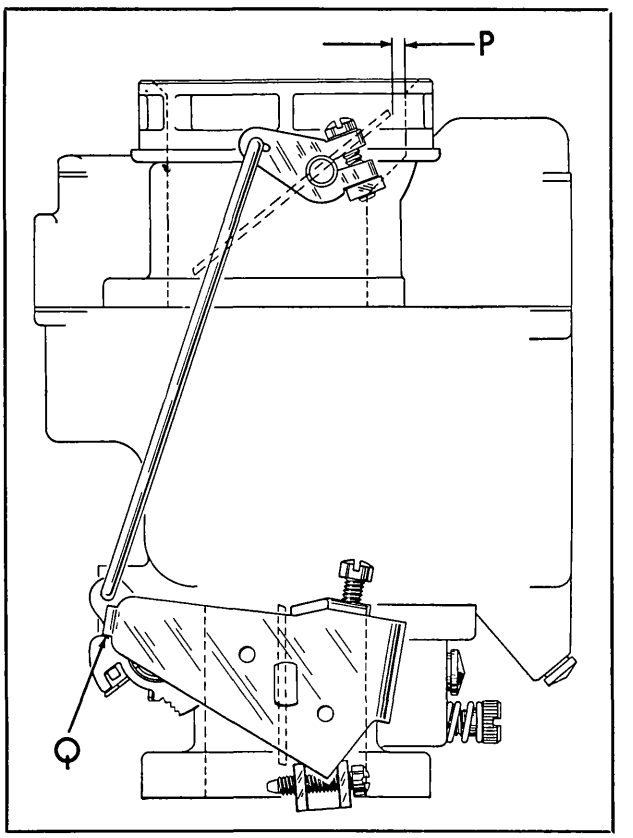
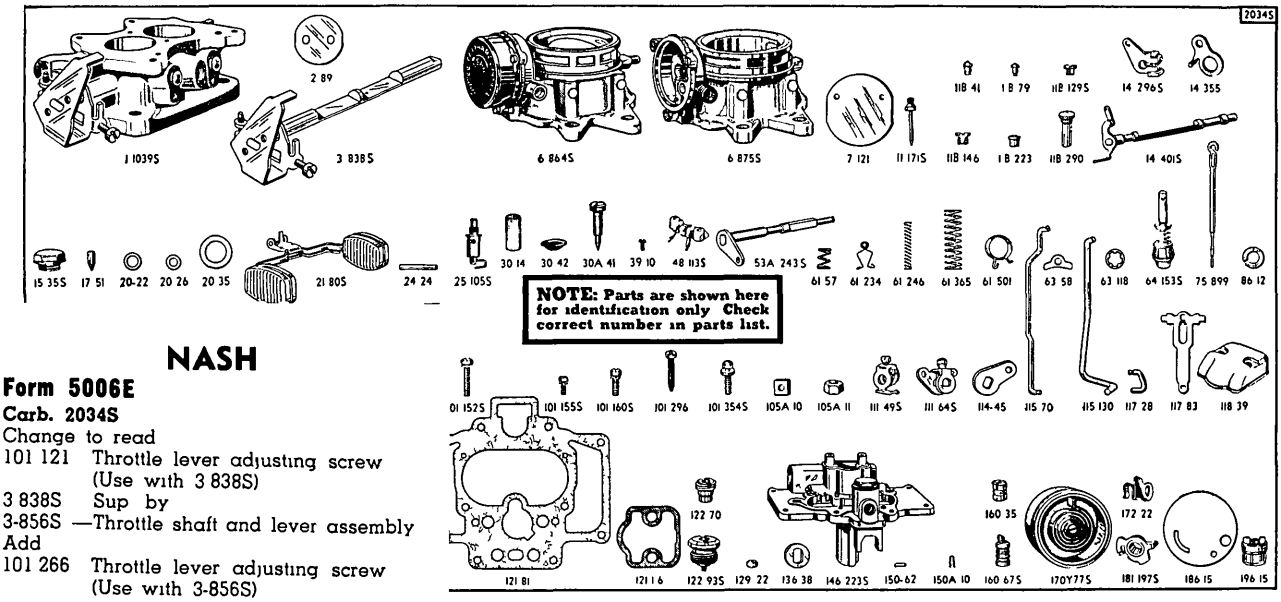


Figure 6
Unloader Adjustment

UNLOADER ADJUSTMENT (Fig. 6):

With throttle wide open there should be 11/64 inch (Gauge T109-166) clearance (P) between upper edge of choke valve and inner wall of air horn. Adjust by bending unloader lip (Q) on throttle shaft lever (Use bending tool T109-41).



NASH

Form 5006E

Carb. 2034S

Change to read

101 121 Throttle lever adjusting screw (Use with 3 838S)

3 838S Sup by

3-856S —Throttle shaft and lever assembly

Add

101 266 Throttle lever adjusting screw (Use with 3-856S)

Nash 6—1953—Carbureter No. 2034S

WHEN SERVICING, USE GASKET ASSORTMENT No 230, REPAIR PACKAGE No 1732

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-1039S	Body flange assembly	
2-89	Throttle valve	(2)
3-838S	Throttle shaft and lever assembly	
6 864S	Air horn and Climatic ® control assembly	
6 875S	Air horn assembly	
7-121	Choke valve	
11-171S	LOW SPEED JET ASSEMBLY	(2)
11-176S	Low speed jet assembly (Sup by 11 171S)	(2)
11B-41	Rivet plug	(2)
11B-79	Rivet plug	(3)
11B-108	Idle port rivet plug (Sup by 11B 290)	(2)
11B-129S	PUMP DISCHARGE PASSAGE PLUG ASSEMBLY	
11B-146	Level sight plug	
11B-223	Nozzle passage rivet plug	(2)
11B-290	IDLE PORT RIVET PLUG	(2)
14 296S	Choke lever and screw assembly	
14 355	Cam trip lever	
14-401S	Choke piston lever link and shaft assembly	
15-35S	Strainer nut assembly	
17-51	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	
20-26	Pump discharge passage gasket	
20 35	BOWL STRAINER GASKET	
21-80S	Float and lever assembly	
21-150U	Unitized package (Consists of (1) 21 147S (1) 21 148S and (1) 22 67)	
24-24	Float lever pin	
25 105S	NEEDLE AND SEAT ASSEMBLY	
30-14	BOWL COVER STRAINER	
30 42	PUMP STRAINER	
30A-41	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
48-113S	Pump jet and housing assembly	
53A-243S	Pump operating lever and countershaft assembly	
61-57	Idle adjustment screw spring	(2)
61-234	METERING ROD SPRING	
61-246	VACUUM PISTON SPRING	
61-365	LOWER PUMP SPRING	
61-495	Fast idle cam spring	
61-501	Fast idle cam spring (Sup by 61 495)	
63-58	Coil housing retainer	(3)
63-118	Throttle shaft retaining ring	
64-153S	PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
75 890	Metering rod (Sup by 75 899)	(2)
75-899	METERING ROD	(2)
75-965	Metering rod—1 size lean	(2)
75-966	Metering rod—2 sizes lean	(2)

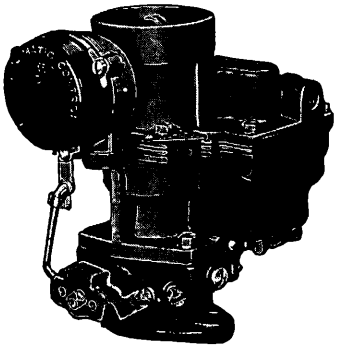
Part No	PART NAME	
86-12	Flange stud lock washer	(3)
101-10	Metering rod and pump arm clamp screw	(2)
101-19	Choke lever clamp screw (Sup by 101 354S)	
101-67	Pump plunger guide retainer screw	
101-73	Throttle valve attaching screw	(4)
101-74	Throttle shaft arm attaching screw	
101-121	Throttle lever adjusting screw	
101-136	Coil housing attaching screw	(3)
101-140	Fast idle cam attaching screw	
101-148S	Dust cover attaching screw and washer assembly	(2)
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	(4)
101-155S	Pump jet housing attaching screw and washer assembly	(2)
101-160S	Bowl cover attaching screw and washer assembly	(6)
101-296	Fast idle adjustment screw	
101-354S	Choke lever clamp screw assembly	
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(3)
111-49S	Metering rod arm and screw assembly	
111-64S	Pump arm and screw assembly	
114-45	THROTTLE SHAFT ARM	
115-70	Choke connector rod	
115-130	THROTTLE CONNECTOR ROD	
117-28	Pump connector link	
117-83	Vacumeter piston link	
118-39	Dust cover	
120-158	METERING ROD JET	(2)
121-78	COIL HOUSING GASKET	
121-79	BODY FLANGE GASKET	
121-80	AIR HORN GASKET	
121-81	BOWL COVER GASKET	
121-116	DUST COVER GASKET	
122-70	PUMP DISCHARGE CHECK SEAT PLUG	
122-93S	PUMP INTAKE DISK CHECK ASSEMBLY	
129-22	Metering rod disk	(2)
136-38	Throttle shaft arm washer	
146-223S	Bowl cover assembly	
150-62	Choke piston pin	
150A-10	PIN SPRING	
160-35	Choke piston	
160-67S	Vacuum piston and pin assembly	
170Y77S	Thermostatic coil and housing assembly	
172-22	THROTTLE CONNECTOR ROD RETAINER	
181-197S	Fast idle cam and spring assembly	
186-15	Choke baffle plate	
196-15	Pump plunger guide	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.

MODEL

"5160"

(Two carbureters per engine)



NASH AMBASSADOR SIX DUAL JET-FIRE 1951

YF Down-Draft Climatic® Control **Carbureter No. 892S**

CARBURETER SPECIFICATIONS

For Nash 6 Cylinder Engine 3⅜ Inch Bore, 4⅜ Inch Stroke

Dimensions Flange size 1¼ inch S A E
Primary venturi 11/32 inch I D
Secondary venturi 11/16 inch I D
Main venturi 1¼ inch I D

Float Setting See Adjustments

Vents Outside none Inside balance vent to air horn above choke valve

Gasoline Intake Spring loaded needle Size No 46 (.081 inch) drill in needle seat

Low Speed Jet Tube Jet size No 70 (.028 inch) drill By pass in air horn size No 55 (.052 inch) drill Economizer in body size No 53 (.0595 inch) drill Idle bleed in body size No 52 (.0635 inch) drill

Idle Port Upper port slot type length 200 inch Width .030 inch

Idle Port Opening Top of port .142 to .146 inch above top edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw) .0615 to .0655 inch diameter

Set Idle Adjustment Screw ½ to 1½ turns open For richer mixture turn screw out Do not idle engine below 550 RPM

Main Nozzle Nozzle is installed permanently **Do not remove** Anti percolator air bleed size .028 inch diameter

Metering Rod (Diaphragm Type) Economy step .068 inch diameter middle step tapers to .057 inch diameter power step .044 inch diameter

Metering Rod Jet .0935 inch diameter

Metering Rod Setting See Adjustments

Accelerating Pump Diaphragm type vacuum and mechanically operated Discharge through nozzle Intake (ball check) size No 40 (.098 inch) drill Vacuum restriction (in flange) size No 55 (.052 inch) drill Vacuum passage (diaphragm bleed) size No 65 (.035 inch) drill Discharge (ball check) seat size No 32 (.116 inch) drill in diaphragm housing Discharge restriction (in housing) No 65 (.035 inch) drill

Pump Adjustment None

Choke Carter Climatic® Control set on index Valve Offset butterfly type Choke heat suction hole restriction in body size No 46 (.081 inch) drill

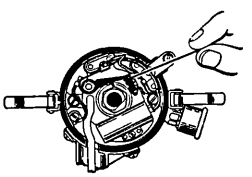
Vacuum Spark Port Round type Size .040 inch diameter Bottom of port .021 .029 inch above top edge of valve in closed position

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



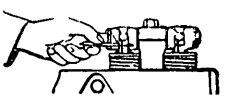
Spark Plug Gap .030"



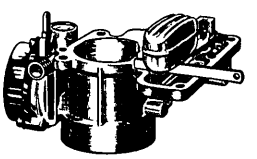
Breaker Point Setting .020"



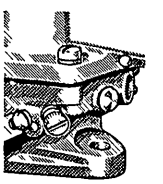
Ignition Timing Breaker Points to Open T. D C



Valve Setting (Hot)
Intake .012"
Exhaust .016"



Float Setting (See Adjustments)



Idle Adjustment Screw Setting ½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT With bowl cover assembly inverted and float resting on pin in seated needle, and with gasket removed the distance from the bowl cover to the top of float should be 21/64 (gauge T109-107 may be used) Do not depress float lip against spring loaded pin in needle, but let float rest of its own weight Adjust by bending lip of float not float arm Float setting must be checked with bowl cover held at eye height in a level position

METERING ROD ADJUSTMENT This adjustment is important and should be checked each time the carbureter is reassembled or lean rods are installed With throttle valve seated in bore of carbureter press down on upper end of diaphragm shaft until diaphragm bottoms in vacuum chamber (Tool T109-212 may be used to hold diaphragm shaft down while adjusting metering rod) Metering rod should contact bottom of metering rod well and metering rod arm

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should contact lifter link between springs and at supporting lug Adjust by bending lip up or down

ACCELERATING PUMP If acceleration is not satisfactory, remove pump housing, intake check assembly and discharge check ball and spring Examine diaphragm for wear or damage Be sure intake screen, intake check and discharge check are not clogged with lint or foreign matter Discharge check ball must seat, as a leak at this point will result in poor acceleration Inspect and replace all worn parts, clean and blow out all passages with compressed air

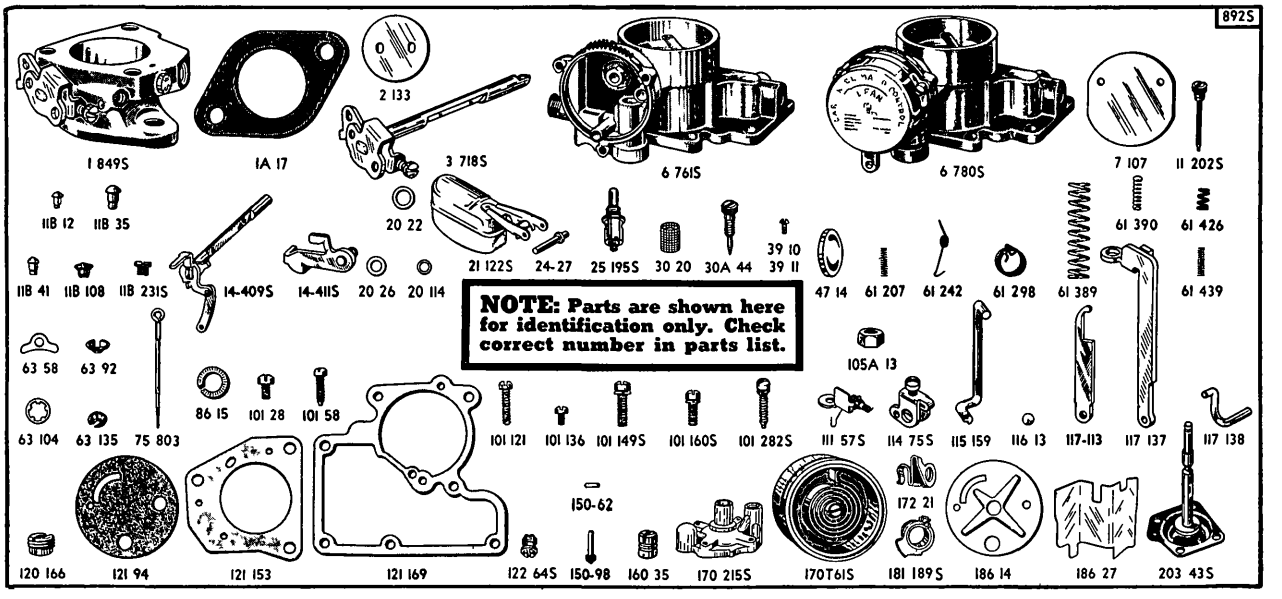
FAST IDLE ADJUSTMENT Remove thermostatic coil housing, gasket and baffle plate Crack throttle valve and hold choke valve fully closed, then close throttle This will allow fast idle cam to revolve to fast idle position With choke valve held tightly closed and slight tension on throttle lever, there should now be 028 inch clearance between throttle valve and bore of carbureter (side opposite idle port) Adjust by bending connector link at lower angle Use bending tool T109-213

UNLOADER ADJUSTMENT This adjustment must be made after fast idle adjustment Hold throttle valve in wide open position and close choke valve as far as possible without forcing There should be 3/8 inch clearance between lower edge of choke valve and inner wall of air horn (gauge T109-80) Adjust by bending arm of choke trip lever (use tool T109-214)

RECOMMENDED PROCEDURE FOR SETTING IDLE

1 Back out idle speed screw on rear carbureter (fully closed throttle).
2 Adjust idle speed screw on front carbureter to give 550 r p m.
3 Adjust idle mixture on front carbureter to best operation and readjust idle speed if necessary to maintain 550 r p m
4 Back out idle speed screw on front carbureter two full turns (or whatever is necessary to insure closed throttle)
5 Adjust idle speed screw on rear carbureter to give 550 r p m
6 Adjust idle mixture screw on rear carbureter to give best operation and readjust idle speed if necessary
7 Turn in idle speed screw on front carbureter as far as possible without increasing r p m

This should result in balancing the two carbureters Any further adjustment to idle speed or mixture should be made by turning the screws the same amount on each carbureter



Nash 6—1951—Carbureter No. 892S

WHEN SERVICING, USE GASKET ASSORTMENT No 216

Part No	PART NAME	
1-849S	Body flange assembly	
1A-17	Flange gasket	
2-133	Throttle valve	
3-718S	Throttle shaft and lever assembly	
6-761S	Air horn assembly	
6-780S	Air horn and Climatic® control assembly	
7-107	Choke valve	
11-202S	Low speed jet assembly	
11B-12	Flange passage plug	
11B-35	Nozzle passage rivet plug	
11B-41	Rivet plug	
11B-108	Idle port rivet plug	
11B-231S	Ball retainer screw plug assembly	
14-409S	Choke piston lever and shaft assembly	
14-411S	Choke trip lever and pin assembly	
20-22	Needle seat gasket	
20-26	Ball retainer screw plug gasket	
20-114	Diaphragm housing attaching screw gasket	
21-122S	Float and lever assembly	
24-27	Float lever pin	
25-195S	Needle, pin, spring and seat assembly	
30-20	Pump intake strainer	
30A-44	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	Throttle valve attaching screw	(2)
47-14	Welsh plug	
61-207	Intake needle spring	
61-242	Metering rod spring	
61-298	Fast idle cam spring	
61-389	Pump diaphragm spring	
61-390	Upper pump spring	
61-426	Idle adjustment screw spring	
61-439	Pump discharge spring	
63 58	Coil housing retainer	(3)
63-92	Diaphragm spring retainer	
63-104	Throttle shaft retaining ring	

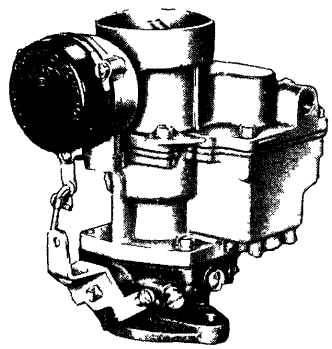
Part No	PART NAME	
63-135	Upper pump spring retainer	
75-803	Metering rod, standard	
86-15	Flange stud lock washer	(2)
101-28	Throttle shaft arm attaching screw	
101-58	Diaphragm housing attaching screw	
101-121	Throttle lever adjustment screw	
101-136	Coil housing attaching screw	(3)
101-149S	Body flange attaching screw and washer assembly	(3)
101-160S	Air horn attaching screw and washer assembly	(7)
101-282S	Diaphragm housing attaching screw and washer assembly	(3)
105A-13	Flange nut	(2)
111-57S	Metering rod arm assembly	
114-75S	Throttle shaft arm assembly	
115-159	Choke connector rod	
116-13	Pump check ball	
117-113	Fast idle link	
117-137	Pump lifter link	
117-138	Pump connector link	
120-166	Metering rod jet	
121-94	Thermostatic coil housing gasket	
121-153	Body flange gasket	
121-169	Bowl cover and air horn gasket	
122-64S	Intake ball check assembly	
150-62	Choke piston pin	
150-98	Intake needle pin	
160-35	Choke piston	
170-215S	Diaphragm housing and bushing assembly	
170T-61S	Thermostatic coil and housing assembly	
172 21	Throttle connector rod retainer	
181-189S	Fast idle cam assembly	
186-14	Coil housing baffle plate	
186-27	Fuel bowl baffle plate (Sup by 186-45)	
186-45	Fuel bowl baffle plate	
203-43S	Diaphragm assembly	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

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DIVISION OF acf INDUSTRIES INCORPORATED
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NASH 757S-SA-SB 824S-SA-SB
December, 1950
Revised September, 1953

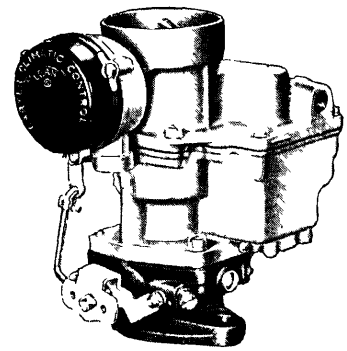


Carb No 757S
Nash Rambler Six

NASH
RAMBLER SIX
MODEL 5110

STATESMAN SIX
MODEL 5140

1951



Carb No 824S
Nash Statesman Six

(2014S can be used in place of 757S-SA-SB)
(877SA can be used in place of 824S-SA-SB)

YF DOWN-DRAFT CLIMATIC® CONTROL CARBURETERS

Nos. 757S-757SA-757SB-824S-824SA-824SB

CARBURETER SPECIFICATIONS

For Nash (757S SA SB) 6 Cylinder Engine 3⅛ Inch Bore, 3¾ Inch Stroke
For Nash (824S-SA-SB) 6 Cylinder Engine 3⅛ Inch Bore, 4 Inch Stroke

Dimensions Flange size 1¼ inch S A E
Primary venturi 11/32 inch I D
Secondary venturi 11/16 inch I D
Main venturi 1¼ inch I D

Float Setting Distance from float (at free end) to float chamber cover with free weight of float on needle to be ½ inch

Vents Outside none Inside balance vent to air horn above choke valve

Gasoline Intake Square vertical needle Size No 48 drill in needle seat

Low Speed Jet Tube Jet size No 70 (.028 inch) drill By pass in air horn size No 56 drill Bleed in body size No 52 drill Economizer in body size No 56 (.0465 inch) drill

Idle Ports Upper port slot type length .200 inch Width .030 inch

Idle Port Opening Top of port .142 to .146 inch above top edge of valve with valve tight closed Lower port size .053 to .057 inch diameter (For idle adjusting screw)

Set Idle Adjustment Screw 1 to 2 turns open For richer mixture turn screw out Do not idle engine below 500 r p m (824S SA SB) For hydramatic do not idle engine below 375 r p m

Main Nozzle In primary venturi angle 40° off vertical Nozzle is installed permanently **Do not remove**
Anti Percolator Air Bleed size .035 inch diameter

Metering Rod (Diaphragm Type) Economy step .0725 inch diameter middle step tapers to .068 inch diameter power step .040 inch diameter
(This rod is designed with flats on economy step)

Metering Rod Jet (757S SA 824S SA) .098 inch diameter (757SB 824SB) .096 inch diameter

Metering Rod Setting See Adjustments

Accelerating Pump Diaphragm type vacuum operated
Discharge through nozzle
Intake (disk check) size No 40 (.098 inch) drill
Vacuum restriction (in flange) size No 55 drill
Vacuum passage (diaphragm bleed) size No 65 drill
Discharge (ball check) seat size No 32 drill in diaphragm housing

Pump Adjustment None

Choke Carter Climatic® Control set on index Valve Offset butterfly type Choke heat suction hole restriction in body size No 46 drill

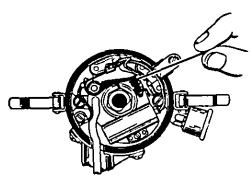
Vacuum Spark Port Slot type Size .125 by .041 inch Bottom of port .025 .035 inch above top edge of valve in closed position

Motor Tune-Up—Be Accurate!

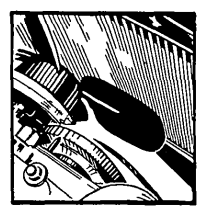
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



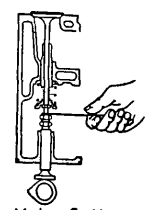
Spark Plug Gap .030"



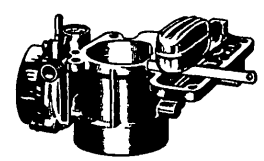
Breaker Point Setting .022"



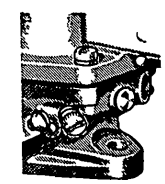
Ignition Timing Breaker Points to Open T D C



Valve Setting (Hot)
Intake .015"
Exhaust .015"



Fl at Setting ½ Inch



Idle Adjustment Screw Setting 1 to 2 Turns Open

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CARBURETER ADJUSTMENTS

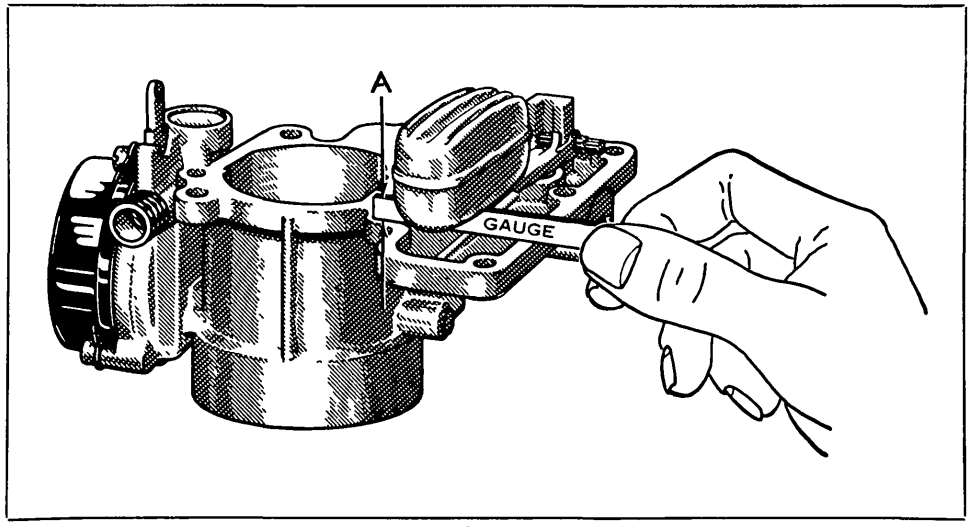


Fig. 1
Float Adjustment

FLOAT ADJUSTMENT: (Fig. 1)

With bowl cover assembly inverted and float resting on seated needle, the distance (A) from the bowl cover to the top of float should be 1/2 inch Adjust by bending lip of float, not float arm.

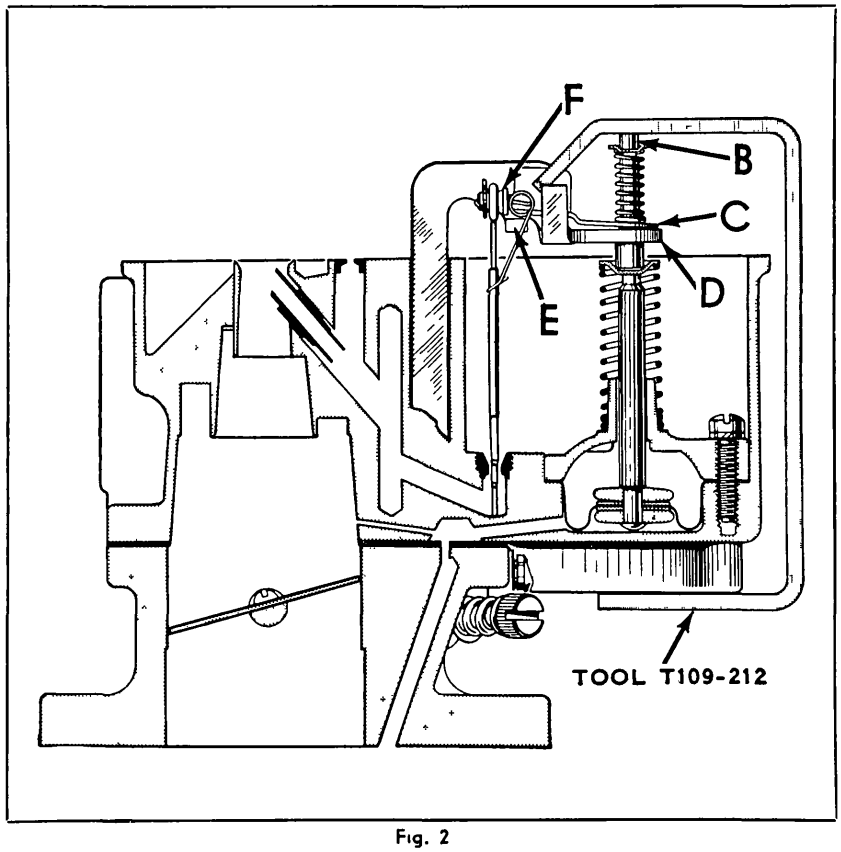


Fig. 2
Metering Rod Adjustment

METERING ROD ADJUSTMENT: (Fig 2)

This adjustment is important and should be checked each time the carbureter is reassembled or lean rods are installed With throttle valve seated in bore of carbureter press down on upper end of diaphragm shaft (B) until diaphragm bottoms in vacuum chamber (Tool T109-212 may be used to hold diaphragm shaft down while adjusting metering rod) Metering rod should contact bottom of metering rod well, and metering rod arm (C) should contact lifter link (D) between springs and at supporting lug (E) Adjust by bending lip (F) up or down

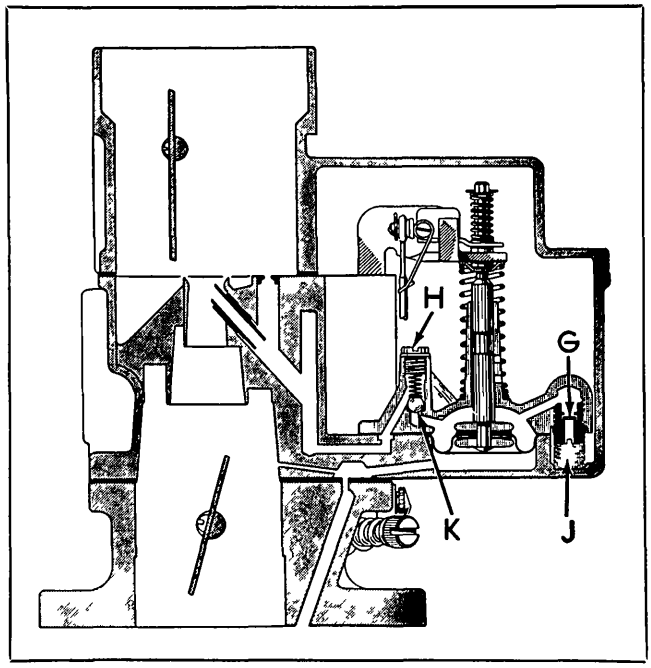


Fig 3
Accelerating Pump

ACCELERATING PUMP (Fig 3)

If acceleration is not satisfactory remove pump housing intake check (G) and discharge check (H) Examine diaphragm for wear or damage Be sure intake screen (J) intake check and discharge check are not clogged with lint or foreign matter Discharge check ball (K) must seat as a leak at this point will result in poor acceleration Inspect and replace all worn parts clean and blow out all passages with compressed air

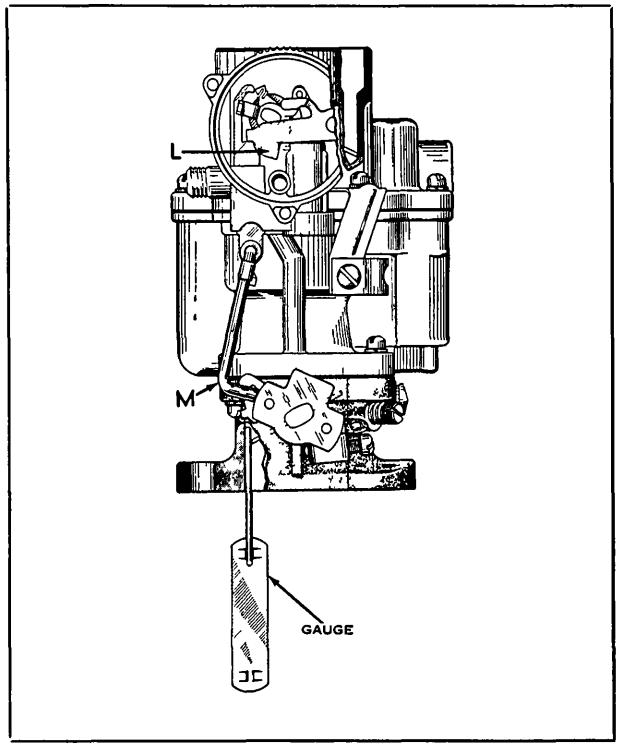


Fig 4
Fast Idle Adjustment

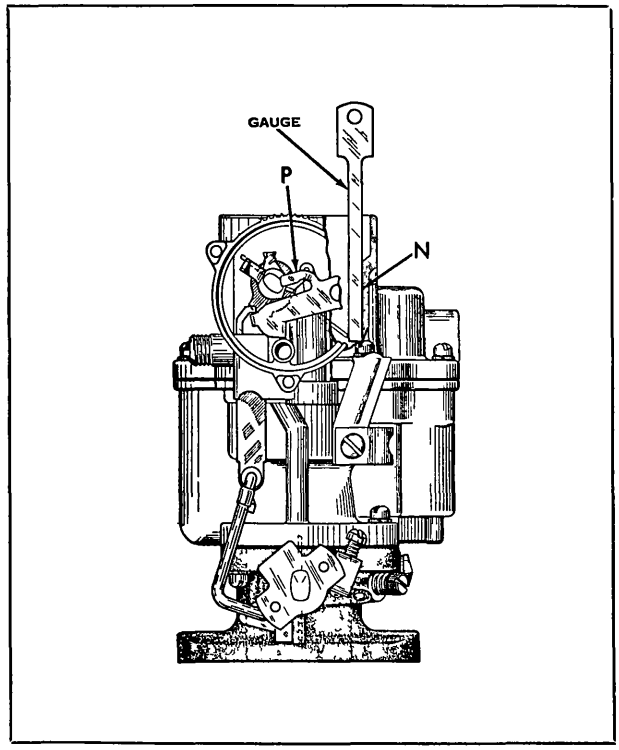


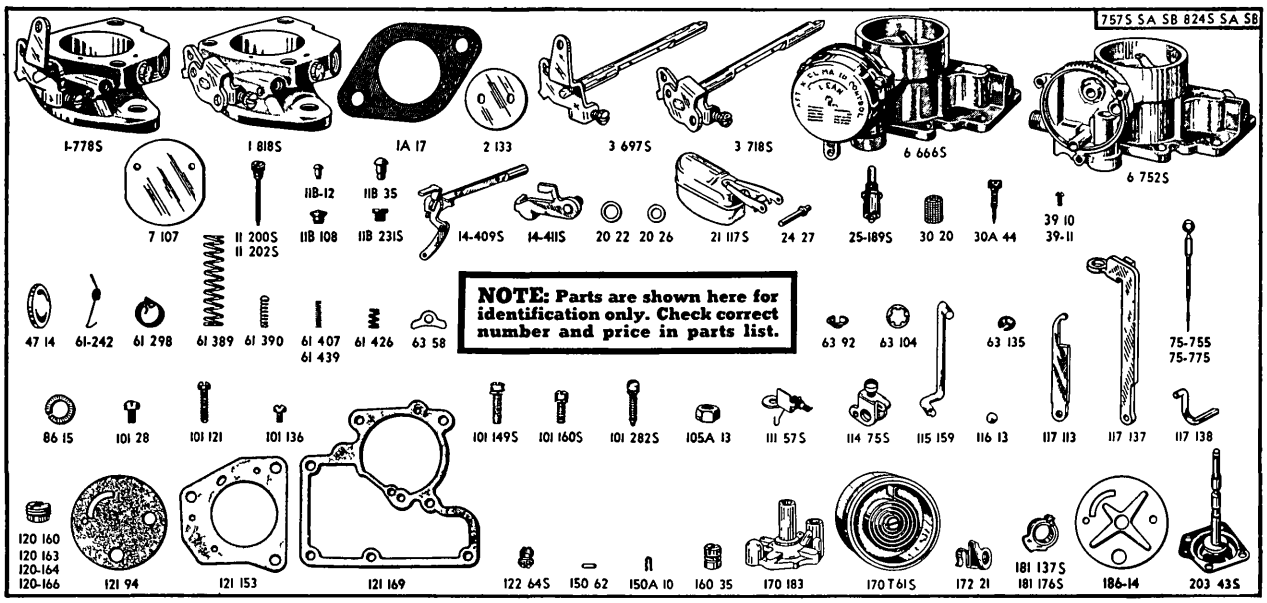
Fig 5
Unloader Adjustment

FAST IDLE ADJUSTMENT (Fig 4)

Remove thermostatic coil housing gasket and baffle plate Crack throttle valve and hold choke valve fully closed, then close throttle This will allow fast idle cam to revolve to fast idle position (L) With choke valve held tightly closed and slight tension on throttle lever there should now be 054 inch clearance between throttle valve and bore of carbureter (side opposite idle port) Adjust by bending connector link at angle (M) Use bending tool T109 41

UNLOADER ADJUSTMENT (Fig 5)

This adjustment must be made after fast idle adjustment Hold throttle valve in wide open position and close choke valve as far as possible without forcing There should be 3/16 inch clearance between lower edge of choke valve and inner wall of air horn (N) (gauge T109 28) Adjust by bending arm of choke trip lever (P) Use tool T109 187



Nash 6—1951—Carbureters Nos. 757S-757SA-757SB-824S-824SA-824SB

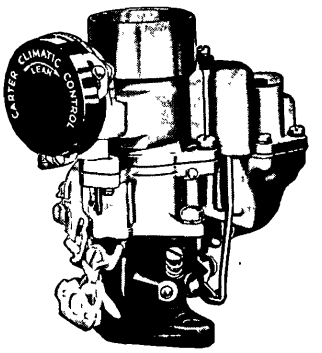
WHEN SERVICING, USE GASKET ASST. No. 208A (ALL); REPAIR PKG. No 157QB (757SB-824SB)

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-778S	Body flange assembly (757S-SA-SB)	
1-818S	Body flange assembly (824S-SA-SB)	
1A-17	Flange gasket (Sup. by 1A-41)	
1A-41	FLANGE GASKET	
2-133	Throttle valve	
3-697S	Throttle shaft and lever assembly (757S-SA-SB)	
3-718S	Throttle shaft and lever assembly (824S-SA-SB)	
6-666S	Air horn and Climatic® control assembly	
6-752S	Air horn assembly	
7-107	Choke valve	
11-200S	Low speed jet assembly (Sup by 11-202S)	
11-202S	LOW SPEED JET ASSEMBLY	
11B-12	Flange passage plug	
11B-35	Nozzle passage rivet plug	
11B-41	Rivet plug	
11B-108	IDLE PORT RIVET PLUG	
11B-231S	Ball retainer screw plug assembly	
14-409S	Choke piston lever and shaft assembly	
14-411S	Choke trip lever and pin assembly	
20-22	Needle seat gasket	
20-26	Ball retainer screw plug gasket	
21-117S	Float and lever assembly	
24-27	Float lever pin	
25-189S	NEEDLE AND SEAT ASSEMBLY	
30-20	PUMP INTAKE STRAINER	
30A-44	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	THROTTLE VALVE ATTACHING SCREW	(2)
47-14	Welsh plug	
61-84	Idle screw spring (Sup by 61-426)	
61-242	Metering rod spring	
61-298	Fast idle cam spring	
61-389	PUMP DIAPHRAGM SPRING	
61-390	Upper pump spring	
61-407	Pump discharge spring (Sup by 61-439)	
61-426	Idle adjustment screw spring	
61-439	PUMP DISCHARGE SPRING	
63-58	Coil housing retainer	(3)
63-92	DIAPHRAGM SPRING RETAINER	
63-104	THROTTLE SHAFT RETAINING RING	

Part No.	PART NAME	
63-135	UPPER PUMP SPRING RETAINER	
75-755	Metering rod—standard (Sup by 75 775)	
75-775	METERING ROD—STANDARD	
75-791	Metering rod—1 size lean	
75-792	Metering rod—2 sizes lean	
86-15	Flange stud lock washer	(2)
101-28	Throttle shaft arm attaching screw	
101-121	Throttle lever adjustment screw	
101-136	Coil housing attaching screw	(3)
101-149S	Body flange attaching screw and washer assembly	(3)
101-160S	Air horn attaching screw and washer assembly	(7)
101-282S	Diaphragm housing attaching screw and washer assembly	(4)
105A-13	Flange nut	(2)
111-57S	Metering rod arm assembly	
114-75S	THROTTLE SHAFT ARM ASSEMBLY	
115-159	Choke connector rod	
116-13	PUMP CHECK BALL	
117-113	Fast idle link	
117-137	PUMP LIFTER LINK	
117-138	PUMP CONNECTOR LINK	
120-160	METERING ROD JET (757SB-824SB)	
120-163	Metering rod jet (757S SA, 824S-SA)	
120-164	Metering rod jet (Sup by 120-160)	
120-166	Metering rod jet (Sup by 120-160)	
121-94	THERMOSTATIC COIL HOUSING GASKET	
121-153	BODY FLANGE GASKET	
121-169	BOWL COVER AND AIR HORN GASKET	
122-64S	INTAKE BALL CHECK ASSEMBLY	
150-62	Choke piston pin	
150A-10	PIN SPRING	
160-35	Choke piston	
170-208S	Pump diaphragm housing and check assembly	
170-214S	Pump diaphragm housing assembly	
170T-61S	Thermostatic coil and housing assembly	
172-21	Throttle connector rod retainer	
181-137S	Fast idle cam assembly (Sup by 181 176S)	
181-176S	Fast idle cam assembly	
186-14	Coil housing baffle plate	
203-43S	PUMP DIAPHRAGM ASSEMBLY	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.



Casting Number 779 on face of flange



NASH STATESMAN SIX MODELS 5040-5140 1950-51

RAMBLER SIX MODEL 5110 1951

WA-1 Down-Draft **Carbureter 780S** With Climatic® Control

CARBURETER SPECIFICATIONS

For Nash 6 Cylinder Engine: 3⅛" Bore, 3¾" Stroke
For Nash 6 Cylinder Engine: 3⅛" Bore, 4" Stroke

Dimensions: Flange size, 1¼ inch S. A. E.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 11/16 inch I. D.
Main venturi, 1¼ inch I. D.

Float Level: Distance from seam of float (at free end) to tip on lower edge of float chamber cover to be ½ inch when needle is seated. (See cut.)

Outside Vent: No. 10 drill size. No inside vent.

Gasoline Intake: Square vertical needle. No. 48 drill size in needle seat.

Low Speed Jet Tube: Jet No. 69 drill size.
By-pass in body, 53 drill size.
Economizer in body, .0755-.0765 inch diameter.
Idle bleed, No. 50 drill size.

Idle Port: Slot type, length, .200 inch, width .032 inch.

Idle Port Opening: Top of port .153 to .157 inch above top edge of valve with valve tight closed.

Idle Screw Seat: No. 46 drill.

Set Idle Adjustment Screw: ¾ to 1¾ turns open. For richer mixture, turn screw out. Do not attempt to idle engine below 500 r.p.m. or 7 m.p.h.

Main Nozzle: In primary venturi, angle 45°. Angled tip.
Inside diameter, No. 30 drill.
Discharge jet size, .0885 inch diameter.

Metering Rod: Economy step, .078 inch diameter. Middle step tapers to .072 inch diameter. Power step, .044 inch diameter. Length of rod, 3-9/64 inches.

Metering Rod Jet: .103 inch diameter.

Metering Rod Setting: Use gauge, part No. T109-102 (2.468 inches).

Accelerating Pump: Pressure type, spring operated lever, with adjustable stroke.
Discharge through nozzle.
Intake ball check, seat size, No. 40 drill in body.
Discharge ball check, seat size, No. 32 drill in body.

Pump Adjustment: 25/64 inch plunger travel. Top hole, (long stroke.) (Full throttle position.) Use gauge T109-117S.

Choke: Carter Climatic® Control, set at index.
Butterfly type, offset valve. Choke heat suction hole, in body. Size No. 38 (.1015 inch) drill.

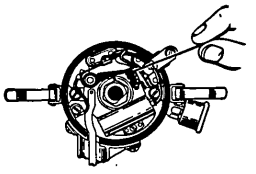
Vacuum Spark Port: .039 to .041 inch diameter. Bottom of port .021 to .029 inch above valve.

Motor Tune-Up—Be Accurate!

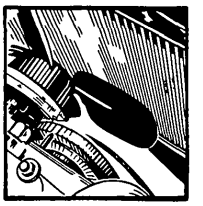
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



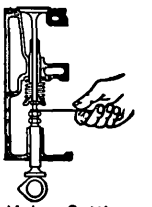
Spark Plug Gap .030"



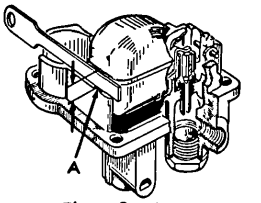
Breaker Point Setting .020"



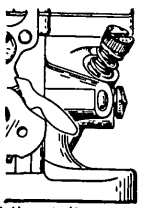
Ignition Timing Breaker Points to Open: T.D.C.



Valve Setting (Hot) Intake .015" Exhaust .015"



Float Setting ½ Inch (Measure from point "A" to top of float seam)



Idle Adjustment Screw Setting ¾ to 1¾ Turns Open

CARBURETER ADJUSTMENTS

Pump Circuit: The pump circuit differs from previous models, as no pump jet is used. The pump discharges through the nozzle into the primary venturi. A spring loaded ball acts as a discharge check and prevents any fuel from entering the nozzle well from the pump cylinder after the pump stroke is completed.

Pump Adjustment: With throttle valve seated and connector link in upper hole of pump arm, pump plunger should travel 25/64" from seated to wide open position. Pump travel can be measured by using universal pump stroke gauge T109-117S, placing base of gauge on ridged portion of bowl cover so that indicator ear of pump gauge rests on top surface of connector link where it extends through plunger shaft. Hold gauge vertical. The difference between the number shown by index mark on gauge, at wide open and closed positions, should be "25". Link position may be changed to accommodate climatic conditions after adjustment has been made.

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Adjustment should be made by bending throttle connector rod at lower angle

Metering Rod Adjustment Correct setting of metering rod is important and must be made after pump adjustment Procedure is as follows

(1) Back out throttle lever set screw to seat throttle valve

(2) Insert metering rod gauge T109-102 in place of metering rod, seating tapered end in metering rod jet

(3) Press lightly on vacuum piston link until lip contacts pin on pump operating lever There should be less than 005 between metering rod pin and shoulder pin in notch of gauge

(4) Adjustment can be made by bending lip of vacuum piston link

Remove gauge and install metering rod and disk Connect metering rod spring

Anti-Percolator Adjustment Crack throttle valve 030" by placing gauge T109-29 between valve and bore of carbureter (side opposite port) Bend rocker arm (Use tool T109-105) until there is a clearance of 005" to 015" between rocker arm and pump arm

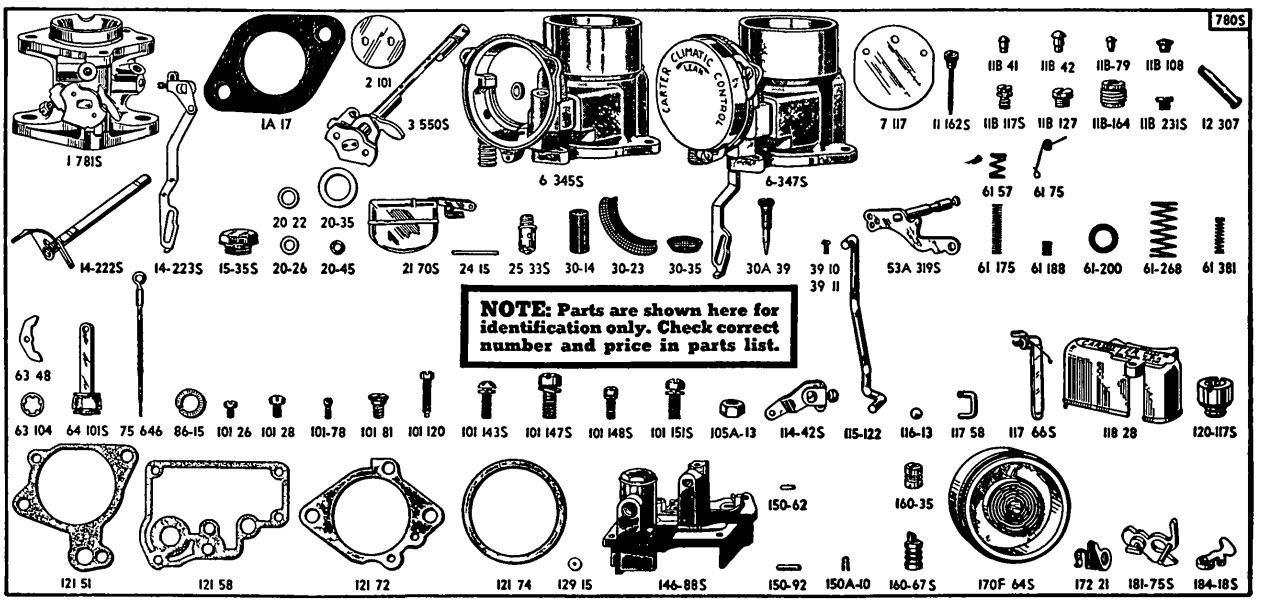
Fast Idle Adjustment With fast idle cam held in normal idle position, tighten throttle lever adjusting screw until it just touches cam Hold throttle closed and pull cam back until first (or lower) step on cam is against (not on) set screw

There should now be 5/8' clearance between inside wall of air horn and lower edge of choke valve (Use tool T109-85)

Adjustment can be made by bending at offset portion of fast idle link (Use tool T109-41)

Unloader Adjustment With throttle valve wide open there should be 7/16 clearance between lower edge of choke valve and inner wall of air horn (Use tool T109-81) Adjustment should be made by bending arm on throttle lever using tool T109-41

Lock Out Adjustment With throttle and choke valve wide open choke should lock in wide open position Adjustment should be made by bending lip at lower end of fast idle link to give 1/32 clearance between lip and throttle lever lock **Lock-out adjustment cannot be made when the choke lever, screw and link assembly without the lock-out lip is installed**



WA-1 Down-Draft Carbureter 780S With Climatic® Control

WHEN SERVICING, USE GASKET ASSORTMENT No 139A, REPAIR PACKAGE No 1501A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

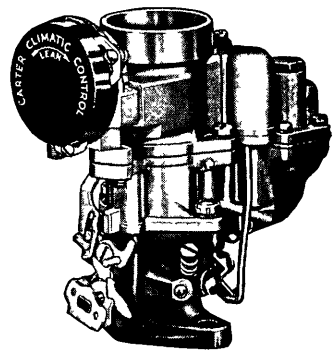
Part No	PART NAME	
1-781S	Body flange assembly	
1A-17	FLANGE GASKET	
2 101	Throttle valve	
3-550S	Throttle shaft and lever assembly	
6-345S	Air horn and piston housing assembly	
6-347S	Air horn assembly	
7-117	Choke valve	
11-162S	LOW SPEED JET ASSEMBLY	
11B-41	Rivet plug	
11B-42	Spark port rivet plug	
11B-79	Rivet plug	(5)
11B-108	Idle port rivet plug	
11B-117S	Idle passage plug assembly	
11B-127S	Nozzle passage plug assembly	
11B-164	Nozzle retainer plug	
11B-231S	Ball retainer screw plug assembly	
12-307	Nozzle	
14-222S	Choke piston lever, link and shaft assembly	
14-223S	Choke lever screw and link assembly (Sup by 14-406S)	
14 406S	Choke lever, screw and link assembly	
15-35S	Strainer nut assembly	
20-22	Gasket	(2)
20-26	Gasket	(3)
20-35	BOWL STRAINER GASKET	
20-45	NOZZLE GASKET	
21 70S	Float and lever assembly	
24-15	Float lever pin	
25-33S	NEEDLE AND SEAT ASSEMBLY	
30-14	BOWL STRAINER GAUZE	
30-23	PISTON HOUSING STRAINER	
30-35	PUMP STRAINER	
30A-39	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	Throttle valve attaching screw	(2)
53A-319S	Pump operating lever assembly	
61-57	Idle adjustment screw spring	
61-75	Metering rod spring	
61-175	VACUUM PISTON SPRING	
61-188	Rocker arm spring	
61-200	Plunger spring	
61-268	Pump spring	
61-381	Pump discharge spring	
63-48	Housing retainer	(3)
63-104	Throttle shaft retaining ring	

Part No.	PART NAME	
64-101S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49-123)	
75-646	METERING ROD—STANDARD	
75-660	Metering rod—1 size lean	
75-661	Metering rod—2 sizes lean	
75-663U	Unitized package (Consists of 1—75-660 and 1—75-661)	
86-15	Flange stud lock washer	
101-26	Coil housing attaching screw	(3)
101 28	Throttle shaft arm clamp screw	
101-78	Choke lever clamp screw	
101-81	Fast idle cam screw	
101-120	Throttle lever adjusting screw	
101-143S	Piston housing attaching screw and washer assembly	
101-147S	Body flange attaching screw and washer assembly	(2)
101-148S	Bowl cover attaching screw and washer assembly	(5)
101-151S	Air horn attaching screw and washer assembly	(2)
105A-13	Flange nut	
114-42S	THROTTLE SHAFT ARM AND SCREW ASSEMBLY	
115-122	THROTTLE CONNECTOR ROD	
116-13	PUMP CHECK BALL	(2)
117-58	PUMP CONNECTOR LINK	
117-66S	Piston link and spring assembly	
118-28	Dust cover	
120 117S	METERING ROD JET ASSEMBLY	
121 51	AIR HORN GASKET	
121-58	BOWL GASKET	
121-72	BODY FLANGE GASKET	
121-74	COIL HOUSING GASKET	
129 15	Metering rod disk	
146-88S	Bowl cover assembly	
150-62	Choke piston pin	
150 92	Anti-percolator pin	
150A-10	PIN SPRING	(3)
160-35	Choke piston	
160 67S	Vacuum piston and pin assembly	
170F-64S	Thermostatic housing and coil assembly	
172-21	THROTTLE CONNECTOR ROD RETAINER	
181-75S	Fast idle cam and pin assembly	
184-18S	ANTI-PERCOLATOR CAP AND ROCKER ARM ASSEMBLY	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

CAR SERIAL NUMBERS
R556001 and higher

MOTOR SERIAL NUMBERS
46001 and higher



Casting Number 679 on face of flange

NASH AMBASSADOR SIX MODELS "5060"-"5160" 1950-1951

WA-1 Down-Draft **Carbureter 746S** With Climatic® Control

CARBURETER SPECIFICATIONS

For Nash 6 Cylinder Engine, 3⅜" Bore, 4⅜" Stroke

Dimensions: Flange size, 1¼ inch S. A. E.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 11/16 inch I. D.
Main venturi, 1-5/16 inch I. D.

Float Level: Distance from seam of float (at free end) to tip on lower edge of float chamber cover to be ½ inch when needle is seated. (See cut.)

Outside Vent: No. 10 drill size (2 holes). No inside vent.

Gasoline Intake: Square vertical needle. No. 46 drill size in needle seat.

Low Speed Jet Tube: Jet No. 64 drill size.
By-pass in body, 53 drill size.
Economizer in body, .063-.064 inch diameter.
Idle bleed, No. 50 drill size.

Idle Port: Length, .175 inch. Width, .030 inch.

Idle Port Opening: .137 to .141 inch above upper edge of valve with valve closed tight.

Idle Screw Seat: No. 46 drill.

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture, turn screw out. Do not attempt to idle engine below 350 r.p.m. or 7 m.p.h.

Main Nozzle: In primary venturi, angle 45°. Closed tip. Top hole (.021 inch) diameter on 45° angle. Lower hole (.081 inch) diameter on 70° angle.

Metering Rod: Standard: Economy step, .076 inch diameter. Middle step tapers to .066 inch diameter.
Power step, .040 inch diameter. Length of rod, 3-9/64 inches.

Metering Rod Jet: .0995 inch diameter.

Metering Rod Setting: Use gauge, part No. T109-102 (2.468 inches).

Accelerating Pump: Pressure type, with adjustable stroke. Discharge through nozzle.
Intake ball check seat size, No. 40 drill in body.
Discharge ball check, seat size, No. 32 drill in body.

Pump Adjustment: 27/64 inch plunger travel (long stroke), full throttle position. Use gauge T109-117S.

Choke: Carter Climatic® Control, set at index. Butterfly type, offset valve. Choke heat suction hole, in body. Size No. 37 (.104 inch) drill.

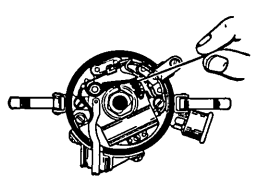
Vacuum Spark Port: .061-.064 inch diameter. Bottom of port .020 to .030 inch above valve.

Motor Tune-Up—Be Accurate!

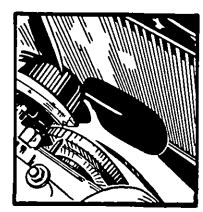
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



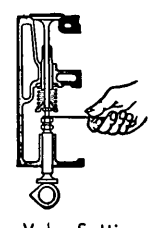
Spark Plug Gap .030"



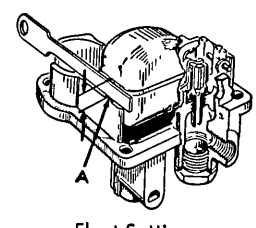
Breaker Point Setting .020"



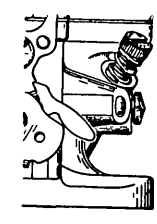
Ignition Timing Breaker Points to Open: T. D. C.



Valve Setting (Hot) Intake .015" Exhaust .018"



Float Setting ½ Inch (Measure from point "A" to top of float seam)



Idle Adjustment Screw Setting ½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

Pump Circuit: The pump circuit differs from previous models, as no pump jet is used. The pump discharges through the nozzle into the primary venturi. A spring loaded ball acts as a discharge check and prevents any fuel from entering the nozzle well from the pump cylinder after the pump stroke is completed.

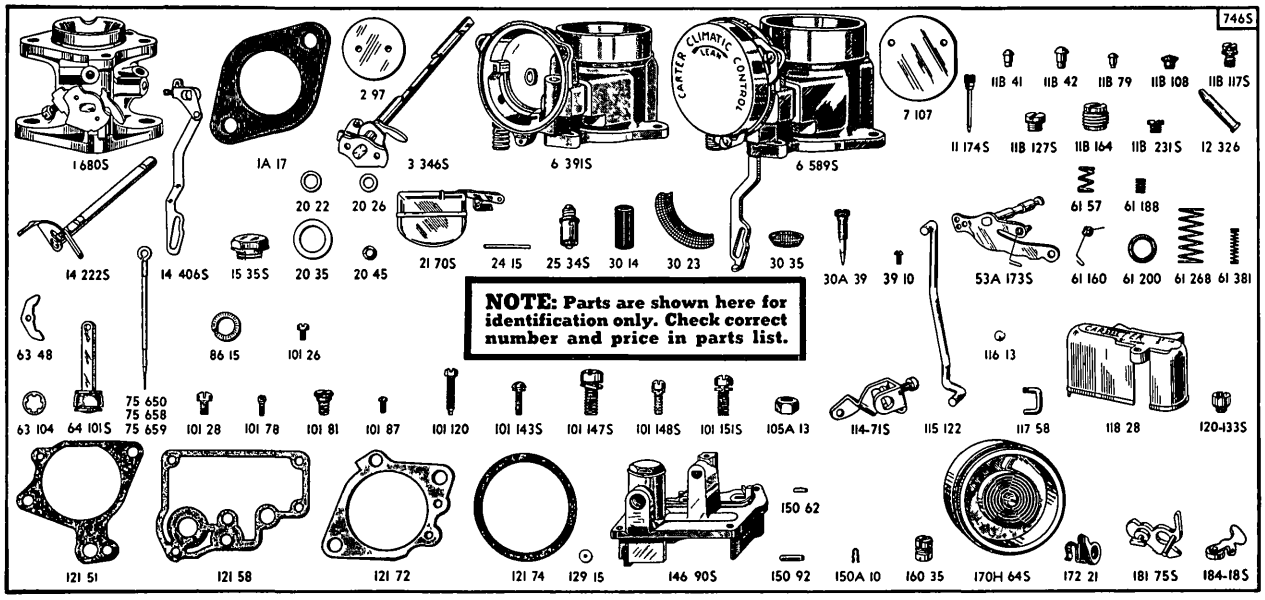
Pump Adjustment: With throttle valve seated and connector link in upper hole in pump arm, pump plunger should travel 27/64" from closed to wide open position. Pump travel should be measured by placing universal pump travel gauge T109-117S on ridged portion of bowl cover so that indicator ear of pump gauge rests on top surface of connector link at pump

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shaft Hold gauge vertical The difference between numbers shown by index mark on gauge, at wide open and closed position, should be 27
Adjust by bending throttle connector rod at lower angle
Metering Rod Adjustment Correct setting of metering rod is important and must be made after pump adjustment Insert gauge T109-102 in place of metering rod, seating tapered end in metering rod jet Hold gauge vertical to insure seating With throttle valve seated there should be less than 005" clearance between pin in pump arm and shoulder in notch of gauge
Adjustment should be made by bending metering rod arm pin portion of pump arm up or down
Remove gauge and install metering rod and disk Connect metering rod spring
Anti Percolator Adjustment Crack throttle valve 030 by placing gauge T109-29 between throttle valve and bore of carburetor (side opposite port) Bend rocker arm (bending tool T109-105) until there is a clearance of 005" to 015' between rocker arm and pump arm
Fast Idle Adjustment With fast idle cam held in normal idle position tighten throttle lever adjusting screw until it just seats against cam Hold throttle lever closed and pull cam back until first (or lower) step on cam is against (not on) set screw
There should now be 5/8' clearance between inside wall of air horn and lower edge of choke valve (Use tool T109-85) Adjustment can be made by bending at offset portion of fast idle link (Use tool T109-41)
Unloader Adjustment With throttle valve wide open there should be 31/64 clearance between lower edge of choke valve and inner wall of air horn (Use tool T109-82) Adjustment should be made by bending cam on throttle lever (Use tool T109-41)



Nash 6—1950-1951—Carbureter No. 746S

WHEN SERVICING, USE GASKET ASSORTMENT No 139A, REPAIR PACKAGE No. 1518

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-680S	Body flange assembly	
1A-17	FLANGE GASKET	
2-97	Throttle valve	
3-346S	Throttle shaft and lever assembly	
6 391S	Air horn and piston housing assembly	
6 589S	Air horn and Climatic® control assembly	
7-107	Choke valve	
11-174S	LOW SPEED JET ASSEMBLY	
11B-41	Rivet plug	
11B 42	Spark port rivet plug	
11B-79	Rivet plug	(4)
11B 108	Idle port rivet plug	
11B 117S	Idle passage plug assembly	
11B-127S	Passage plug assembly	
11B-164	Nozzle retainer plug	
11B 231S	Ball retainer screw plug assembly	
12 326	Nozzle	
14 222S	Choke piston lever, link and shaft assembly	
14 406S	Choke lever screw and link assembly	
15-35S	Strainer nut assembly	
20 22	Gasket	(2)
20-26	Gasket	(3)
20 35	BOWL STRAINER GASKET	
20 45	NOZZLE GASKET	
21-70S	Float and lever assembly	
24-15	Float lever pin	
25 34S	NEEDLE AND SEAT ASSEMBLY	
30 14	BOWL STRAINER GAUZE	
30-23	PISTON HOUSING STRAINER	
30-35	PUMP STRAINER	
30A-39	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
53A-173S	Pump arm and spring assembly	
61-23	Plunger spring (Sup by 61-200)	
61-57	Idle adjustment screw spring	
61-160	Metering rod spring	
61-188	Rocker arm spring	
61-200	Plunger spring	
61 268	Pump spring	
61-381	Pump discharge spring	
63-48	Housing retainer	(3)
63-104	Throttle shaft retaining ring	
64-101S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49-123)	

Part No.	PART NAME	
75-650	METERING ROD—STANDARD— 076'- 076 to 066 - 040	
75-658	Metering rod—1 size lean— 077"- 077' to 069"- 048'	
75-659	Metering rod—2 sizes lean— 078 - 078 to 072"- 054"	
75-662U	Unitized package (Consists of (1) 75-658 and (1) 75-659)	
86-15	Flange stud lock washer	(2)
101-26	Coil housing attaching screw	(3)
101 28	Throttle shaft arm clamp screw	
101 78	Choke lever clamp screw	
101 81	Fast idle cam attaching screw	
101 87	Throttle valve attaching screw	(2)
101-120	Throttle lever adjusting screw	
101-143S	Piston housing attaching screw and washer assembly	
101-147S	Body flange attaching screw and washer assembly	(2)
101-148S	Bowl cover attaching screw and washer assembly	(5)
101-151S	Air horn attaching screw and washer assembly	(2)
105A-13	Flange nut	(2)
114-71S	THROTTLE SHAFT ARM AND SCREW ASSEMBLY	
115-122	THROTTLE CONNECTOR ROD	
116-13	PUMP CHECK BALL	(2)
117 58	PUMP CONNECTOR LINK	
118 28	Dust cover	
120-133S	METERING ROD JET ASSEMBLY	
121-51	AIR HORN GASKET	
121-58	BOWL GASKET	
121-72	BODY FLANGE GASKET	
121-74	COIL HOUSING GASKET	
129-15	Metering rod disk	
146 90S	Bowl cover assembly	
150 62	Choke piston pin	
150 92	Anti-percolator pin	
150A-10	PIN SPRING	(3)
160 35	Choke piston	
170H 64S	Thermostatic housing and coil assembly	
172 21	THROTTLE CONNECTOR ROD RETAINER	
181-75S	Fast idle cam and pin assembly	
184-18S	ANTI-PERCOLATING CAP AND ROCKER ARM ASSEMBLY	

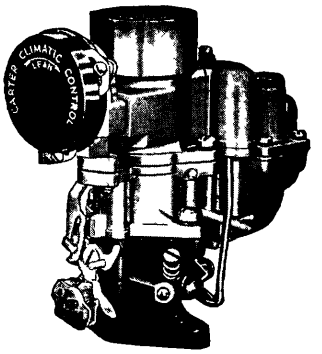
NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

CAR SERIAL NUMBERS

K-260501 and higher

MOTOR SERIAL NUMBERS

S-1001 and higher



Casting Number 298 on face of flange

NASH

600 MODEL "4940"
1949

STATESMAN MODEL "5040"
1950 (Early Production)

(780S can also be used)

WA-1 Down-Draft **Carbureter 694S** With Climatic® Control

CARBURETER SPECIFICATIONS

For Nash 6 Cylinder Engine 3 1/8" Bore 3 3/4" Stroke

Dimensions: Flange size 1 1/4 inch S A E
Primary venturi 11/32 inch I D
Secondary venturi 11/16 inch I D
Main venturi 1 1/4 inch I D

Float Level: Distance from seam of float (at free end) to tip on lower edge of float chamber cover to be 1/2 inch when needle is seated (See cut.)

Outside Vent: No 10 drill size No inside vent

Gasoline Intake: Square vertical needle No 48 drill size in needle seat

Low Speed Jet Tube: Jet No 69 drill size
By pass in body, 53 drill size
Economizer in body 0755 0765 inch diameter
Idle bleed No 50 drill size

Idle Port. Slot type length 200 inch width 032 inch

Idle Port Opening: Top of port 153 to 157 inch above top edge of valve with valve tight closed

Idle Screw Seat: No 46 drill

Set Idle Adjustment Screw 3/4 to 1 3/4 turns open For richer mixture turn screw out Do not attempt to idle engine below 350 r p m or 7 m p h

Main Nozzle In primary venturi angle 45° Angled tip
Inside diameter, No 30 drill
Discharge jet size 086 inch diameter

Metering Rod Economy step 078 inch diameter Middle step tapers to 072 inch diameter Power step 044 inch diameter
Length of rod, 3 9/64 inches

Metering Rod Jet 103 inch diameter

Metering Rod Setting Use gauge part No T109 102 (2 468 inches)

Accelerating Pump Pressure type spring operated lever with adjustable stroke
Discharge through nozzle
Intake ball check seat size No 40 drill in body
Discharge ball check seat size No 32 drill in body

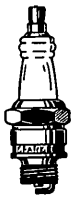
Pump Adjustment 25/64 inch plunger travel Top hole (long stroke) (Full throttle position) Use gauge T109 117S

Choke Carter Climatic® Control set 2 points rich
Butterfly type offset valve Choke heat suction hole in body Size No 38 (1015 inch) drill

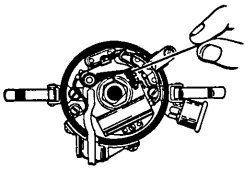
Vacuum Spark Port 039 to 041 inch diameter Bottom of port 021 to 029 inch above valve

Motor Tune-Up—Be Accurate!

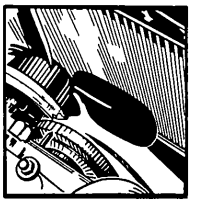
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter.



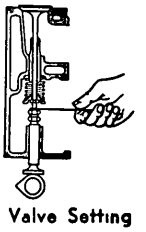
Spark Plug Gap
030"



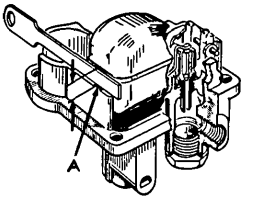
Breaker Point Setting
.020"



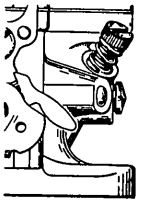
Ignition Timing
Breaker Points to Open:
T. D. C.



Valve Setting (Hot)
Int. .015"
Exh .015"



Float Setting
1/2 Inch
(Measure from point "A" to top of float seam)



Idle Adjustment Screw Setting
3/4 to 1 3/4 Turns Open

CARBURETER ADJUSTMENTS

Pump Circuit The pump circuit differs from previous models, as no pump jet is used The pump discharges through the nozzle into the primary venturi A spring loaded ball acts as a discharge check and prevents any fuel from entering the nozzle well from the pump cylinder after the pump stroke is completed

Pump Adjustment With throttle valve seated and connector link in upper hole of pump arm pump plunger should travel 25/64' from seated to wide open position Pump travel can be measured by using universal pump stroke gauge T109-117S, placing base of gauge on ridged portion of bowl cover so that indicator ear of pump gauge rests on top surface of connector link where it extends through plunger shaft Hold gauge vertical The difference between the number shown by index mark on gauge at wide open and closed positions should be "25' Link position may be changed to accommodate climatic conditions after adjustment has been made

Adjustment should be made by bending throttle connector rod at lower angle

Metering Rod Adjustment Correct setting of metering rod is important and must be made after pump adjustment Procedure is as follows

(1) Back out throttle lever set screw to seat throttle valve

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(2) Insert metering rod gauge T109-102 in place of metering rod, seating tapered end in metering rod jet.
(3) Press lightly on vacuum piston link until lip contacts pin on pump operating lever. There should be less than .005" between metering rod pin and shoulder pin in notch of gauge.
(4) Adjustment can be made by bending lip of vacuum piston link.

Remove gauge and install metering rod and disk. Connect metering rod spring.

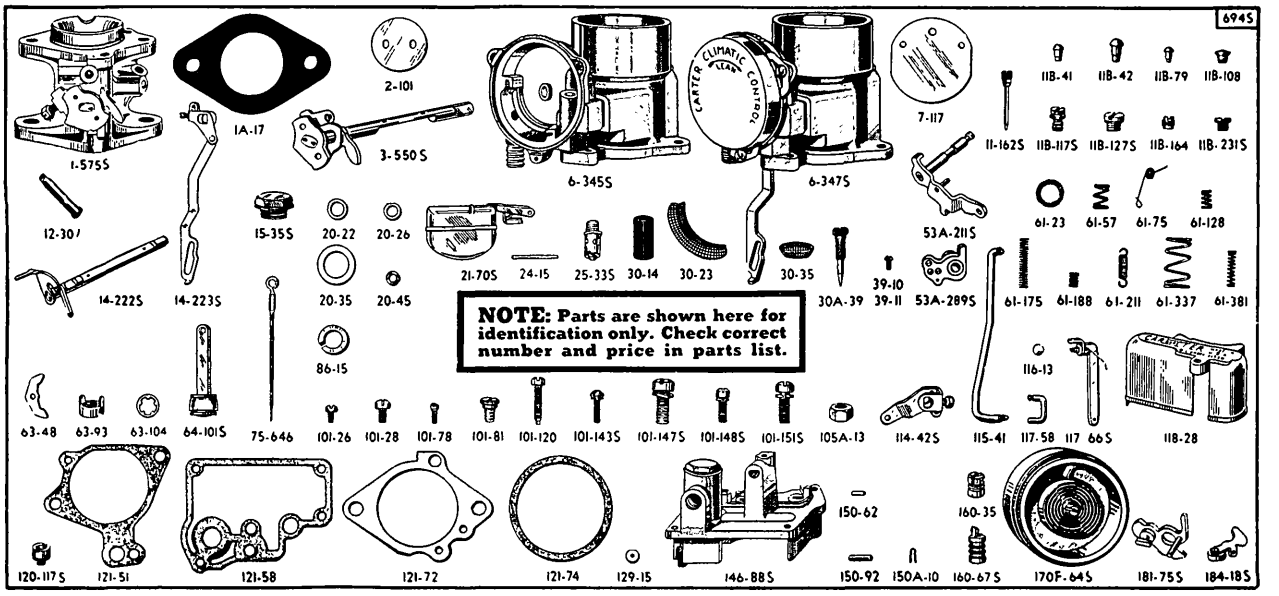
Anti-Percolator Adjustment: Crack throttle valve .030" by placing gauge T109-29 between valve and bore of carbureter (side opposite port). Bend rocker arm (Use tool T109-105) until there is a clearance of .005" to .015" between rocker arm and pump arm.

Fast Idle Adjustment: With fast idle cam held in normal idle position, tighten throttle lever adjusting screw until it just touches cam. Hold throttle closed and pull cam back until first (or lower) step on cam is against (not on) set screw.

There should now be 5/8" clearance between inside wall of air horn and lower edge of choke valve. (Use tool T109-85.) Adjustment can be made by bending at offset portion of fast idle link. (Use tool T109-41.)

Unloader Adjustment: With throttle valve wide open there should be 7/16" clearance between lower edge of choke valve and inner wall of air horn. (Use tool T109-81.) Adjustment should be made by bending arm on throttle lever using tool T109-41.

Lock-Out Adjustment: With throttle and choke valve wide open, choke should lock in wide open position. Adjustment should be made by bending lip at lower end of fast idle link to give 1/32" clearance between lip and throttle lever lock.



WA-1 Down-Draft Carbureter 694S With Climatic® Control

WHEN SERVICING, USE GASKET ASSORTMENT No. 139A; REPAIR PACKAGE No. 1501A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

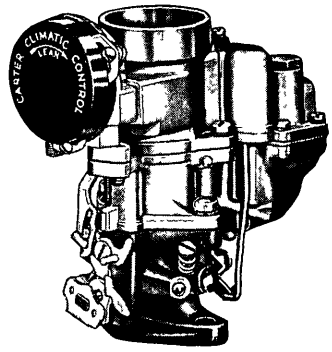
Part No.	PART NAME
1A-17	FLANGE GASKET
1-575S	Body flange assembly
2-101	Throttle valve
3-550S	Throttle shaft and lever assembly
6-345S	Air horn and piston housing assembly
6-347S	Air horn and Climatic® control assembly
7-117	Choke valve
11-162S	LOW SPEED JET ASSEMBLY
11B-41	Rivet plug
11B-42	Spark port rivet plug
11B-79	Rivet plug (5)
11B-108	Idle port rivet plug
11B-117S	Idle passage plug assembly
11B-127S	Nozzle passage plug assembly
11B-164	Nozzle retainer plug
11B-231S	Ball retainer screw plug assembly
12-307	Nozzle
14-222S	Choke piston lever, link and shaft assembly
14-223S	Choke lever, screw and link assembly (Sup. by 14-406S)
14-406S	Choke lever, screw and link assembly
15-35S	Strainer nut assembly
20-22	Needle seat and plug gasket (2)
20-26	Metering rod jet and plug gasket (3)
20-35	BOWL STRAINER GASKET
20-45	NOZZLE GASKET
21-70S	Float and lever assembly
24-15	Float lever pin
25-33S	NEEDLE AND SEAT ASSEMBLY
30-14	BOWL STRAINER GAUZE
30-23	PISTON HOUSING STRAINER
30-35	PUMP STRAINER
30A-39	Idle adjustment screw
39-10	Choke valve attaching screw (2)
39-11	Throttle valve attaching screw (2)
53A-211S	Pump operating lever and countershaft assembly (Sup. by 53A-319S)
53A-289S	Pump arm and collar assembly (Sup. by 53A-319S)
53A-319S	Pump operating lever assembly
61-23	Plunger spring (Sup. by 61-200)
61-57	Idle adjustment screw spring
61-75	Metering rod spring
61-128	Connector rod spring (Use with 115-41)
61-175	VACUUM PISTON SPRING
61-188	Rocker arm spring
61-200	Plunger spring
61-211	Pump operating lever spring (Use with 53A-211S and 53A-289S)
61-268	Pump spring
61-337	Pump spring (Sup. by 61-268)
61-381	Pump discharge spring
63-48	Housing retainer (3)

Part No.	PART NAME
63-93	Spring retainer (Use with 115-41)
63-104	Throttle shaft retaining ring
64-101S	PLUNGER AND ROD ASSEMBLY
75-646	METERING ROD—STANDARD—.078"-.078" to .072"-.044"
75-660	Metering rod—1 size lean—.079"-.079" to .0745"-.050"
75-661	Metering rod—2 sizes lean—.080"-.080" to .077"-.055"
75-663U	Unitized package (Consists of 1—75-660 and 1—75-661)
86-15	Flange stud lock washer (2)
101-26	Coil housing attaching screw (3)
101-28	Throttle shaft arm clamp screw
101-78	Choke lever clamp screw
101-81	Fast idle cam screw
101-120	Throttle lever adjusting screw
101-143S	Piston housing attaching screw and washer assembly
101-147S	Body flange attaching screw and washer assembly (2)
101-148S	Bowl cover attaching screw and washer assembly (5)
101-151S	Air horn attaching screw and washer assembly (2)
105A-13	Flange nut (2)
114-42S	THROTTLE SHAFT ARM AND SCREW ASSEMBLY
115-41	Throttle connector rod (Sup. by 115-122)
115-122	THROTTLE CONNECTOR ROD
116-13	PUMP CHECK BALL (2)
117-58	PUMP CONNECTOR LINK
117-66S	Piston link and spring assembly
118-28	Dust cover
120-117S	METERING ROD JET ASSEMBLY
121-51	AIR HORN GASKET
121-58	BOWL GASKET
121-72	BODY FLANGE GASKET
121-74	COIL HOUSING GASKET
129-15	Metering rod disk
146-88S	Bowl cover assembly
150-62	Choke piston pin
150-92	Anti-percolater pin
150A-10	PIN SPRING (3)
160-35	Choke piston
160-67S	Vacuum piston and pin assembly
170F-64S	Thermostatic housing and coil assembly
170F-64SU	Unitized package (Consists of 1—170F-64S, 3—63-48, 3—101-26, 1—121-74)
172-21	THROTTLE CONNECTOR ROD RETAINER—LOWER (Use with 115-122)
181-75S	Fast idle cam and pin assembly
184-18S	ANTI-PERCOLATOR CAP AND ROCKER ARM ASSEMBLY

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

CAR SERIAL NUMBERS
R-515501 and higher

MOTOR SERIAL NUMBERS
A-1001 and higher



Casting Number 290 on face of flange

NASH AMBASSADOR SIX MODEL "4960" 1949

(746S can also be used)

WA-1 Down-Draft **Carbureter 683S** With Climatic® Control

CARBURETER SPECIFICATIONS

For Nash 683S 6 Cylinder Engine, 3⅜" Bore, 4⅜" Stroke

Dimensions: Flange size, 1¼ inch S. A. E.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 11/16 inch I. D.
Main venturi, 1-5/16 inch I. D.

Float Level: Distance from seam of float (at free end) to tip on lower edge of float chamber cover to be ½ inch when needle is seated. (See cut.)

Outside Vent: No. 10 drill size (2 holes). No inside vent.

Gasoline Intake: Square vertical needle. No. 46 drill size in needle seat.

Low Speed Jet Tube: Jet No. 64 drill size
By-pass in body, 53 drill size.
Economizer in body, .063-.064 inch diameter.
Idle bleed, No. 50 drill size.

Idle Port: Length, .175 inch. Width, .030 inch.

Idle Port Opening: .137 to .141 inch above upper edge of valve with valve closed tight.

Idle Screw Seat: No. 46 drill.

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture, turn screw out. Do not attempt to idle engine below 350 r.p.m. or 7 m.p.h.

Main Nozzle: In primary venturi, angle 45°. Closed tip. Top hole (.021 inch) diameter on 45° angle. Lower hole (.081 inch) diameter on 70° angle.

Metering Rod: Standard: Economy step, .076 inch diameter. Middle step tapers to .066 inch diameter.
Power step, .040 inch diameter. Length of rod, 3-9/64 inches.

Metering Rod Jet: .0995 inch diameter.

Metering Rod Setting: Use gauge, part No. T109-102 (2.468 inches).

Accelerating Pump: Pressure type, with adjustable stroke. Discharge through nozzle.
Intake ball check seat size, No. 40 drill in body.
Discharge ball check, seat size, No. 32 drill in body.

Pump Adjustment: 27/64 inch plunger travel (long stroke), full throttle position. Use gauge T109-117S.

Choke: Carter Climatic® Control, set at index. Butterfly type, offset valve. Choke heat suction hole, in body. Size No. 33 (.113 inch) drill.

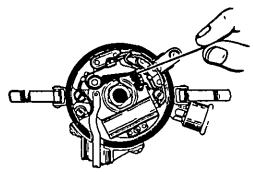
Vacuum Spark Port: .061-.064 inch diameter. Bottom of port .020 to .030 inch above valve.

Motor Tune-Up—Be Accurate!

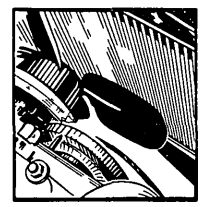
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



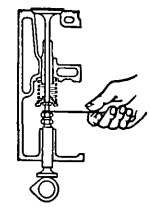
Spark Plug
Gap
.030"



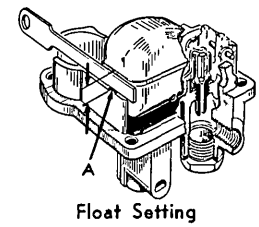
Breaker Point
Setting
.020"



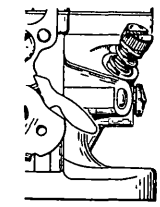
Ignition Timing
Breaker Points to Open:
T. D. C.



Valve Setting
Intake .015"
Exhaust .018"



Float Setting
½ Inch
(Measure from point "A"
to top of float seam)



Idle Adjustment
Screw Setting
½ to 1½
Turns Open

CARBURETER ADJUSTMENTS

Pump Circuit: The pump circuit differs from previous models, as no pump jet is used. The pump discharges through the nozzle into the primary venturi. A spring loaded ball acts as a discharge check and prevents any fuel from entering the nozzle well from the pump cylinder after the pump stroke is completed.

Pump Adjustment: With throttle valve seated and connector link in upper hole in pump arm, pump plunger should travel 27/64" from closed to wide open position. Pump travel should be measured by placing universal pump travel gauge T109-117S on ridged portion of bowl cover so that indicator ear of pump gauge rests on top surface of connector link at pump shaft. Hold gauge vertical. The difference between numbers shown by index mark on gauge, at wide open and closed position, should be 27.

Adjust by bending throttle connector rod at lower angle.

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Metering Rod Adjustment Correct setting of metering rod is important and must be made after pump adjustment Insert gauge T109-102 in place of metering rod seating tapered end in metering rod jet Hold gauge vertical to insure seating With throttle valve seated there should be less than .005" clearance between pin in pump arm and shoulder in notch of gauge

Adjustment should be made by bending metering rod arm pin portion of pump arm up or down

Remove gauge, and install metering rod and disk Connect metering rod spring

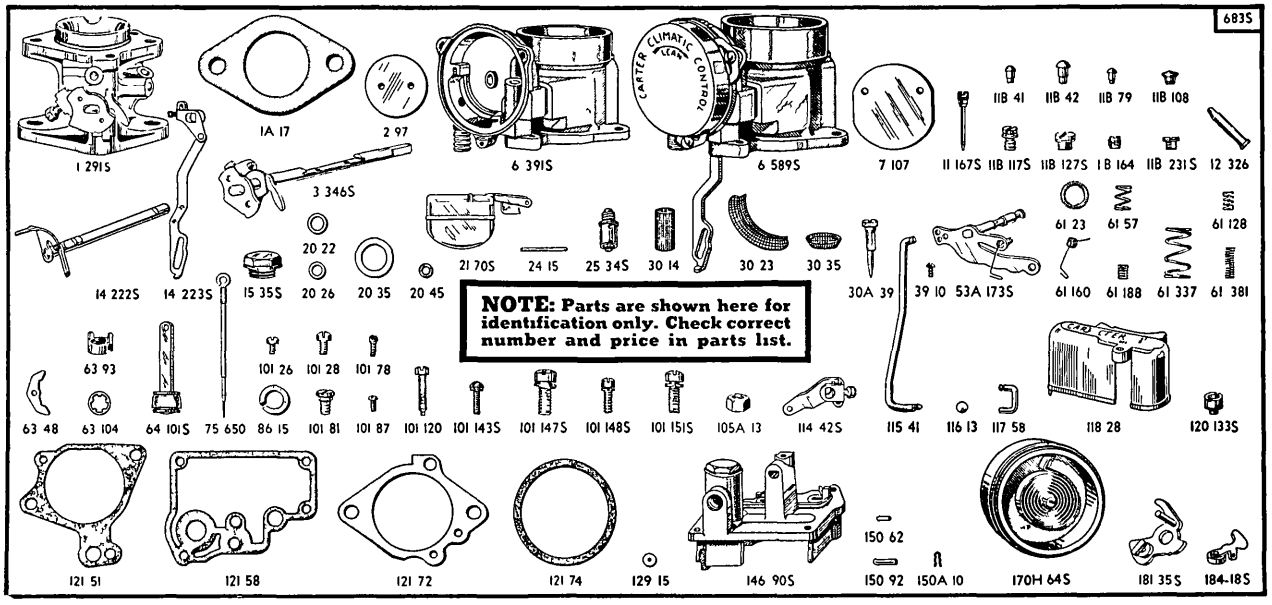
Anti Percolator Adjustment Crack throttle valve .020" by placing gauge T109-29 between throttle valve and bore of carbureter (side opposite port) Bend rocker arm (bending tool T109-105) until there is a clearance of .005" to .015" between rocker arm and pump arm

Fast Idle Adjustment With fast idle cam held in normal idle position, tighten throttle lever adjusting screw until it just seats against cam Hold throttle lever closed and pull cam back until first (or lower) step on cam is against (not on) set screw

There should now be 5/8 clearance between inside wall of air horn and lower edge of choke valve (Use tool T109-85) Adjustment can be made by bending at offset portion of fast idle link (Use tool T109-41)

Unloader Adjustment. With throttle valve wide open there should be 31/64" clearance between lower edge of choke valve and inner wall of air horn (Use tool T109-82) Adjustment should be made by bending cam on throttle lever (Use tool T109-41)

Lock-Out Adjustment With throttle and choke valve wide open choke should lock in wide open position Adjustment should be made by bending lip at lower end of fast idle link to give 1/32" clearance between lip and throttle lever lock, with throttle and choke valve held wide open (Use tool T109-105) Lock-out adjustment cannot be made when the choke lever, screw and link assembly without the lock-out lip is installed



Nash 6—1949—Carbureter No. 683S

WHEN SERVICING, USE GASKET ASSORTMENT No 139A; REPAIR PACKAGE No. 1399A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1 291S	Body flange assembly	
1A-17	FLANGE GASKET	
2-97	Throttle valve	
3-346S	Throttle shaft and lever assembly	
6-391S	Air horn and piston housing assembly	
6-589S	Air horn assembly	
7-107	Choke valve	
11-174S	LOW SPEED JET ASSEMBLY	
11B-41	Rivet plug	
11B-42	Spark port rivet plug	
11B-79	Rivet plug	(4)
11B-108	Idle port rivet plug	
11B-117S	Idle passage plug assembly	
11B-127S	Nozzle passage plug assembly	
11B-164	Nozzle retainer plug	
11B-231S	Ball retainer screw plug assembly	
12-326	Nozzle	
14-222S	Choke piston lever, link and shaft assembly	
14-223S	Choke lever, screw and link assembly (Sup by 14-406S)	
14-406S	Choke lever screw and link assembly	
15-35S	Strainer nut assembly	
20-22	Gasket	(2)
20-26	Gasket	(3)
20 35	BOWL STRAINER GASKET	
20-45	NOZZLE GASKET	
21-70S	Float and lever assembly	
24-15	Float lever pin	
25-34S	NEEDLE AND SEAT ASSEMBLY	
30 14	BOWL STRAINER GAUZE	
30 23	PISTON HOUSING STRAINER	
30 35	PUMP STRAINER	
30A-39	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
53A-173S	Pump arm pin and countershaft assembly	
61 23	Plunger spring (Sup by 61-200)	
61-57	Idle adjustment screw spring	
61-128	Connector rod spring (Use with 115-41)	
61-160	Metering rod spring	
61-188	Rocker arm spring	
61-200	Plunger spring	
61-268	Pump spring	
61-337	Pump spring (Sup by 61-268)	
61-381	Pump discharge spring	
63-48	Housing retainer	(3)
63 93	Spring retainer (Use with 115-41)	
63-104	Throttle shaft retaining ring	
64 101S	PLUNGER AND ROD ASSEMBLY	

Part No	PART NAME	
75-650	METERING ROD—STANDARD— .076"- .076" to .066'- .040"	
75-658	Metering rod—1 size lean— .077"- .077" to .069'- .048"	
75-659	Metering rod—2 sizes lean— .078' - .078" to .072"- .054"	
75-662U	Unitized package (Consists of 1—75-658 and 1—75-659)	
86-15	Flange stud lock washer	(2)
101-26	Coil housing attaching screw	(3)
101-28	Throttle shaft arm clamp screw	
101 78	Choke lever clamp screw	
101-81	Fast idle cam screw	
101 87	Throttle valve attaching screw	(2)
101-120	Throttle lever adjusting screw	
101-143S	Piston housing attaching screw and washer assembly	
101-147S	Body flange attaching screw and washer assembly	(2)
101-148S	Bowl cover attaching screw and washer assembly	(5)
101-151S	Air horn attaching screw and washer assembly	(2)
105A-13	Flange nut	(2)
114-42S	THROTTLE SHAFT ARM AND SCREW ASSEMBLY	
115-41	Throttle connector rod (Sup by 115-122)	
115-122	THROTTLE CONNECTOR ROD	
116-13	PUMP CHECK BALL	(2)
117-58	CONNECTOR LINK (PUMP)	
118 28	Dust cover	
120-133S	METERING ROD JET ASSEMBLY	
121-51	AIR HORN GASKET	
121-58	BOWL GASKET	
121-72	BODY FLANGE GASKET	
121-74	COIL HOUSING GASKET	
129 15	Metering rod disk	
146-90S	Bowl cover assembly	
150-62	Choke piston pin	
150-92	Anti-percolator pin	
150A-10	PIN SPRING	(3)
160-35	Choke piston	
170H-64S	Thermostatic housing and coil assembly	
170H-64SU	Unitized package (Consists of 1—170H-64S, 2—63-48 2—101-26 1—121-74)	
172 21	THROTTLE CONNECTOR ROD RETAINER (LOWER) (Use with 115-122)	
181-35S	Fast idle cam and pin assembly	
184 18S	ANTI-PERCOLATING CAP AND ROCKER ARM ASSEMBLY	

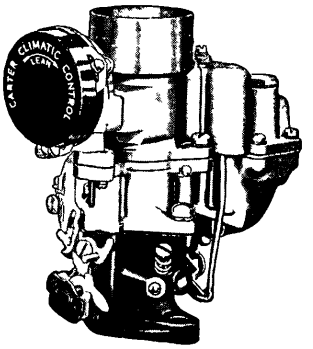
NOTE· Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST LOUIS, MO, U S A

NASH 662S-662SA
January, 1948
Revised November, 1955

CAR SERIAL NUMBERS
196900 and higher

MOTOR SERIAL NUMBERS
K.E.55001 and higher



Casting Number 298 on face of flange

NASH SIX MODEL "4840" 1948

(780S can also be used)

WA-1 Down-Draft **Carbureters 662S-662SA** With Climatic® Control

CARBURETER SPECIFICATIONS

For Nash 6 Cylinder Engine 3 1/8" Bore, 3 3/4" Stroke

Dimensions Flange size 1 1/4 inch S A E
Primary venturi 11/32 inch I D
Secondary venturi 11/16 inch I D
Main venturi 1 1/4 inch I D

Float Level: Distance from seam of float (at free end) to tip on lower edge of float chamber cover to be 1/2 inch when needle is seated (See cut)

Outside Vent No 10 drill size No inside vent

Gasoline Intake Square vertical needle No 48 drill size in needle seat

Low Speed Jet Tube (662S) Jet No 68 drill size (662SA) No 67 drill size
By pass in body 53 drill size
Economizer in body 0755 0765 inch diameter
Idle bleed No 50 drill size

Idle Port: Slot type, length, 200 inch width 032 inch

Idle Port Opening: Top of port 153 to 157 inch above top edge of valve with valve tight closed

Idle Screw Seat: No 46 drill

Set Idle Adjustment Screw 3/4 to 1 3/4 turns open For richer mixture, turn screw out Do not attempt to idle engine below 350 r p m or 7 m p h

Main Nozzle. In primary venturi angle 45° Angled tip
Inside diameter No 30 drill
Discharge jet size 086 inch diameter

Metering Rod Economy step 077 inch diameter Middle step tapers to 070 inch diameter Power step 040 inch diameter
Length of rod 3 9/64 inches

Metering Rod Jet: 103 inch diameter

Metering Rod Setting: Use gauge part No T109-102 (2 468 inches)

Accelerating Pump· High pressure type spring operated lever with adjustable stroke
Discharge jet (No 72 drill) 025 inch diameter
Intake ball check seat size No 40 drill in body
Discharge ball check seat size No 32 drill in body
Relief passage to outside No 42 drill size

Pump Adjustment· 25/64 inch plunger travel Top hole (long stroke) (Full throttle position) Use gauge T109 117S

Choke· Carter Climatic® Control (662S) set 2 points lean (662SA) set on index Butterfly type offset valve Choke heat suction hole in body size No 42 drill (early production) No 38 drill (later production)

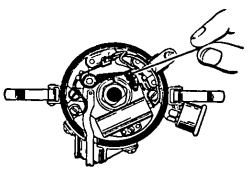
Vacuum Spark Port· 039 to 041 inch diameter Bottom of port 021 to 029 inch above valve

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter



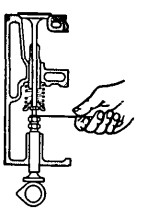
Spark Plug Gap 025"



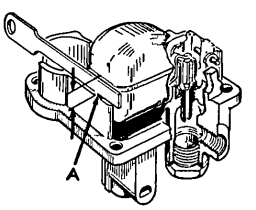
Breaker Point Setting .020"



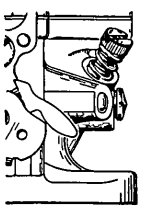
Ignition Timing Breaker Points to Open: T. D C.



Valve Setting Int 015" Exh. .015"



Float Setting 1/2 inch (Measure from point "A" to top of float seam)



Idle Adjustment Screw Setting 3/4 to 1 3/4 Turns Open

CARBURETER ADJUSTMENTS

Pump Adjustment: With pump connector link in outer hole of pump arm, and throttle adjustment screw backed out until throttle valve seats in bore of carbureter, pump travel should be 25/64" from seated to wide open position Pump travel can be measured by using universal pump stroke gauge T109-117S, by placing gauge on ridged portion of bowl cover. Hold gauge vertical Adjust gauge until indicator ear contacts top surface of connector link where it extends through plunger shaft Repeat at wide open throttle The difference between the number shown by index mark on gauge, at wide open and closed positions, should be "25' Adjustment should be made by bending throttle connector rod at lower angle Link position may be changed to accommodate climatic or seasonal conditions after adjustment has been made

Metering Rod Adjustment: Correct setting of metering rod is important and must be made after pump adjustment Procedure is as follows

(1) Back out throttle lever set screw until throttle valve seats

(2) Insert metering rod gauge T109-102 in place of metering rod, seating tapered end in metering rod jet

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(3) Press lightly on vacuum piston link until lip contacts pin on pump operating lever There should be less than 005 between metering rod pin and shoulder in notch of gauge

(4) Adjust by bending lip on vacuum piston link Remove gauge and install metering rod and disk Connect metering rod spring

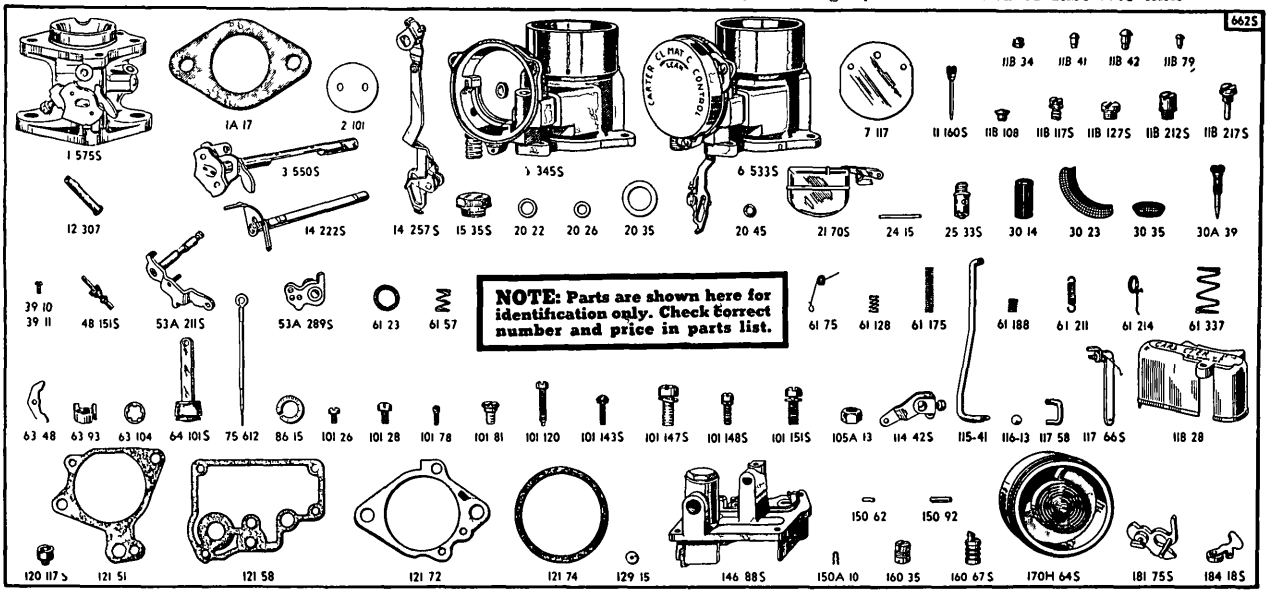
Anti-Percolator Adjustment. Crack throttle valve 030" by placing gauge T109-29 between valve and bore of carbureter (side opposite port) Bend rocker arm (Use tool T109-105) until there is a clearance of 005" to 015" between rocker arm and pump arm

Fast Idle Adjustment: With fast idle cam held in normal idle position, tighten throttle lever adjusting screw until it just touches cam Hold throttle closed and pull cam back until first (or lower) step on cam is against (not on) set screw

There should now be 5/8" clearance between inside wall of air horn and lower edge of choke valve (Use tool T109-85) Adjustment can be made by bending at offset portion of fast idle link (Use tool T109-41)

Unloader Adjustment: With throttle valve wide open there should be 7/16" clearance between lower edge of choke valve and inner wall of air horn (Use gauge T109-81) Adjustment should be made by bending arm on throttle lever with tool T109-41

Lock-Out Adjustment: With throttle and choke valves wide open, choke should lock in wide open position With throttle held wide open, push choke valve to wide open position Choke should lock wide open Adjustment should be made by bending lip at lower end of fast idle link



WA-1 Down-Draft Carbureters 662S-662SA With Climatic® Control

WHEN SERVICING, USE GASKET ASSORTMENT No 139A, REPAIR PACKAGE No 1379B

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-575S	Body flange assembly	
1A-17	FLANGE GASKET	
2-101	Throttle valve	
3-550S	Throttle shaft and lever assembly	
6-345S	Air horn and piston housing assembly	
6 347S	Air horn assembly	
6-533S	Air horn assembly (Sup by 6-347S)	
7 117	Choke valve	
11-160S	Low speed jet assembly (Sup by 11-168S)	
11-168S	LOW SPEED JET ASSEMBLY	
11B 34	Nozzle retainer plug (Sup by 11B-164)	
11B-41	Rivet passage plug	
11B-42	Body flange rivet plug	
11B-79	Rivet passage plug	(5)
11B-108	Idle port rivet plug	
11B-117S	Low speed passage plug assembly	
11B-127S	Nozzle passage plug assembly	
11B-164	Nozzle retainer	
11B-212S	Pump jet dome assembly	
11B-217S	Discharge ball retainer plug assembly	
12 307	Nozzle	
14-222S	Choke piston lever, link and shaft assembly	
14-223S	Choke lever, screw and link assembly (Sup by 14-406S)	
14 257S	Choke lever screw and link assembly (Sup by 14-223S)	
14-406S	Choke lever screw and link assembly	
15-35S	Strainer nut assembly	
20 22	Gasket	(3)
20-26	Gasket	(3)
20-35	Bowl strainer gasket	
20 45	NOZZLE GASKET	
21-70S	Float and lever assembly	
24-15	Float lever pin	
25-33S	NEEDLE AND SEAT ASSEMBLY	
30-14	BOWL STRAINER GAUZE	
30 23	PISTON HOUSING STRAINER	
30 35	PUMP STRAINER	
30A-39	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	Throttle valve attaching screw	(2)
48-151S	PUMP JET AND TUBE ASSEMBLY	
53A-211S	Pump operating lever and countershaft assembly	
53A-289S	Pump arm and collar assembly	
61-23	Plunger spring (Sup by 61-200)	
61 57	Adjustment screw spring	
61-75	Metering rod spring	
61-128	Connector rod spring (Use with 115-41)	
61-175	Vacuum piston spring	
61-188	Anti-percolator valve spring	
61-200	Plunger spring	
61-211	Pump operating lever spring	
61-214	Trip lever spring (662S only)	
61-337	Pump spring	
63-48	Housing retainer	(3)
63 93	Spring retainer (Use with 115-41)	

Part No.	PART NAME	
63-104	Throttle shaft retaining ring	
64-101S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49-123)	
75-612	Metering rod—Standard— 078"- 078" to 073"- 045" (Sup by 75-619)	
75-619	METERING ROD—STANDARD— 077"- 077" to 070"- 040"	
75-631	Metering rod—1 size lean— 079"- 079" to 073"- 047"	
75-632	Metering rod—2 sizes lean— 080"- 080" to 074"- 052"	
75-637U	Unitized package (Consists of 75-631 and 75-632)	
86-15	Flange stud lock washer	(2)
101-26	Coil housing attaching screw	(3)
101-28	Throttle shaft arm clamp screw	
101-78	Choke lever clamp screw	
101-81	Fast idle cam screw	
101-120	Throttle lever adjusting screw	
101-143S	Piston housing attaching screw and washer assembly	
101-147S	Body flange attaching screw and washer assembly	(2)
101-148S	Bowl cover attaching screw and washer assembly	(5)
101-151S	Air horn attaching screw and washer assembly	(2)
105A-13	Flange nut	(2)
114-42S	THROTTLE SHAFT ARM AND SCREW ASSEMBLY	
115-41	Throttle connector rod (Sup by 115-122)	
115-122	THROTTLE CONNECTOR ROD	
116-13	PUMP CHECK BALL	(2)
117-58	PUMP CONNECTOR LINK	
117-66S	Piston link and spring assembly	
118-28	Dust cover	
120-117S	METERING ROD JET ASSEMBLY	
121-51	AIR HORN GASKET	
121-58	BOWL GASKET	
121-72	BODY FLANGE GASKET	
121-74	COIL HOUSING GASKET	
129-15	Metering rod disk	
146 88S	Bowl cover assembly	
150-62	Choke piston pin	
150-92	Anti-percolator pin	
150A-10	PIN SPRING	(3)
160-35	Choke piston	
160-67S	Vacuum piston and pin assembly	
170F-64S	Thermostatic coil and housing assembly	
170F-64SU	Unitized package (Consists of 1—170F-64S 3—63-48, 3—101-26 1—121-74)	
170H-64S	Thermostatic coil and housing assembly (Sup by 170F-64S)	
172-21	THROTTLE CONNECTOR ROD RETAINER (Use with 115-122)	
181-75S	Fast idle cam and pin assembly	
184-18S	ANTI-PERCOLATOR CAP AND ROCKER ARM ASSEMBLY	

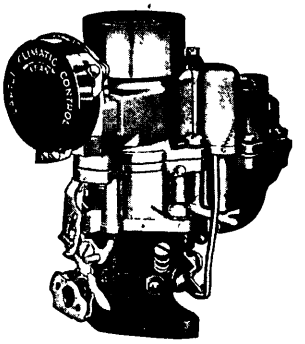
NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

NASH TRUCKS

MODELS

3148 - 3148A - 3248 - 3248A

Use 464S Carbureter Only



Casting Number 290 on face of flange

NASH SIX
PASSENGER CARS

MODEL "4260" — 1942
MODEL "4660" — 1946
MODEL "4760" — 1947
MODEL "4860" — 1948

(746S can also be used)

WA-1 Down-Draft **Carbureter 464S** With Climatic® Control

CARBURETER SPECIFICATIONS

For Nash 464S—6 Cylinder Engine, 3⅜" Bore, 4⅜" Stroke

Dimensions: Flange size, 1¼ inch S. A. E.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 11/16 inch I. D.
Main venturi, 1-5/16 inch I. D.

Float Level: Distance from seam of float (at free end) to tip on lower edge of float chamber cover to be ⅜ inch when needle is seated. (See cut.)

Outside Vent: No. 10 drill size (2 holes). No inside vent.

Gasoline Intake: Square vertical needle. No. 46 drill size in needle seat.

Low Speed Jet Tube: Jet No. 65 drill size.
By-pass in body, 53 drill size.
Economizer in body, .059-.060 inch diameter.
Idle bleed, No. 52 drill size.

Idle Port: Length, .175 inch. Width, .030 inch.

Idle Port Opening: .137 to .141 inch above upper edge of valve with valve closed tight.

Idle Screw Seat: No. 46 drill.

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture, turn screw out. Do not attempt to idle engine below 350 r.p.m. or 7 m.p.h.

Main Nozzle: In primary venturi, angle 45°. Closed tip. Top hole No. 75 drill on 45° angle. Lower hole No. 47 drill on 70° angle.

Metering Rod: Standard: Economy step, .076 inch diameter. Power step, .040 inch diameter. Length of rod, 3-9/64 inches.

Metering Rod Jet: .0995 inch diameter.

Metering Rod Setting: Use gauge, part No. T109-102 (2.468 inches).

Accelerating Pump: Low pressure type, with adjustable stroke.
Discharge jet, No. 70 drill.
Intake ball check seat size, No. 62 drill in body.
Discharge ball check, seat size, No. 32 drill in body.
Relief passage to outside, No. 42 drill size.

Pump Adjustment: 27/64 inch plunger travel (long stroke). Use gauge T109-117S.

Choke: Carter Climatic® Control, set at index. Butterfly type, offset valve. Choke heat suction hole, in body, size No. 37 (.104 inch) drill (early production); No. 33 (.113 inch) drill (late production).

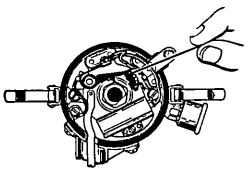
Vacuum Spark Port: 061-.064 inch diameter, bottom of port 022 to .027 inch above valve (early production). Bottom of port .020 to .030 inch above valve (late production).

Motor Tune-Up—Be Accurate!

Caution: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



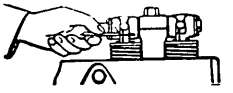
Spark Plug
Gap
.025"



Breaker Point
Setting
.020"

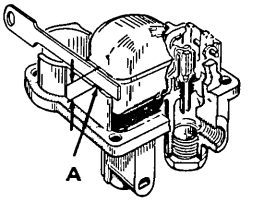


Ignition Timing
Breaker Points to Open:
Passenger Cars
4° B.T.D.C.
Trucks T.D.C.

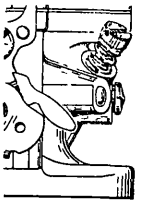


Valve Setting
Passenger Cars
Intake .015"
Exhaust .015"

Trucks
Intake .015"
Exhaust .018"



Float Setting
⅜ inch
(Measure from point "A" to top of float seam)



Idle Adjustment
Screw Setting
½ to 1½
Turns Open

BRIEF CARBURETER ADJUSTMENTS

Pump Adjustment: With throttle valve seated and connector link in upper hole in pump arm, pump plunger should travel 27/64" from closed to wide open position. Adjustment should be made by bending throttle connector rod at lower angle. Pump travel can be measured by using universal pump stroke gauge T109-117S by placing base of gauge on ridged portion of bowl cover so that indicator ear of pump gauge rests on top surface of connector link at pump shaft. Hold gauge vertical. The difference between the number shown by index mark on gauge, at wide open and closed positions, should be 27.

Metering Rod Adjustment: Correct setting of metering rod is important and must be made after pump adjustment. Insert gauge (Tool No. T109-102) in place of metering rod, seating tapered end in metering rod jet. Hold gauge vertical to insure seating. With throttle valve seated there should be less than .005" clearance between pin in pump arm and shoulder of notch in gauge. Gauge should not drag on pin. Adjustment should be made by bending metering rod pin portion of pump arm up or down.

Remove gauge, and install metering rod and disk. Connect metering rod spring.

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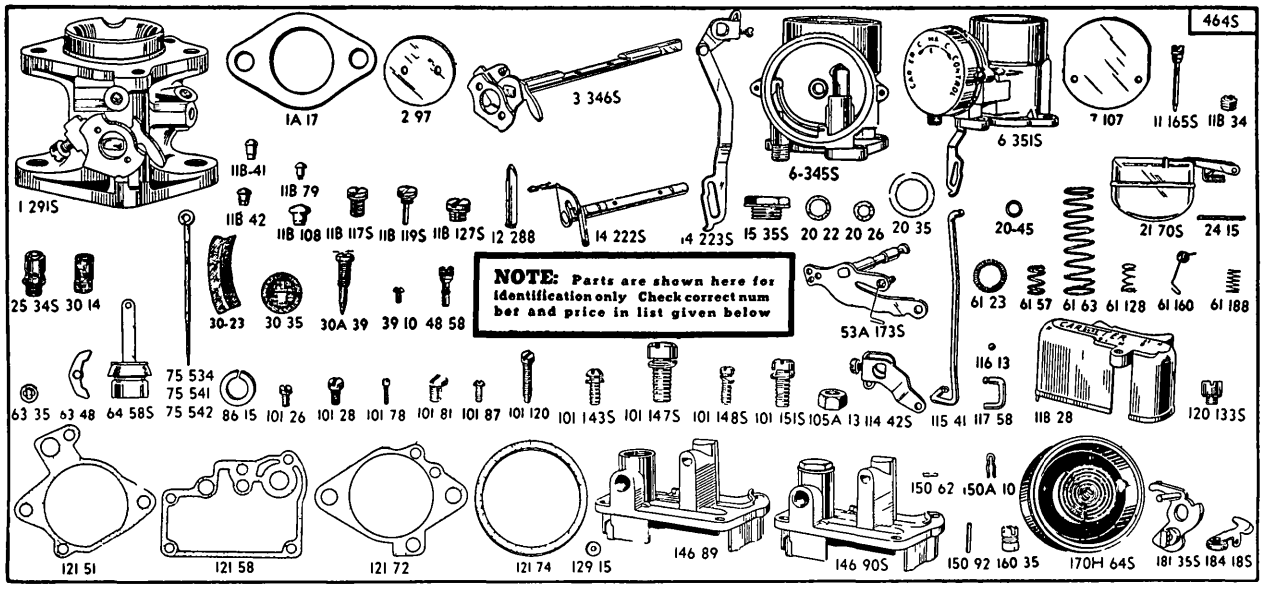
Anti percolator Adjustment Crack throttle valve 020 by placing gauge T109-29 between valve and bore of carbureter (side opposite port) Bend rocker arm (Use tool T109 105) until there is a clearance of 005 to 015 between rocker arm and pump arm

Fast Idle Adjustment With fast idle cam held in normal idle position tighten throttle lever adjusting screw until it just seats against cam Hold throttle lever closed and pull cam back until first (or lower) step on cam is against (not on) set screw

There should now be 5/8 clearance between inside wall of air horn and lower edge of choke valve (Use tool T109 85) Adjustment can be made by bending at offset portion of fast idle link (Use tool T109-41)

Unloader Adjustment With throttle valve wide open there should be 31/64 clearance between lower edge of choke valve and inner wall of air horn (Use tool T109-82) Adjustment should be made by bending cam on throttle lever (Use tool T109-41)

Lock Out Adjustment With throttle and choke valves wide open choke should lock in wide open position Adjustment should be made by bending lip at lower end of fast idle link to give 1/32 clearance between lip and throttle lever lock, with throttle and choke valves held wide open (Use tool T109-105)



NASH 6—1942-46-47-48—CARBURETER No. 464S

WHEN SERVICING, USE GASKET ASSORTMENT No 139A, REPAIR PACKAGE No 1065B

PART NAMES IN CAPITAL LETTERS LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1 291S	Body flange assembly	
1A-17	FLANGE GASKET—1¼ S A E	
2 97	Throttle valve	
3 346S	Throttle shaft and lever assembly	
6 345S	Air horn and piston housing assembly	
6 351S	Air horn and Climatic® control assembly	
7 107	Choke valve	
11 165S	LOW SPEED JET ASSEMBLY, No 6o DR	
11B 34	Nozzle retainer plug (Sup by 11B-164)	
11B-41	Rivet plug	
11B 42	Vacuum spark port rivet plug	
11B-79	Rivet plug	(4)
11B-108	Idle port rivet plug	
11B-117S	Idle passage plug assembly	
11B-119S	Ball retainer plug assembly	
11B 127S	Nozzle and pump jet passage plug assembly	(2)
11B-164	Nozzle retainer plug	
12-288	Nozzle	
14-222S	Choke piston lever, link and shaft assembly	
14 223S	Choke lever screw and link assembly	
15 35S	Strainer nut assembly	
20 22	Needle seat and plug gasket	(3)
20 26	Metering rod jet and plug gasket	(3)
20 35	Bowl strainer gasket	
20 45	NOZZLE GASKET	
21-70S	Float and lever assembly	
24-15	Float lever pin	
25 34S	NEEDLE AND SEAT ASSEMBLY	
30 14	BOWL STRAINER GAUZE	
30 23	PISTON HOUSING STRAINER	
30 35	PUMP STRAINER	
30A-39	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
48 58	PUMP JET— 028	
53A 173S	Pump arm spring and countershaft assembly	
61 23	Plunger spring (Sup by 61-200)	
61-57	Adjustment screw spring	
61 63	Pump spring	
61-128	Connector rod spring (Use with 115-41)	
61 160	Metering rod spring	
61-188	Rocker arm spring	
61 200	Plunger spring	
63 35	Spring retainer (Sup by 63-93)	
63 48	Thermostat housing retainer	(3)
63 93	Spring retainer (Use with 115-41)	
63 104	†Retainer	

Part No	PART NAME	
64 58S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49-108)	
75 372	METERING ROD—STANDARD— 076 - 076 to 074 - 040	
75-534	Metering rod—standard— 076 - 040 (Sup by 75-372)	
75-384	Metering rod—1 size lean— 077 - 048	
75 385	Metering rod—2 sizes lean— 078 - 053	
86-15	Flange stud lock washer	(2)
101-26	Coil housing attaching screw	(3)
101 28	Throttle shaft arm clamp screw	
101-78	Choke lever clamp screw	
101 81	Fast idle cam screw	
101 87	Throttle valve attaching screw	(2)
101-120	Throttle lever adjusting screw	
101-143S	Piston housing screw and washer assembly	
101-147S	Body flange screw and washer assembly	(2)
101-148S	Bowl cover screw and washer assembly	(5)
101-151S	Air horn screw and washer assembly	(2)
105A-13	Flange nut	(2)
114 42S	THROTTLE SHAFT ARM AND SCREW ASSEMBLY	
115-41	Throttle connector rod (Sup by 115-122)	
115-122	THROTTLE CONNECTOR ROD	
116-13	CHECK BALL	(2)
117-58	PUMP CONNECTOR LINK	
118 28	Dust cover	
120 133S	METERING ROD JET ASSEMBLY— 0995	
121 51	AIR HORN GASKET	
121-58	BOWL GASKET	
121-72	BODY FLANGE GASKET	
121 74	COIL HOUSING GASKET	
129 15	Metering rod disk	
136-87	★Throttle shaft washer	(2)
146-89	Bowl cover (Not sold part of 146 90S)	
146 90S	Bowl cover and strainer assembly	
150 62	Piston pin	
150 92	Anti percolator pin	
150A 10	PIN SPRING	(3)
160-35	Choke piston	
170H64S	Thermostatic coil and housing assembly	
170H-64SU	Unitized package (Consists of 1—170H-64S 2—63-48 2—101-26 1—121-74)	
172-21	THROTTLE CONNECTOR ROD RETAINER (Use with 115-122)	
181 35S	Fast idle cam and pin assembly	
184 18S	ANTI-PERCOLATING CAP AND ROCKER ARM ASSEMBLY	

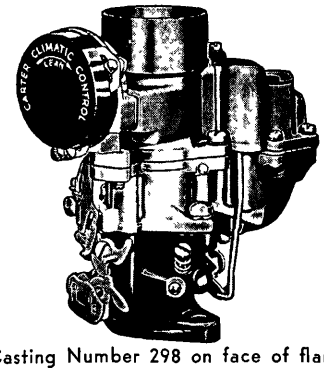
★Assemble these washers on the throttle shaft between throttle body and throttle shaft arm With valve seated press arm securely against washers before tightening clamp screw Throttle must not bind in any position

†Install on throttle shaft between flange and throttle lever, press firmly against casting with prongs inclined outwardly before installing lever

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

CAR SERIAL NUMBERS
K-77701 and higher

MOTOR SERIAL NUMBERS
77701 and higher



Casting Number 298 on face of flange

NASH SIX MODEL "4640" 1946 MODEL "4740" 1947

(780S can also be used)

WA-1 Down-Draft **Carbureter 611S** With Climatic® Control

CARBURETER SPECIFICATIONS

For Nash 611S—6 Cylinder Engine, 3 1/8" Bore, 3 3/4" Stroke

Dimensions: Flange size, 1 1/4 inch S. A. E.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 11/16 inch I. D.
Main venturi, 1 1/4 inch I. D.

Float Level: Distance from seam of float (at free end) to tip on lower edge of float chamber cover to be 1/2 inch when needle is seated. (See cut.)

Outside Vent: No. 10 drill size. No inside vent.

Gasoline Intake: Square vertical needle. No. 48 drill size in needle seat.

Low Speed Jet Tube: Jet No. 71 drill size.
By-pass in body, 53 drill size.
Economizer in body, .0755-.0765 inch diameter.
Idle bleed, No. 50 drill size.

Idle Port: Upper port .086 inch diameter.
Lower port .055 inch diameter.

Idle Port Opening: Top of lower port .011 to .015 inch above top edge of valve with valve tight closed.

Idle Screw Seat: No. 46 drill.

Set Idle Adjustment Screw: 1 1/4 to 2 1/4 turns open. For richer mixture, turn screw out. Do not attempt to idle engine below 350 r.p.m. or 7 m.p.h.

Main Nozzle: In primary venturi, angle 45°. Closed tip. Top hole .021 inch diameter on 45° angle. Lower hole .076 inch diameter on 70° angle.

Metering Rod: (Vacumeter Type) Economy step, .0775 inch diameter. Middle step tapers to .0715 inch diameter. Power step, .049 inch diameter. Length of rod 3-9/64 inches.

Metering Rod Jet: .096 inch diameter.

Metering Rod Setting: Use gauge, part No. T109-102 (2.468 inches).

Accelerating Pump: High pressure type, with seasonal adjustment. Summer setting (lower hole, short stroke). Intermediate setting (upper hole). Winter setting (outer hole, long stroke). Discharge jet, .025 inch diameter. Use tool No. T109-190 to remove.
Intake ball check seat size, No. 40 drill in body.
Discharge ball check, seat size, No. 32 drill in body.
Relief passage to outside, No. 42 drill size.

Pump Adjustment: 25/64 inch plunger travel (full throttle position with pump connector link in outer hole, long stroke). Use gauge T109-117S.

Choke: Carter Climatic® Control, set 2 points lean. Butterfly type, offset valve. Choke heat suction hole, in body. Size No. 42 (.0935) drill.

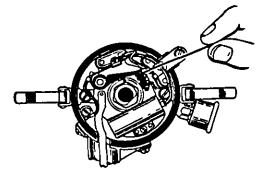
Vacuum Spark Port: .039 to .041 inch diameter. Bottom of port .021 to .029 inch above valve (early production). Bottom of port .010 to .020 inch above valve (later production).

Motor Tune-Up—Be Accurate!

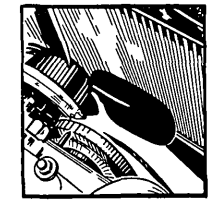
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



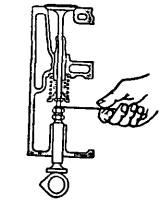
Spark Plug
Gap
.025"



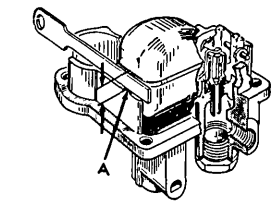
Breaker Point
Setting
.020"



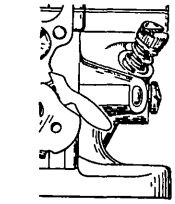
Ignition Timing
Breaker Points to Open:
T. D. C.



Valve Setting
Int. .015"
Exh. .015"



Float Setting
1/2 Inch
(Measure from point "A" to top of float seam)



Idle Adjustment Screw Setting
1 1/4 to 2 1/4 Turns Open

CARBURETER ADJUSTMENTS

Pump Adjustment: With throttle valve seated and connector link in outer hole of pump arm, pump plunger should travel 25/64" from seated to wide open position. Adjustment should be made by bending throttle connector rod at lower angle. Pump travel can be measured by using universal pump stroke gauge T109-117S, placing base of gauge on ridged portion of bowl cover so that indicator ear of pump gauge rests on top surface of connector link where it extends through plunger shaft. Hold gauge vertical. The difference between the number shown by index mark on gauge, at wide open and closed positions, should be "25." Link position may be changed to accommodate climatic conditions after adjustment has been made.

Metering Rod Adjustment: Correct setting of metering rod is important and must be made after pump adjustment. Procedure is as follows:

(1) Back out throttle lever set screw to seat throttle valve.
(2) Insert metering rod gauge T109-102 in place of metering rod, seating tapered end in metering rod jet.
(3) Press lightly on vacuum piston link until lip contacts pin on pump operating lever. There should be less than .005" between metering rod pin and shoulder in notch of gauge.
(4) Adjustment can be made by bending lip of vacuum piston link.

Remove gauge and install metering rod and disk. Connect metering rod spring.

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Anti-Percolator Adjustment. Crack throttle valve .030" by placing gauge T109-29 between valve and bore of carbureter (side opposite port) Bend rocker arm (Use tool T109-105) until there s a clearance of .005" to .015" between rocker arm and pump arm

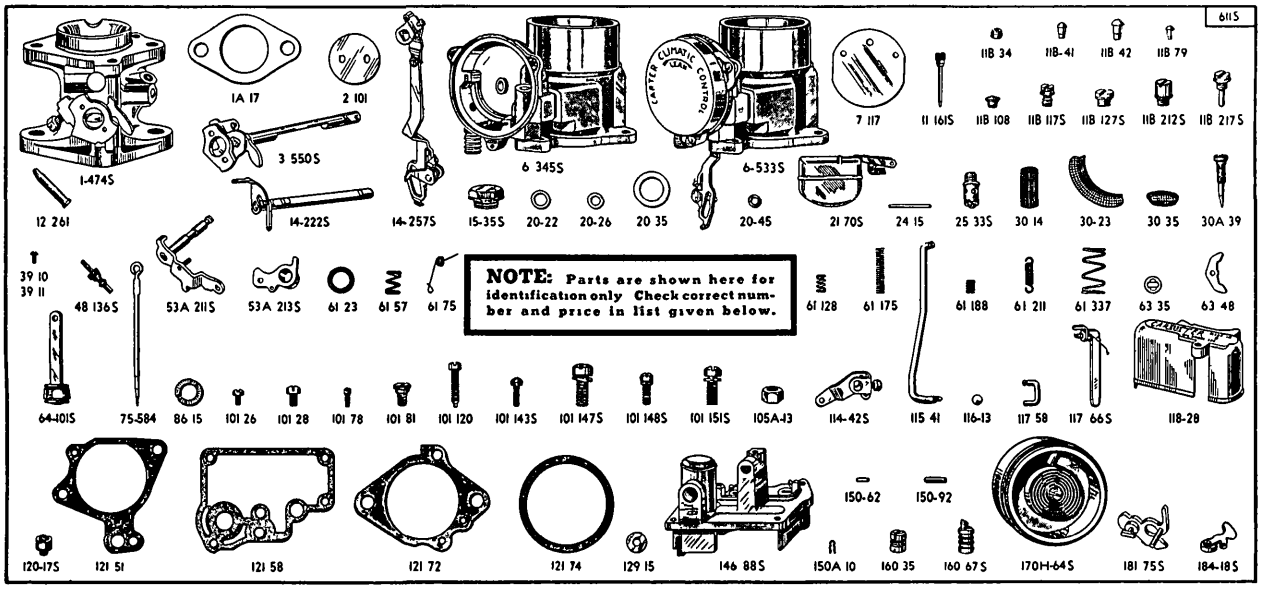
Fast Idle Adjustment With fast idle cam held in normal idle position, tighten throttle lever adjusting screw until it just touches cam Hold throttle closed and pull cam back until first (or lower) step on cam is against (not on) set screw

There should now be 5/8" clearance between inside wall of air horn and lower edge of choke valve (Use tool T109-85)

Adjustment can be made by bending at offset portion of fast idle link (Use tool T109-41.)

Unloader Adjustment: With throttle valve wide open there should be 7/16' clearance between lower edge of choke valve and inner wall of air horn (Use gauge T109-81) Adjustment should be made by bending arm on throttle lever using tool T109-41

Lock-Out Adjustment. With throttle and choke valves wide open, choke should lock in wide open position Adjustment should be made by bending lip at lower end of fast idle link to give 1/32" clearance between lip and throttle lever lock



WA-1 Down-Draft Carbureter 611S With Climatic® Control

WHEN SERVICING, USE GASKET ASSORTMENT No 139A, REPAIR PARTS PKG No 1361C

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-474S	Body flange assembly	
1A-17	FLANGE GASKET	
2-101	Throttle valve	
3-550S	Throttle shaft and lever assembly	
6-345S	Air horn and piston housing assembly	
6-533S	Air horn and Climatic® control assembly	
7-117	Choke valve	
11-161S	LOW SPEED JET ASSEMBLY	
11B-34	Nozzle retainer plug (Sup by 11B-164)	
11B-41	Rivet passage plug	
11B-42	Vacuum spark passage plug	
11B-79	Rivet passage plug	(5)
11B-108	Idle port rivet plug	
11B-117S	Idle passage plug assembly	
11B-127S	Nozzle passage plug assembly	
11B-164	Nozzle retainer plug	
11B-212S	Pump jet dome assembly	
11B-217S	Discharge ball retainer plug assembly	
12-261	Nozzle	
14-222S	Choke piston lever, link and shaft assembly	
14-257S	Choke lever, screw and link assembly	
15-35S	Strainer nut assembly	
20-22	Gasket	(3)
20-26	Gasket	(3)
20-35	Bowl strainer nut gasket	
20-45	NOZZLE GASKET	
21-70S	Float and lever assembly	
24-15	Float lever pin	
25-33S	NEEDLE AND SEAT ASSEMBLY	
30 14	BOWL STRAINER GAUZE	
30 23	PISTON HOUSING STRAINER	
30-35	PUMP STRAINER	
30A-39	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39 11	Throttle valve attaching screw	(2)
48-136S	Pump jet assembly (Sup by 48-151S)	
48-151S	★PUMP JET ASSEMBLY	
53A-211S	Pump operating lever and countershaft assembly	
53A-213S	Pump arm and collar assembly (Sup by 53A-281S)	
53A-281S	PUMP ARM AND COLLAR ASSEMBLY	
61-23	Plunger spring (Sup by 61-200)	
61-57	Plunger spring	
61-75	Metering rod spring	
61-128	Connector rod spring (Use with 115-41)	
61-175	Vacuum piston spring	
61-188	Rocker arm spring	
61-200	Plunger spring	
61-211	Pump operating lever spring	
61-337	Pump spring	
63-35	Spring retainer (Sup by 63-93)	
63-48	Housing retainer	(3)
63-93	Spring retainer (Use with 115-41)	

Part No.	PART NAME	
63-104	†Retaining ring	
64-101S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49-123)	
75-584	METERING ROD—STANDARD— 0775"- 0775" to 0715"- 049"	
75-585	Metering rod—1 size lean— 0785"- 0785" to 0735"- 0545"	
75-586	Metering rod—2 sizes lean— 0795"- 0795" to 077"- 060"	
86-15	Flange stud lock washer	
101-26	Coil housing attaching screw .	(3)
101-28	Throttle shaft arm clamp screw	
101-78	Choke lever clamp screw	
101-81	Fast idle cam screw	
101-120	Throttle lever adjusting screw	
101-143S	Piston housing attaching screw and washer assembly	
101-147S	Flange attaching screw and washer assembly	(2)
101-148S	Bowl cover attaching screw and washer assembly	(5)
101-151S	Air horn attaching screw and washer assembly	(2)
105A-13	Flange nut	
114-42S	THROTTLE SHAFT ARM AND SCREW ASSEMBLY	
115-41	Throttle connector rod (Sup by 115-122)	
115-122	THROTTLE CONNECTOR ROD	
116-13	PUMP CHECK BALL	(2)
117-58	PUMP CONNECTOR LINK	
117-66S	Piston link and spring assembly	
118-28	Dust cover	
120-17S	METERING ROD JET ASSEMBLY	
121-51	AIR HORN GASKET	
121-58	BOWL GASKET	
121-72	BODY FLANGE GASKET	
121-74	COIL HOUSING GASKET	
129-15	Metering rod disk	
136-87	Throttle shaft washer (Sup by 63-104)	(2)
146-88S	Bowl cover and strainer assembly	
150-62	Choke piston pin	
150-92	Anti-percolator pin	
150A-10	PIN SPRING	(3)
160-35	Choke piston	
160-67S	Vacuum piston and pin assembly	
170H-64S	Thermostatic coil and housing assembly	
170H-64SU	Unitized package (Consists of 1—170H-64S, 2—63-48 2—101-26, 1—121-74)	
172-21	THROTTLE CONNECTOR ROD RETAINER (Use with 115-122)	
181-75S	Fast idle cam and pin assembly	
184-18S	ANTI-PERCOLATOR CAP AND ROCKER ARM ASSEMBLY	

†Install 63-104 retainer ring with prongs away from body casting Press ring firmly against casting before installing throttle lever

★Use unitized package No 52-40U (48-151S pump jet and 52-39 manifold sleeve assembly) on all carbureters produced prior to July, 1947 which have not already had these parts installed

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

OIL PRESSURE WARNING SWITCH

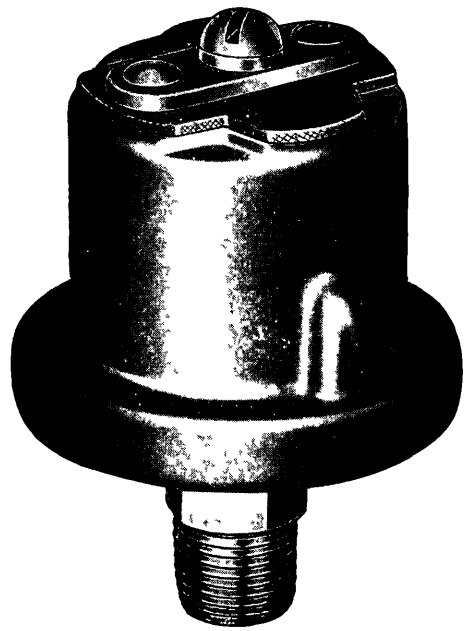
NASH

MODELS

Statesman Six "5240", "5340", "5440"—1952-1954

Ambassador Six "5260", "5360", "5460"—1952-1954

Rambler Six "5010", "5110", "5210", "5310", "5410"—1950-1954



A954S Oil Pressure Warning Switch

With ignition switch on and engine stopped, or before oil pressure reaches normal, the A954S Oil Pressure Warning Switch is closed and grounded completing the circuit to warning light on dash. When the oil pressure reaches normal operating pressure (5 to 8 lbs.) the switch operates as follows: The diaphragm, which is actuated by oil pressure, separates the contact points and the circuit is broken, extinguishing warning light. No adjustment of the switch is necessary as the calibration is set and sealed at the factory.

To insure efficient operation and long life, the Carter Oil Pressure Switch is equipped with silver contact points which are protected against moisture and corrosion.

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Form 5151A

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

Revised

OLDSMOBILE

MODELS
"SUPER 88" and "98"
1955

WCFB Four-Bore Down-Draft Climatic® Control **Carbureter No. 2246S**

CARBURETER SPECIFICATIONS

For Oldsmobile 8 Cylinder Engine: 3⅞ Inch Bore, 3-7/16 Inch Stroke

Dimensions: Flange size, 1⅛ inch Four Bore—4 bolt type
Primary venturi size, 11/32 inch I. D.
Main venturi (primary) size, 1-1/16 inch.
Main venturi (secondary) size, 15/16 inch I. D

Float Level: See adjustments.

Vents: Outside, none. Inside, balance vent tube in air horn, 2 on primary side, 3 on secondary side.

Gasoline Intake: Size No. 42 (.0935 inch) drill hole in needle seat.

Low Speed Jet Tube: (Primary side only).
Jet, pressed in place (DO NOT REMOVE) size No. 68 (.031 inch) drill.
By Pass, in body, size No. 52 (.0635 inch) drill.
Economizer, in screw plug, size No. 57 (.043 inch) drill.
Idle bleed, in body, size No. 52 (.0635 inch) drill.

Idle Port: (Upper) slot type. Primary, length .174 inch; width .040 inch. Secondary, none.

Idle Port Opening: Primary, .113 to .119 inch above top edge of valve with valve tightly closed. Secondary, none.

Lower Port: Primary (for idle adjustment screw), size No. 53 (.0595 inch) drill. Secondary, none.

Set Idle Adjustment Screw: 1 to 2 turns open. For richer mixture turn screw out Do not idle engine below 400 r.p.m. (Hydra-matic Trans.—in Drive Range), 425 r.p.m. (Std. Trans.).

Main Nozzle: Installed permanently. DO NOT REMOVE. Anti-percolating jet (off nozzle well), size No. 60 (.040 inch) drill.

Metering Rod: Primary, economy step .07275 inch diameter. Middle step tapers to .06975 inch diameter. Power step, .058 inch diameter. Secondary, none.

Metering Rod Jet: Primary, size .0935 inch diameter (for metering rod).
Secondary, size No. 53 (.0595 inch) drill (no metering rod).

Metering Rod Setting: See adjustments.

Accelerating Pump: Discharge jet (twin) primary side only size No. 67 (.032 inch) drill.
Intake ball check seat, size .115 to .120 inch diameter.
Discharge needle seat, size .070 inch diameter.
Relief passage (vent) to fuel chamber No. 42 (.0935 inch) drill.

Pump Adjustment: See adjustments.

Choke: Carter Climatic® Control, set on index. Butterfly type—offset choke valve, primary side only. Choke heat suction hole, restriction in piston housing, size No. 43 (.089 inch) drill.

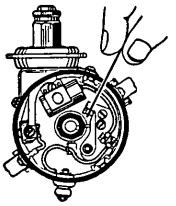
Vacuum Spark Port: Horizontal slot (round end) .045 x .110 inch. Top of port .018 to .028 inch above valve with valve tightly closed

Motor Tune-Up—Be Accurate!

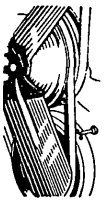
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



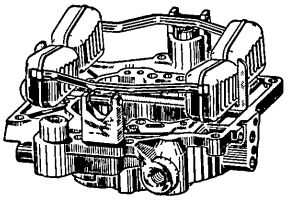
Spark Plug Gap 030"



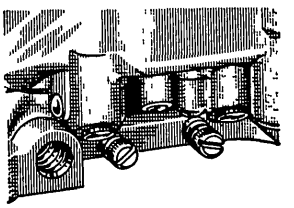
Breaker Point Setting .016"



Ignition Timing 5° B. T. D. C. With Engine Idling at 850 R.P.M. (Distributor vacuum line disconnected)



Float Setting See Adjustments



Idle Adjustment Screw Setting 1 to 2 Turns Open

NOTE: These cars are equipped with hydraulic valve lifters.—NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT Two separate float adjustments must be made — lateral and vertical **LATERAL ADJUSTMENT** With bowl cover assembly inverted bowl cover gasket removed and float resting on seated needle place float gauge (T109 222) directly under floats with notched portion of gauge fitted over edge of casting S de of floats should just clear the vertical uprights of float gauge Adjustment should be made by bend ing arms of float. **VERTICAL ADJUSTMENT** With float gauge in same position floats should just clear the horizontal portion of gauge Vertical distance between top of float and machined surface of casting must be 3/16 inch for both primary and sec ondary floats (gauge T109 222) Adjust by bend ng float arms

FLOAT DROP ADJUSTMENT With bowl cover held in upright position and measuring from center of float the distance be tween top of floats and bowl cover should be 11/16 inch for both primary and secondary floats Adjust by bending stop tabs on float brackets

PUMP ADJUSTMENT Install pump connector link in outer hole (long stroke) of pump arm with ends extending toward counter shaft arm Back out throttle lever set screw until throttle valves seat in bores of carbureter Hold straight edge across top of dust cover boss at pump arm The flat on top of pump arm should be parallel to straight edge Adjust by bending throttle connector rod at lower angle (Use tool T109 213)

METERING ROD ADJUSTMENT Metering rod adjustment is important and must be made after completing the pump ad justment No metering rod gauges are necessary Procedure is as follows 1 Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen meter ing rod arm clamp screw 2 With metering rods in place press down on vacumeter link until metering rods bottom in carbureter body casting 3 Holding rods in downward position and throttle valves seated revolve metering rod arm until finger on arm contacts lip of vacumeter link Hold in place and care fully tighten clamp screw

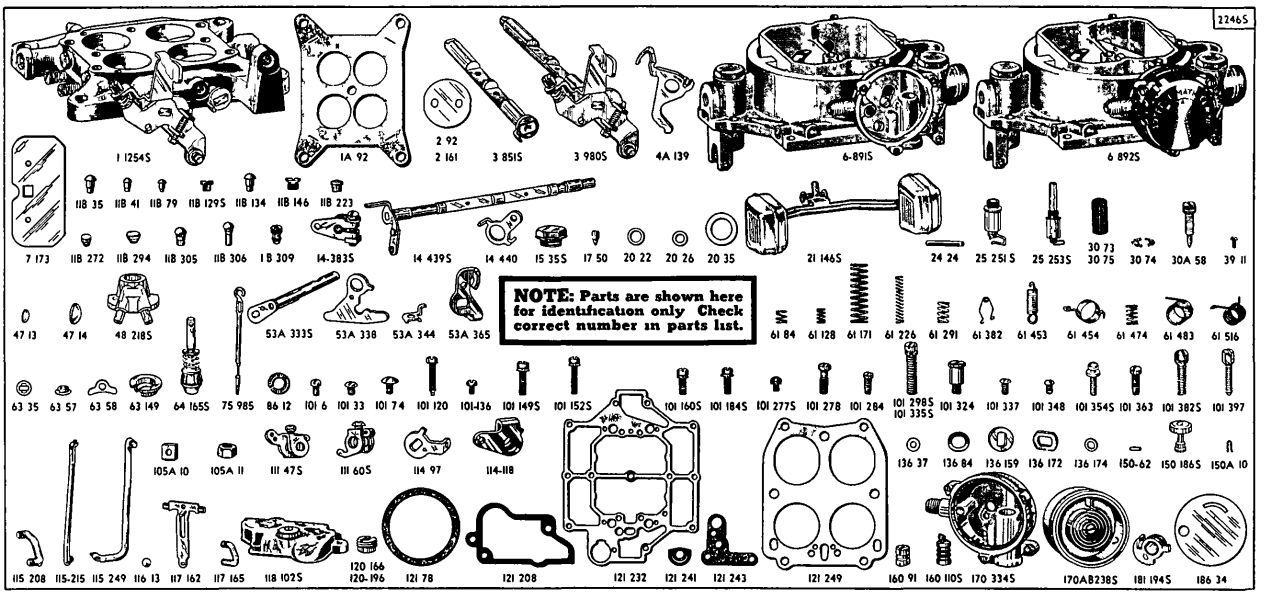
BOWL VAPOR VENT ADJUSTMENT This adjustment should be made after completing pump and metering rod adjustments Install dust cover and dust cover gasket Back out throttle leve set screw to allow throttle valves to seat in bores of carbureter There should be 1/16 inch (gauge T109 197) between lower edge of bowl vapor vent valve and dust cover To adjust remove dust cover and bend vapor vent arm

FAST IDLE ADJUSTMENT (a) Loosen choke lever clamp screw on choke shaft Insert 020 inch feeler gauge (T109 29) be tween lip of fast idle cam and boss of flange casting Hold choke valve tightly closed and take slack out of linkage by press ng choke lever towards closed position—hold in place and tighten clamp screw (b) With choke valve tightly closed tighten fast dle adjusting screw until there is 015 inch (gauge T109 44) opening between throttle valve and bore of carbureter side opposite idle port Be sure fast idle adjusting screw is on high step of cam while making this adjustment

UNLOADER ADJUSTMENT With throttle wide open there should be 3/16 inch (gauge T109 28) clearance between upper edge of choke valve and inner wall of air horn Adjust by bending unloader lip on throttle shaft lever (use bending tool T109 41)

SECONDARY THROTTLE LEVER ADJUSTMENT Primary and secondary throttle valves should reach wide open position at the same time To adjust bend throttle operating rod at upper angle (Use bending tool T109 213)

SECONDARY THROTTLE LOCK OUT ADJUSTMENT This ad justment should be made after completing fast idle and sec ondary throttle lever adjustments Crack throttle valves and hold choke valve tightly closed Then close throttle Tang on secondary throttle lever should freely engage in notch of lock out dog If necessary to adjust bend tang on secondary throt tle lever



Oldsmobile—1955—Carbureter No. 2246S

WHEN SERVICING, USE GASKET ASSORTMENT No. 250

Part No	PART NAME	
1-1254S	Body flange assembly	
1A-92	Flange gasket	
2-92	Primary throttle valve	(2)
2-161	Secondary throttle valve	(2)
3-851S	Secondary throttle shaft and dog assembly	
3-980S	Primary throttle shaft and lever assembly	
4A-139	Throttle shaft dog	
6-891S	Air horn assembly (Casting No 6 889)	
6-892S	Air horn and Climatic® control assembly (Casting No 6 889)	
6-1215S	Air horn assembly (Casting No 6 1147)	
7-173	Choke valve	
11B-35	Rivet plug	(4)
11B-41	Rivet plug (6 891S 6 892S (2) (6 1215S (1)	
11B-79	Rivet plug	(4)
11B-129S	Pump discharge passage plug assembly	
11B-134	Rivet passage plug	
11B-146	Level sight plug	(2)
11B-223	Nozzle passage rivet plug	(4)
11B-272	Rivet plug	(2)
11B-294	Idle port rivet plug	(2)
11B-305	Rivet plug (6 891S 6 892S (1) (6 1215S (2)	
11B-306	Rivet plug (6 891S 6 892S (2) (6 1215S (1)	
11B-309	Economizer screw plug	(2)
14-383S	Choke lever and screw assembly	
14-439S	Choke piston lever link and shaft assembly	
14-440	Cam trip lever	
15-35S	Strainer nut assembly	(2)
17-50	Pump check needle	

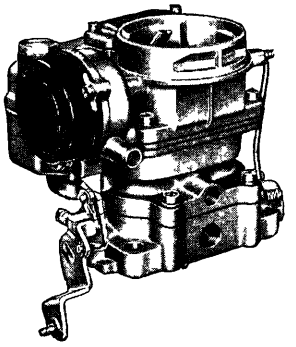
Part No.	PART NAME	
20-22	Needle seat gasket	(2)
20-26	Pump passage plug gasket	
20-35	Bowl strainer gasket	(2)
21-146S	Float and lever assembly	(2)
24-24	Float lever pin	(2)
25-251S	Primary needle and seat assembly	
25-253S	Secondary needle and seat assembly	
30-73	Primary needle seat strainer	
30-74	Secondary fuel inlet strainer	
30-75	Bowl strainer	
30A-58	Idle adjustment screw	(2)
39-11	Choke valve attaching screw	(2)
47-13	Welsh plug (spark port)	
47-14	Welsh plug (choke housing)	
48-218S	Pump jet and housing assembly	
53A-333S	Pump operating lever and countershaft assembly	
53A-338	Lockout arm	
53A-344	Vent arm	
53A-365	Secondary operating lever	
61-84	Idle adjustment screw spring	(2)
61-128	Connector rod spring	
61-171	Pump spring (lower)	
61-226	Vacuum piston spring	
61-291	Throttle lever adjusting screw spring	
61-382	Metering rod spring	
61-453	Throttle flex spring	
61-454	Fast idle cam spring	
61-474	Bowl vent spring	
61-483	Secondary throttle return spring	

Part No.	PART NAME	
61-516	Countershaft spring	
63-35	Connector rod spring retainer	
63-57	Intake check ball retainer	
63-58	Coil housing retainer	(3)
63-149	Bowl vent spring retainer	
64-165S	Pump plunger rod spring and retainer assembly	
75-985	Metering rod—standard	(2)
86-12	Flange stud lock washer	(4)
98-10	Compression coupling nut	
99-10	Compression coupling cone	
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	(2)
101-120	Fast idle adjustment screw	
101-136	Coil housing attaching screw	(3)
101-149S	Body flange attaching screw and washer assembly	
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer ass y	(2)
101-275	Piston housing attaching screw (Use with 6 1215S)	
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet and housing attaching screw	
101-284	Piston housing attaching screw (6 891S 6 892S	(2)
101-298S	Body flange attaching screw and washer ass y	(2)
101-307S	Air horn attaching screw and washer assembly	(8)
101-324	Fast idle cam attaching screw	
101-335S	Air horn attaching screw and washer ass y	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-348	Primary throttle valve attaching screw	(4)
101-354S	Choke lever clamp screw assembly	
101-363	Piston housing attaching screw (6 891S, 6 892S (1) (6 1215S (2)	
101-382S	Body flange attaching screw and washer ass y	(3)
101-397	Throttle lever adjusting screw	
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	

Part No.	PART NAME	
114-97	Throttle shaft arm (outer)	
114-118	Throttle shaft arm (inner)	
115-208	Throttle operating rod	
115-215	Choke connector rod	
115-249	Throttle connector rod	
116-13	Pump intake check ball	
117-162	Vacumeter piston link	
117-165	Pump connector link	
118-102S	Dust cover assembly	
120-166	Primary metering rod jet	(2)
120-196	Secondary metering jet	(2)
121-78	Coil housing gasket	
121-208	Dust cover gasket	
121-232	Air horn gasket	
121-241	Pump jet housing gasket	
121-243	Piston housing gasket (Use with 6 891S 6 892S)	
121-249	Body flange gasket	
121-283	Piston housing gasket (Use with 6 1215S)	
136-37	Throttle connector rod and operating rod washer	(5)
136-84	Spring washer	
136-159	Throttle shaft washer	
136-172	Secondary throttle shaft washer	
136-174	Throttle lever adjusting screw washer	
137-62	Heat tube	
150-62	Choke piston pin	
150-186S	Pin and valve cap assembly	
150A-10	Pin spring	(5)
156-105	Elbow fitting	
160-91	Choke piston	
160-110S	Vacuum piston and pin assembly	
170-334S	Piston housing and plug assembly (Use with 6 891S 6 892S)	
170AB-238S	Thermostatic coil and housing assembly	
170-442S	Piston housing and plug assembly (Use with 6 1215S)	
181-194S	Fast idle cam and spring assembly	
186-34	Choke baffle plate	

NOTE **Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.**

CARBURETER
TRADE MARK REG. U. S. PAT OFF.
MARCA REGISTRADA



OLDSMOBILE
MODEL
DELUXE "88"
1954

WGD Dual Down-Draft Climatic® Control **Carbureter No. 2058S**

CARBURETER SPECIFICATIONS

For Oldsmobile 8 Cylinder Engine: 3⅞ Inch Bore, 3-7/16 Inch Stroke

Dimensions: Flange size, 1¼ inch dual, 4 bolt type.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 21/32 inch I. D.
Main venturi, 1-3/16 inch I. D.

Float Level: See adjustments.

Vents: Outside, none. Inside, balance vent tube above choke valve.

Gasoline Intake: Size No. 42 (.0935 inch) drill in needle seat.

Low Speed Jet Tube: Jet, size No. 67 (.032 inch) drill.
By pass, in bowl cover, size No. 53 (.0595 inch) drill.
Economizer, in bowl cover, size No. 57 (.043 inch) drill.
Idle bleed, in bowl cover, size No. 53 (.0595 inch) drill.

Idle Port: Upper, slot type, length .160 inch, width .030 inch.

Idle Port Opening: .109 to .115 inch above top edge of valve with valve tightly closed.

Lower Port (For Idle Adjustment Screw): Size, .0615 to .069 inch diameter.

Set Idle Adjustment Screw: 1½ to 2½ turns open. For richer mixture turn screw out. Do not idle engine below 400 r.p.m. (Hydramatic—in Drive Range) or 425 r.p.m. (Syncromesh Transmission).

Nozzle: Nozzle is installed permanently. DO NOT REMOVE.

Anti-percolating well jet, size No. 71 (.026 inch) drill.

Metering Rod (Vacumeter Type): Economy step, .0655 inch diameter. Power step .052 inch diameter. These rods designed with idle stabilizing flats on economy step.

Metering Rod Jet: Size .086 inch diameter.

Metering Rod Setting: See adjustments.

Acceleratng Pump: Discharge jet (twin) size No. 70 (.028 inch) drill.
Pump jet air bleed passage to outside, ⅛ inch drill.
Intake ball check, in plunger shaft.
Discharge (needle seat) size No. 50 (.070 inch) drill.

Pump Adjustment: See adjustments.

Choke: Carter Climatic® Control—set on index. Butterfly type, offset valve. Choke heat suction hole in piston housing, size No. 42 (.0935 inch) drill.

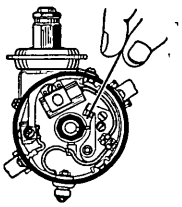
Vacuum Spark Port: Horizontal slot (round end) .045 x .110 inch. Top of port to be .028 inch above upper edge of valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

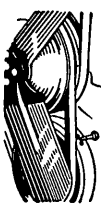
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



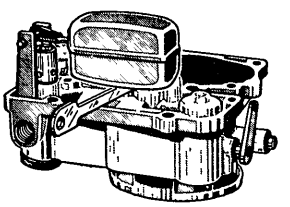
Spark Plug Gap .030"



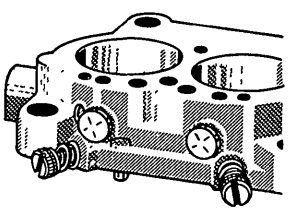
Breaker Point Setting .016"



Ignition Timing Breaker Points to Open: 5° B.T.C. With Engine Idling at 850 R.P.M. (Distributor Vacuum Line Disconnected)



Float Setting ¼" (Use Gauge T109-31)



Idle Adjustment Screw Setting 1½ to 2½ Turns Open

NOTE: These cars equipped with hydraulic valve lifters.—No adjustment.

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CARBURETER
TRADE MARK REG. U. S. PAT. OFF.
MARCA REGISTRADA

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CARBURETER ADJUSTMENTS

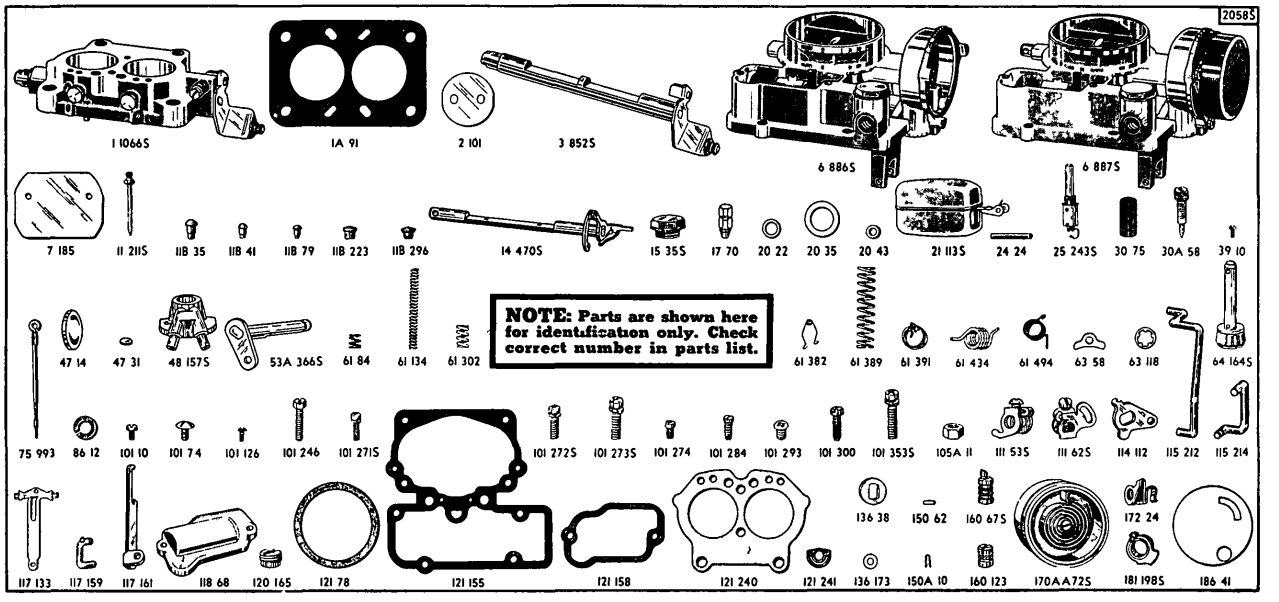
Float Adjustment With bowl cover gasket removed bowl cover inverted and needle seated there should be 1/4 inch (gauge T109-31) between top of float and bowl cover Adjust by bending float arm

Pump Adjustment Back out throttle lever set screw until throttle valves seat in bores of carbureter Hold straight edge across top of dust cover boss at pump arm The flat on top of pump arm should be parallel to straight edge Adjust by bending pump arm at upper angle Use bending tool T109 213

Metering Rod Adjustment The metering rods must be adjusted after the pump adjustment No metering rod gauges are necessary procedure is as follows With the throttle lever set screw backed out and throttle valves seated in bores of carbureter press down on vacumeter link until metering rods bottom in casting With rods held in this position, revolve metering rod arm until lip contacts vacumeter link Hold in place and carefully tighten metering rod arm set screw

Fast Idle Adjustment With the thermostatic coil housing gasket and baffle plate removed crack throttle valve and hold choke valve closed Then close throttle There should now be 020 inch clearance (gauge T109-29) between throttle valve and bore of carbureter (side opposite idle port) Adjust by bending the choke connector rod at lower angle

Unloader Adjustment This adjustment must be made after fast idle adjustment Hold throttle valve in wide open position and close choke valve as far as possible without forcing There should be 7/32 inch (gauge T109-106) clearance between upper edge of choke valve and inner wall of air horn Adjust by bending choke shaft unloader arm (Use Bending Tool T109-105)



Oldsmobile—1954—Carbureter No. 2058S

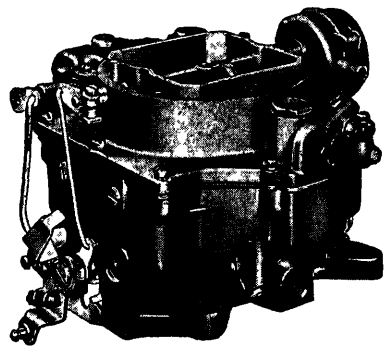
WHEN SERVICING, USE GASKET ASSORTMENT No 249, REPAIR PACKAGE No. 1755

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1066S	Body flange assembly	
1A-91	FLANGE GASKET	
2-101	Throttle valve	(2)
3-852S	Throttle shaft and lever assembly	
6-886S	Air horn assembly	
6-887S	Air horn and Climatic ® control assembly	
7-185	Choke valve	
11-211S	LOW SPEED JET ASSEMBLY	(2)
11B-35	Rivet plug	(3)
11B-41	Rivet plug	(3)
11B-79	Rivet plug	
11B-223	Nozzle passage rivet plug	(2)
11B-296	IDLE PORT RIVET PLUG	(2)
14-470S	Choke piston lever, link and shaft assembly	
15 35S	Strainer nut assembly	
17-70	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	
20-35	BOWL STRAINER GASKET	
20-43	Piston housing gasket	
21-113S	Float and lever assembly (Sup by 21 172S)	
21-172S	Float and lever assembly	
24-24	Float lever pin	
25-243S	NEEDLE AND SEAT ASSEMBLY	
30 75	BOWL COVER STRAINER	
30A-58	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
47-14	Piston housing welsh plug	
47-31	Spark port welsh plug	
48-157S	Pump jet and housing assembly	
53A-366S	Pump operating lever and countershaft assembly	
61-84	Idle adjustment screw spring	(2)
61-134	VACUUM PISTON SPRING	
61-302	Throttle adjusting screw spring	
61-382	METERING ROD SPRING	
61-389	UPPER PUMP SPRING	
61-391	Fast idle cam spring	
61-434	Throttle return spring	
61-494	Countershaft spring	
63-58	Coil housing retainer	(3)
63-118	Throttle shaft retaining ring	
64-164S	Plunger rod and check assembly (Sup by 64 185S)	
64-185S	PLUNGER ROD AND CHECK ASSEMBLY	
75-993	METERING ROD—STANDARD	(2)

Part No.	PART NAME	
86-12	Flange stud lock washer	(4)
101-10	Pump arm clamp screw	
101-74	Throttle shaft arm attaching screw	
101-126	Throttle valve attaching screw	(4)
101-246	Throttle lever adjustment screw	
101-271S	Dust cover attaching screw and washer assembly	(2)
101-272S	Air horn attaching screw and washer assembly	(8)
101 273S	Body flange attaching screw and washer assy	(2)
101-274	Coil housing attaching screw	(3)
101-284	Piston housing attaching screw	(3)
101-293	Metering rod arm clamp screw	
101-300	Pump jet housing attaching screw	
101-353S	Body flange attaching screw and washer assy	(2)
105A-11	Flange stud nut	(4)
111-53S	Metering rod arm and screw assembly	
111 62S	Pump arm and screw assembly	
114-112	THROTTLE SHAFT ARM	
115-212	THROTTLE CONNECTOR ROD	
115-214	Choke connector rod	
117-133	Vacumeter piston link	
117-159	Pump connector link	
117-161	Fast idle link	
118-68	Dust cover	
120-165	METERING ROD JET	(2)
121-78	COIL HOUSING GASKET	
121 155	AIR HORN GASKET	
121 158	DUST COVER GASKET	
121-240	BODY FLANGE GASKET	
121-241	PUMP JET HOUSING GASKET	
136-38	Throttle shaft washer	
136-173	Pump connector link washer	(2)
150-62	Choke piston pin (Sup. by 150-170)	
150-170	Choke piston pin	
150A-10	Pin spring	(2)
160-67S	Vacuum piston and pin assembly	
160-123	Choke piston	
170-342S	Piston housing and plug assembly	
170AA-72S	Thermostatic coil and housing assembly	
172-24	CHOKE AND THROTTLE CONNECTOR ROD RETAINER	(3)
181-198S	Fast idle cam assembly	
186-41	Choke baffle plate	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used



OLDSMOBILE

MODELS
"SUPER 88" and "98"
1954

(2246S can also be used)

WCFB Four-Bore Down-Draft Climatic® Control **Carbureter No. 2059S**

CARBURETER SPECIFICATIONS

For Oldsmobile 8 Cylinder Engine: 3⅞ Inch Bore, 3-7/16 Inch Stroke

Dimensions: Flange size, 1⅛ inch Four Bore—4 bolt type.
Primary venturi size, 11/32 inch I. D.
Main venturi (primary) size, 1-1/16 inch.
Main venturi (secondary) size, 15/16 inch I. D.

Float Level: See adjustments.

Vents: Outside, none. Inside, balance vent tube in air horn, 2 on primary side, 3 on secondary side.

Gasoline Intake: Size No. 42 (.0935 inch) drill hole in needle seat.

Low Speed Jet Tube: (Primary side only).
Jet, pressed in place (DO NOT REMOVE) size No. 68 (.031 inch) drill.
By Pass, in body, size No. 52 (.0635 inch) drill.
Economizer, in screw plug, size No. 57 (.043 inch) drill.
Idle bleed, in body, size No. 52 (.0635 inch) drill.

Idle Port: (Upper) slot type. Primary, length .174 inch; width .040 inch. Secondary, none.

Idle Port Opening: Primary, .113 to .119 inch above top edge of valve with valve tightly closed. Secondary, none.

Lower Port: Primary (for idle adjustment screw), size No. 53 (.0595 inch) drill. Secondary, none.

Set Idle Adjustment Screw: 1 to 2 turns open. For richer mixture turn screw out. Do not idle engine below 400 r.p.m. (Hydra-matic Trans.—in Drive Range), 425 r.p.m. (Std. Trans.).

Main Nozzle: Installed permanently. DO NOT REMOVE. Anti-percolating jet (off nozzle well), size No. 60 (.040 inch) drill.

Metering Rod: Primary, economy step .07275 inch diameter. Middle step tapers to .06975 inch diameter. Power step, .058 inch diameter. Secondary, none.

Metering Rod Jet: Primary, size .0935 inch diameter (for metering rod).
Secondary, size No. 53 (.0595 inch) drill (no metering rod).

Metering Rod Setting: See adjustments.

Accelerating Pump: Discharge jet (twin) primary side only size No. 67 (.032 inch) drill.
Intake ball check seat, size .115 to .120 inch diameter.
Discharge needle seat, size .070 inch diameter.
Relief passage (vent) to fuel chamber No. 42 (.0935 inch) drill.

Pump Adjustment: See adjustments.

Choke: Carter Climatic® Control, set on index. Butterfly type—offset choke valve, primary side only. Choke heat suction hole, restriction in piston housing, size No. 43 (.089 inch) drill.

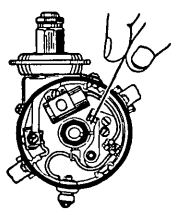
Vacuum Spark Port: Horizontal slot (round end) .045 x .110 inch. Top of port .018 to .028 inch above valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

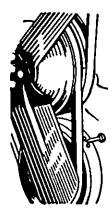
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



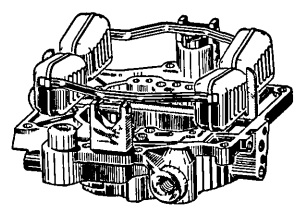
Spark Plug Gap .030"



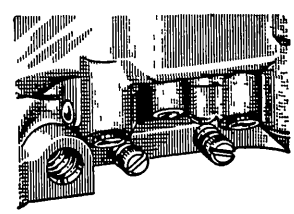
Breaker Point Setting .016"



Ignition Timing 5° B. T. D. C. With Engine Idling at 850 R.P.M. (Distributor vacuum line disconnected)



Float Setting See Adjustments



Idle Adjustment Screw Setting 1 to 2 Turns Open

NOTE: These cars are equipped with hydraulic valve lifters.—NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: Two separate float adjustments must be made — lateral and vertical. **LATERAL ADJUSTMENT:** With bowl cover assembly inverted, bowl cover gasket removed and float resting on seated needle, place float gauge (T109-223) directly under floats with notched portion of gauge fitted over edge of casting. Side of floats should just clear the vertical uprights of float gauge. Adjustment should be made by bending arms of floats. **VERTICAL ADJUSTMENT:** With float gauge in same position, floats should just clear the horizontal portion of gauge. Vertical distance between top of float and machined surface of casting must be 1/4 inch for both primary and secondary floats (gauge T109-223). Adjust by bending float arms.

FLOAT DROP ADJUSTMENT: With bowl cover held in upright position and measuring from center of float, the distance between top of floats and bowl cover should be 3/4 inch for both primary and secondary floats. Adjust by bending stop tabs on float brackets.

PUMP ADJUSTMENT: Install pump connector link in outer hole (long stroke) of pump arm, with ends extending toward countershaft arm. Back out throttle lever set screw until throttle valves seat in bores of carbureter. Hold straight edge across top of dust cover boss at pump arm. The flat on top of pump arm should be parallel to straight edge. Adjust by bending throttle connector rod at lower angle. (Use tool T109-213.)

METERING ROD ADJUSTMENT: Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows: 1. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw. 2. With metering rods in place, press down on vacumeter link until metering rods bottom in carbureter body casting. 3. Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link. Hold in place and carefully tighten clamp screw.

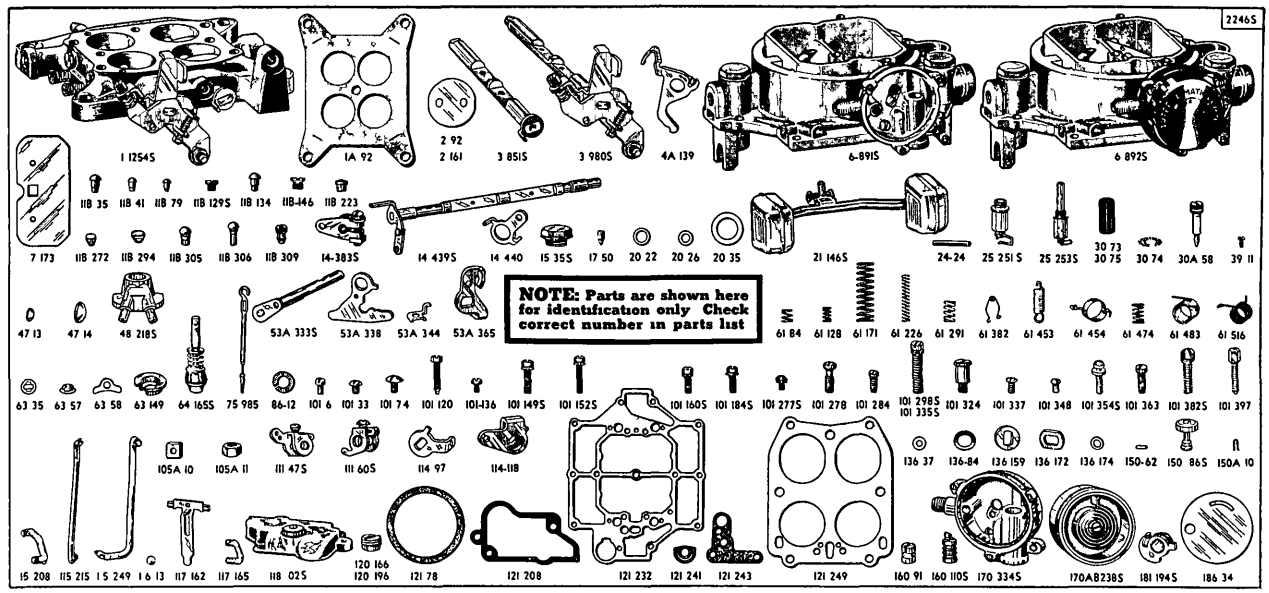
BOWL VAPOR VENT ADJUSTMENT: This adjustment should be made after completing pump and metering rod adjustments. Install dust cover and dust cover gasket. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter. There should be 1/16 inch (gauge T109-197) between lower edge of bowl vapor vent valve and dust cover. To adjust, remove dust cover and bend vapor vent arm

FAST IDLE ADJUSTMENT: (a) Loosen choke lever clamp screw on choke shaft Insert .020 inch feeler gauge (T109-29) between lip of fast idle cam and boss of flange casting. Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw. (b) With choke valve tightly closed, tighten fast idle adjusting screw until there is .015 inch (gauge T109-44) opening between throttle valve and bore of carbureter, side opposite idle port. Be sure fast idle adjusting screw is on high step of cam while making this adjustment.

UNLOADER ADJUSTMENT: With throttle wide open there should be 3/16 inch (gauge T109-28) clearance between upper edge of choke valve and inner wall of air horn. Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41).

SECONDARY THROTTLE LEVER ADJUSTMENT: Primary and secondary throttle valves should reach wide open position at the same time. To adjust, bend throttle operating rod at upper angle. (Use bending tool T109-213.)

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: This adjustment should be made after completing fast idle and secondary throttle lever adjustments. Crack throttle valves and manually open and close the choke valve. Tang on secondary throttle lever should freely engage in notch of lock-out dog. If necessary to adjust, bend tang on secondary throttle lever.



Oldsmobile—1954—Carbureter No. 2059S

WHEN SERVICING, USE GASKET ASSORTMENT No. 250, REPAIR PACKAGE No. 1756

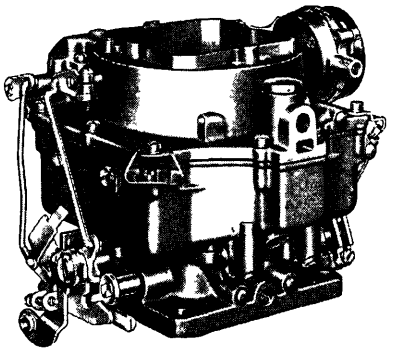
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1072S	Body flange assembly	
1A-92	Flange gasket	
2-92	Primary throttle valve	(2)
2-161	Secondary throttle valve	(2)
3-849S	Primary throttle shaft and lever assembly	
3-851S	Secondary throttle shaft and dog assembly	
4A-139	Throttle shaft dog	
6-891S	Air horn assembly	
6-892S	Air horn and Climatic® control assembly	
7-173	Choke valve	
11B-35	Rivet plug	(3)
11B-41	Rivet plug	(2)
11B-79	Rivet plug	(4)
11B-129S	Pump discharge passage plug assembly	
11B-134	Rivet passage plug	
11B-146	Level sight plug	(2)
11B-223	Nozzle passage rivet plug	(4)
11B-272	Rivet plug	(3)
11B-294	Idle port rivet plug	(2)
11B-305	Rivet plug	
11B-306	Rivet plug	(2)
11B-309	Economizer screw plug	(2)
14-383S	Choke lever and screw assembly	
14-439S	Choke piston lever link and shaft assembly	
14-440	Cam trip lever	
15-35S	Strainer nut assembly	(2)
17-50	Pump check needle	
20-22	Needle seat gasket	(2)

Part No.	PART NAME	
20-26	Pump passage plug gasket	
20-35	Bowl strainer gasket	(2)
21-146S	Float and lever assembly	(2)
24-24	Float lever pin	(2)
25-251S	Primary needle and seat assembly	
25-253S	Secondary needle and seat assembly	
30-73	Primary needle seat strainer	
30-74	Secondary fuel inlet strainer	
30-75	Bowl strainer	
30A-58	Idle adjustment screw	(2)
39-11	Choke valve attaching screw	(2)
47-13	Welsh plug (spark port)	
47-14	Welsh plug (choke housing)	
48-218S	Pump jet and housing assembly	
53A-333S	Pump operating lever and countershaft assembly	
53A-338	Lockout arm	
53A-344	Vent arm	
53A-365	Secondary operating lever	
61-84	Idle adjustment screw spring	(2)
61-128	Connector rod spring	
61-171	Pump spring (lower)	
61-226	Vacuum piston spring	
61-291	Throttle lever adjusting screw spring	
61-382	Metering rod spring	
61-453	Throttle flex spring	
61-454	Fast idle cam spring	
61-474	Bowl vent spring	
61-483	Secondary throttle return spring	

Part No.	PART NAME
61-516	Countershaft spring
63-35	Connector rod spring retainer
63-57	Intake check ball retainer
63-58	Coil housing retainer (3)
63-149	Bowl vent spring retainer
64-165S	Pump plunger, rod, spring and retainer assembly
75-985	Metering rod—standard (2)
86-12	Flange stud lock washer (4)
101-6	Pump arm clamp screw
101-33	Metering rod arm clamp screw
101-74	Throttle shaft screw (2)
101-120	Fast idle adjustment screw
101-136	Coil housing attaching screw (3)
101-149S	Body flange attaching screw and washer assembly
101-152S	Air horn attaching screw and washer assembly
101-160S	Air horn attaching screw and washer assembly (Sup. by 101-307S) (8)
101-184S	Dust cover attaching screw and washer ass'y (2)
101-277S	Vent arm attaching screw and washer assembly
101-278	Pump jet and housing attaching screw
101-284	Piston housing attaching screw (2)
101-298S	Body flange attaching screw and washer ass'y (2)
101-307S	Air horn attaching screw and washer assembly (8)
101-324	Fast idle cam attaching screw
101-335S	Air horn attaching screw and washer ass'y (7)
101-337	Secondary throttle valve attaching screw (4)
101-348	Primary throttle valve attaching screw (4)
101-354S	Choke lever clamp screw assembly
101-363	Piston housing attaching screw
101-376	Throttle lever adjusting screw
101-382S	Body flange attaching screw and washer ass'y (3)
105A-10	Choke lever clamp screw nut
105A-11	Flange stud nut (4)
111-47S	Pump arm and screw assembly
111-60S	Metering rod arm and screw assembly
114-97	Throttle shaft arm (outer)
114-118	Throttle shaft arm (inner)
115-208	Throttle operating rod
115-215	Choke connector rod
115-216	Throttle connector rod
116-13	Pump intake check ball
117-162	Vacumeter piston link
117-165	Pump connector link
118-102S	Dust cover assembly
120-166	Primary metering rod jet (2)
120-196	Secondary metering jet (2)
121-78	Coil housing gasket
121-208	Dust cover gasket
121-232	Air horn gasket
121-241	Pump jet housing gasket
121-243	Piston housing gasket
121-249	Body flange gasket
136-37	Throttle connector rod and operating rod washer (5)
136-84	Spring washer
136-159	Throttle shaft washer
136-172	Secondary throttle shaft washer
136-174	Throttle lever adjusting screw washer
150-62	Choke piston pin
150-186S	Pin and valve cap assembly
150A-10	Pin spring (5)
160-91	Choke piston
160-110S	Vacuum piston and pin assembly
170-334S	Piston housing and plug assembly
170AB-238S	Thermostatic coil and housing assembly
170AL-238S	Thermostatic coil and housing assembly (Sup. by 170AB-238S)
181-194S	Fast idle cam and spring assembly
186-34	Choke baffle plate

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.



Cut shows 2016S carbureter.

OLDSMOBILE 8

MODELS

"SUPER 88" and "98"

1953

(2080S can be used in place of 2016S)

WCFB Four-Bore Down-Draft Climatic® Control **Carbureters Nos. 2016S-2080S**

CARBURETER SPECIFICATIONS

For Oldsmobile 8 Cylinder Engine: 3¾ Inch Bore, 3-7/16 Inch Stroke

Dimensions: Flange size, 1⅛ inch Four Bore—4 bolt type.
Primary venturi size, 11/32 inch I. D.
Main venturi (primary) size, 1-1/16 inch.
Main venturi (secondary) size, 15/16 inch I. D.

Float Level: See adjustments.

Vents: Outside, none. Inside, balance vent tube in air horn, 2 on primary side, 1 on secondary side.

Gasoline Intake: Size No. 42 (.0935 inch) drill hole in needle seat.

Low Speed Jet Tube: (Primary side only)
Jet, size No. 68 (.031 inch) drill.
By-pass, size .0492 inch diameter.
Economizer, size No. 57 (.043 inch) drill.
Idle bleed, size No. 53 (.0595 inch) drill.

Idle Port: (Upper) slot type. Primary, length .164 inch; width .040 inch. Secondary, none.

Idle Port Opening: Primary, .108 to .114 inch above top edge of valve with valve tightly closed. Secondary, none.

Lower Port: Primary (for idle adjustment screw), size No. 53 (.0595 inch) drill. Secondary, none.

Set Idle Adjustment Screw: 1¾ to 2¾ turns open. For richer mixture turn screw out. Do not idle engine below 375 r.p.m. (Hydra-matic Trans.—in Drive Range); 425 r.p.m. (Synchro-mesh Trans.).

Main Nozzle: Installed permanently. **Do Not Remove.** Anti-percolating jet (off nozzle well), size No. 60 (.040 inch) drill.

Metering Rod: Primary, economy step .07125 inch diameter.
Middle step tapers to .067 inch diameter.
Power step, .050 inch diameter. (These rods designed with stabilizing flats on economy step.)
Secondary, none.

Metering Rod Jet: Primary, size .0935 inch diameter (for metering rod).
Secondary, size No. 52 (.0635 inch) drill (no metering rod)

Metering Rod Setting: See adjustments.

Accelerating Pumps: Discharge jet (twin) primary side only, size No. 68 (.031 inch) drill.
Intake ball check seat, size .115 to .120 inch diameter.
Discharge needle seat, size .070 inch diameter.
Relief passage (vent) to fuel chamber No. 42 (.0935 inch) drill.

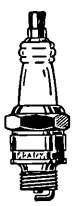
Pump Adjustment: See adjustments.

Choke: Carter Climatic ® Control, set on index. Butterfly type—offset choke valve, primary side only. Choke heat suction hole, restriction in piston housing, size No. 43 (.089 inch) drill.

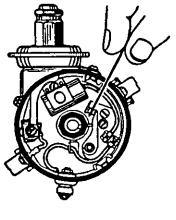
Vacuum Spark Port: Horizontal slot (round end) .045 x .110 inch. Top of port .018 to .028 inch above valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

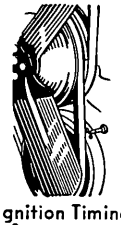
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



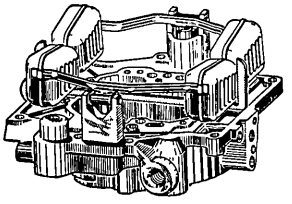
Spark Plug
Gap
.030"



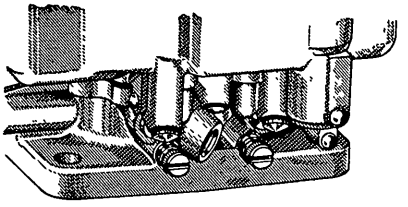
Breaker Point
Setting
.016"



Ignition Timing
5° B. T. D. C.
With Engine Idling at
850 R.P.M.
(Distributor vacuum line disconnected)



Float Setting
Primary 3/16 Inch
Secondary 3/16 Inch
(Use Gauge T109-222)



Idle Adjustment
Screw Setting
1¾ to 2¾
Turns Open

NOTE: These cars are equipped with hydraulic valve lifters.—NO ADJUSTMENT.

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CARBURETER
TRADE MARK REG. U. S PAT. OFF.
MARCA REGISTRADA

PRINTED IN U.S.A.

CARBURETER ADJUSTMENTS

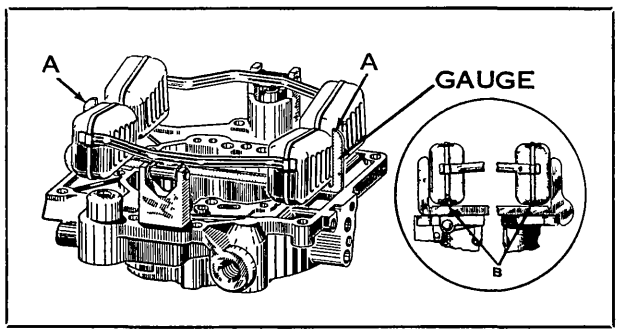


Figure 1
Float Adjustment

FLOAT ADJUSTMENT (Fig. 1):

Two separate float adjustments must be made—lateral and vertical. LATERAL ADJUSTMENT With bowl cover assembly inverted, bowl cover gasket removed and float resting on seated needle place float gauge (T109 222) directly under floats with notched portion of gauge fitted over edge of casting Side of floats should just clear the vertical uprights of float gauge (A) Adjustment should be made by bending arms of floats VERTICAL ADJUSTMENT With float gauge in same position floats should just clear the horizontal portion of gauge Vertical distance (B) between top of float and machined surface of casting must be 3/16 inch for both primary and secondary floats (gauge T109 222) Adjust by bending float arms

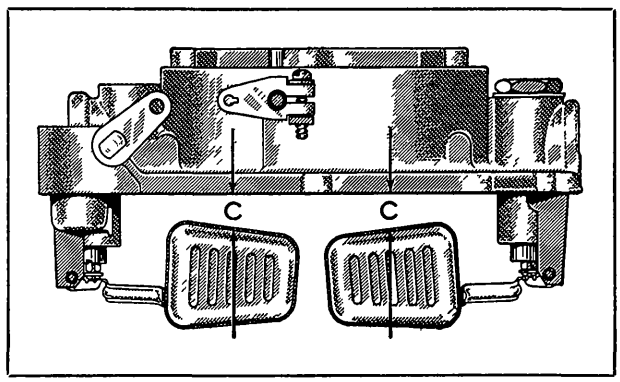


Figure 2
Float Drop Adjustment

FLOAT DROP ADJUSTMENT (Fig. 2):

With bowl cover held in upright position and measuring from center of float (C), the distance between top of floats and bowl cover should be 1/2 inch (2016S), 11/16 inch (2080S) for both primary and secondary floats Adjust by bending stop tabs on float brackets

PUMP ADJUSTMENT (Fig. 3):

Install pump connector link in outer hole (long stroke) of pump arm (D) with ends extending toward countershaft arm Back out throttle lever set screw until throttle valves seat in bores of carbureter Hold straight edge across top of dust cover boss at pump arm The flat on top of pump arm should be parallel to straight edge Adjust by bending throttle connector rod at lower angle (E) (Use tool T109-213) OPTIONAL ADJUSTMENT With throttle valves seated in bores of carbureter, the distance from the top of the plunger shaft to the top of the dust cover boss should be 18/64 inch (F) Adjust as mentioned above

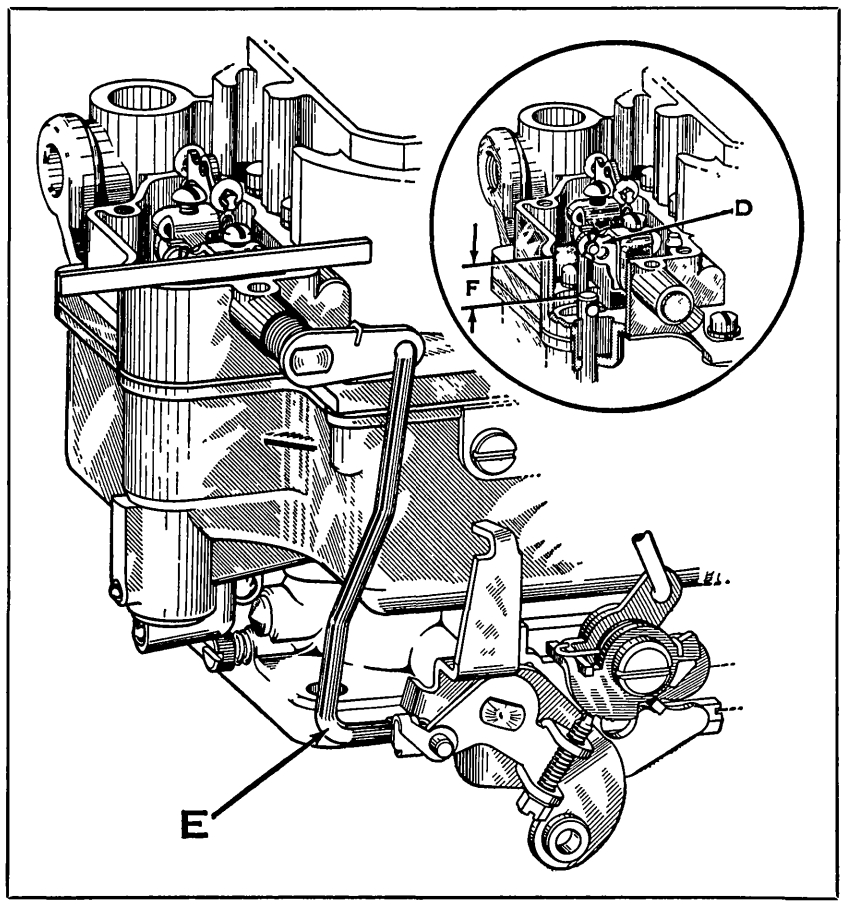


Figure 3
Pump Adjustment

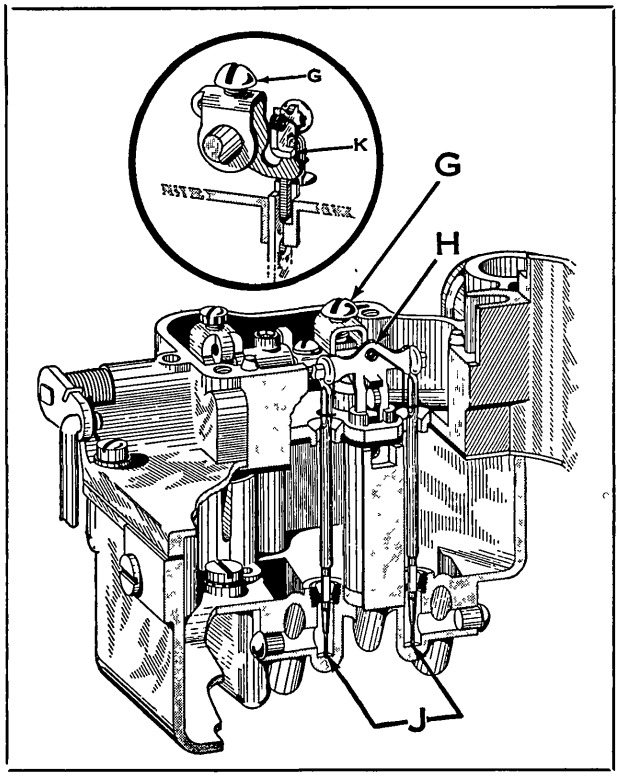


Figure 4
Metering Rod Adjustment

METERING ROD ADJUSTMENT (Fig. 4):
Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows: 1. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw (G). 2. With metering rods in place, press down on vacumeter link (H) until metering rods bottom in carbureter body casting (J). 3. Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip (K) of vacumeter link. Hold in place and carefully tighten clamp screw (G).

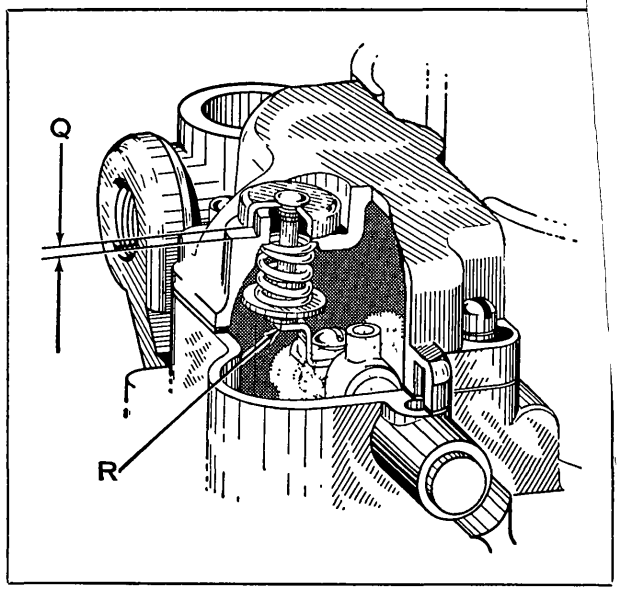


Figure 5
Bowl Vapor Vent Adjustment

BOWL VAPOR VENT ADJUSTMENT (Fig. 5):
This adjustment should be made after completing pump and metering rod adjustments. Install dust cover and dust cover gasket. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter. There should be 1/16 inch (Q) (gauge T109-197) between lower edge of bowl vapor vent valve and dust cover. To adjust, remove dust cover and bend vapor vent arm (R).

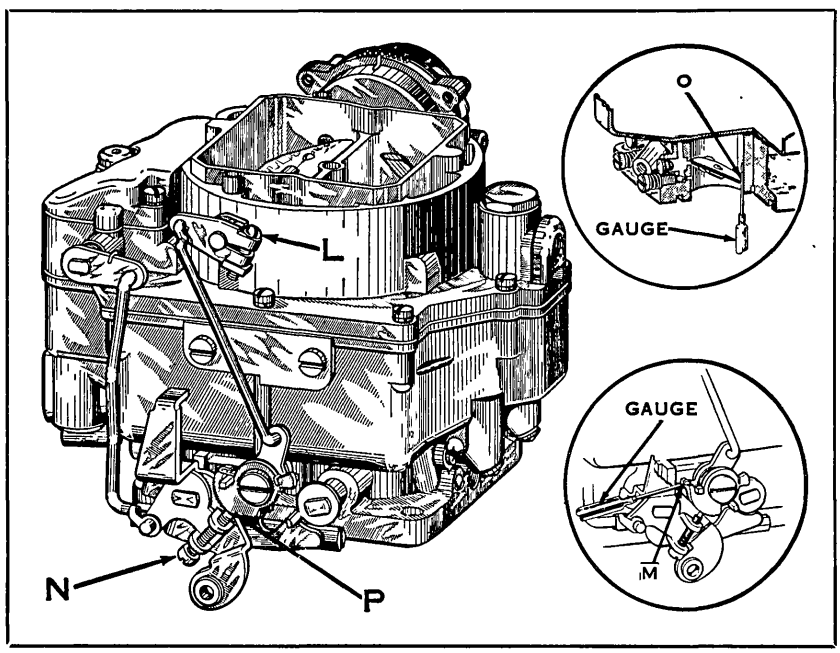


Figure 6
Fast Idle Adjustment

FAST IDLE ADJUSTMENT (Fig. 6):
(a) Loosen choke lever clamp screw (L) on choke shaft. Insert .020 inch feeler gauge (T109-29) between lip of fast idle cam and boss of flange casting (M). Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position — hold in place and tighten clamp screw (L). (b) With choke valve tightly closed, tighten fast idle adjusting screw (N) until there is .018 inch (gauge T109-44) opening between throttle valve and bore of carbureter, side opposite idle port (O). Be sure fast idle adjusting screw is on high step of cam (P), while making this adjustment.

Part No.	PART NAME	
53A-344	Vent arm	
53A-358	Secondary operating lever	
61 84	Idle adjustment screw spring	(2)
61-259	VACUUM PISTON SPRING	
61-291	Throttle lever adjusting screw spring	
61-382	METERING ROD SPRING	
61-413	UPPER PUMP SPRING	
61-453	Throttle flex spring	
61-454	Fast idle cam spring	
61-474	Bowl vent spring	
61-483	SECONDARY THROTTLE RETURN SPRING	
61-486	Countershaft spring	
61-491	Throttle flex spring (2016S) (Sup by 61 453)	
63-57	INTAKE BALL CHECK RETAINER	
63-58	Coil housing retainer	(3)
63-149	Bowl vent spring retainer	
63-176	Pump spring retainer	
64-145S	PUMP PLUNGER AND ROD ASSEMBLY	
75 887	METERING ROD	(2)
86-12	Flange stud lock washer	(4)
101-10	Pump arm clamp screw	
101-19	Choke lever clamp screw (2016S) (Sup by 101 354S)	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	(2)
101-120	Fast idle adjustment screw	
101-136	Coil housing attaching screw	(3)
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attach ng screw and washer assembly (2080S)	
101-160S	Air horn attaching screw and washer assembly (2016S (9) (2080S early prod (8)	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet housing attaching screw	
101-284	Piston housing attaching screw	(2)
101-307S	Air horn attaching screw and washer assembly (2080S late prod (8)	
101-324	Fast idle cam attaching screw	
101-332	Throttle lever adjusting screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-348	Primary throttle valve attaching screw	(4)
101-354S	Choke lever clamp screw assembly	

Part No.	PART NAME	
101-363	Piston housing attaching screw	
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
114-96	Inner throttle shaft arm	
114-97	Outer throttle shaft arm	
115-188	THROTTLE CONNECTOR ROD	
115-189	Choke connector rod	
115-208	Throttle operating rod	
116-13	PUMP INTAKE CHECK BALL	
117-28	Pump connector link	
117-155	Vacumeter piston link	
118-98S	Dust cover assembly	
120-166	PRIMARY METERING ROD JET	(2)
120-176	SECONDARY METERING JET	(2)
121-78	COIL HOUSING GASKET	
121-149	Pump jet housing gasket (2016S) (Sup by 121 241)	
121-208	DUST COVER GASKET	
121-210	Body flange gasket (Sup by 121 242)	
121 232	AIR HORN GASKET	
121-241	PUMP JET HOUSING GASKET	
121-242	BODY FLANGE GASKET	
121-243	PISTON HOUSING GASKET	
136-37	Throttle operating rod washer	(4)
136-84	Spring washer	
136-159	Primary throttle shaft washer	
136-172	Secondary throttle shaft washer	
150-62	Choke piston pin	
150-186S	Pin and valve cap assembly	
150A-10	Pin spring	(5)
156-95	Elbow	
160-91	Choke piston	
160-110S	Vacuum piston and pin assembly	
170-260S	Piston housing and plug assembly	
170AB238S	Thermostatic coil and housing assembly	
172-22	THROTTLE CONNECTOR ROD RETAINER	
181-194S	Fast idle cam assembly	
186-34	Choke baffle plate	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

CARBURETER
TRADE MARK REG U S PAT OFF
MARCA REGISTRADA

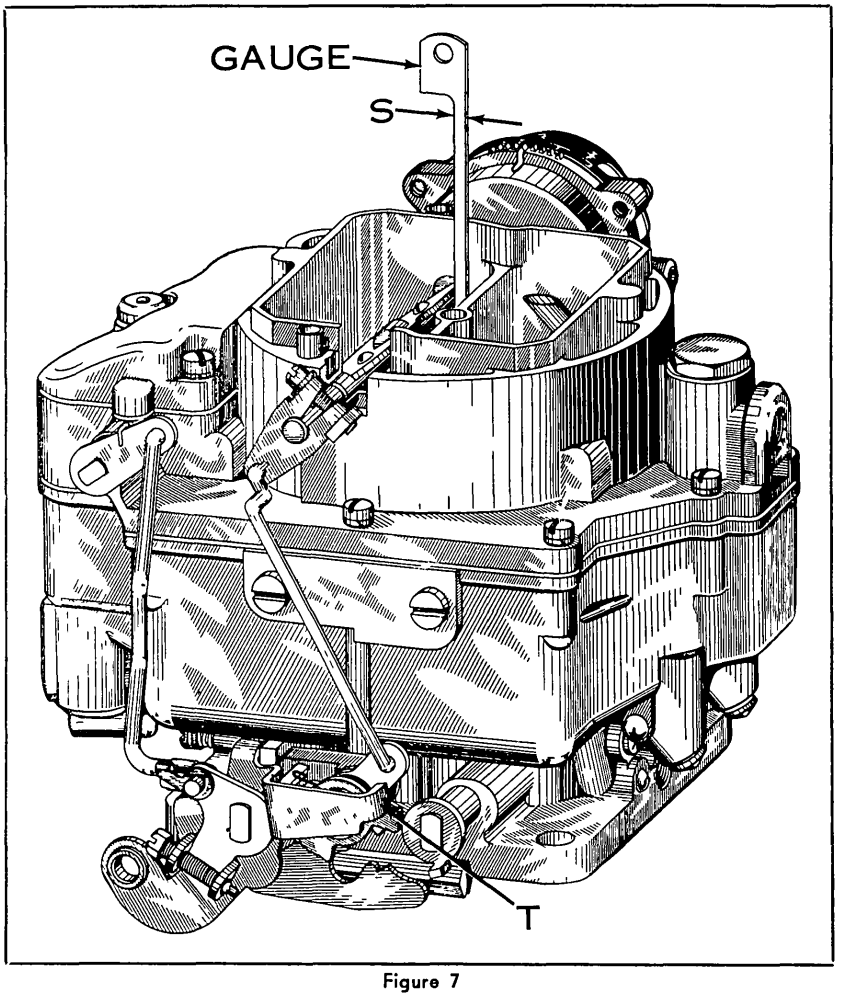


Figure 7
Unloader Adjustment

UNLOADER ADJUSTMENT (Fig. 7):

With throttle wide open there should be 3/16 inch (gauge T109-28) clearance (S) between **upper** edge of choke valve and inner wall of air horn.

Adjust by bending unloader lip (T) on throttle shaft lever (use bending tool T109-41)

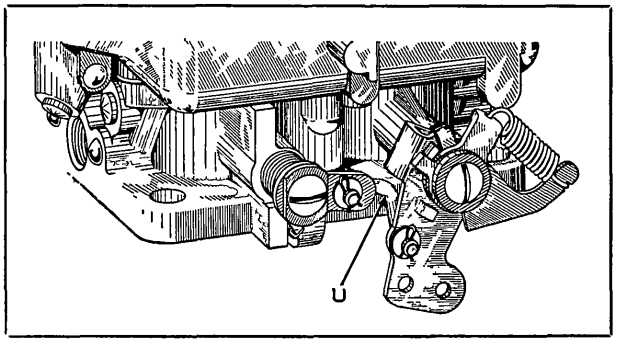


Figure 8
Secondary Throttle Lever Adjustment

SECONDARY THROTTLE LEVER ADJUSTMENT (Fig. 8):

Primary and secondary throttle valves should reach wide open position at the same time. To adjust, bend throttle operating rod at upper angle (U). (Use bending tool T109-213)

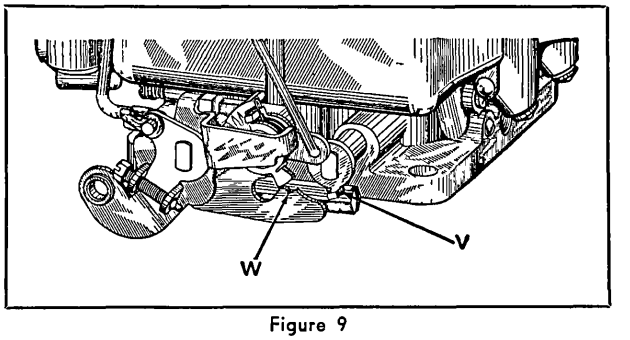
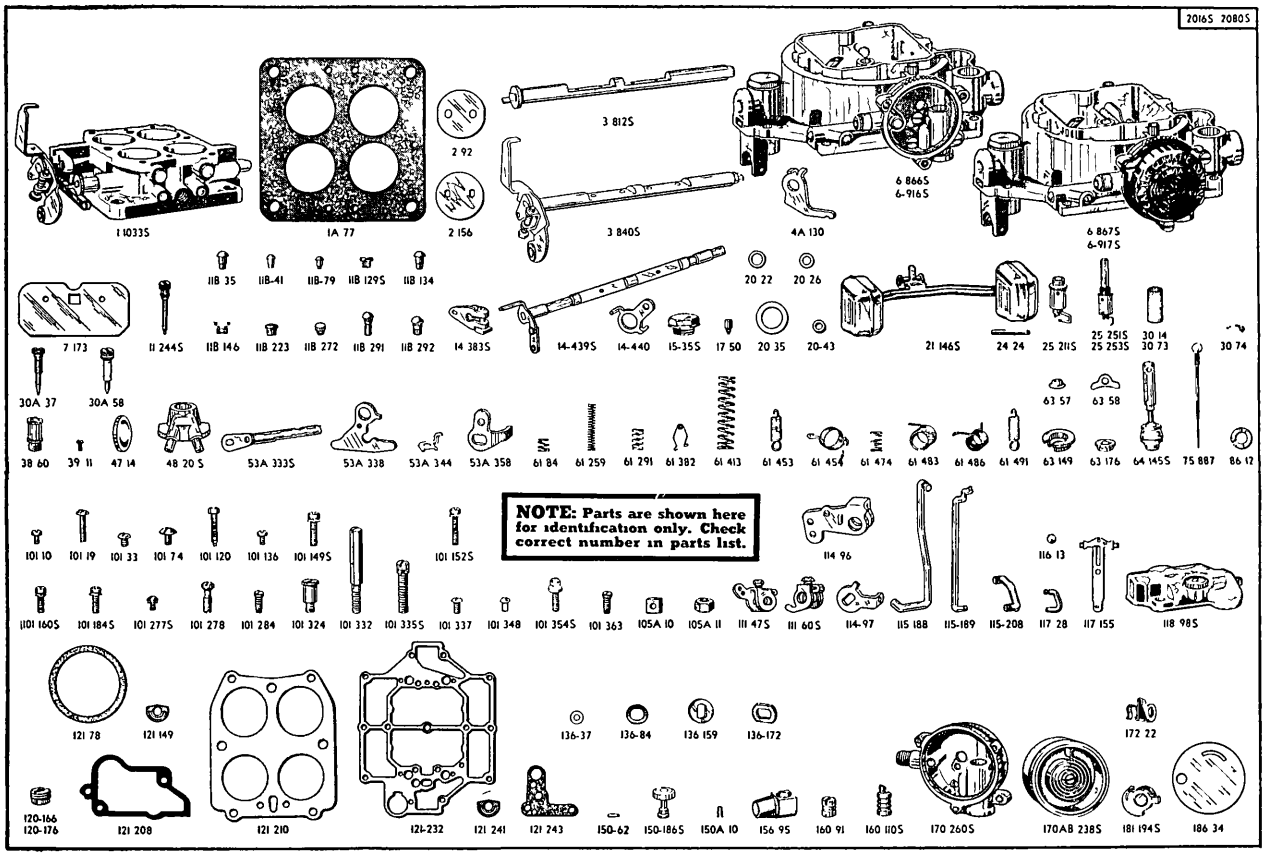


Figure 9
Secondary Throttle Lock-Out Adjustment

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT (Fig. 9):

This adjustment should be made after completing fast idle and secondary throttle lever adjustments. (a) With choke valve tightly closed, open primary throttle valves all the way. Tang (V) on secondary throttle arm should engage in notch (W) on lock out lever preventing secondary throttle shaft movement. (b) Hold choke valve in wide open position. Open primary throttle valves all the way. Lock-out lever should fall free allowing secondary throttle valves to be opened before primary throttle valves are fully open. If necessary, bend tang (V) on secondary throttle lever to provide clearance for proper operation of lock-out lever.



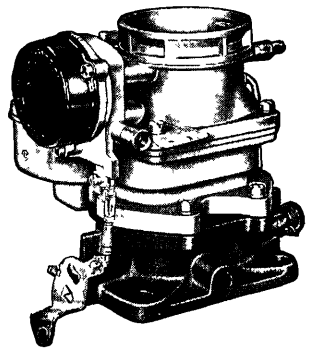
Oldsmobile 8—1953—Carbureters Nos. 2016S-2080S

WHEN SERVICING, USE GASKET ASSORTMENT No. 234A (BOTH); REPAIR PACKAGE No. 1730 (2016S), No. 1745A (2080S)

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-1033S	Body flange assembly	
1A-77	FLANGE GASKET	
2-92	Primary throttle valve	(2)
2-156	Secondary throttle valve	(2)
3-812S	Secondary throttle shaft and dog assembly	
3-840S	Primary throttle shaft and lever assembly	
4A-130	Throttle shaft dog	
6-866S	Air horn assembly (2016S) (Sup by 6 867S)	
6-867S	Air horn and Climatic ® control assembly (2016S)	
6-916S	Air horn assembly (2080S)	
6-917S	Air horn and Climatic® control assembly (2080S)	
7-173	Choke valve	
11-244S	LOW SPEED JET ASSEMBLY	(2)
11B-35	Rivet plug (2016S 2080S early prod (3) (2080S late prod (4)	
11B-41	Rivet plug	(2)
11B-79	Rivet plug	(4)
11B-129S	PUMP DISCHARGE PASSAGE PLUG ASSEMBLY	
11B-134	Rivet plug	
11B-146	Level sight plug	(2)
11B-223	Idle port and nozzle passage rivet plug	(6)
11B-272	Rivet plug (2016S 2080S early prod)	
11B-291	Rivet plug	(2)
11B-292	Rivet plug	
14-383S	Choke lever and screw assembly	

Part No	PART NAME	
14-439S	Choke piston lever link and shaft assembly	
14-440	Cam trip lever	
15-35S	Strainer nut assembly (2016S (1) (2080S (2)	
17-50	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	(2)
20-26	Passage plug gasket	
20-35	BOWL STRAINER GASKET (2016S (1) (2080S (2)	
20-43	Piston housing gasket (2016S) (Sup by 121 243)	
21-146S	Float and lever assembly	(2)
24-24	Float lever pin	(2)
25-211S	NEEDLE AND SEAT ASSEMBLY (2016S)	(2)
25-251S	Primary needle and seat assembly (2080S)	
25-253S	Secondary needle and seat assembly (2080S)	
30-14	BOWL STRAINER	
30-73	Primary needle seat strainer (2080S)	
30-74	Secondary fuel inlet strainer (2080S)	
30A-37	Idle adjustment screw (2016S) (Sup by 30A-58)	(2)
30A-58	Idle adjustment screw	(2)
38-60	Standpipe (Early Production) (2016S)	
39-11	Choke valve attaching screw	(2)
47-14	Welsh plug	
48-201S	Pump jet and housing assembly	
53A-333S	Pump operating lever and countershaft assembly	
53A-338	Lockout arm	



Cut shows 851S Carbureter

OLDSMOBILE 8 ROCKET ENGINE MODELS "88"-"98"—1951 DELUXE "88"—1952-1953

(2015S can be used in place of 851S-SA)

WGD **851S-851SA-2015S** Dual Down-Draft Climatic® Control Carbureters

CARBURETER SPECIFICATIONS

For Oldsmobile 8 Cylinder Engine: 3¾ Inch Bore, 3-7/16 Inch Stroke

Dimensions: Flange size, 1¼ inch dual, 4 bolt type.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 21/32 inch I. D.
Main venturi, 1-3/16 inch I. D.

Float Level: See adjustments.

Vents: Outside, none. Inside, balance vent tube, above choke valve.

Gasoline Intake: Size (851S) No. 38 (.1015") drill; (851SA-2015S) No. 42 (.0935") drill.

Low Speed Jet Tube: Jet size, No. 65 (.035") drill.
By-pass, size No. 55 (.052") drill (851S); No. 54 (.055") drill (851SA-2015S).
Economizer, size No. 62 (.038") drill.
Idle bleed, size No. 54 (.055") drill.

Idle Ports: Upper port, slot type. Length .130 inch. Width .030 inch.

Idle Port Opening: .079 to .085 inch above upper edge of valve with valve tightly closed.

Lower Port (For Idle Adjustment Screw): Size, .0615 to .0655 inch diameter.

Set Idle Adjustment Screw: ¾ to 1¼ turns open. For richer mixture turn screw out. Do not idle engine below 375 r.p.m. (Hydramatic—in Drive Range) or 425 r.p.m. (Syncromesh Transmission).

Nozzle: Nozzle is installed permanently. **DO NOT REMOVE.** Anti-percolating well jet, size No. 60 (.040 inch) drill.

Metering Rod (Vacumeter Type): Economy step, .0685 inch diameter. Middle step tapers to .059 inch diameter. Power step .048 inch diameter. These rods designed with idle stablizing flats on economy step.

Metering Rod Jet: .089 inch diameter.

Metering Rod Setting: See adjustments.

Accelerating Pump: Discharge jet (twin) size No. 70 drill.
Pump jet air bleed passage to outside, ⅛ inch drill.
Intake ball check; Restriction (under ball check) size .100 inch diameter.

Discharge (needle seat) size No. 50 (.070") drill.

Pump Adjustment: See adjustments.

Choke: Carter Climatic® Control—set on index. Butterfly type, offset valve. Choke heat suction hole in piston housing, size No. 36 (.1065 inch) drill.

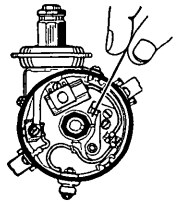
Vacuum Spark Port: 851S (Early Production): .039 to .041 inch diameter. 851S (Late Production): .051 to .053 inch diameter. 851SA-2015S: Horizontal slot (round end) .045 X .110 inch. Top of port .023 to .033 inch above upper edge of valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

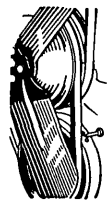
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



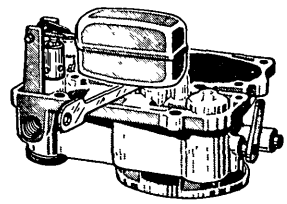
Spark Plug Gap .030"



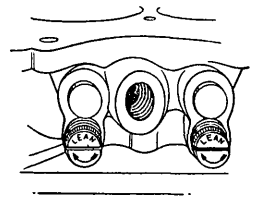
Breaker Point Setting .016"



Ignition Timing Breaker Points to Open:
(1951) 2° B.T.D.C.
(1952-53) 5° B.T.D.C.
With Engine Idling at 850 R.P.M.
(Distributor Vacuum Line Disconnected)



Float Setting ¼"
(Use Gauge T109-31)



Idle Adjustment Screw Setting ¾ to 1¼ Turns Open

NOTE: These cars equipped with hydraulic valve lifters.—No adjustment.

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT (Fig. 1)·

With bowl cover gasket removed, bowl cover inverted and needle seated, there should be 1/4 inch (gauge T109-31) between top of float and bowl cover. Adjust by bending float arm.

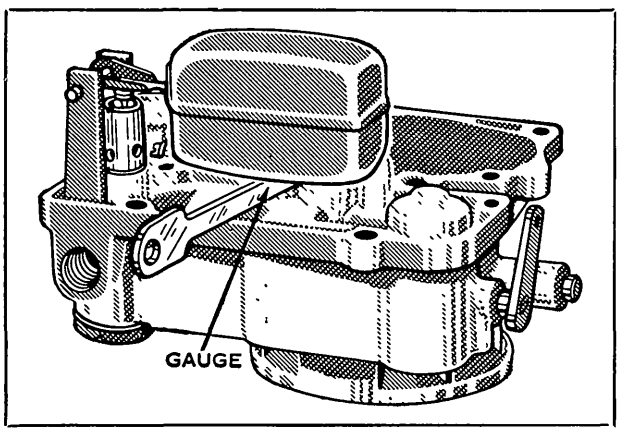


Figure 1
Float Adjustment

PUMP ADJUSTMENT (Fig. 2):

Install pump connector link in outer hole (long stroke) of pump arm, with ends extending toward countershaft arm Back out throttle lever set screw until throttle valves seat in bores of carbureter. Hold straight edge across top of dust cover boss at pump arm. The flat on top of pump arm should be parallel to straight edge. Adjust by bending pump arm at upper angle (A)

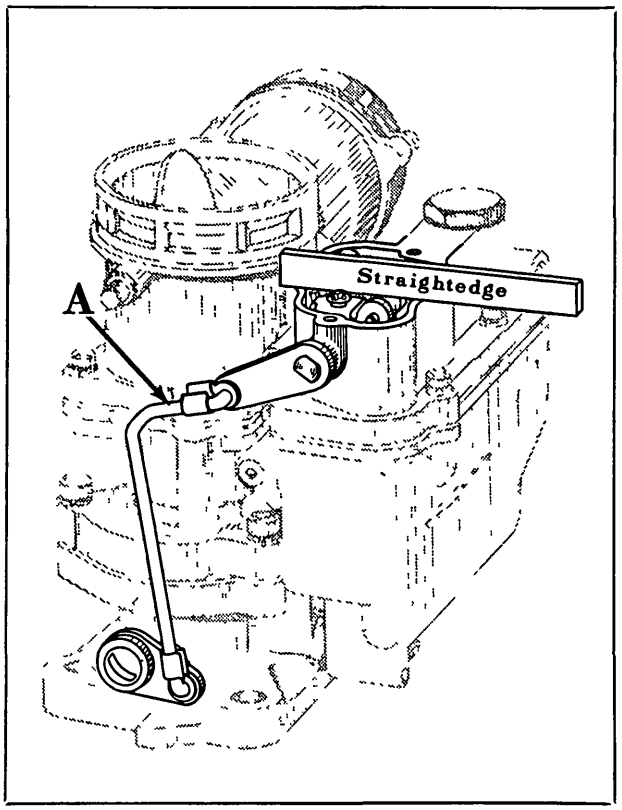


Figure 2
Pump Adjustment

METERING ROD ADJUSTMENT (Fig. 3):

The metering rods must be adjusted after the pump adjustment. No metering rod gauges are necessary; procedure is as follows: With the throttle lever set screw backed out and throttle valves seated in bores of carbureter, press down on vacumeter link (D) until metering rods bottom in casting at (E). With rods held in this position, revolve metering rod arm (F) until lip contacts vacumeter link at (G). Hold in place and carefully tighten metering rod arm set screw (H)

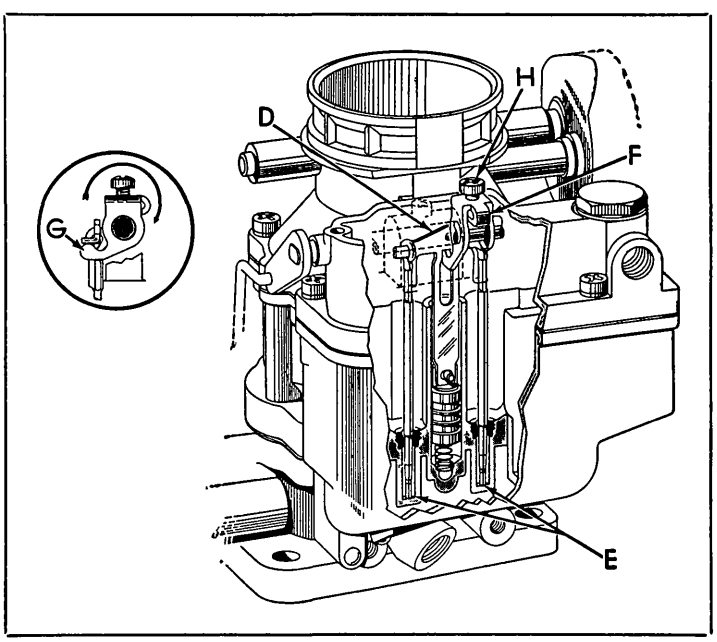


Figure 3
Metering Rod Adjustment

FAST IDLE ADJUSTMENT (Fig. 4)·

Remove thermostatic coil housing, gasket and baffle plate Crack throttle valve, and hold choke valve fully closed, then close throttle This will allow fast idle cam to revolve to fast idle position With choke valve held tightly closed and slight tension on throttle lever, loosen lock nut (J) on choke connector rod assembly and turn sleeve (K) until there is 020 inch (gauge T109-29) clearance (L) between throttle valve and bore of carbureter, side opposite idle port. Hold sleeve (K) in position and secure lock nut (J).

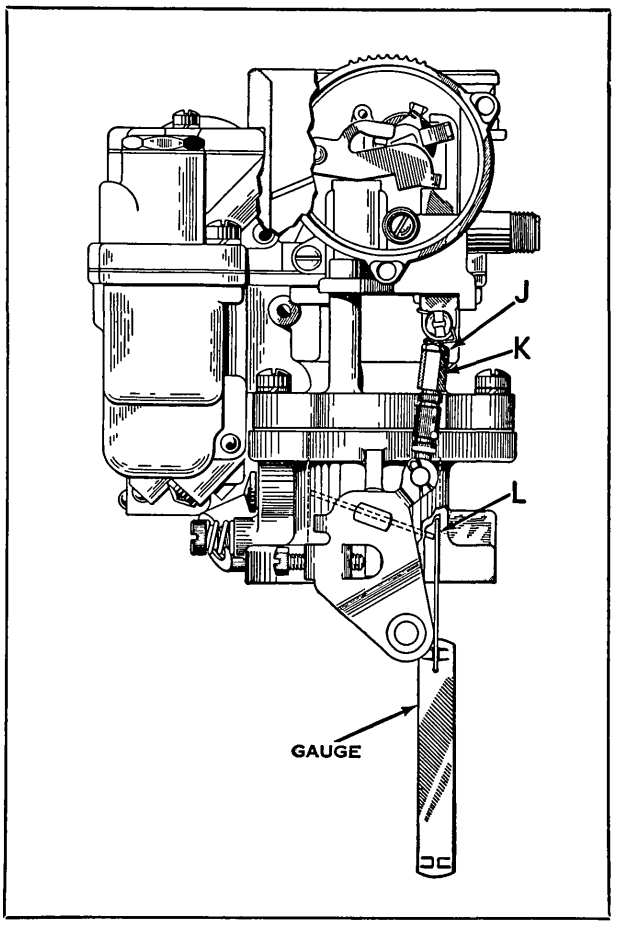


Figure 4
Fast Idle Adjustment

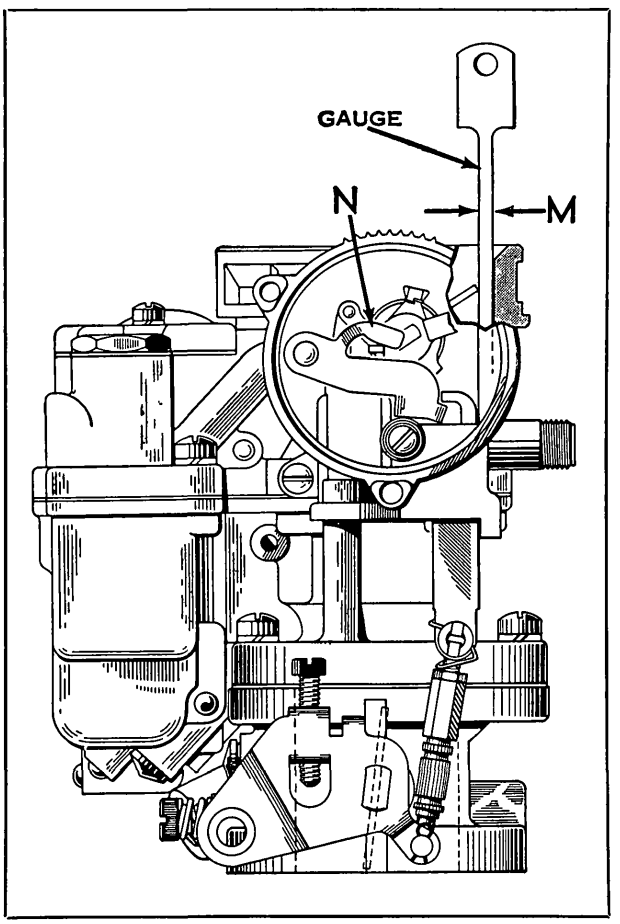


Figure 5
Unloader Adjustment

UNLOADER ADJUSTMENT (Fig. 5):

Must be made after fast idle adjustment. Hold throttle valve wide open and close choke valve as far as possible without forcing; there should now be 1/4 inch (gauge T109-31) clearance between upper edge of choke valve and inner wall of air horn (M). Adjust by bending arm on choke trip lever (N). (Tool T109-214)

FAST IDLE LINK SPRING (Fig. 6):

To prevent any possibility of the accelerator sticking in a wide open throttle position, part No. 61-443 should be installed as shown in Illustration "A" **All 851S carbureters produced prior to February 1951 (Code Date B1) should have the spring No. 61-443 installed.**

Model 851S carbureters bearing the Code Date "B1" (FEBRUARY 1951) and thereafter on the brass indentification tag will have in addition to the spring, a choke housing with a small amount of metal (O) added as shown in Illustration "B".

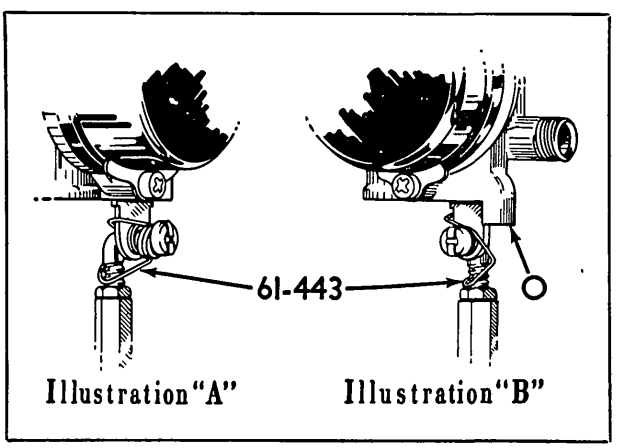
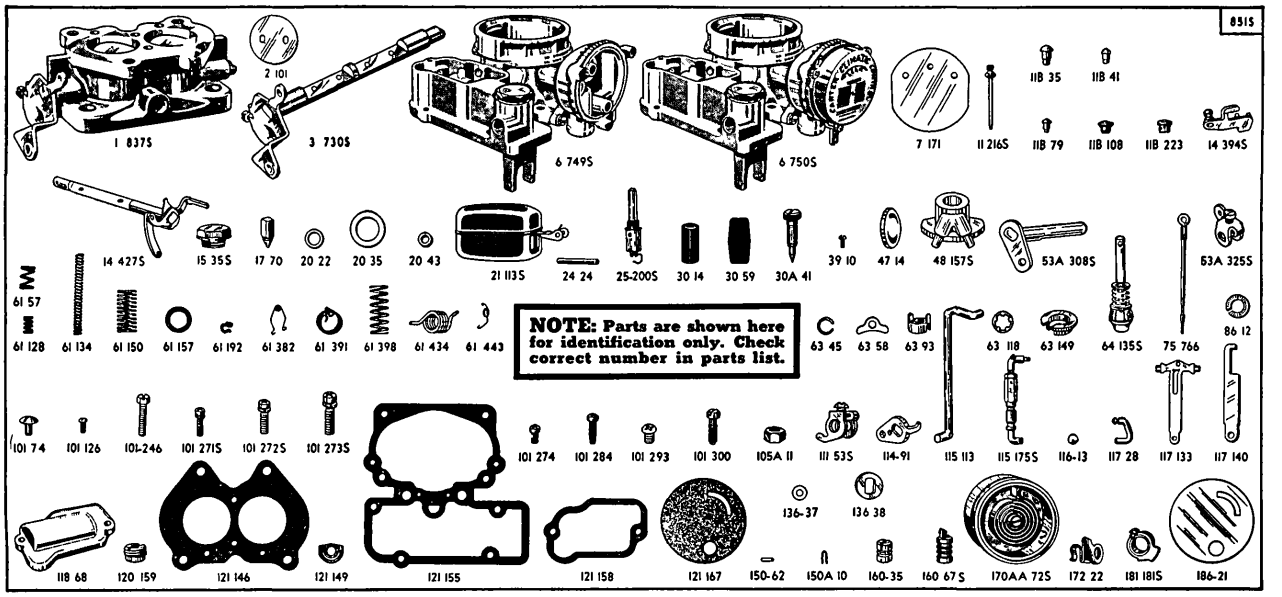


Figure 6



Oldsmobile 8—1951-1953—Carbureters 851S-851SA-2015S

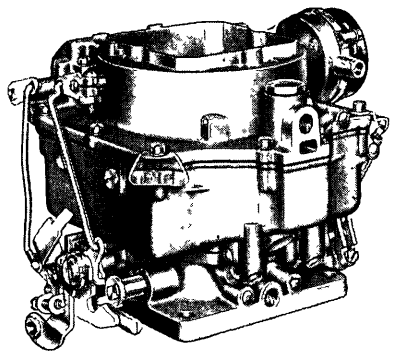
WHEN SERVICING, USE GASKET ASSORTMENT No 196, REPAIR PACKAGE No 1573

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-837S	Body flange assembly (851S-SA)	
1-1023S	Body flange assembly (2015S)	
1A-91	Flange gasket	
2-101	Throttle valve	(2)
3-730S	Throttle shaft and lever assembly	
6-749S	Air horn assembly (851S) (Sup by 6-822S)	
6-750S	Air horn and Climatic® control assembly (851S) (Sup by 6-823S)	
6 822S	Air horn assembly	
6 823S	Air horn and Climatic® control assembly	
7-171	Choke valve	
11-216S	LOW SPEED JET ASSEMBLY	(2)
11B-35	Rivet plug	(3)
11B-41	Rivet plug	(3)
11B-79	Rivet plug	
11B-108	IDLE PORT RIVET PLUG	(2)
11B-223	NOZZLE RIVET PASSAGE PLUG	(2)
14-394S	Choke trip lever and pin assembly	
14-427S	Choke piston lever, link and shaft assembly	
15-35S	Strainer nut assembly	
17 70	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	
20-35	BOWL STRAINER GASKET	
20-43	Piston housing gasket	
21-113S	Float and lever assembly (Sup by 21 172S)	
21-172S	Float and lever assembly	
24-24	Float lever pin	
25-186S	NEEDLE AND SEAT ASSEMBLY	
25-200S	Needle and seat assembly (851S) (Sup by 25-186S)	
30-14	BOWL COVER STRAINER	
30-59	STRAINER	
30A-41	Idle adjustment screw	(2)
39 10	Choke valve attaching screw	(2)
47-14	Choke cylinder welsh plug	
48 157S	Pump jet and housing assembly	
53A-308S	Pump operating lever and countershaft assembly	
53A-325S	Pump arm and screw assembly	
61-57	Idle adjustment screw lock spring	(2)
61-128	Connector rod spring	
61-134	VACUUM PISTON SPRING	
61-150	PUMP SPRING (LOWER)	
61-382	METERING ROD SPRING	
61-391	Fast idle cam spring	
61 434	Throttle shaft arm spring	
61-443	FAST IDLE LINK SPRING (851S-SA)	
63-45	PUMP CHECK BALL RETAINER RING	
63-58	Coil housing retainer	(3)

Part No	PART NAME	
63-93	Connector rod spring retainer	
63-118	Throttle shaft retaining ring	
64-135S	PLUNGER ROD, SPRING AND RETAINER ASSEMBLY	
75-766	METERING ROD—STANDARD	(2)
86-12	Flange stud lock washer	(4)
101-74	Throttle shaft arm attaching screw	
101-126	Throttle valve attaching screw	(4)
101-246	Throttle lever adjustment screw	
101-271S	Dust cover attaching screw and washer assembly	(2)
101 272S	Air horn attaching screw and washer assembly	(8)
101-273S	Body flange attaching screw and washer assembly	(4)
101-274	Coil housing attaching screw	(3)
101-284	Piston housing attaching screw	(3)
101-293	Metering rod arm clamp screw	(2)
101 300	Pump jet housing attaching screw	
105A-11	Flange stud nut	(4)
111-53S	Metering rod arm and screw assembly	
114-91	THROTTLE SHAFT ARM	
115-113	THROTTLE CONNECTOR ROD	
115-175S	Choke connector rod assembly	
116-13	PUMP INTAKE CHECK BALL	
117-28	Pump connector link	
117-133	Vacumeter piston link	
117-140	Fast idle link	
118 68	Dust cover	
120-159	METERING ROD JET	(2)
121-146	BODY FLANGE GASKET	
121-149	Pump jet gasket (Sup by 121-241)	
121-155	AIR HORN GASKET	
121-158	DUST COVER GASKET	
121-167	COIL HOUSING GASKET	
121-241	PUMP JET HOUSING GASKET	
136-37	Choke connector rod washer	
136-38	Throttle shaft washer	
150-62	Choke piston pin	
150A-10	Pin spring	(2)
156-95	Elbow	
160-35	Choke piston	
160-67S	Vacuum piston and pin assembly	
170AA-72S	Thermostatic coil and housing assembly	
172-22	THROTTLE AND CHOKE CONNECTOR ROD RETAINER	(2)
181-181S	Fast idle cam assembly (851S) (Sup by 181-187S)	
181-187S	Fast idle cam assembly	
186-21	Baffle plate	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used



OLDSMOBILE 8 MODELS "SUPER 88" and "98" 1952

(2080S can also be used)

WCFB Four-Bore Down-Draft Climatic® Control **Carbureter No. 932S**

CARBURETER SPECIFICATIONS

For Oldsmobile 8 Cylinder Engine: 3¾ Inch Bore, 3-7/16 Inch Stroke

Dimensions: Flange size, 1⅛ inch Four Bore—4 bolt type.
Primary venturi size: 11/32 inch I. D.
Main venturi size: 1-1/16 inch I. D.

Float Level: Primary: Float setting ¼ inch.
Secondary: Float setting ¼ inch. See adjustments.

Vents: Outside, None.
Inside, balance vent tube, in air horn, (secondary side) ahead of choke valve.

Gasoline Intake: Size No. 42 (.0935 inch) drill hole in needle seat.

Low Speed Jet Tube: Jet size: No. 68 (.031 inch) drill.
By-pass size: No. 54 (.055 inch) drill.
Economizer size: No. 58 (.042 inch) drill.
Idle bleed size: No. 54 (.055 inch) drill.

Idle Ports: (Upper) Primary: Slot type, length .160 inch, width .030 inch.
Secondary: Round type, .076 inch diameter.
Opening, primary .089 to .095 inch above upper edge of valve, with valve tightly closed.
Opening, secondary, (.047 to .053 inch).

Idle Ports: (Lower) Primary: (for idle adjustment screw seat) Size No. 53 (.0595 inch) drill.

Set Idle Adjustment Screw: 1 to 2 turns open For richer mixture turn screw out. Do not idle engine below 375 R.P.M. (Hydra-Matic Trans.—in Drive range).

Vacuum Spark: Horizontal slot (round end) .045 x .110 inch.
Top of port .023 to .033 inch above valve.

Main Nozzle: Installed permanently. **Do Not Remove.**
Anti-percolating jet· (off idle well) Size No. 74 (.0225 inch) drill.
Nozzle bleed; Size No 60 (.040 inch) drill.

Metering Rod: Primary: Economy step .073 inch diameter.
Middle step tapers to .0675 inch diameter.
Power step, .058 inch diameter.
(These rods designed with stabilizing flats on economy step.)
Secondary: None.

Metering Rod Jet: Primary: Size .0935 inch diameter (for metering rod).
Secondary: Size .0635 inch diameter (no metering rod).

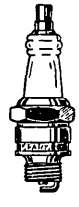
Metering Rod Setting: See adjustments.

Accelerating Pump: Pressure type, adjustable stroke.
Discharge jet (twin) primary only, Size No. 68 (.031 inch) drill.
Intake; ball check seat size .115 to .120 inch diameter.
Discharge; needle seat size .070 inch diameter.
Relief passage (vent) to fuel chamber No. 42 (.0935 inch) drill.

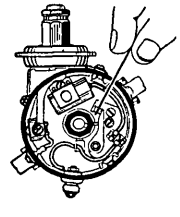
Choke: Carter Climatic® Control, set on index. Butterfly type —offset choke valve, primary side only. Choke heat suction hole, restriction in piston housing, Size: No. 43 (.089 inch) drill.

Motor Tune-Up—Be Accurate!

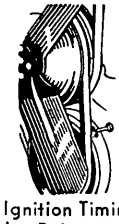
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



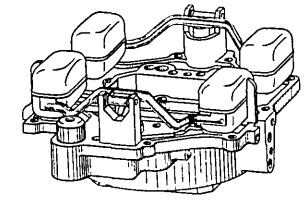
Spark Plug Gap .030"



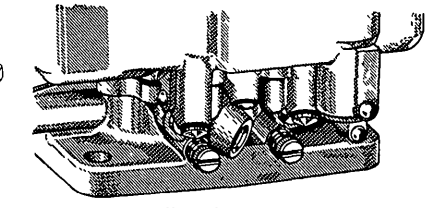
Breaker Point Setting .016"



Ignition Timing Breaker Points to Open: 5° B. T. D. C. With Engine Idling at 850 R.P.M. (Distributor vacuum line disconnected)



Float Setting Primary ¼ Inch Secondary ¼ Inch (Use Gauge T109-223)



Idle Adjustment Screw Setting 1 to 2 Turns Open

NOTE: These cars equipped with hydraulic valve lifters.—No adjustment.

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CARBURETER ADJUSTMENTS

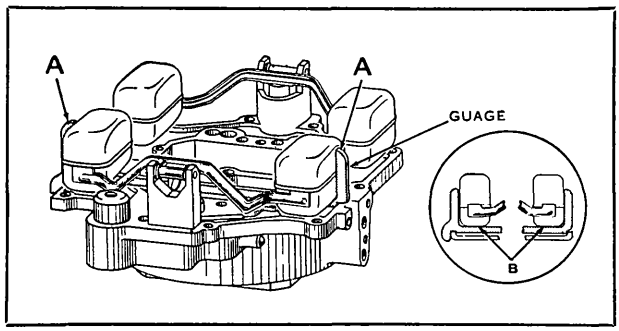


Figure 1
Float Adjustment

FLOAT ADJUSTMENT (Fig. 1):

Two separate float adjustments must be made—lateral and vertical. **LATERAL ADJUSTMENT:** With bowl cover assembly inverted bowl cover gasket removed and float resting on seated needle place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting Side of floats should just clear the vertical uprights of float gauge (A) Adjustment should be made by bending arms of floats

VERTICAL ADJUSTMENT: With float gauge in same position, floats should just clear the horizontal portion of gauge Vertical distance (B) between top of float and machined surface of casting must be 1/4" for both primary and secondary floats (gauge T109 223) Adjust by bending float arms

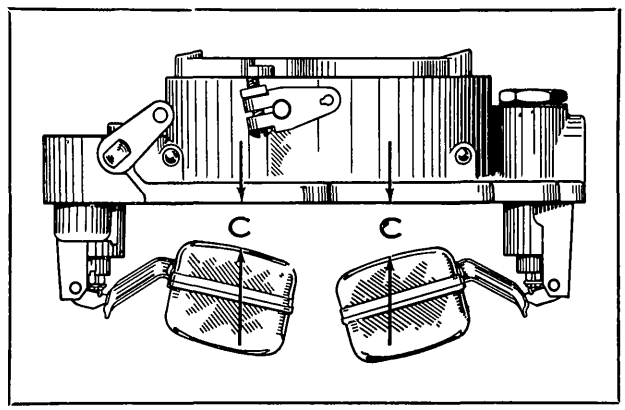


Figure 2
Float Drop Adjustment

FLOAT DROP ADJUSTMENT (Fig. 2):

With bowl cover held in upright position and measuring from center of float, the distance between top of floats and bowl cover should be 3/4" for both primary and secondary floats Adjust by bending stop tabs on float brackets

PUMP ADJUSTMENT (Fig. 3):

Install pump connector link in outer hole (long stroke) of pump arm (D) with ends extending toward counter shaft arm Back out throttle lever set screw until throttle valves seat in bores of carbureter Hold straight edge across top of dust cover boss at pump arm The flat on top of pump arm should be parallel to straight edge Adjust by bending throttle connector rod at lower angle (E) (Use tool T109-213)

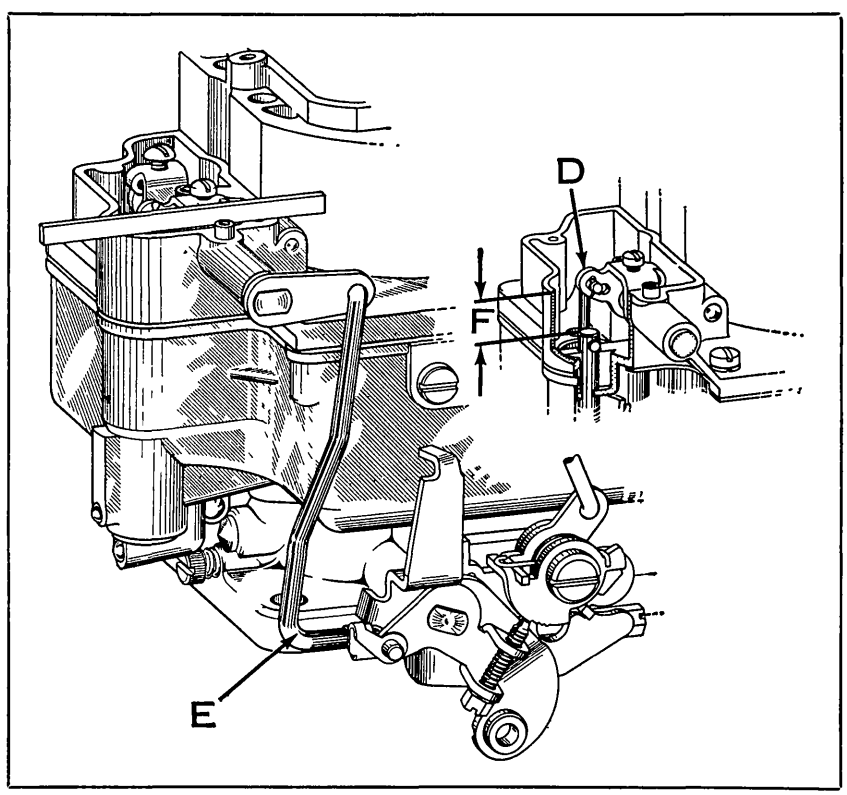


Figure 3
Pump Adjustment

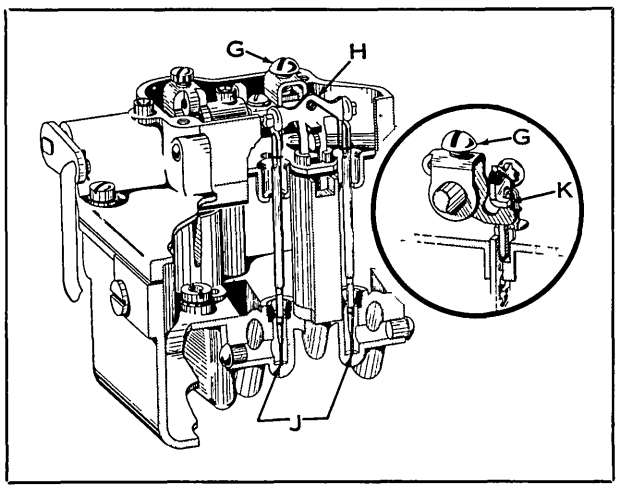


Figure 4
Metering Rod Adjustment

METERING ROD ADJUSTMENT (Fig. 4).

Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows: 1. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw (G). 2. With metering rods in place, press down on vacumeter link (H) until metering rods bottom in carbureter body casting (J). 3. Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link (K). Hold in place and carefully tighten clamp screw (G).

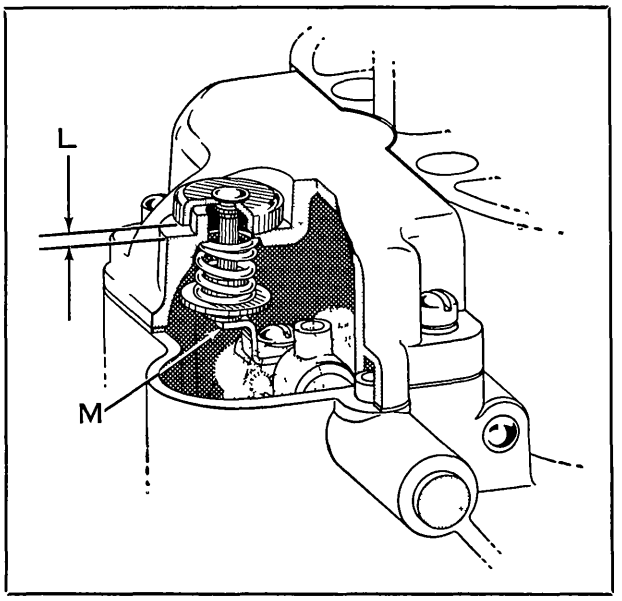


Figure 5
Bowl Vapor Vent Adjustment

BOWL VAPOR VENT ADJUSTMENT (Fig. 5):

This adjustment should be made after completing pump and metering rod adjustments Install dust cover and dust cover gasket. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter. There should be 3/32" (L) (gauge T109-125) between lower edge of bowl vapor vent valve and dust cover To adjust, remove dust cover and bend vapor vent arm (M).

FAST IDLE ADJUSTMENT (Fig. 6):

(a) Loosen choke lever clamp screw (N) on choke shaft Insert 020" feeler gauge T109 29 between lip of fast idle cam and boss of flange casting (O) Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw (N).

(b) With choke valve tightly closed tighten fast idle adjusting screw (P) until there is 018" (gauge T109 44) opening between throttle valve and bore of carbureter (side opposite idle port) (Q) Be sure fast idle adjusting screw is on high step of cam (R) while making this adjustment

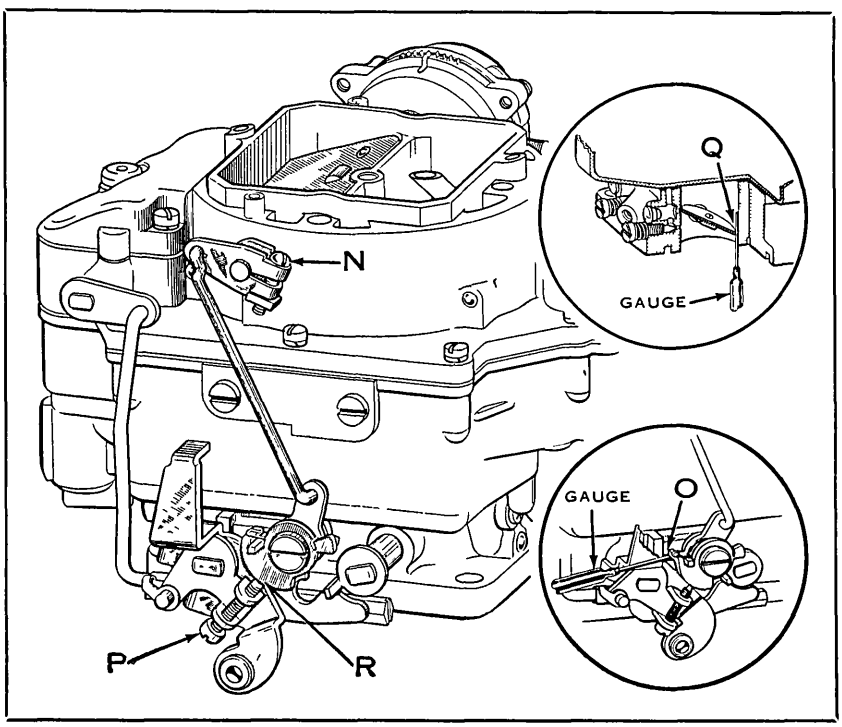


Figure 6
Fast Idle Adjustment

Part No.	PART NAME	
63-58	Coil housing retainer	(3)
63 149	Bowl vent spring retainer	
63-176	Pump spring retainer	
64-145S	PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
75-850	METERING ROD—STANDARD	(2)
86-12	Flange stud lock washer	(4)
101-10	Pump arm clamp screw	
101-19	Choke lever clamp screw (Sup by 101 354S)	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	
101-120	Fast idle adjustment screw	
101-136	Coil housing attaching screw	(3)
101-149S	Body flange attaching screw and washer assembly	(4)
101-160S	Air horn attaching screw and washer assembly	(8)
101-164	Operating lever clamp screw	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet housing attaching screw	
101-284	Piston housing attaching screw	(3)
101-307S	Bracket attaching screw and washer assembly	
101-324	Fast idle cam screw	
101-332	Throttle lever adjusting screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-354S	Choke lever clamp screw assembly	
105A-10	Choke lever nut	
105A-11	Flange stud nut	(4)
105A-28	Operating lever nut	
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
114-96	Inner throttle shaft arm	
114-97	Outer throttle shaft arm	
115-185	Throttle operating rod (Sup by 115 199)	
115-188	THROTTLE CONNECTOR ROD	
115-189	Choke connector rod	
115-199	Throttle operating rod	
116-13	PUMP INTAKE CHECK BALL	
117-28	Pump arm link	
117-155	Vacumeter piston link	
118-98S	Dust cover assembly	
120-166	PRIMARY METERING ROD JET	(2)
120-176	SECONDARY METERING JET	(2)
121-78	COIL HOUSING GASKET	
121-149	Pump jet housing gasket (Sup by 121 241)	
121-208	DUST COVER GASKET	
121-210	Body flange gasket (Sup by 121 242)	
121-211	AIR HORN GASKET	
121-241	PUMP JET HOUSING GASKET	
121-242	BODY FLANGE GASKET	
121-243	PISTON HOUSING GASKET	
136-37	Throttle operating rod washer	(2)
136-84	Spring washer	
136-159	Throttle shaft washer	
150-62	Choke piston pin	
150-186S	Pin and valve cap assembly	
150A-10	PIN SPRING	(4)
160-91	Choke piston	
160-110S	Vacuum piston and pin assembly	
170-260S	Piston housing and plug assembly	
170AB238S	Thermostatic coil and housing assembly	
172-22	THROTTLE CONNECTOR ROD RETAINER	
180-60	Secondary throttle return spring bracket	
181-194S	Fast idle cam assembly	
186-34	Baffle plate	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

CARBURETER
TRADE MARK REG U S PAT OFF
MARCA REGISTRADA

UNLOADER ADJUSTMENT (Fig. 7):

With throttle wide open there should be 1/8" clearance (S) between lower edge of choke valve and inner wall of air horn (gauge T109-36). Adjust by bending unloader lip (T) on throttle shaft lever (use bending tool T109-41)

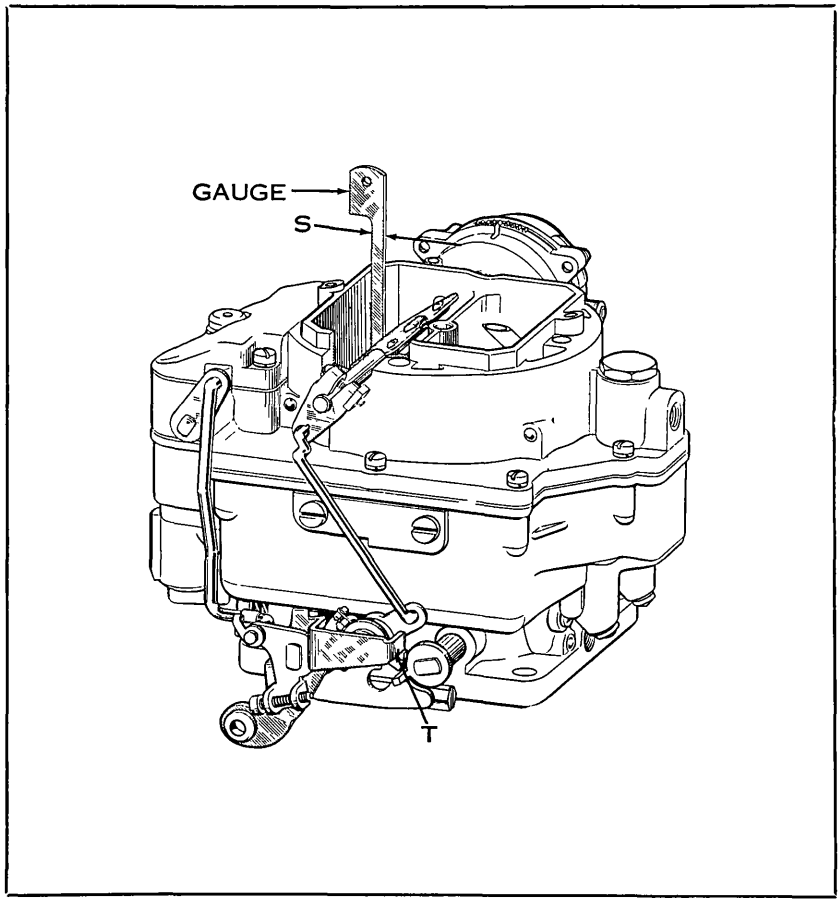


Figure 7
Unloader Adjustment

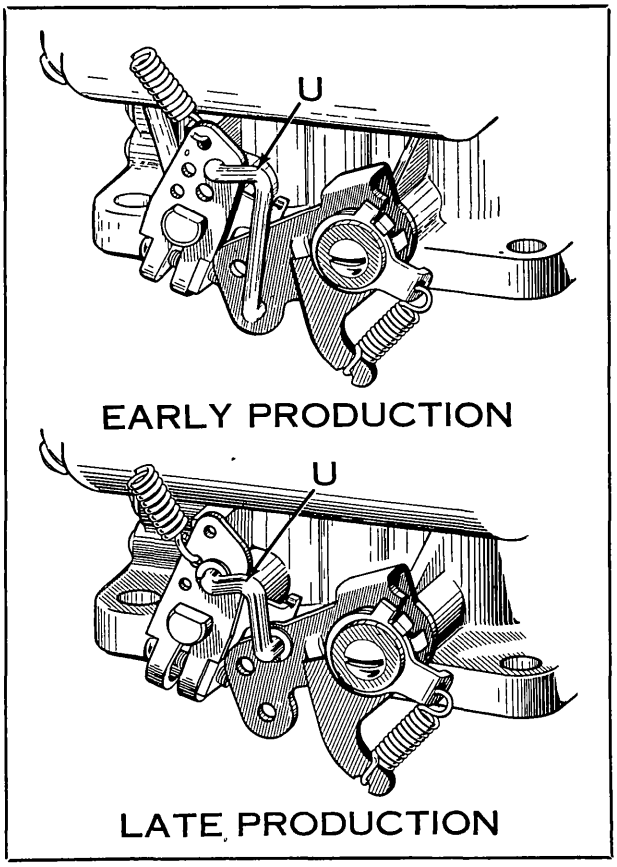


Figure 8
Secondary Throttle Lever Adjustment

SECONDARY THROTTLE LEVER ADJUSTMENT (EARLY AND LATE PRODUCTION) (Fig. 8):

Primary and secondary throttle valves should reach wide open position at the same time To adjust· Bend throttle operating rod at upper angle (U) (Use bending tool T109-213)

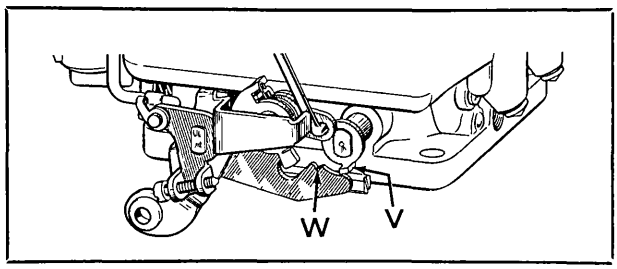
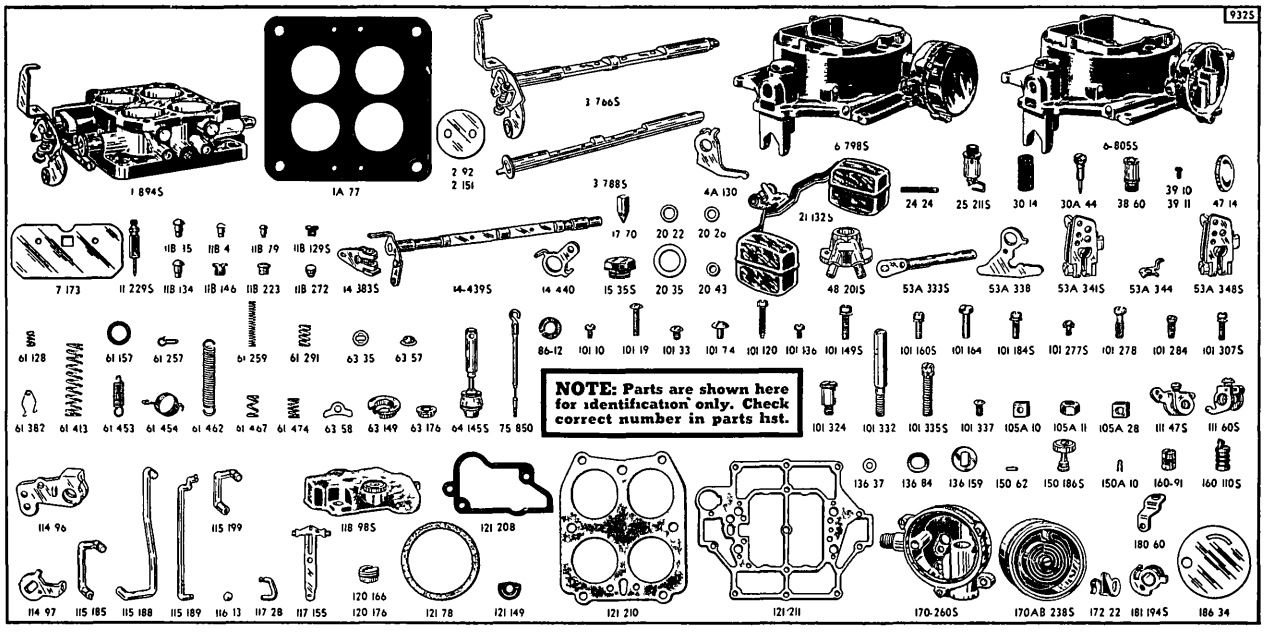


Figure 9
Secondary Throttle Lock-Out Adjustment

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT (Fig. 9)

This adjustment should be made after completing fast idle and secondary throttle lever adjustments (a) With choke valve tightly closed open primary throttle valves all the way Tang (V) on secondary throttle arm should engage in notch (W) on lock out lever preventing secondary throttle shaft movement (b) Hold choke valve in wide open position Open primary throttle valves all the way Lock-out lever should fall free allowing secondary throttle valves to be opened before primary throttle valves are fully open If necessary bend tang (V) on secondary throttle lever to provide clearance for proper operation of lock-out lever



Oldsmobile 8—1952—Carbureter No. 932S

WHEN SERVICING, USE GASKET ASSORTMENT No. 221 OR 234, REPAIR PACKAGE No. 1703

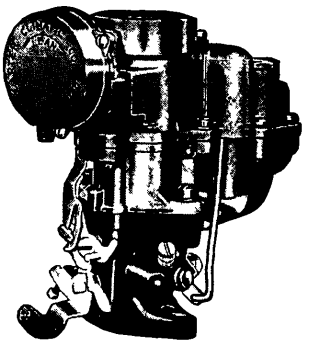
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-894S	Body flange assembly	
1A-77	FLANGE GASKET	
2-92	Primary throttle valve	(2)
2-151	Secondary throttle valve (Sup by 2 156)	(2)
2-156	Secondary throttle valve	(2)
3-766S	Primary throttle shaft and lever assembly	
3-788S	Secondary throttle shaft and dog assembly	
3-796S	Secondary throttle shaft and dog assembly (Sup by 3-788S)	
4A-130	Throttle shaft dog	
6-798S	Air horn and Climatic® control assembly	
6-805S	Air horn assembly	
7-173	Choke valve	
11-229S	LOW SPEED JET ASSEMBLY	(4)
11B-35	Rivet plug	(8)
11B-41	Rivet plug	(2)
11B-79	Rivet plug	(8)
11B-129S	Passage plug assembly	
11B-134	Rivet plug	
11B-146	Level sight plug	(2)
11B-223	IDLE PORT AND NOZZLE PASSAGE RIVET PLUG	(8)
11B-272	Rivet plug	
14-383S	Choke lever and screw assembly	
14-439S	Choke piston lever link and shaft assembly	
14-440	Cam trip lever	
15-35S	Strainer nut assembly	
17-70	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	(2)
20-26	Passage plug gasket	
20-35	BOWL STRAINER GASKET	
20-43	Piston housing gasket (Sup by 121-243)	

Part No.	PART NAME	
21-132S	Float and lever assembly	(2)
24-24	FLOAT LEVER PIN	(2)
25-211S	NEEDLE AND SEAT ASSEMBLY	(2)
30-14	BOWL STRAINER	
30A-44	Idle adjustment screw	(2)
38-60	Standpipe	
39-10	Primary throttle valve attaching screw	(4)
39-11	Choke valve attaching screw	(2)
47-14	WELSH PLUG	
48-201S	Pump jet housing assembly	
53A-333S	Pump operating lever and countershaft assembly	
53A-338	Lockout arm	
53A-341S	Secondary operating lever assembly (Sup by 53A 348S)	
53A-344	Vent arm	
53A-348S	Secondary operating lever assembly	
61-128	Connector rod spring	
61-157	Plunger spring	
61-257	Needle pull clip	(2)
61-259	VACUUM PISTON SPRING	
61-291	Throttle lever adjusting screw spring	
61-382	METERING ROD SPRING	
61-413	Upper pump spring	
61-453	Throttle flex spring	
61-454	Fast idle cam spring	
61-462	SECONDARY THROTTLE RETURN SPRING	
61-467	Idle adjustment screw lock spring	(2)
61-474	Bowl vent spring	
63-35	Spring retainer	
63-57	INTAKE BALL CHECK RETAINER	

Model-"76"

Canadian Series
"3500"



Cut Shows 764S

Casting No 538 on Face of Flange

OLDSMOBILE SIX 1950

763S-763SA—Hydra-Matic Trans
764S—Syncrom sh Trans

WA-1 Down-Draft **Carbureters 763S-763SA-764S** With Climatic® Control

CARBURETER SPECIFICATIONS

For Oldsmobile Six Cylinder Engine 3 17/32 Inch Bore, 4 3/8 Inch Stroke

Dimensions Flange size 1 1/2 inch S A E
Primary venturi 11/32 inch I D
Secondary venturi 11/16 inch I D
Main venturi 1 3/8 inch I D

Float Level Distance from seam of float (at free end) to tip on lower edge of float chamber cover when needle is seated to be 1/2 inch

Vents Outside No 10 drill Inside none

Gasoline Intake Square vertical (push pull) needle Size No 46 (.081") drill hole in needle seat

Low Speed Jet Tube Jet size No 65 (.035") drill
By pass size .063 inch diameter
Economizer .052 ± .0005 inch diameter
Idle bleed size No 52 (.0635") drill

Idle Port Length .190 inch Width .040 inch

Idle Port Opening .136 to .140 inch above valve with valve closed tight

Idle Screw Seat No 46 drill

Set Idle Adjustment Screw 1/2 to 1 1/2 turns open For richer mixture turn screw out Do not attempt to idle engine below 6 m p h

Main Nozzle (Assembly) Slip Nozzle flush type (angle tip) seats in primary venturi at 45° angle Discharge jet size .110 inch diameter Inner nozzle (seats in slip nozzle), I D No 31 (.120") drill

Metering Rod (Vacumeter Type) Economy step .0745 inch diameter Middle step tapers to .066 inch diameter Power step .048 inch diameter Length 3 9/64 inches

Metering Rod Jet .1015 inch diameter

Metering Rod Setting Use gauge part No T109 102 (2.468 inches)

Accelerating Pump Pressure type
Pump discharge jet size No 72 (.025") drill
Relief passage (to outside) size No 42 (.0935") drill
Intake ball check size No 60 (.040") drill
Discharge ball check size No 32 (.116") drill

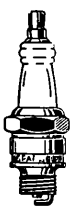
Pump Adjustment 16/64 inch plunger travel (full throttle position) Use gauge No T109 117S

Choke Carter Climatic® Control set at index Butterfly type offset valve Choke heat suction hole in body size No 30 (.1285") drill

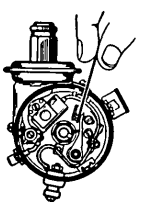
Vacuum Spark Port (Round type) .058 .061 inch diameter Top of port .050 inch above valve

Motor Tune-Up—Be Accurate!

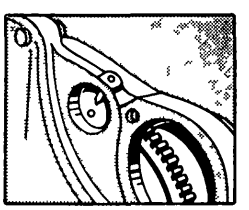
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



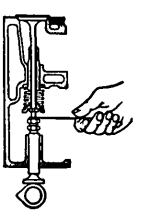
Spark Plug
Gap
.040"



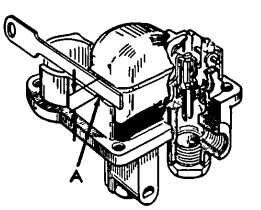
Breaker Point
Setting
.020"



Ignition Timing
Breaker Points to Open
On Ball or 1° B T C



Valve Setting
(Hot)
Intake .008"
Exhaust .011"



Float Setting
1/2 Inch
(Measure from point 'A to top of float seam)



Idle Adjustment
Screw Setting
1/2 t 1 1/2
Turns Open

CARBURETER ADJUSTMENTS

Pump Adjustment With throttle valve seated and pump connector link in place (lower hole on 763S-763SA) pump should travel 16/64' from closed to wide open throttle position

Measure pump travel by using Universal pump travel gauge T109-117S Place base of the gauge on ridged portion of bowl cover so that projecting portion of pump gauge rests on top surface of connector link of pump shaft Hold gauge vertical

The difference between the numbers shown by index mark on gauge at wide open and closed throttle position should be 16 (16/64") Adjust by bending throttle connector rod at lower angle

Metering Rod Adjustment Correct setting of metering rod is important and must be made after pump adjustment or when leaner than standard rods are installed

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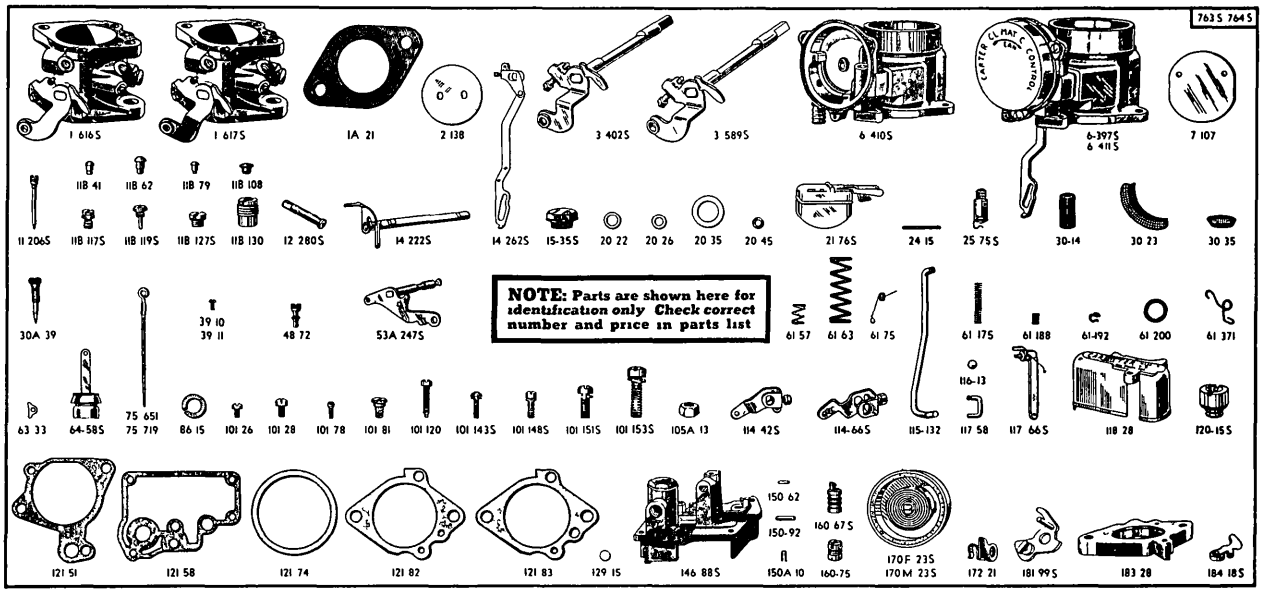
Insert gauge (tool No T109-102) in place of metering rod seating tapered end of gauge in metering rod jet Hold gauge vertical to insure seating in jet With throttle valve seated press down on piston link, directly over piston until it contacts the pump arm There should now be less than 005' clearance between metering rod pin and shoulder in notch of gauge Gauge must not drag on pin

Adjust by bending lip on piston link (use tool T109-105) Remove gauge and install metering rod, disc, pin and spring

Anti-Percolator Adjustment Crack throttle valve 020 by placing gauge T109-29 between throttle valve and bore of carbureter (side opposite idle port) Bend rocker arm (use tool T109-105) until there is a clearance of 005" to 015" between rocker arm lip and pump arm

Fast Idle Adjustment With fast idle cam in normal idle position, tighten throttle lever adjusting screw until it just seats against cam Hold throttle lever closed and pull cam back until first (or lower) step is against (not on) set screw There should now be 5/8" clearance between inside wall of air horn and lower edge of choke valve (Use tool T109-85) Adjust by bending fast idle link at offset portion (use tool T109-41)

Unloader Adjustment With throttle valve wide open there should be 3/8' (763S-763SA), 7/16" (764S) clearance between lower edge of choke valve and inner wall of air horn (T109-80 and T109-81) Adjust by bending cam on throttle lever (T109-41) Choke must be free and not drag or bend in any position



Oldsmobile 6—1950—Carbureter Nos. 763S-763SA-764S

WHEN SERVICING, USE GASKET ASSORTMENT No 157A, REPAIR PACKAGE No 1536 (763S-SA), No. 1537 (764S)

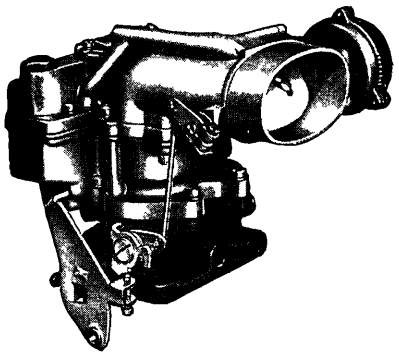
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME
1-616S	Body flange assembly (763S-SA) (Sup by 1-795S)
1-617S	Body flange assembly (764S) (Sup by 1-796S)
1-795S	Body flange assembly (763S-SA)
1-796S	Body flange assembly (764S)
1A-21	FLANGE GASKET
2-138	Throttle valve
3-402S	Throttle shaft and lever assembly (764S)
3-589S	Throttle shaft and lever assembly (763S-SA)
6-397S	Air horn assembly (763S-SA)
6-410S	Air horn and piston housing assembly
6-411S	Air horn assembly (764S)
7-107	Choke valve
11 206S	LOW SPEED JET ASSEMBLY
11B 41	Rivet plug
11B-62	Body flange rivet plug
11B-79	Rivet plug (5)
11B-108	Idle port rivet passage plug
11B-117S	Idle passage plug assembly
11B-119S	Ball retainer screw plug assembly
11B-127S	Passage plug assembly (2)
11B-130	Nozzle retainer plug
12-280S	Nozzle assembly
14-222S	Choke piston lever link and shaft assembly
14-262S	Choke lever, screw and link assembly
15-35S	Strainer nut assembly
20-22	Gasket (3)
20-26	Gasket (3)
20 35	Bowl strainer gasket
20-45	NOZZLE GASKET
21-76S	Float and lever assembly
24-15	Float lever pin
25-75S	NEEDLE AND SEAT ASSEMBLY
30-14	Bowl strainer gauze
30-23	PISTON HOUSING STRAINER
30-35	PUMP STRAINER
30A-39	Idle adjustment screw
39-10	CHOKE VALVE ATTACHING SCREW (2)
39-11	Throttle valve attaching screw (2)
48-72	PUMP JET
53A-199S	Pump arm and countershaft assembly (763S-SA)
53A-247S	Pump arm and countershaft assembly (764S) (Sup by 53A-199S on 763S)
61-57	Adjustment screw spring
61-63	Pump spring
61-75	Metering rod spring
61-175	VACUUM PISTON SPRING
61-188	Rocker arm spring
61-192	Needle pull clip
61-200	Plunger spring
61-371	Pump arm spring (763S-SA)
63-33	Housing retainer (3)

Part No	PART NAME
64 58S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49-108)
75 512	Metering rod, 1 size lean
75-513	Metering rod, 2 sizes lean
75-514	Metering rod, 3 sizes lean
75-651	METERING ROD—STANDARD
75-719	Metering rod—Standard (763S) (Sup by 75-651)
86-15	Flange stud lock washer (2)
101-26	Coil housing attaching screw (3)
101-28	Throttle shaft arm clamp screw
101-78	Choke lever clamp screw
101-81	Fast idle cam screw
101-120	Throttle lever adjusting screw
101-143S	Piston housing attaching screw and washer assembly
101-148S	Bowl cover attaching screw and washer assembly (5)
101-151S	Air horn attaching screw and washer assembly (2)
101-153S	Body flange attaching screw and washer assembly (2)
105A-13	Flange nut (2)
114-42S	THROTTLE SHAFT ARM AND SCREW ASSEMBLY (764S)
114 66S	THROTTLE SHAFT ARM AND SCREW ASSEMBLY (763S-SA)
115-132	THROTTLE CONNECTOR ROD
116-13	PUMP INTAKE AND DISCHARGE CHECK BALL (2)
117-58	Pump connector link
117-66S	Piston link and spring assembly
118-28	Dust cover
120-15S	METERING ROD JET ASSEMBLY
121-51	AIR HORN GASKET
121-58	BOWL GASKET
121-74	COIL HOUSING GASKET
121-82	BODY FLANGE GASKET (UPPER)
121-83	BODY FLANGE GASKET (LOWER)
129-15	Metering rod disk
146-88S	Bowl cover assembly
150-62	Choke piston pin
150-92	Anti-percolator pin
150A 10	PIN SPRING (3)
160-67S	Vacuum piston and pin assembly
160 75	Choke piston
170F-23S	Thermostatic coil and housing assembly (764S)
170M-23S	Thermostatic coil and housing assembly (763S-SA)
172-21	CONNECTOR ROD RETAINER
181-99S	Fast idle cam and pin assembly
183-28	Insulator
184-18S	ANTI-PERCOLATOR CAP AND ROCKER ARM ASSEMBLY

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

849SU (Consists of:
(1) 849S Carbureter
(1) 195-43U Installation Unit)



Casting No 604 on Face of Flange

OLDSMOBILE 8 ROCKET ENGINE MODELS "88"-"98" 1949-50

WGD **849S** DUAL DOWN-DRAFT CLIMATIC® CONTROL CARBURETER

195-43U Installation Unit

(To be used when engine is not originally Carter equipped)

CARBURETER SPECIFICATIONS

For Oldsmobile 8 Cylinder Engine 3¾ Inch Bore 3 7/16 Inch Stroke

Dimensions Flange size 1¼ inch (31 75 mm) dual 4 bolt type
Primary venturi 11/32 inch (8 73 mm) I D
Secondary venturi 21/32 inch (16 67 mm) I D
Main venturi 1 3/16 inch (30 16 mm) I D

Float Level Distance from float to bowl cover when needle is seated to be ¼ inch (6 35 mm) Use gauge No T109 31

Vents Outside none Inside balance vent forward of choke valve

Gasoline Intake Seat size No 38 (2 58 mm) drill

Low Speed Jet Tube Jet size No 70 (71 mm) drill
By pass size No 55 (1 32 mm) drill
Economizer size 0472 inch (1 2 mm) drill
Idle bleed size No 56 (1 18 mm) drill

Idle Port Upper port slot type length 190 inch (4 83 mm) Width 040 inch (1 02 mm)

Idle Port Opening 132 to 138 inch (3 35 to 3 51 mm) above upper edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw) Size 0615 to 0655 inch (1 56 to 1 66 mm) diameter

Set Idle Adjustment Screw 1 to 1½ turns open For richer mixture turn screw out Do not idle engine below 375 r p m (Hydramatic—in neutral) or 425 r p m (Syncromesh)

Nozzle Nozzle is installed permanently **Do not remove** Anti percolating well jet size No 60 (1 02 mm) drill

Metering Rod (Vacumeter Type) Economy step 0755 inch (1 92 mm) diameter
Middle step tapers to 066 inch (1 68 mm) diameter
Power step 048 inch (1 22 mm) diameter

Metering Rod Jet 096 inch (2 44 mm) diameter

Metering Rod Setting See Adjustments

Accelerating Pump Discharge jet (twin) size No 70 (71 mm) dr ll
Pump jet air bleed to outside ⅛" (3 18 mm) diameter drill
Intake ball check Restriction (under ball check) size 100 inch (2 54 mm) diameter
D scharge (needle seat) size No 50 (1 78 mm) drill

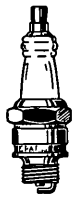
Pump Adjustment See Adjustments

Choke Carter Climatic® Control—set at index Butterfly type offset valve Choke heat suction hole in body size No 35 (2 79 mm) drill

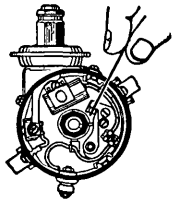
Vacuum Spark Port 051 to 053 inch (1 30 to 1 35 mm) diam eter Top of port 021 to 031 inch (53 to 79 mm) above valve

Motor Tune-Up—Be Accurate! Always Use Feeler Gauges!

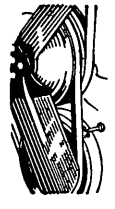
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



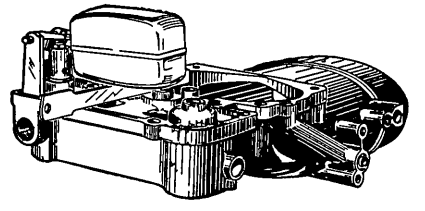
Spark Plug
Gap
030"



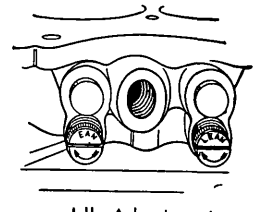
Breaker Point
Setting
015"



Ignition Timing
Breaker Points to Open
2° B T D C



Float Setting
¼ Inch
(Use Gauge T109 31)



Idle Adjustment
Screw Setting
1 to 1½
Turns Open

NOTE These cars equipped with hydraulic valve lifters —N adjustment

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT (Fig. 1):

With bowl cover gasket removed, bowl cover inverted and needle seated, there should be 1/4 inch (gauge T109-31) between top of float and bowl cover.

Adjust by bending float arm.

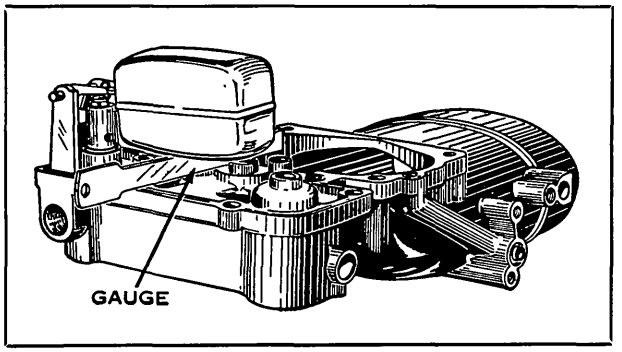


Figure 1
Float Adjustment

PUMP ADJUSTMENT (Fig. 2):

Back out throttle lever set screw until throttle valves seat in bores of carbureter. Hold straight edge across top of dust cover boss at pump arm. The flat on top of pump arm should be parallel with straight edge.

Adjust by bending pump connector rod at upper angle "A".

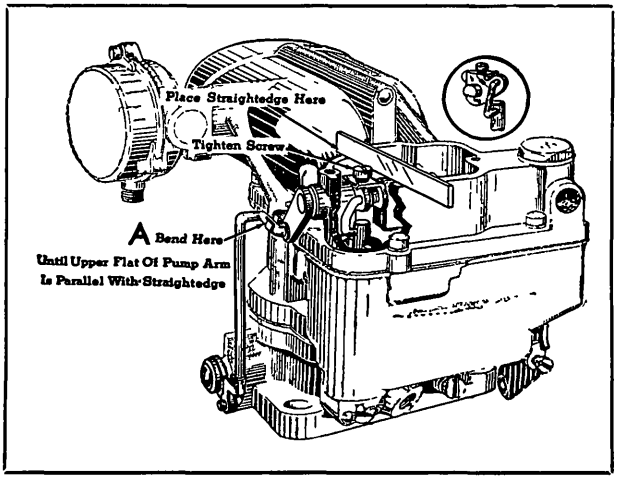


Figure 2
Pump Adjustment

METERING ROD ADJUSTMENT (Fig. 3):

The metering rods must be adjusted after the pump adjustment, or when leaner than standard rods are installed. No metering rod gauges are necessary; procedure is as follows:

With the throttle lever set screw backed out and throttle valves seated in bores of carbureter, press down on vacumeter link "B" until metering rods bottom at "C". With rods held in this position, revolve metering rod arm until lip contacts vacumeter link "D". Hold in place and carefully tighten set screw.

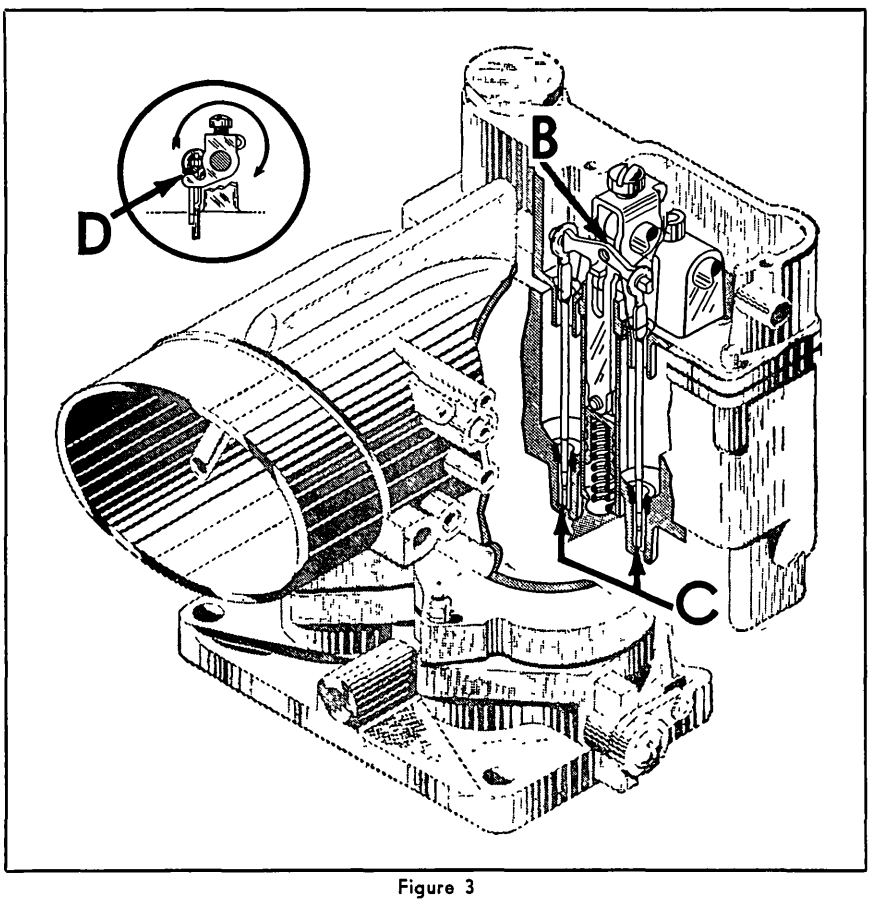


Figure 3
Metering Rod Adjustment

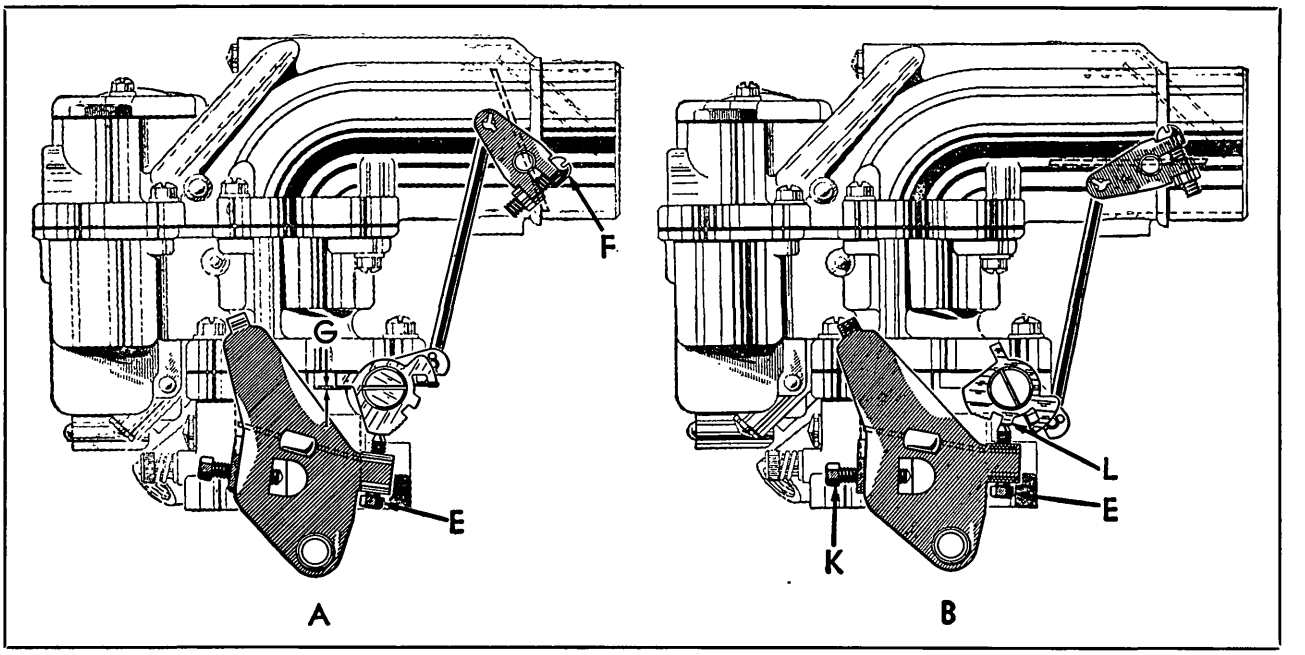


Figure 4
Fast Idle Adjustment

FAST IDLE ADJUSTMENT (Fig. 4):

A. Back out fast idle set screw "E" until fast idle cam revolves freely, then loosen choke lever clamp screw "F". Insert .015" flat feeler gauge between lip of fast idle cam and boss on flange casting "G". Hold choke valve tightly closed and take all slack out of linkage by pressing choke lever toward closed position—hold in place and tighten clamp screw "F".

B. With throttle lever set screw "K" backed out and throttle valves seated in bores of carbureter, revolve fast idle cam until raised projection "L" lines up with fast idle set screw "E". Adjust fast idle set screw "E" until it just touches raised projection "L" on fast idle cam.

UNLOADER ADJUSTMENT (Fig. 5):

With throttle valve in wide open position, there should be 7/64 inch (gauge T109-125 may be used) between lower edge of choke valve and inner wall of air horn "H". Adjust by bending lip "J" on throttle lever. Use bending tool T109-41.

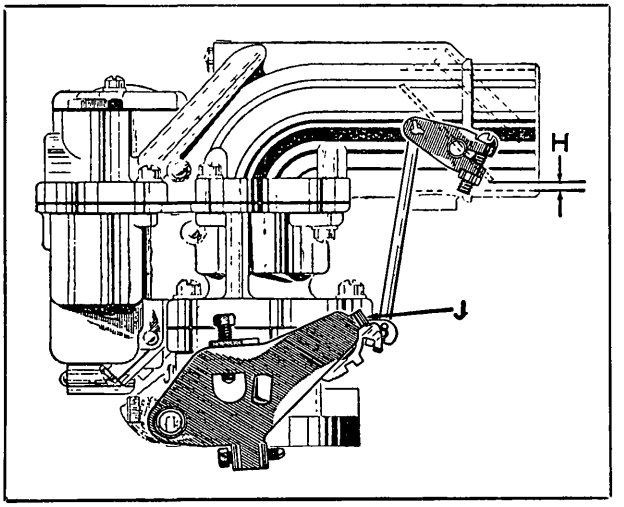


Figure 5
Unloader Adjustment

INSTALLATION UNIT:

Installation unit No. 195-43U required when installing Carter WGD 849S or 714SA carbureter on 1949 or 1950 Oldsmobile 8 cylinder Rocket engines, not originally Carter equipped. Complete installation instructions packed with each unit.

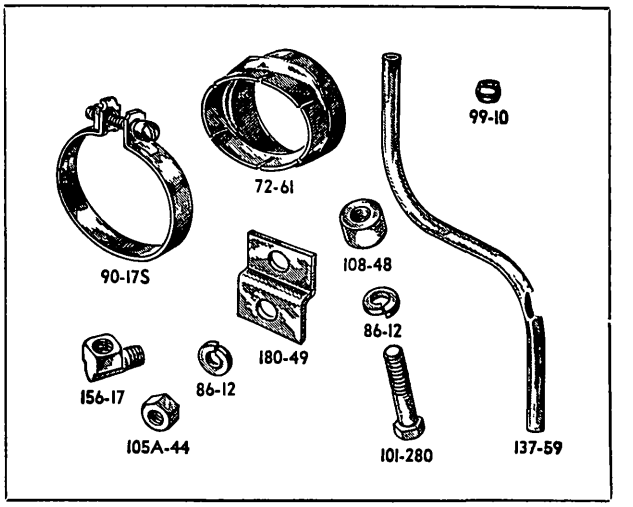
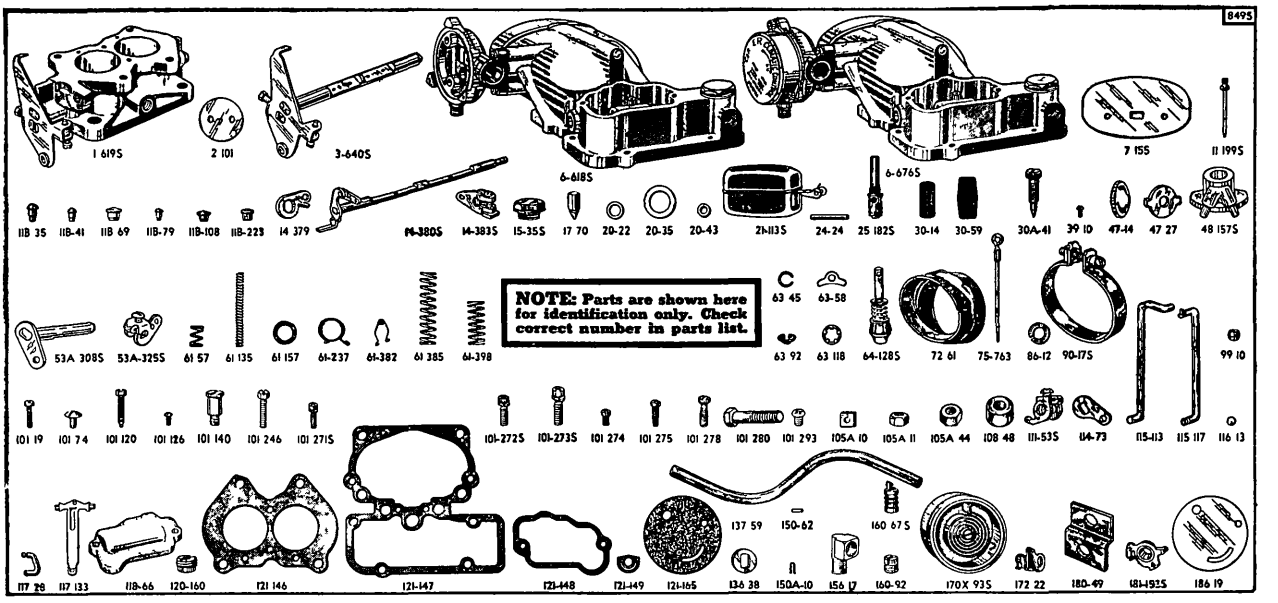


Figure 6
195-43U Parts



Oldsmobile 8—1949-50—Carbureter 849S

WHEN SERVICING, USE REPAIR PACKAGE No 1505B, GASKET ASSORTMENT No 193

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

★PARTS SO MARKED ARE INCLUDED IN INSTALLATION UNIT 195-43U

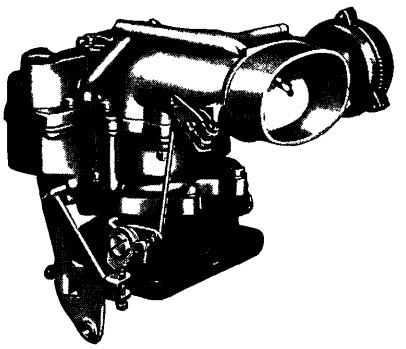
Part No.	PART NAME	
1-619S	Body flange assembly	
2-101	Throttle valve	(2)
3 640S	Throttle shaft and lever assembly	
6-618S	Air horn assembly	
6-676S	Air horn and Climatic® control assembly	
7-155	Choke valve	
11-199S	LOW SPEED JET ASSEMBLY	(2)
11B 35	Passage plug	(3)
11B-41	Rivet plug	(4)
11B-69	Rivet plug	
11B-79	Rivet plug	
11B-108	IDLE PORT RIVET PLUG	(2)
11B-223	NOZZLE RIVET PLUG	(2)
14-379	Cam trip lever	
14-380S	Choke piston lever, link and shaft assembly	
14-383S	Choke lever and screw assembly	
15-35S	Strainer nut assembly	
17-70	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	
20 35	BOWL STRAINER GASKET	
20-43	Hot air passage gasket	
21-113S	Float and lever assembly	
24-24	Float lever pin	
25-182S	NEEDLE AND SEAT ASSEMBLY	
30-14	BOWL COVER STRAINER	
30-59	STRAINER	
30A-41	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
47-14	Choke cylinder welsh plug	
47-27	Choke piston baffle	
48 157S	Pump jet and housing assembly	
53A-308S	Pump operating lever and countershaft assembly	
53A-325S	Pump arm and screw assembly	
61-57	Idle adjustment screw lock spring	(2)
61-135	VACUUM PISTON SPRING	
61-157	Plunger spring	
61-237	Fast idle cam spring	
61-382	METERING ROD SPRING	
61-385	PUMP SPRING (LOWER)	
61-398	Pump spring (upper)	
63 45	RETAINER RING PUMP CHECK	
63-58	Coil housing retainer	(3)
63 92	Pump spring retainer	
63-118	Throttle shaft retaining ring	
64-128S	PLUNGER ROD, SPRING AND RETAINER ASSEMBLY	
72-61	★Air cleaner adaptor	
75 706	Metering rod—1 size lean	
75-763	METERING ROD—STANDARD	(2)
86 12	★Flange stud and air cleaner lock washer	(6)

Part No	PART NAME	
90-17S	★Air cleaner adaptor assembly	
99-10	★Compression coupling cone	
101-19	Choke lever clamp screw (Sup by 101-354S)	
101-74	Throttle shaft arm attaching screw	
101-120	Fast idle adjustment screw	
101-126	Throttle valve attaching screw	(4)
101-140	Fast idle attaching screw	
101-246	Throttle lever adjusting screw	
101-271S	Dust cover attaching screw and washer assembly	(2)
101-272S	Air horn attaching screw and washer assembly	(8)
101-273S	Body flange attaching screw and washer assembly	(4)
101-274	Coil housing attaching screw	(3)
101-275	Choke housing attaching screw	(3)
101-278	Pump jet housing screw	
101-280	★Cap screw	
101-293	Metering rod arm clamp screw	(2)
101-354S	Choke lever clamp screw assembly	
105A-10	Choke lever clamp nut	
105A-11	Flange stud nut	(4)
105A-44	★Air cleaner hex nut	
108-48	★Air cleaner spacer	
111-53S	Metering rod arm and screw assembly	
114-73	THROTTLE SHAFT ARM	
115-113	THROTTLE CONNECTOR ROD	
115-117	Fast idle connector rod	
116-13	PUMP INTAKE CHECK BALL	
117-28	Pump arm link	
117-133	Vacumeter piston link	
118-66	Dust cover	
120-160	METERING ROD JET	(2)
121-146	BODY FLANGE GASKET	
121-147	AIR HORN GASKET	
121-148	DUST COVER GASKET	
121-149	Pump jet gasket (Sup by 121-241)	
121-165	COIL HOUSING GASKET	
121-241	PUMP JET HOUSING GASKET	
136-38	Throttle shaft arm washer	
137-59	★Heat tube	
150-62	Choke piston pin	
150A-10	Pin spring	(2)
156-17	★Elbow fitting	
160-67S	Vacuum piston and pin assembly	
160 92	Choke piston	
170X-93S	Thermostatic housing and coil assembly	
172-22	THROTTLE CONNECTOR ROD RETAINER	(2)
180-49	★Air cleaner mounting bracket	
181-153S	Fast idle cam assembly	
186-19	Baffle plate	

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown only one is used.

714S
714SU (Consists of:
(1) 714S Carbureter
(1) 195-43U Installation Unit)

714SA
714SAU (Consists of:
(1) 714SA Carbureter
(1) 195-43U Installation Unit)



Casting No. 604 on face of flange

OLDSMOBILE 8 ROCKET ENGINE MODELS "88"-"98" 1949

(849S can also be used)

WGD **714S-714SA** Dual Down-Draft Climatic® Control Carbs.

195-43U Installation Unit

(To be used when engine is not originally Carter equipped)

CARBURETER SPECIFICATIONS

For Oldsmobile 8 Cylinder Engine· 3¾ Inch Bore, 3-7/16 Inch Stroke

Dimensions: Flange size, 1¼ inch dual, 4 bolt type.
Primary venturi, 11/32 inch I D.
Secondary venturi, 21/32 inch I D.
Main venturi, 1-3/16 inch I. D.

Float Level: Distance from float to bowl cover, when needle is seated to be ¼ inch. Use gauge No. T109-31.

Vents: Outside, none. Inside balance vent, forward of choke valve.

Gasoline Intake: Square vertical (push-pull) needle. Seat size No. 38 (.1015") drill.

Low Speed Jet Tube: Jet size, No. 70 (.028") drill.
By-pass, size No. 55 (.052") drill.
Economizer, size (.0472") drill.
Idle bleed, size No. 56 (.0465") drill.

Idle Ports: Upper port, slot type, length .200 inch. Width .030 inch (early production). Length .190 inch. Width .040 inch (late production).

Idle Port Opening: .132 to .138 inch above upper edge of valve with valve closed tight.

Lower Port (For Idle Adjustment Screw): Size, .0615 to .0655 inch diameter.

Set Idle Adjustment Screw: ½ to 1 turn open. For richer mixture turn screw out. Do not idle engine above 390 r p m

Nozzle: In primary venturi, angle 45°. Flush type. Inside diameter, No. 38 drill. Nozzle is installed permanently. Do not remove. Anti-percolating well; jet size, No. 60 drill.

Metering Rod (Vacumeter Type): Economy step, 0745 inch diameter. Middle step tapers to 0655 inch diameter. Power step .042 inch diameter. Length 2-59/64 inches.

Metering Rod Jet: .096 inch diameter.

Metering Rod Setting: After adjusting for pump stroke, set metering rod as follows
With throttle tightly closed, hold metering rods (assembled on vacumeter link) in maximum down position, tighten clamp screw securely with metering rod arm contacting vacumeter link.

Accelerating Pump: Pressure type delayed action plunger (non-adjustable lever).
Discharge jet (twin) size No. 70 drill.
Pump jet air bleed to outside: ⅛" diameter drill
Intake ball check, size No. 40 (.098") drill.
Discharge (needle seat) size No. 50 (.070") drill.

Pump Adjustment: Flat on top of pump arm should be parallel with straight edge held across top of dust cover boss

Choke: Carter Climatic® Control—set at index Butterfly type, offset valve Choke heat suction hole in body, size No. 35 (.110 inch) drill.

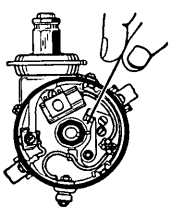
Vacuum Spark Port: 051 to 053 inch diameter. Top of port 029 to .033 inch above valve (early production), 021 to .031 inch above valve (late production).

Motor Tune-Up—Be Accurate! Always Use Feeler Gauges!

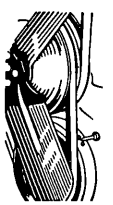
CAUTION· Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter



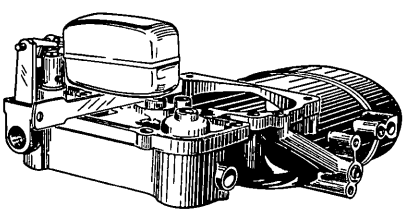
Spark Plug Gap .030"



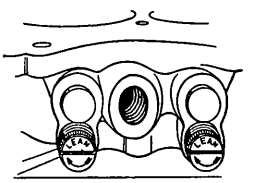
Breaker Point Setting .015"



Ignition Timing Breaker Points to Open: On Mark



Float Setting ¼ Inch (Use Gauge T109-31)



Idle Adjustment Screw Setting ½ to 1 Turn Open

NOTE: These cars equipped with hydraulic valve lifters.—No adjustment.

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CARBURETER
TRADE MARK REG U S PAT OFF.
MARCA REGISTRADA

PRINTED IN U.S.A.

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT (Fig. 1):

With bowl cover gasket removed, bowl cover inverted and needle seated, there should be 1/4 inch (gauge T109-31) between top of float and bowl cover.

Adjust by bending float arm.

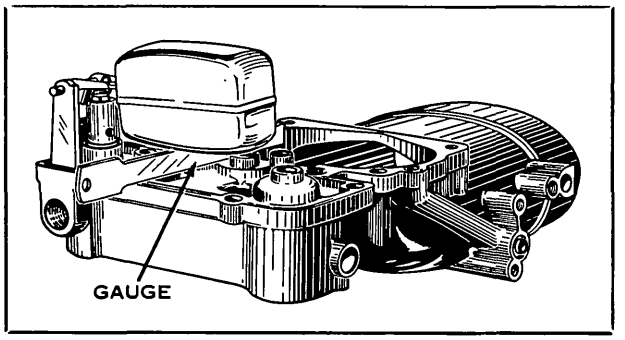


Figure 1
Float Adjustment

PUMP ADJUSTMENT (Fig. 2):

Back out throttle lever set screw until throttle valves seat in bores of carbureter. Hold straight edge across top of dust cover boss at pump arm. The flat on top of pump arm should be parallel with straight edge.

Adjust by bending pump connector rod at upper angle "A".

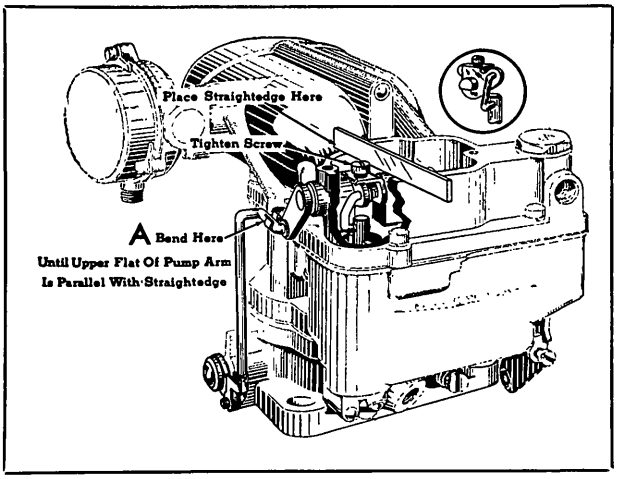


Figure 2
Pump Adjustment

METERING ROD ADJUSTMENT (Fig. 3):

The metering rods must be adjusted after the pump adjustment, or when leaner than standard rods are installed. No metering rod gauges are necessary; procedure is as follows:

With the throttle lever set screw backed out and throttle valves seated in bores of carbureter, press down on vacumeter link "B" until metering rods bottom at "C". With rods held in this position, revolve metering rod arm until lip contacts vacumeter link "D". Hold in place and carefully tighten set screw.

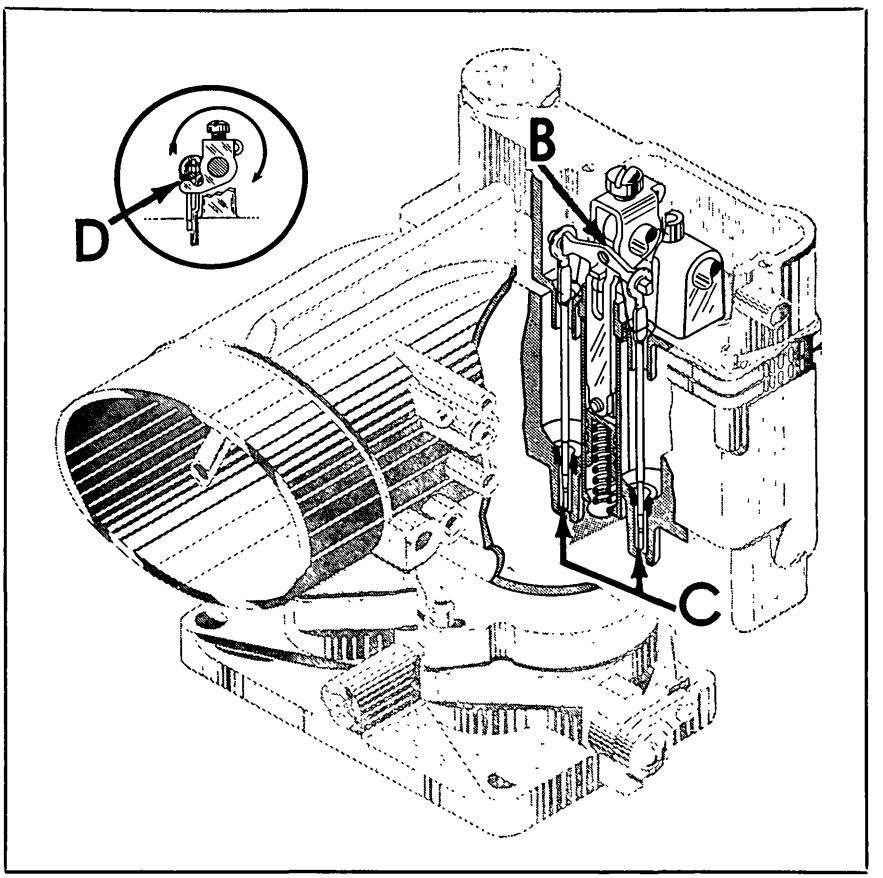


Figure 3
Metering Rod Adjustment

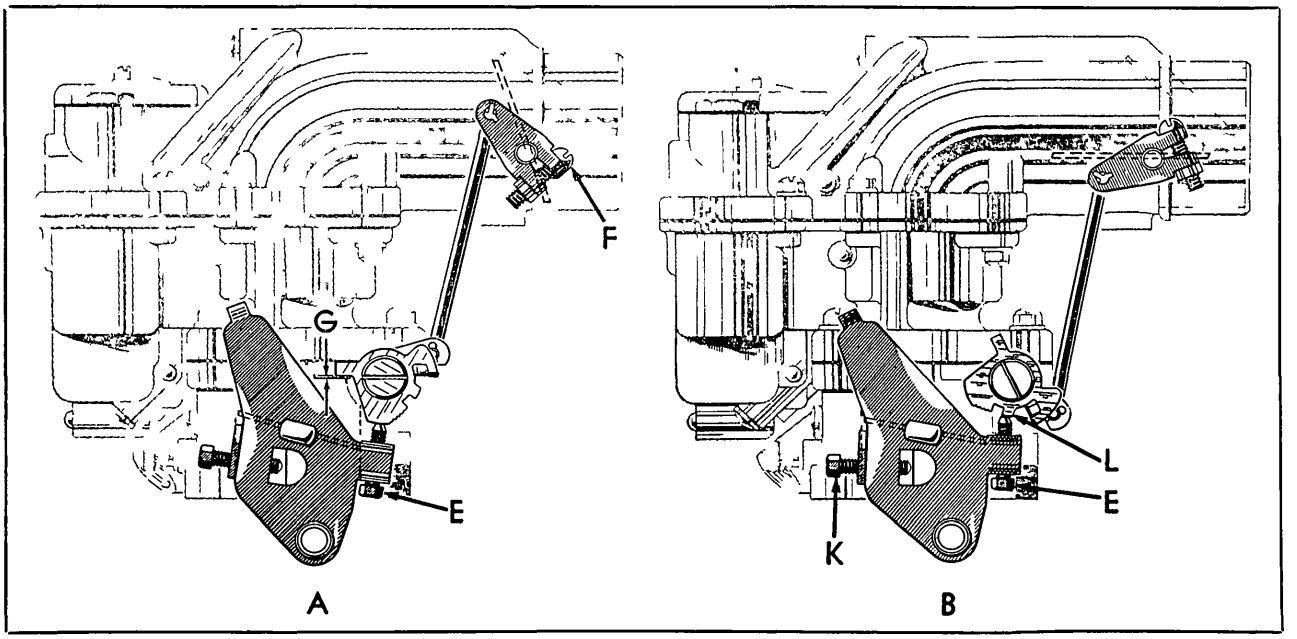


Figure 4
Fast Idle Adjustment

FAST IDLE ADJUSTMENT (Fig 4)

A Back out fast idle set screw E until fast idle cam revolves freely then loosen choke lever clamp screw F Insert 018" wire gauge (T109 44) between lip of fast idle cam and boss on flange casting G Hold choke valve tightly closed and take all slack out of linkage by pressing choke lever toward closed position—hold in place and tighten clamp screw F

B With throttle lever set screw K backed out and throttle valves seated in bores of carbureter revolve fast idle cam until raised projection L lines up with fast idle set screw E Adjust fast idle set screw E until it just touches raised projection L on fast idle cam

UNLOADER ADJUSTMENT (Fig. 5):

With throttle valve in wide open position there should be 1/4 inch (gauge T109 31) between lower edge of choke valve and inner wall of air horn H ' Adjust by bending lip "J on throttle lever Use bending tool T109 41

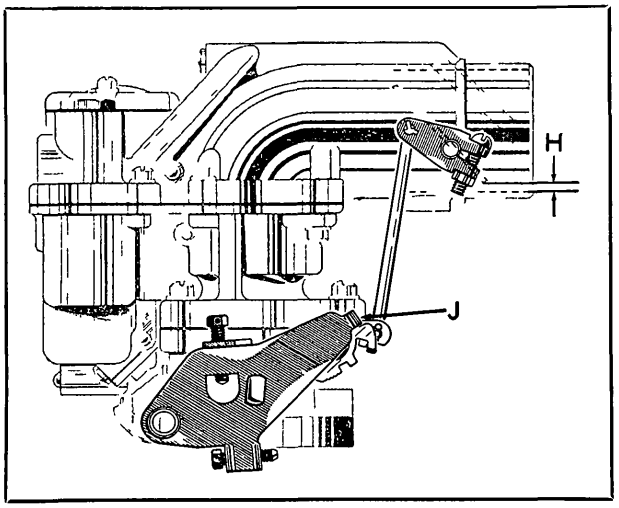


Figure 5
Unloader Adjustment

INSTALLATION UNIT

Installation unit No 195 43U required when installing Carter WGD 714S or 714SA carbureter on 1949 Oldsmobile 8 cylinder Rocket engines not originally Carter equipped Complete installation instructions packed with each unit

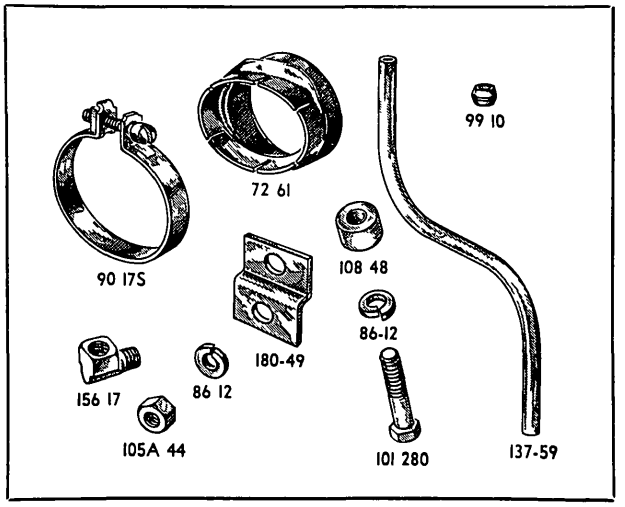
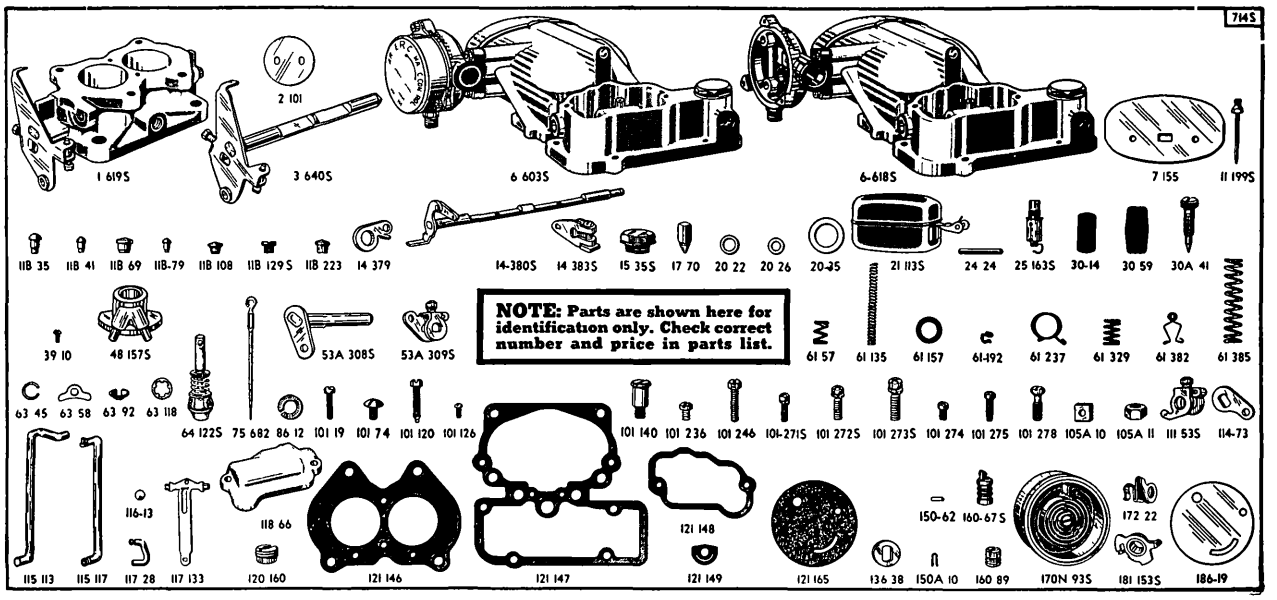


Figure 6
195-43U Parts



Oldsmobile 8—1949—Carbureters 714S-714SA

WHEN SERVICING, USE REPAIR PACKAGE No 1505B, GASKET ASSORTMENT No. 193

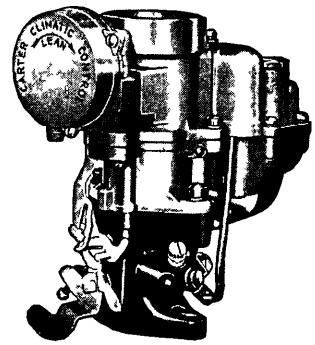
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

★ PARTS SO MARKED ARE INCLUDED IN INSTALLATION UNIT 195-43U

Part No	PART NAME	
1-619S	Body flange assembly	
2-101	Throttle valve	(2)
3-640S	Throttle shaft and lever assembly	
6-603S	Air horn assembly (Sup by 6-676S)	
6-618S	Air horn and piston housing assembly	
6-676S	Air horn assembly	
7-155	Choke valve	
11-199S	LOW SPEED JET ASSEMBLY	(2)
11B-35	Passage plug	(2)
11B-41	Rivet plug	(5)
11B-69	Rivet plug	
11B-79	Rivet plug	
11B-108	IDLE PORT RIVET PLUG	(2)
11B-129S	Pump discharge passage plug assembly	
11B-223	NOZZLE RIVET PLUG	(2)
14-379	Cam trip lever	
14-380S	Choke piston lever, link and shaft assembly	
14-383S	Choke lever and screw assembly	
15-35S	Strainer nut assembly	
17-70	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	
20-26	Pump passage plug gasket	
20-35	BOWL STRAINER GASKET	
20-43	Hot air passage gasket	
21-113S	Float and lever assembly	
24-24	Float lever pin	
25-163S	Needle and seat assembly (Sup by 25-182S)	
25-182S	NEEDLE AND SEAT ASSEMBLY	
30-14	BOWL COVER STRAINER	
30-59	STRAINER	
30A-41	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
47-14	Choke cylinder welsh plug	
47-27	Choke piston baffle	
48-157S	Pump jet and housing assembly	
53A-308S	Pump operating lever and countershaft assembly	
53A-309S	Pump arm and screw assembly (Sup by 53A-325S)	
53A-325S	Pump arm and screw assembly	
61-57	Idle adjustment screw lock spring	(2)
61-135	VACUUM PISTON SPRING	
61-157	Plunger spring	
61-192	Needle pull clip (Use with 25-163S)	
61-237	Fast idle cam spring	
61-329	Pump spring (upper) (Sup by 61-398)	
61-382	METERING ROD SPRING	
61-385	PUMP SPRING (LOWER)	
61-398	Pump spring (upper)	
63-45	RETAINER RING PUMP CHECK	
63-58	Coil housing retainer	(3)
63-92	Pump spring retainer	
63-118	Throttle shaft retaining ring	
64-122S	Plunger, rod spring and retainer assembly (Sup by 64-128S)	
64-128S	PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
★72-61	Air cleaner adaptor	
75-682	Metering rod—standard (Sup by 75-763)	(2)
75-706	Metering rod—1 size lean	(2)
75-763	METERING ROD—STANDARD	(2)
★86-12	Flange stud and air cleaner lock washer	(6)
★90-17S	Air cleaner adaptor clamp assembly	
★99-10	Compression coupling cone	
101-19	Choke lever clamp screw (Sup by 101-354S)	
101-74	Throttle shaft arm attaching screw	
101-120	Fast idle adjustment screw	
101-126	Throttle valve attaching screw	(4)
101-140	Fast idle attaching screw	
101-236	Metering rod arm clamp screw (Sup by 101-293)	(2)
101-246	Throttle lever adjustment screw	
101-271S	Dust cover attaching screw and washer assembly	(2)
101-272S	Air horn attaching screw and washer assembly	(8)
101-273S	Body flange attaching screw and washer assembly	(4)
101-274	Coil housing attaching screw	(3)
101-275	Choke housing attaching screw	(3)
101-278	Pump jet housing screw	
★101-280	Cap screw	
101-293	Metering rod arm clamp screw	(2)
101-354S	Choke lever clamp screw assembly	
105A-10	Choke lever clamp nut	
105A-11	Flange stud nut	(4)
★105A-44	Air cleaner hex nut	
★108-48	Air cleaner spacer	
111-53S	Metering rod arm and screw assembly	
114-73	THROTTLE SHAFT ARM	
115-113	THROTTLE CONNECTOR ROD	
115-117	Fast idle connector rod	
116-13	PUMP INTAKE CHECK BALL	
117-28	Pump arm link	
117-133	Vacumeter piston link	
118-66	Dust cover	
120-160	METERING ROD JET	(2)
121-146	BODY FLANGE GASKET	
121-147	AIR HORN GASKET	
121-148	DUST COVER GASKET	
121-149	Pump jet gasket (Sup by 121-241)	
121-165	COIL HOUSING GASKET	
121 241	PUMP JET HOUSING GASKET	
136-38	Throttle shaft arm washer	
★137-59	Heat tube	
150-62	Choke piston pin	
150A-10	Pin spring	(2)
★156-17	Elbow fitting	
160-67S	Vacuum piston and pin assembly	
160-89	Choke piston (Sup by 160-92)	
160-92	Choke piston	
170N-93S	Thermostatic housing and coil assembly (Sup by 170X-93S)	
170X-93S	Thermostatic housing and coil assembly	
172-22	THROTTLE CONNECTOR ROD RETAINER	(2)
★180-49	Air cleaner mounting bracket	
181-153S	Fast idle cam assembly	
186-19	Baffle plate	

NOTE· Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

MODELS
709S—76-49 (Hydra.)
710S—76-49 (Std.)



Casting No 538 on Face of Flange

OLDSMOBILE SIX 1949

709S—Hydra-Matic Transmission
710S—Syncromesh Transmission

(763SA can be used in place of 709S
764S can be used in place of 710S)

WA-1 Down-Draft **Carbureters 709S-710S** With Climatic® Control

CARBURETER SPECIFICATIONS

For Oldsmobile Six Cylinder Engine 3 17/32 Inch Bore, 4⅜ Inch Stroke

Dimensions Flange size 1½ inch S A E
Primary venturi 11/32 inch I D
Secondary venturi 11/16 inch I D
Main venturi 1⅜ inch I D

Float Level Distance from seam of float (at free end) to tip on lower edge of float chamber cover when needle is seated to be ½ inch

Vents Outside No 10 drill Inside none

Gasoline Intake Square vertical (push pull) needle Size No 46 (.081") drill hole in needle seat

Low Speed Jet Tube Jet size No 70 (.028") drill
By pass size No 53 (.0595") drill (early production)
By pass size .063 inch diameter (late production)
Economizer .063 .064 inch diameter
Idle bleed size No 52 (.0635") drill

Idle Port Length .190 inch Width, .040 inch

Idle Port Opening .136 to .140 inch above valve with valve closed tight

Idle Screw Seat No 46 drill

Set Idle Adjustment Screw ½ to 2 turns open For richer mixture turn screw out Do not attempt to idle engine below 6 m p h

Main Nozzle (Assembly) Slip Nozzle, flush type (angle tip) seats in primary venturi at 45° angle Discharge jet size .110 inch diameter Inner nozzle (seats in slip nozzle) I D No 31 (.120") drill

Nozzle Retainer Plug Size No 26 drill

Metering Rod (Vacumeter Type) Economy step .0745 inch diameter Middle step tapers to .066 inch diameter Power step .048 inch diameter Length 3 9/64 inches

Metering Rod Jet .1015 inch diameter

Metering Rod Setting Use gauge part No T109 102 (2.468 inches)

Accelerating Pump Pressure type
Pump d scharge jet size No 72 (.025") drill
Relief passage (to outside) size No 42 (.0935") drill
Intake ball check size No 60 (.040") drill
Discharge ball check size No 32 (.116") drill

Pump Adjustment 16/64 inch plunger travel (full throttle position) Use gauge No T109 117S

Choke Carter Climatic® Control set at index Butterfly type offset valve Choke heat suction hole in body size No 30 (.1285") drill

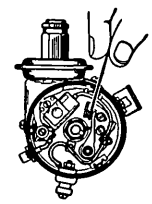
Vacuum Spark Port (Round type) .058 .061 inch diameter Top of port .050 inch above valve

Motor Tune-Up—Be Accurate!

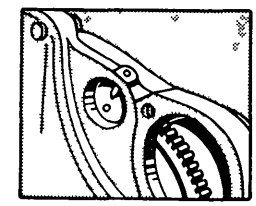
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



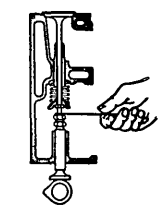
Spark Plug Gap .040"



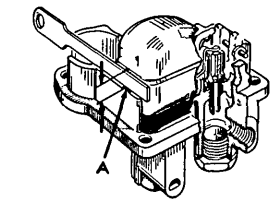
Breaker Point Setting .020"



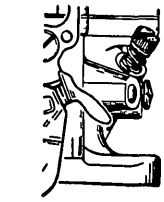
Ignition Timing Breaker Points to Open On Ball or 1° B T C



Valve Setting (Hot)
Intake .008"
Exhaust .011"



Float Setting ½ Inch (Measure from point 'A' to top of float seam)



Idle Adjustment Screw Setting ½ to 2 Turns Open

CARBURETER ADJUSTMENTS

Pump Adjustment With throttle valve seated, pump plunger should travel 16/64' from closed to wide open throttle position

Measure pump travel by using Universal pump travel gauge T109-117S Place base of the gauge on ridged portion of bowl cover so that projecting portion of pump gauge rests on top surface of connector link at pump shaft Hold gauge vertical The difference between the numbers shown by index mark on gauge at wide open and closed throttle position should be 16 (16/64)

Adjust by bending throttle connector rod at lower angle

Metering Rod Adjustment Correct setting of metering rod is important and must be made after pump adjustment or when leaner than standard rods are installed

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Insert gauge (tool No T109-102) in place of metering rod seating tapered end of gauge in metering rod jet Hold gauge vertical to insure seating in jet With throttle valve seated press down on piston link, directly over piston until it contacts the pump arm There should now be less than 005 clearance between metering rod pin and shoulder in notch of gauge Gauge must not drag on pin

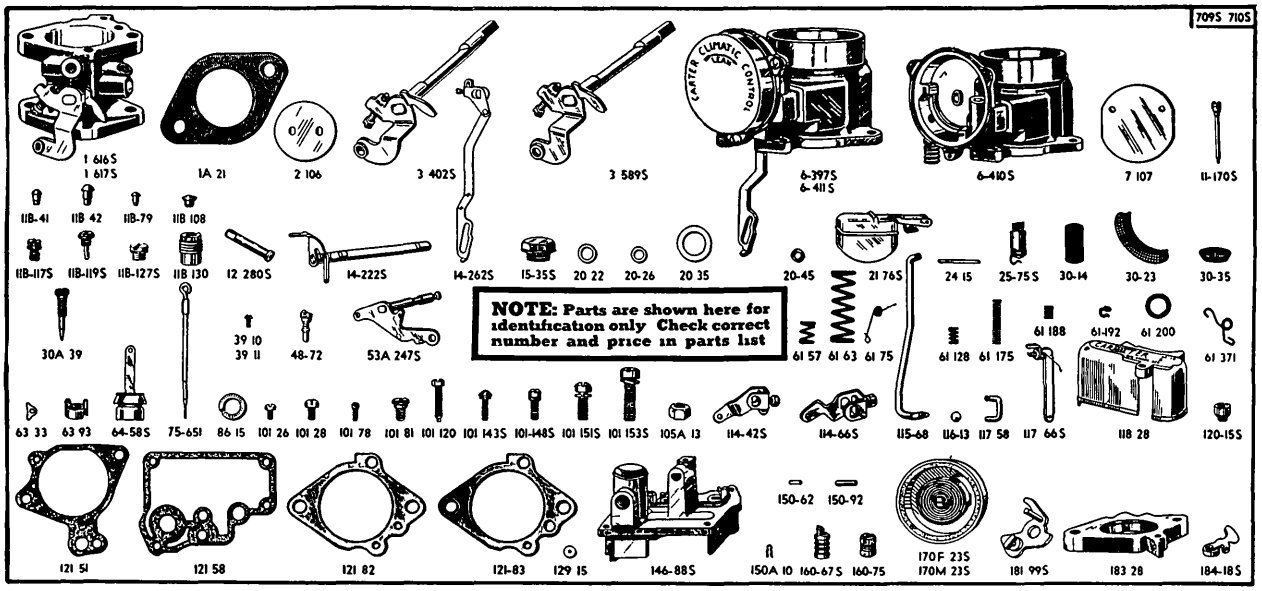
Adjust by bending lip on piston link (use tool T109-105) Remove gauge and install metering rod, disc, pin and spring

Anti-Percolator Adjustment Crack throttle valve 020" by placing gauge T109-29 between throttle valve and bore of carbureter (side opposite idle port) Bend rocker arm (use tool T109-105) until there is a clearance of 005 to 015" between rocker arm lip and pump arm

Fast Idle Adjustment With fast idle cam in normal idle position tighten throttle lever adjusting screw until it just seats against cam Hold throttle lever closed and pull cam back until first (or lower) step is against (not on) set screw

There should now be 5/8' clearance between inside wall of air horn and lower edge of choke valve (Use tool T109-85) Adjust by bending fast idle link at offset portion (use tool T109-41)

Unloader Adjustment With throttle valve wide open there should be 7/16" (710S), 3/8' (709S) clearance between lower edge of choke valve and inner wall of air horn (T109 80 or T109-81) Adjust by bending cam on throttle lever (T109 41)



Oldsmobile 6—1949—Carbureter Nos. 709S-710S

WHEN SERVICING, USE GASKET ASSORTMENT No. 157A, REPAIR PACKAGE (709S) No 1383B, (710S) No 1097B

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

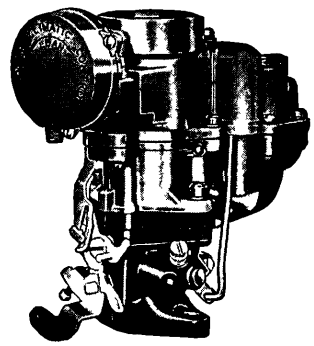
Part No	PART NAME	
1-616S	Body flange assembly (709S)	
1 617S	Body flange assembly (710S)	
1A 21	FLANGE GASKET	
2-106	Throttle valve	
3-402S	Throttle shaft and lever assembly (710S)	
3 589S	Throttle shaft and lever assembly (709S)	
6 397S	Air horn assembly (Sup by 6-610S) (709S)	
6-410S	Air horn and piston housing assembly	
6 411S	Air horn assembly (Sup by 6-611S) (710S)	
6 610S	Air horn assembly (709S)	
6 611S	Air horn assembly (710S)	
7-107	Choke valve	
11 170S	LOW SPEED JET ASSEMBLY	
11B 41	Rivet plug	
11B 42	Body flange rivet plug (early production)	
11B 62	Body flange rivet plug (late production)	
11B 79	Rivet plug	(5)
11B 108	Idle port rivet passage plug	
11B 117S	Idle passage plug assembly	
11B-119S	Ball retainer screw plug assembly	
11B 127S	Passage plug assembly	(2)
11B 130	Nozzle retainer plug	
12-280S	Nozzle assembly	
14 222S	Choke piston lever, link and shaft assembly	
14 262S	Choke lever screw and link assembly	
15-35S	Strainer nut assembly	
20-22	Gasket	(3)
20-26	Gasket	(3)
20 35	Bowl strainer gasket	
20 45	NOZZLE GASKET	
21-76S	Float and lever assembly	
24 15	Float lever pin	
25-75S	NEEDLE AND SEAT ASSEMBLY	
30 14	Bowl strainer gauze	
30-23	PISTON HOUSING STRAINER	
30 35	PUMP STRAINER	
30A-39	Idle adjustment screw	
39-10	CHOKE VALVE ATTACHING SCREW	(2)
39 11	Throttle valve attaching screw	(2)
48-72	PUMP JET	
53A-247S	Pump arm and countershaft assembly	
61-57	Adjustment screw spring	
61 63	Pump spring	
61 75	Metering rod spring	
61-175	VACUUM PISTON SPRING	
61-188	Rocker arm spring	
61 192	Needle pull clip	
61-200	Plunger spring	
61-371	Pump arm spring (709S)	
63 33	Housing retainer	(3)
64 58S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49-108)	
75 512	Metering rod—1 size lean— 07625"- 07625" to 07325'- 07325' to 068'- 057	
75-513	Metering rod—2 sizes lean— 078'- 078" to 075'- 075" to 070'- 063'	
75-514	Metering rod—3 sizes lean— 079'- 079" to 077'- 077" to 0725 - 065	
75-651	METERING ROD—STANDARD— 0745 - 0745" to 066"- 048"	
86-15	Flange stud lock washer	(2)
101-26	Coil housing attaching screw	(3)
101-28	Throttle shaft arm clamp screw	
101-78	Choke lever clamp screw	
101-81	Fast idle cam screw	
101-120	Throttle lever adjusting screw	
101-143S	Piston housing attaching screw and washer assembly	
101-148S	Bowl cover attaching screw and washer assembly	(5)
101-151S	Air horn attaching screw and washer assembly	(2)
101-153S	Body flange attaching screw and washer assembly	(2)
105A-13	Flange nut	(2)
114-42S	THROTTLE SHAFT ARM AND SCREW ASSEMBLY (710S)	
114-66S	THROTTLE SHAFT ARM AND SCREW ASSEMBLY (709S)	
115-68	Throttle connector rod (Sup by 115-132)	
115-132	THROTTLE CONNECTOR ROD	
116-13	PUMP INTAKE AND DISCHARGE CHECK BALL	(2)
117-58	Pump connector link	
117-66S	Piston link and spring assembly	
118-28	Dust cover	
120-15S	METERING ROD JET ASSEMBLY	
121-51	AIR HORN GASKET	
121-58	BOWL GASKET	
121-74	COIL HOUSING GASKET	
121-82	BODY FLANGE GASKET (UPPER)	
121-83	BODY FLANGE GASKET (LOWER)	
129-15	Metering rod disk	
146-88S	Bowl cover assembly	
150-62	Choke piston pin	
150-92	Anti-percolator pin	
150A-10	PIN SPRING	(3)
160-67S	Vacuum piston and pin assembly	
160-75	Choke piston	
170F-23S	Thermostatic housing and coil assembly (Sup by 170F-64SU) (710S)	
170M-23S	Thermostatic housing and coil assembly (Sup by 170M-64SU) (709S)	
170F-64SU	Unitized package (Consists of 1—170F-64S 3—63-48 3—101-26 and 1—121-74) (710S)	
170M-64SU	Unitized package (Consists of 1—170M-64S, 3—63-48 3—101-26 and 1—121-74) (709S)	
172-21	CONNECTOR ROD RETAINER	
181-99S	Fast idle cam and pin assembly	
183-28	Insulator	
184-18S	ANTI-PERCOLATOR CAP AND ROCKER ARM ASSEMBLY	

NOTE· Figures in parentheses indicate number of pieces used in ne carbureter. Where no figur is shown, only ne is used

CARTER CARBURETOR

DIVISION OF acf INDUSTRIES INCORPORATED
ST LOUIS, MO, U S A

ENGINE NUMBERS	CAR SERIAL NUMBERS
555001	66-165001 and up
555003	76-164001 and up
555006	66A2001 and up
555008	76A2001 and up
555011	66B1001 and up
555013	76B1001 and up
555016	66K9001 and up
555018	76K9001 and up
555021	66L31001 and up
555023	76L13091 and up
555026	66C21001 and up
555028	76C18001 and up
555031	66W3001 and up
555033	76W3001 and up



Casting No 538 on Face of Flange

OLDSMOBILE 6 MODELS 3500 SERIES "66"-"76" 1948

Hydra-Matic Transmission

(763SA can also be used)

WA-1 Down-Draft **Carbureter 651S** With Climatic® Control

CARBURETER SPECIFICATIONS

For Oldsmobile Six Cylinder Engine 3½ Inch Bore, 4⅛ Inch Stroke

Dimensions Flange size 1½ inch S A E
Primary venturi 11/32 inch I D
Secondary venturi 11/16 inch I D
Main venturi 1⅜ inch I D

Float Level Distance from seam of float (at free end) to tip on lower edge of float chamber cover when needle is seated to be ½ inch

Vents Outside No 10 drill Inside none

Gasoline Intake Square vertical (push pull) needle Size No 46 (081") drill hole in needle seat

Low Speed Jet Tube Jet size No 70 (028") drill
By pass size No 53 (0595") drill (early production) (063") drill (late production)
Economizer 063 064 inch diameter
Idle bleed size No 52 (0635") drill

Idle Port Length 190 inch Width 040 inch

Idle Port Opening 136 to 140 inch above valve with valve closed tight

Idle Screw Seat No 46 drill

Set Idle Adjustment Screw ½ to 1½ turns open For richer mixture turn screw out Do not attempt to idle engine below 6 m p h

Main Nozzle (Assembly) Slip Nozzle flush type (angle tip) seats in primary venturi at 45° angle Discharge jet size 110 inch diameter Inner nozzle (seats in slip nozzle) I D No 31 (120") drill

Nozzle Retainer Plug Size No 26 drill

Metering Rod (Vacumeter Type) Economy step 0745 inch diameter Middle step tapers to 066 inch diameter Power step 048 inch diameter Length 3 9/64 inches

Metering Rod Jet 1015 inch diameter

Metering Rod Setting Use gauge part No T109 102 (2 468 inches)

Accelerating Pump Low pressure type
Pump discharge jet size No 72 (025") drill
Relief passage (to outside) size No 42 (0935") drill
Intake ball check size No 60 (040") drill
Discharge ball check size No 32 (116") drill

Pump Adjustment 16/64 inch plunger travel (full throttle position) Use gauge No T109-117S

Choke Carter Climatic® Control set at index Butterfly type offset valve Choke heat suction hole in body size No 30 (1285") drill

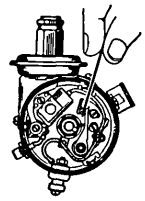
Vacuum Spark Port Slot type (round end) 040 x 100 inch Bottom of port 025 035 inch above valve

Motor Tune-Up—Be Accurate!

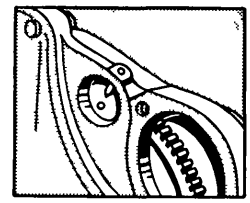
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



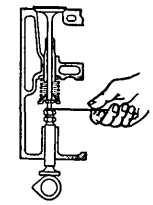
Spark Plug Gap 040"



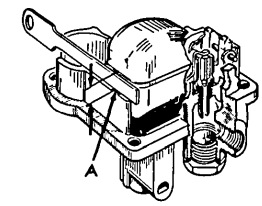
Breaker Point Setting 018"-024"



Ignition Timing Breaker Points to Open On Ball 1° BTC



Valve Setting Int 008" Exh 011"



Float Setting ½ Inch (Measure from point A to top of float seam)



Idle Adjustment Screw Setting ½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

Pump Adjustment With throttle valve seated pump plunger should travel 16/64" from closed to wide open throttle position

Pump travel should be measured by using Universal pump travel gauge T109-117S Place the base of the gauge on ridged portion of bowl cover so that projecting portion of pump gauge rests on top surface of connector link at pump shaft Hold gauge vertical The difference between the numbers shown by index mark on gauge at wide open and closed throttle position should be 16 (16/64")

Adjust by bending throttle connector rod at lower angle

Metering Rod Adjustment Correct setting of metering rod is important and must be made after pump adjustment or when leaner than standard rods are installed

Insert gauge (tool No 109 102) in place of metering rod, seating tapered end of gauge in metering rod jet Hold gauge vertical to insure seating in jet With throttle valve seated press down on piston link directly over piston until it contacts the pump arm There should now be less than 005" clearance between metering rod pin and shoulder in notch of gauge Gauge must not drag on pin

Adjust by bending lip on piston link (use tool T109-105)

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Remove gauge and install metering rod, disc, pin and spring

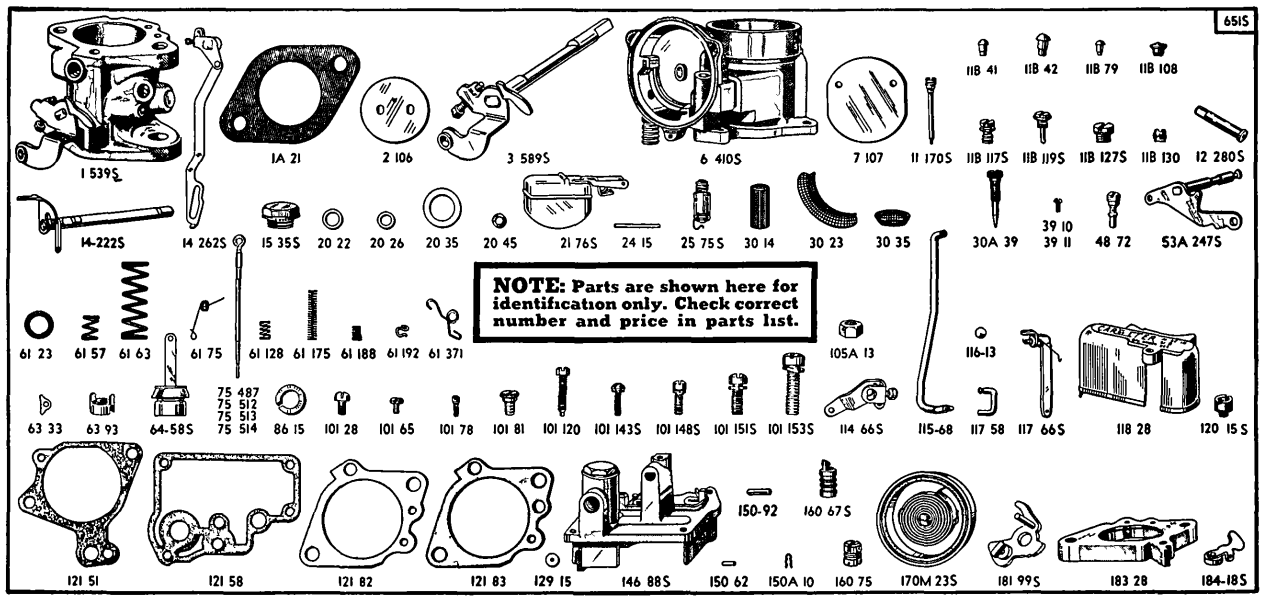
Anti-Percolator Adjustment: Crack throttle valve .020" by placing gauge T109-29 between throttle valve and bore of carbureter (side opposite idle port) Bend rocker arm (use tool T109-105) until there is a clearance of .005" to .015" between rocker arm lip and pump arm

Fast Idle Adjustment: With fast idle cam in normal idle position, tighten throttle lever adjusting screw until it just seats against cam Hold throttle lever closed and pull cam back until first (or lower) step is against (not on) set screw

There should now be 5/8" clearance between inside wall of air horn and lower edge of choke valve (Use tool T109-85)

Adjustment can be made by bending fast idle link at offset portion (Use tool T109-41)

Unloader Adjustment with throttle valve wide open there should be 3/8 inch clearance between lower edge of choke valve and inner wall of air horn (T109-80) Adjustment should be made by bending cam on throttle lever (T109-41)



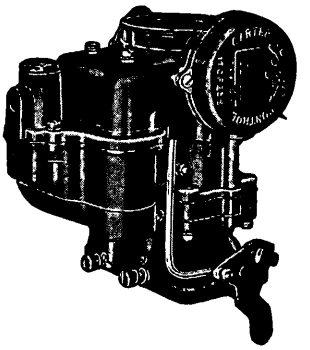
Oldsmobile 6—1948—Carbureter No. 651S

WHEN SERVICING, USE GASKET ASSORTMENT No 157A; REPAIR PACKAGE No. 1383B
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-539S	Body flange assembly	
1A-21	FLANGE GASKET	
2-106	Throttle valve	
3-589S	Throttle shaft and lever assembly	
6-397S	Air horn assembly (Sup by 6-610S)	
6-410S	Air horn and piston housing assembly	
6-610S	Air horn assembly	
7-107	Choke valve	
11-170S	LOW SPEED JET ASSEMBLY	
11B-41	Rivet passage plug	
11B-42	Body flange rivet plug (early production)	
11B-62	Body flange rivet plug (late production)	
11B-79	Rivet passage plug	(5)
11B-108	Idle port rivet passage plug	
11B-117S	Idle passage plug assembly	
11B-119S	Ball retainer screw plug assembly	
11B-127S	Passage plug assembly	(2)
11B-130	Nozzle retainer plug	
12-280S	Nozzle assembly	
14-222S	Choke piston lever, link and shaft assembly	
14-262S	Choke lever, screw and link assembly	
15-35S	Strainer nut assembly	
20-22	Gasket	(3)
20-26	Gasket	(3)
20-35	Bowl strainer nut gasket	
20 45	NOZZLE GASKET	
21-76S	Float and lever assembly	
24-15	Float lever pin	
25-75S	NEEDLE AND SEAT ASSEMBLY	
30-14	Bowl strainer gauze	
30-23	PISTON HOUSING STRAINER	
30-35	PUMP STRAINER	
30A 39	Idle adjustment screw	
39-10	CHOKE VALVE ATTACHING SCREW	(2)
39-11	Throttle valve attaching screw	(2)
48-72	PUMP JET	
53A-247S	Pump arm and countershaft assembly	
61-23	Plunger spring (Sup by 61-200)	
61-57	Adjustment screw spring	
61-63	Pump spring	
61-75	Metering rod spring	
61-128	Connector rod spring (Use with 115-68)	
61-175	VACUUM PISTON SPRING	
61-188	Rocker arm spring	
61-192	Needle pull clip	
61-200	Plunger spring	
61-371	Pump arm spring	
63-33	Coil housing retainer (Use with 170M-23S)	(3)
63-48	Coil housing retainer (Use with 170M-64S)	(3)
63-93	Spring retainer (Use with 115 68)	
64-58S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49-108)	
75-487	Metering rod—Standard— .07625' - .07625" to .0715 - .053 (Sup by 75-651)	
75-512	Metering rod—1 size lean— .07725"- .07725" to .07325 - .068"	
75-513	Metering rod—2 sizes lean— .075"- .075" to .070 - .063	
75-514	Metering rod—3 sizes lean— .079"- .079' to .077"- .0725'	
75-651	METERING ROD—STANDARD— .0745"- .0745" to .066'- .048'	
86-15	Flange stud lock washer	
101-26	Coil housing attaching screw	(3)
101-28	Throttle shaft arm clamp screw	
101-65	Coil housing attaching screw (Sup by 101-26)	
101-78	Choke lever clamp screw	
101-81	Fast idle cam screw	
101-120	Throttle lever adjusting screw	
101-143S	Piston housing attaching screw and washer assembly	
101-148S	Bowl cover attaching screw and washer assembly	(5)
101-151S	Air horn attaching screw and washer assembly	(2)
101-153S	Body flange attaching screw and washer assembly	(2)
105A-13	Flange nut	
114-66S	THROTTLE SHAFT ARM AND SCREW ASSEMBLY	
115-68	Throttle connector rod (Sup by 115-132)	
115 132	THROTTLE CONNECTOR ROD	
116-13	PUMP INTAKE AND DISCHARGE CHECK BALL	(2)
117-58	Pump connector link	
117-66S	Piston link and spring assembly	
118 28	Dust cover	
120 15S	METERING ROD JET ASSEMBLY	
121-51	AIR HORN GASKET	
121-58	BOWL GASKET	
121-74	COIL HOUSING GASKET	
121 82	BODY FLANGE GASKET (UPPER)	
121 83	BODY FLANGE GASKET (LOWER)	
129 15	Metering rod disk	
146 88S	Bowl cover assembly	
150-62	Choke piston pin	
150 92	Anti-percolator pin	
150A 10	PIN SPRING	(3)
160 67S	Vacuum piston and pin assembly	
160-75	Choke piston	
170M-23S	Thermostatic housing and coil assembly (Sup by 170M-64S)	
170M-64S	Thermostatic coil and housing assembly	
170M-64SU	Unitized package (Consists of 1—170M-64S 3—63 48 3—101-26 1—121-74)	
172-21	THROTTLE CONNECTOR ROD RETAINER (Use with 115 132)	
181-99S	Fast idle cam and pin assembly	
183 28	Insulator	
184-18S	ANTI-PERCOLATOR CAP AND ROCKER ARM ASSEMBLY	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

ENGINE NUMBERS	CAR SERIAL NUMBERS
555002	68-25001 and up
555004	78-72001 and up
555005	98-65001 and up
555007	68A2001 and up
555009	78A2001 and up
555010	98A1001 and up
555012	68B1001 and up
555014	78B1001 and up
555015	98B1001 and up
555017	68K3001 and up
555019	78K7001 and up
555020	98K6001 and up
555022	68L8001 and up
555024	78L16001 and up
555025	98L20001 and up
555027	68C6001 and up
555029	78C11001 and up
555030	98C11001 and up
555032	68W2001 and up
555034	78W2001 and up
555035	98W1001 and up



OLDSMOBILE EIGHT "68"-"78"-"98" 1948

Hydra-Matic Transmission

Casting No. 540 on face of flange.

WDO Dual Down-Draft Vacumeter Clim.® Cont. Carbs.—**Models 650S-650SA**

CARBURETER SPECIFICATIONS

For Oldsmobile 8 Cylinder Engine: 3¼ Inch Bore, 3⅞ Inch Stroke

Dimensions: Flange size, 1⅛ inch dual, 4 bolt type.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 21/32 inch I. D.
Main venturi, 1-3/16 inch I. D.

Float Level: Distance from float to bowl cover, when needle is seated to be 3/16 inch (650S), 15/64 inch (650SA). Use gauge No. T109-32 (15/64 inch).

Vents: Outside, No. 10 drill—four holes. Inside, none.

Gasoline Intake: Square vertical (push-pull) needle. Size No. 38 (.1015") drill hole in needle seat (650S); size No. 46 (.081") drill hole in needle seat (650SA).

Low Speed Jet Tube: Jet size, No. 71 (.026") drill.
By-pass (plug), size No. 51 (.067") drill.
Economizer, size No. 50 (.070") drill.
Idle bleed, size No. 53 (.0595") drill.

Idle Ports: Upper port, slot type, length .200 inch. Width .030 inch.

Idle Port Opening: .144 to .150 inch above upper edge of valve with valve closed tight.

Lower Port (For Idle Adjustment Screw): Size, .0615 to .0655 inch diameter.

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture turn screw out. Do not idle engine above 375 R.P.M. on Hydra-Matic cars. (Use Tachometer.)

Main Nozzle: Slip Nozzle, flush type (angle tip) seats in primary venturi, at 45° angle. Discharge jet size, .110 inch diameter.
Inner Nozzle (seats in slip nozzle). No. 31 (.120") drill I. D.

Nozzle Retainer Plug: Jet size, No. 51 (.067") drill (early production); No. 50 (.070") drill (later production).

Metering Rod (Vacumeter Type): Economy step, .071 inch diameter. Middle step tapers to .061 inch diameter. Power step, .050 inch diameter. Length 2-59/64 inches.

Metering Rod Jet: .089 inch diameter.

Metering Rod Setting: Use gauge, part No. T109-113 (2.280 inches).

Accelerating Pump: High pressure type (spring operated lever).
Discharge jet (twin) size, No. 72 drill.
Relief passage (slots) to air horn.
Intake ball check, size No. 40 (.098") drill.
Discharge (needle seat) size, No. 50 (.070") drill.

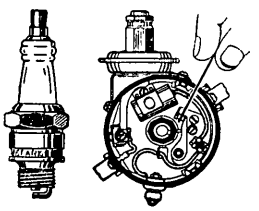
Pump Adjustment: 19/64 inch plunger travel (full throttle position). Use gauge No. T109-117S.

Choke: Carter Climatic® Control—set 2 points rich. Butterfly type, offset valve. Choke heat suction hole in body, size No. 38 (.1015 inch) drill.

Vacuum Spark Port: .039-.041 inch diameter. Top of port .029-.033 inch above valve.

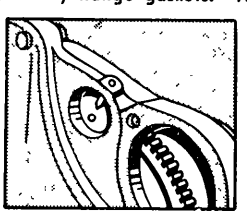
Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

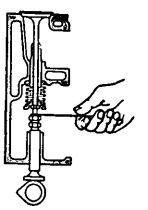


Spark Plug Gap .030"

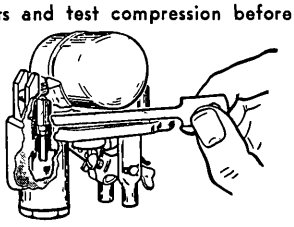
Breaker Point Setting .012"-.018"



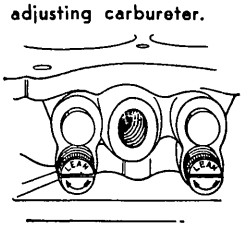
Ignition Timing Breaker Points to Open: On Ball 1° B.T.C.



Valve Setting Intake .008" Exhaust .011"



Float Setting 3/16" (650S) 15/64" (650SA) (Use Gauge T109-32)



Idle Adjustment Screw Setting ½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

PUMP ADJUSTMENT: With pump connector link in place in pump arm, throttle adjusting screw backed out and throttle in closed position, pump plunger should travel 19/64" from closed to wide open throttle position. Pump travel can be measured by using Universal pump travel gauge T109-117S. Place gauge on raised portion of bowl cover around the plunger shaft. Projecting portion in indicator should be placed on top of connector link where it extends through the plunger shaft. The difference in reading between closed and wide open throttle position should be "19" (19/64") plunger travel.

Adjust by bending throttle connector rod at lower angle.

METERING ROD ADJUSTMENT: Must be made when reassembling carbureter or when leaner than standard metering rods are installed. Do not disturb pump adjustment. Procedure is as follows:

(a) Back out throttle lever adjustment screw until throttle valves seat. Insert one metering rod gauge T109-113 in place of metering rod. Be sure gauge seats in jet.

(b) Install metering rod pin and pin spring in vacuum piston and link assembly.

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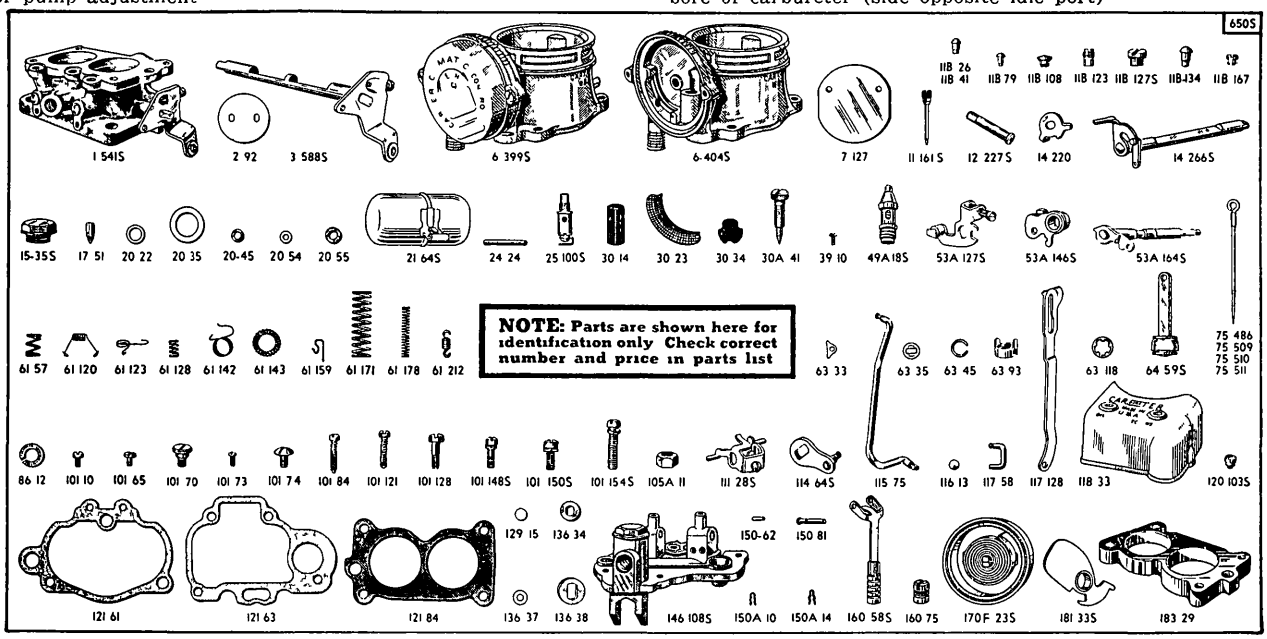
(c) Press lightly on top of vacuum piston link until lip contacts tongue on anti-percolator arm There should now be less than .005" clearance between metering rod pin and shoulder in notch of gauge with throttle valves seated

Adjust by bending tongue on pump arm Remove gauge and metering rod pin and install metering rods, discs spring, and metering rod pin, and hook spring to metering rod Vacuum piston and link must not bind or drag in any position

ANTI-PERCOLATOR ADJUSTMENT: Anti-percolator should be checked after metering rod setting and installation of metering rod on carbureter Do not disturb metering rod or pump adjustment With throttle valve seated in bores of carbureter, adjust lips of anti-percolator arm until center of indicator line is just flush with top of anti-percolator plug Since there are two anti-percolators on this carbureter, great care must be taken so that an even adjustment is made on both lips.

UNLOADER ADJUSTMENT. With throttle wide open, distance between upper edge of choke valve and wall of air horn should be ¼" Use gauge No T109-31 Adjustment should be made by bending lip on fast idle connector link Adjust with choke in wide open position

FAST IDLE ADJUSTMENT: Hold choke valve tightly closed and adjust fast idle cam screw, on high step of cam, until there is .015' opening between edge of throttle valve and bore of carbureter (side opposite idle port)



Oldsmobile 8—1948—Carbureter Nos. 650S-650SA

WHEN SERVICING, USE GASKET ASSORTMENT No. 158, REPAIR PACKAGE No. 1096A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-541S	Body flange assembly	
2 92	Throttle valve	(2)
3 588S	Throttle shaft and lever assembly	
6 399S	Air horn assembly (Sup by 6-609S)	
6 404S	Air horn and pump jet assembly	
6 609S	Air horn assembly	
7 127	Choke valve	
11-161S	LOW SPEED JET ASSEMBLY	(2)
11B 26	Body flange rivet plug	
11B-41	Pump discharge rivet plug	(2)
11B 79	Rivet plug	(4)
11B-108	Idle port rivet plug	(2)
11B-123	Nozzle retainer plug	(2)
11B-127S	Nozzle passage screw plug assembly	(2)
11B-134	Rivet plug	(2)
11B 167	BY-PASS BLEEDER SCREW PLUG	(2)
12 227S	Nozzle assembly	(2)
14 220	Choke trip lever	
14-266S	Choke piston lever, link and shaft assembly	
15 35S	Strainer nut assembly	
17 51	PUMP CHECK NEEDLE	
20 22	Needle seat and nozzle plug gasket	(3)
20 35	Bowl strainer nut gasket	
20-45	NOZZLE GASKET (UPPER)	(2)
20-54	Metering rod jet gasket	(2)
20 55	IDLE PASSAGE GASKET	(3)
21 64S	Float and lever assembly	
24 24	Float lever pin	
25 100S	Needle and seat assembly (Sup by 25-164S)	
25-164S	†NEEDLE AND SEAT ASSEMBLY	
30-14	Bowl cover strainer gauze	
30-23	PISTON HOUSING STRAINER	
30-34	PUMP STRAINER	
30A 41	Idle adjustment screw	(2)
39-10	CHOKE VALVE ATTACHING SCREW	(2)
49A-18S	Anti-percolator valve plug assembly	(2)
53A-127S	Fast idle arm, pin and screw assembly	
53A-146S	Pump arm and collar assembly	
53A-164S	Pump operating lever and countershaft assembly	
61 57	Adjustment screw lock spring	(2)
61-120	Metering rod spring	
61 123	Connector link spring	
61-128	Connector rod spring	(2)
61-142	Fast idle arm spring	
61 143	Plunger spring	
61 159	Needle pull clip	
61 171	Pump spring	
61 175	VACUUM PISTON SPRING	
61-178	Vacuum piston spring (Sup by 61-175)	
61-212	Pump arm spring	
63 33	Coil housing retainer (Use with 170F-23S)	(2)
63 35	Spring retainer	
63 45	Ball retainer ring	
63 48	Coil housing retainer (Use with 170F-64S)	(2)
63 93	Spring retainer (Lower) (Clinch ears over after assembly)	
63-118	Throttle shaft retainer ring (Install with prongs extended outward)	

Part No.	PART NAME	
64 59S	PUMP PLUNGER AND ROD ASSEMBLY	
75-486	Metering rod—standard— .071"- .071" to .0645"- .051" (Sup by 75-641)	
75-509	Metering rod—1 size lean— .0725"- .0725" to .0665"- .051"	(2)
75-510	Metering rod—2 sizes lean— .0735" .0735" to .068"- .053"	(2)
75-511	Metering rod—3 sizes lean— .0735"- .0735" to .06875"- .055"	(2)
75-641	METERING ROD—STANDARD— .071"- .071" to .061"- .050"	(2)
86-12	Flange stud lock washer	(4)
101-10	Anti-percolator arm clamp screw	
101-65	Coil housing and choke trip lever attaching screw	(3)
101-70	Fast idle arm attaching screw	
101-73	Throttle valve attaching screw	(4)
101-74	Throttle shaft arm attaching screw	
101 84	Fast idle adjustment screw	
101-121	Throttle lever adjustment screw	
101-128	Air horn attaching screw—special	
101-148S	Bowl cover attaching screw and washer assembly	(6)
101-150S	Air horn attaching screw and washer assembly	(2)
101-154S	Body flange attaching screw and washer assembly	(4)
105A-11	Flange stud nut	(4)
111-28S	Anti-percolator arm and screw assembly	
114-64S	Throttle shaft arm and pin assembly	
115-75	THROTTLE CONNECTOR ROD	
116 13	CHECK BALL	
117 58	Pump arm link	
117 128	Fast idle connector link	
118-33	Dust cover	
120-103S	METERING ROD JET ASSEMBLY	(2)
121-61	AIR HORN GASKET	
121 63	BOWL COVER GASKET	
121 74	Coil housing gasket	
121 84	BODY FLANGE GASKET	(2)
129 15	Metering rod disk	(2)
136-34	Choke shaft washer	
136-37	Connector rod washer	
136 38	Throttle shaft washer	
146 108S	Bowl cover assembly	
150 62	Choke piston pin	
150-81	Metering rod pin	
150A-10	PIN SPRING	(3)
150A 14	COUNTERSHAFT PIN SPRING	
160 58S	Vacuum piston and link assembly	
160 75	Choke piston	
170F-23S	Thermostatic coil and housing assembly (Sup by 170F-64S)	
170F-64S	Thermostatic coil and housing assembly	
170F-64SU	Unitized package (Consists of 1—170F-64S, 3—63-48, 3—101-26, 1—121-74)	
181-33S	Fast idle cam and collar assembly	
183-29	Insulator	

†Set float level to 15/64 inch

NOTE: Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

OLDSMOBILE 6 MODELS "F41-G41-H41" 1941 "F42-G42" 1942 "66"-"76" 1946-48

(763SA can be used in place of 481S)
(764S can be used in place of 504S)

No. 481S used on cars with Hydra-Matic transmission (1941-47). 504S used on cars with Syncro-Mesh transmission (1941-48).

MOTOR SERIAL NUMBERS

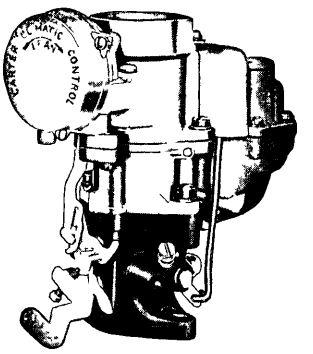
481S, 1941—GA225001 and higher
504S, 1941—G225001 and higher
504S, 1946—6-1001 and higher

CAR SERIAL NUMBERS

— 1941 —
F41—66-1001 and higher
G41—76-1001 and higher
H41—96-1001 and higher

— 1942 —
F42—66-86001, 66L-12001, 66C-9001 and higher
G42—76-75001, 76L-11001, 76C-7001 and higher

— 1946 —
66—66-112001, 66W-1001, 66C-12001, 66L-14001 and higher
76—76-92001, 76W-1001, 76C-9001, 76L-13001 and higher



Casting No. 340 on Face of Flange

WA-1 Down-Draft **Carbureters 481S-504S** With Climatic® Control

CARBURETER SPECIFICATIONS

For Oldsmobile Six Cylinder Engine: 3½ Inch Bore, 4⅛ Inch Stroke

Dimensions: Flange size, 1½ inch S. A. E.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 11/16 inch I. D
Main venturi, 1⅜ inch I. D.

Float Level: Distance from seam of float (at free end) to tip on lower edge of float chamber cover, when needle is seated to be ½ inch

Vents: Outside, No 10 drill. Inside none

Gasoline Intake: Square vertical (push-pull) needle Size No 46 drill hole in needle seat

Low Speed Jet Tube: Jet size, No 70 drill
By-pass, size No. 53 (.0595") drill (early production), 1.6 mm (.063") drill (late production)
Economizer, .063-.064 inch diameter
Idle bleed, size No. 52 drill.

Idle Port: Length, .190 inch. Width, .040 inch

Idle Port Opening: 136 to .140 inch above valve with valve closed tight

Idle Screw Seat: No. 46 drill

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture, turn screw out Do not attempt to idle engine below 6 m p h

Main Nozzle (Assembly): Slip Nozzle, flush type (angle tip) seats in primary venturi, at 45° angle. Discharge jet size .110 inch diameter Inner nozzle (seats in slip nozzle). I. D No 31 drill

Nozzle Retainer Plug Size No 26 drill

Metering Rod (Vacumeter Type): Economy step, .0745 inch diameter Middle step tapers to 066 inch diameter. Power step, 048 inch diameter. Length 3-9/64 inches

Metering Rod Jet: 1015 inch diameter.

Metering Rod Setting: Use gauge, part No T109-102 (2.468 inches)

Accelerating Pump: Low pressure type.
Pump discharge jet, size No. 72 drill
Relief passage (to outside), size No 42 drill
Intake ball check size, No 60 drill
Discharge ball check size, No 32 drill.

Pump Adjustment: 16/64 inch plunger travel (full throttle position) medium stroke Use gauge No T109-117S

Choke: Carter Climatic® Control set at index Butterfly type, offset valve Choke heat suction hole in body size No 30 (.128") drill

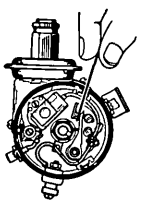
Vacuum Spark Port: Slot type (round end) .040 x .100 inch
Bottom of port .030-.035 inch above valve (early production)
Bottom of port .025-.035 inch above valve (late production).

Motor Tune-Up—Be Accurate!

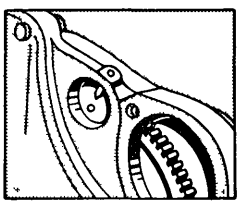
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter



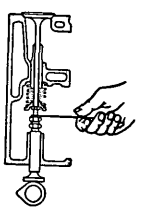
Spark Plug Gap .040"



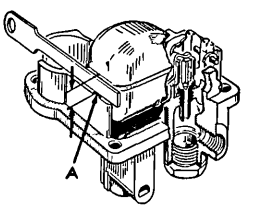
Breaker Point Setting .018"-.024"



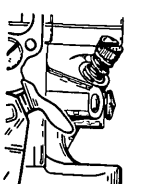
Ignition Timing Breaker Points to Open at T. D. C.



Valve Setting
Intake .008"
Exhaust .011"



Float Setting ½ Inch (Measure from point "A" to top of float seam)



Idle Adjustment Screw Setting ½ to 1½ Turns Open

BRIEF CARBURETER ADJUSTMENTS

Pump Adustment: With throttle valve seated and connector link in lower hole (medium stroke), pump plunger should travel 16/64 inch from closed to wide open throttle position (Later models have only one hole in pump arm.) Pump travel can be measured by Universal pump stroke gauge T109-117S by placing the base of gauge on ridged portion of bowl cover so that projecting portion of pump gauge rests on top surface of connector link at pump shaft Hold gauge vertical The difference between the number shown by index mark on gauge, at wide open and closed position, should be "16" (16/64"). Adjustment should be made by bending throttle connector rod at lower angle

Metering Rod Adjustment: Correct setting of metering rod is important and must be made after pump adjustment Insert gauge (tool No T109-102) in place of metering rod.

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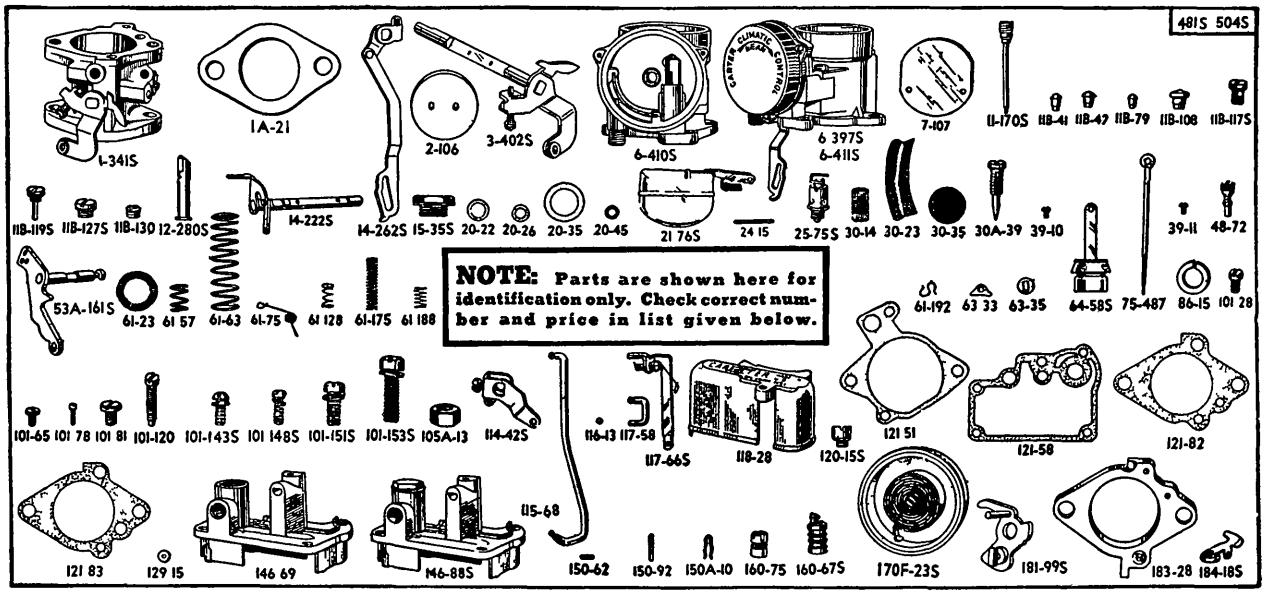
seating tapered end in metering rod jet Hold gauge vertical to insure seating in jet With throttle valve seated press down on piston link directly over piston until it contacts the pump arm There should now be less than 005' clearance between metering rod pin and shoulder in notch of gauge Gauge must not drag on pin Adjustment can be made by bending lip on piston link (use tool T109-105) Remove gauge and install metering rod, disc, pin and spring

Anti-Percolator Adjustment Crack throttle valve 020" by placing gauge T109-29 between valve and bore of carbureter (Side opposite port) Bend rocker arm (use tool T109-105) until there is a clearance of 005" to 015" between rocker arm and pump arm

Fast Idle Adjustment With fast idle cam held in normal idle position tighten throttle lever adjusting screw until it just seats against cam Hold throttle lever closed and pull cam back until first (or lower) step on cam is against (not on) set screw

There should now be 5/8" clearance between inside wall of air horn and lower edge of choke valve (Use tool T109-85) Adjustment can be made by bending at offset portion of fast idle link (Use tool T109-41)

Unloader Adjustment With throttle valve wide open there should be 3/8" clearance between lower edge of choke valve and inner wall of air horn on 481S and 7/16" on 504S-508S (Use tool T109-80 or T109-81) Adjustment should be made by bending cam on throttle lever (Use tool T109-41)



Oldsmobile 6—1941-48—Carbureters Nos. 481S-504S

WHEN SERVICING, USE GASKET ASSORTMENT No. 157A, REPAIR PACKAGE No 1097B

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1 341S	Body flange assembly (481S-504S)	
1A-21	FLANGE GASKET—1½" S A E	
2-106	Throttle valve	
3-402S	Throttle shaft and lever assembly (481S-504S)	
6-397S	Air horn and Climatic® control assembly (Sup by 6-610S) (481S)	
6-410S	Air horn and piston housing assembly	
6-411S	Air horn and Climatic® control assembly (Sup by 6 611S) (504S)	
6-610S	Air horn and Climatic® control assembly (481S)	
6-611S	Air horn and Climatic® control assembly (504S)	
7-107	Choke valve	
11-170S	LOW SPEED JET ASSEMBLY	
11B 41	Rivet plug	
11B-42	Body flange rivet plug (early production)	
11B-62	Body flange rivet plug (later production)	
11B-79	Rivet plug	(5)
11B-108	Idle port rivet plug	
11B-117S	Idle passage plug assembly	
11B-119S	Ball retainer plug assembly	
11B-127S	Pump jet and nozzle passage plug assembly	(2)
11B-130	Nozzle retainer plug	
12-280S	Nozzle assembly	
14-222S	Choke piston lever link and shaft assembly	
14-262S	Choke lever, screw and link assembly	
15-35S	Strainer nut assembly	
20-22	Needle seat and plug gasket	(3)
20-26	Metering rod jet and plug gasket	(3)
20-35	Bowl strainer gasket	
20-45	NOZZLE GASKET	
21-76S	Float and lever assembly	
24-15	Float lever pin	
25-75S	NEEDLE AND SEAT ASSEMBLY	
30-14	Bowl strainer gauze	
30 23	PISTON HOUSING STRAINER	
30-35	PUMP STRAINER	
30A-39	Idle adjustment screw	
39-10	CHOKE VALVE ATTACHING SCREW	(2)
39-11	Throttle valve attaching screw	(2)
48-72	PUMP JET	
53A-161S	Pump arm and countershaft assembly (Sup by 53A-247S)	
53A-247S	Pump arm and countershaft assembly	
61-23	Plunger spring (Sup by 61-200)	
61-57	Adjustment screw spring	
61-63	Pump spring	
61-75	Metering rod spring	
61-128	Connector rod spring (Use with 115-68)	
61-175	VACUUM PISTON SPRING	
61-188	Rocker arm spring	
61-192	Needle pull clip	
61-200	Plunger spring	
63 33	Coil housing retainer (Use with 170F-23S and 170M-23S	(3)
63 48	Coil housing retainer (Use with 170F-64S and 170M-64S)	
63-93	Spring retainer (Use with 115-68)	
64-58S	PLUNGER AND ROD ASSEMBLY (Shaft No 49-108)	
75-487	Metering rod—Standard (Sup by 75-651)	

Part No.	PART NAME	
75-512	Metering rod—1 size lean— 07725" 07725" to 07325'- 07325" to 068'- 057"	
75-513	Metering rod—2 sizes lean— 078"- 078" to 075 - 075" to 070"- 063"	
75-514	Metering rod—3 sizes lean— 079"- 079" to 077"- 077" to 0725"- 065"	
75 651	METERING ROD—STANDARD— 0745"- 0745" to 066"- 048"	
86 15	Flange stud lock washer	(2)
101-26	Coil housing attaching screw	(3)
101-28	Throttle shaft arm clamp screw	
101-65	Coil housing attaching screw (Sup by 101-26)	
101-78	Choke lever clamp screw	
101-81	Fast idle cam screw	
101-120	Throttle lever adjusting screw	
101-143S	Piston housing attaching screw and washer assembly	
101-148S	Bowl cover attaching screw and washer assembly	(5)
101-151S	Air horn attaching screw and washer assembly	(2)
101-153S	Body flange attaching screw and washer assembly	(2)
105A-13	Flange nut	(2)
114-42S	THROTTLE SHAFT ARM AND SCREW ASSEMBLY	
115-68	Throttle connector rod (Sup by 115-132)	
115-132	THROTTLE CONNECTOR ROD	
116-13	CHECK BALL	(2)
117-58	Pump connector link	
117 66S	Piston link and spring assembly	
118-28	Dust cover	
120-15S	METERING ROD JET ASSEMBLY	
121-51	AIR HORN GASKET	
121-58	BOWL GASKET	
121-74	COIL HOUSING GASKET	
121-82	BODY FLANGE GASKET (UPPER)	
121-83	BODY FLANGE GASKET (LOWER)	
129-15	Metering rod disk	
146 69	Bowl cover (Not sold separately—part of 146-88S)	
146-88S	Bowl cover and strainer assembly	
150-62	Piston pin	
150-92	Anti-percolator pin	
150A-10	PIN SPRING	(3)
160-67S	Vacuum piston and pin assembly	
160-75	Choke piston	
170F-23S	Thermostatic coil and housing assembly (504S) (Sup by 170F-64SU)	
170F-64S	Thermostatic coil and housing assy (504S)	
170F-64SU	Unitized package (consists of 1 170F-64S 3 63-48 3 101-26 1 121-74) (504S)	
170M-23S	Thermostatic coil and housing assembly (481S) (Sup by 170M 64SU)	
170M-64S	Thermostatic coil and housing assy (481S)	
170M-64SU	Unitized package (consists of 1 170M-64S, 3 63-48 3 101-26 1 121-74) (481S)	
172-21	THROTTLE CONNECTOR ROD RETAINER (Use with 115-132)	
181-99S	Fast idle cam and pin assembly	
183-28	Insulator	
184-18S	ANTI-PERCOLATOR CAP AND ROCKER ARM ASSEMBLY	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only ne is used

OLDSMOBILE "E41-J41-L41" EIGHT—1941 "68-78-98" EIGHT—1942 "78"-"98"—1946-47

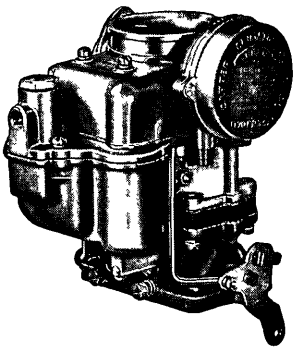
(650SA can also be used)

MOTOR SERIAL NUMBERS

1941—LA-379001 and higher

1942—LA-450001 and higher

NOTE Set 503S 503SA Climatic® Control two points rich when using Hydramatic Transmission



Casting No 342 on face of flange

WDO Dual Down-Draft Vacumeter Climatic® Control Carbureters

Models 480S-480SA-503S-503SA

CARBURETER SPECIFICATIONS

For Oldsmobile 8 Cylinder Engine 3¼ Inch Bore 3⅞ Inch Stroke

Dimensions Flange size 1⅛ inch dual 4 bolt type
Primary venturi 11/32 inch I D
Secondary venturi 21/32 inch I D
Main venturi 1 3/16 inch I D

Float Level Distance from float to bowl cover when needle is seated to be 3/16 inch (25 100S) 15/64 inch (25 164S) (Use gauges Nos T109 28 and T109 32)

Vents Outside No 10 drill—four holes Inside none

Gasoline Intake Square vertical (push pull) needle Size No 38 drill hole in needle seat (25 100S) No 46 drill hole in needle seat (25 164S)

Low Speed Jet Tube Jet size No 71 drill
By pass (plug) size No 51 drill
Economizer size No 50 drill
Idle bleed size No 53 drill

Idle Ports Upper port slot type length 200 inch Width 030 inch

Idle Port Opening 144 to 150 inch above upper edge of valve with valve closed tight

Lower Port (For Idle Adjustment Screw) Size 0615 to 0655 inch diameter

Set Idle Adjustment Screw ½ to 1½ turns open For richer mixture turn screw out Do not idle engine above 375 R P M on Hydra Matic cars or below 425 R P M on Syncro Mesh cars (Use Tachometer)

Main Nozzle
Slip Nozzle flush type (angle tip) seats in primary venturi at 45° angle Discharge jet size 110 inch diameter
Inner Nozzle (seats in slip nozzle) No 31 drill I D

Nozzle Retainer Plug Jet size No 51 (067 inch) drill (early production) No 50 (070 inch) drill (later production)

Metering Rod (Vacumeter Type) Economy step 071 inch diameter Middle step tapers to 061 inch diameter Power step 050 inch diameter
Length 2 59/64 inches

Metering Rod Jet 089 inch diameter

Metering Rod Setting Use gauge part No T109 113 (2 280 inches)

Accelerating Pump High pressure type (spring operated lever)
Discharge jet (twin) size No 72 drill
Relief passage (slots) to air horn
Intake ball check size No 40 drill
Discharge (needle seat) size No 50 drill

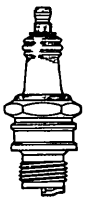
Pump Adjustment 19/64 inch plunger travel (full throttle position) Use gauge No T109 117S

Choke Carter Climatic® Control—480S SA set 2 points rich, 503S SA set at index Butterfly type offset valve Choke heat suction hole in body size No 38 (1015 inch) drill

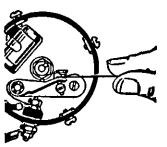
Vacuum Spark Port 039 041 inch diameter Top of port 029 033 inch above valve

Motor Tune-Up—Be Accurate!

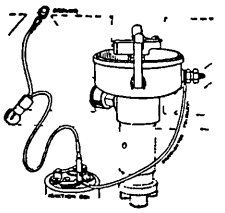
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



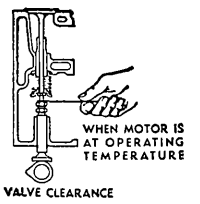
Spark Plug
Gap
030"



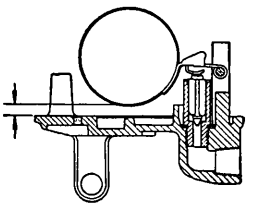
Set
Breaker Points
015"



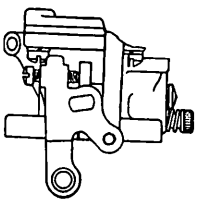
Use Timing Light
Breaker Points to Open
2° Before
Top Dead Center
***See Note Below**



Set Valves
Intake 008"
Exhaust 011"



Correct Float Level
(Remove Cork Gasket)
3/16" (25 100S)
15/64" (25-164S)



Idle Adjustment
Screw Setting
½ to 1½
Turns Open

*Breaker points to open for No 1 cylinder when steel ball in fly wheel is in line with pointer in fly wheel housing (Steel ball is not T D C)

BRIEF CARBURETER ADJUSTMENTS

PUMP ADJUSTMENT With pump connector link in place in pump arm throttle adjustment screw backed out and throttle held in closed position pump plunger should travel 19/64 from closed to wide open position Adjustment can be made by bending throttle connector rod at lower angle (Use tool T109 75) Pump travel can be measured by using gauge T109 117S Bar on gauge indicator should be placed on top surface of pump shaft

METERING ROD ADJUSTMENT should be made when re assembling carbureter or when leaner than standard rods are installed (Do not disturb pump adjustment) Correct setting of metering rods is important Procedure is as follows

A Remove air horn and climatic control assembly
B Back out throttle lever adjusting screw so that throttle valves seat in throttle bore
C Remove pin spring from metering rod pin and slide the pin from vacuum piston link taking care that metering rod spring is not bent Remove metering rods and disks
D Insert one metering rod gauge tool No T109 113 in place of metering rod seating tapered end in metering rod jet Put metering rod pin in place in piston link
E Push piston link down until metering rod pin rests lightly on shoulder of notch in gauge
F With throttle valves seated and piston link held down bend lip on anti percolator arm which extends under metering rod pin so that lip just touches lip on vacumeter piston and link assembly (Use tool T109-105)
G Remove gauge and replace metering rod disks retainer and screw Install metering rods and pin spring and connect metering rod spring

ANTI PERCOLATOR ADJUSTMENT Anti percolator should be checked after metering rod setting and installation of metering rod on carbureter Do not disturb metering rod or pump adjustment

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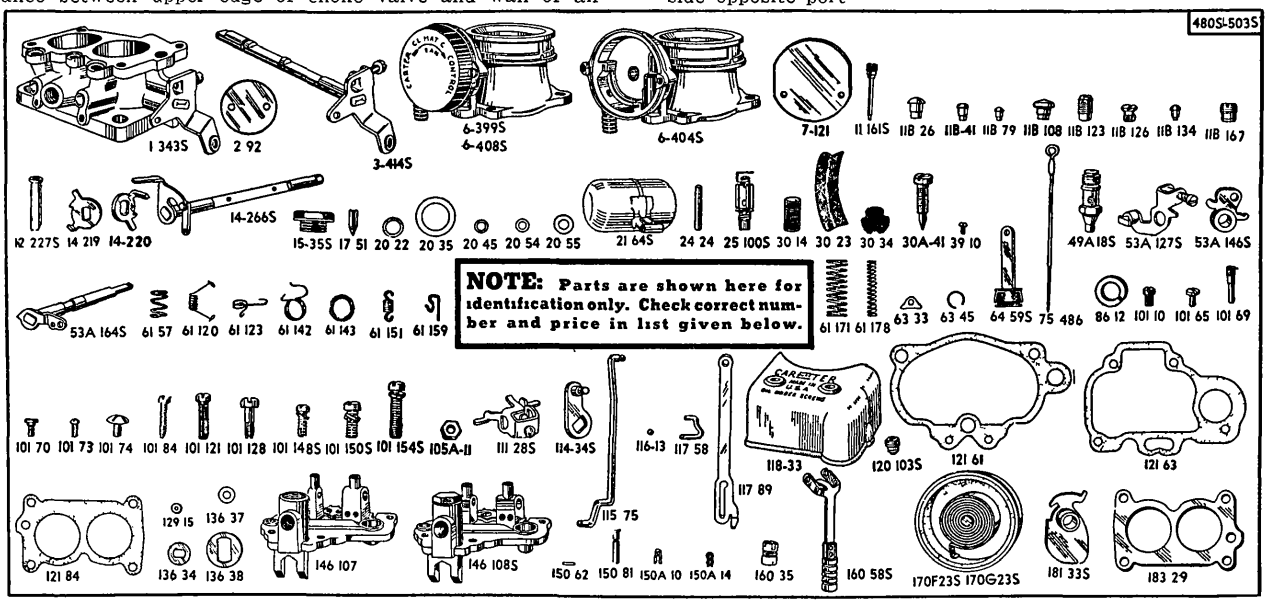
CARBURETER
TRADE MARK REG U S PAT OFF
MARCA REG STRADA

PRINTED IN USA

Back out throttle lever set screw until throttle valves seat in bores of carbureter With throttle valves tightly closed adjust lips of anti-percolator arm until center of indicated line is just flushed with top of anti-percolator plug Since there are two anti-percolator units on this carbureter great care must be taken so that an even adjustment is made on both lips

UNLOADER ADJUSTMENT With throttle wide open distance between upper edge of choke valve and wall of air horn should be ¼ inch If 14-219 is used set for 3/16 inch Use gauge No T109-28 for 3/16 inch or T109-31 for ¼ inch Adjustment can be made by bending lip on fast idle connector link

FAST IDLE ADJUSTMENT Hold choke valve tightly closed and adjust fast idle arm screw to give 015 inch opening between edge of throttle valve and bore of carbureter side opposite port



Oldsmobile 8—1941-1942-1946-1947—Carbureter Nos. 480S-480SA-503S-503SA

WHEN SERVICING, USE GASKET ASSORTMENT No 158, REPAIR PACKAGE No 1096A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME
1-343S	Body flange assembly (Sup by 1-612S)
1-612S	Body flange assembly
2 92	Throttle valve (2)
3-414S	Throttle shaft and lever assembly (Use with 1-343S only)
3-638S	Throttle shaft and lever assy (Use with 1-612S only)
6-399S	Air horn and Climatic® control assembly (Sup by 6-609S)
6-404S	Air horn and pump jet assembly
6-408S	Air horn and Climatic® control assembly (503S-SA) (Sup by 6-399S)
6-609S	Air horn and Climatic® control assembly
7-121	Choke valve (Sup by 7-127)
7-127	Choke valve
11-161S	LOW SPEED JET ASSEMBLY (2)
11B-26	Body flange rivet plug
11B-41	Pump discharge rivet plug (2)
11B-79	Rivet plug (4)
11B-108	Idle port rivet plug (2)
11B-123	Nozzle retainer plug (2)
11B-127S	Nozzle passage screw plug assembly (2)
11B-134	Rivet plug (2)
11B-167	BY-PASS BLEEDER SCREW PLUG (2)
12-227S	Nozzle assembly (2)
14-219	Choke trip lever (Sup by 14-220)
14-220	Choke trip lever
14 266S	Choke piston lever link and shaft assembly
15-35S	Strainer nut assembly
17-51	PUMP CHECK NEEDLE
20 22	Needle seat gasket
20 35	Bowl strainer gasket
20 45	NOZZLE GASKET—UPPER (2)
20 54	Metering rod jet gasket (2)
20 55	IDLE PASSAGE GASKET (3)
21-64S	Float and lever assembly
24-24	Float lever pin
25 100S	Needle and seat assembly (Sup by 25-164S)
25-164S	†NEEDLE AND SEAT ASSEMBLY
30-14	Bowl cover strainer gauze
30 23	PISTON HOUSING STRAINER
30-34	PUMP STRAINER
30A-41	Idle adjustment screw (2)
39-10	CHOKE VALVE ATTACHING SCREW (2)
49A-18S	Anti-percolator valve assembly (2)
53A-127S	Fast idle arm pin and screw assembly
53A-146S	Pump arm and collar assembly
53A-164S	Pump operating lever and countershaft ass y
61-57	Adjustment screw lock spring (2)
61-120	Metering rod spring
61-123	Connector link spring
61-128	Connector rod spring (2)
61-142	Fast idle arm spring
61-143	Plunger spring
61-151	Pump arm spring (Sup by 61-212)
61-159	Needle pull clip
61-171	Pump spring
61-175	VACUUM PISTON SPRING
61-178	Vacuum piston spring (Sup by 61-175)
61-212	Pump arm spring
63-33	Housing retainer (2)
63-35	Spring retainer (upper)
63-45	Ball retainer ring
63-48	Coil housing retainer (Use with 170F-64S) (2)

†Set float level to 15/64 inch

Part No.	PART NAME
63 93	Spring retainer (lower) (clinch ears over after assembly)
63-118	Throttle shaft retaining ring (Use with 3-638S)
64-59S	PUMP PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49-119)
75-486	Metering rod—Standard— 071"- 071" to 0645"- 051" (Sup by 75-641)
75-509	Metering rod—1 size lean— 0725"- 0725" to 0665"- 051" (2)
75-510	Metering rod—2 sizes lean— 073"- 073" to 068"- 053" (2)
75-511	Metering rod—3 sizes lean— 0735"- 0735" to 069"- 055" (2)
75-641	METERING ROD—STANDARD— 071"- 071" to 061"- 050" (2)
86-12	Flange stud lock washer (4)
101-10	Anti-percolator arm clamp screw
101-26	Coil housing attaching screw (2)
101-65	Choke trip lever attaching screw
101-69	Throttle centering screw (Use with 3-414S)
101-70	Fast idle arm attaching screw
101-73	Throttle valve attaching screw (4)
101-74	Throttle shaft arm attaching screw
101-84	Fast idle adjustment screw
101-121	Throttle lever adjustment screw
101-128	Air horn attaching screw—special
101-148S	Bowl cover attching screw and washer assembly (6)
101-150S	Air horn attaching screw and washer assembly (2)
101-154S	Body flange attaching screw and washer assembly (4)
105A-11	Flange stud nut (4)
111 28S	Anti-percolator arm and screw assembly
114-34S	Throttle shaft arm and pin assembly
115-75	THROTTLE CONNECTOR ROD
116-13	CHECK BALL
117-58	Pump arm link
117 89	Fast idle connector link
118-33	Dust cover
120 103S	METERING ROD JET ASSEMBLY, 089" (2)
121-61	AIR HORN GASKET
121-63	BOWL COVER GASKET
121-74	Coil housing gasket
121 84	BODY FLANGE GASKET (2)
129-15	Metering rod disk (2)
136-34	Choke shaft washer
136 37	Connector rod washer
136-38	Throttle shaft washer
146-107	Bowl cover (Not sold separately—part of 146-108S)
146-108S	Bowl cover and strainer assembly
150-62	Piston pin
150 81	Metering rod pin
150A-10	PIN SPRING (4)
150A-14	COUNTERSHAFT PIN SPRING
160-58S	Vacuum piston and link assembly
160-75	Choke piston
170F-23S	Thermostatic coil and housing assembly (Sup by 170F-64S)
170F-64S	Thermostatic coil and housing assembly
170F-64SU	Unitized package (Consists of 1—170F-64S 2—63-48 2—101-26, 1—121-74)
181-33S	Fast idle cam and collar assembly
183-29	Insulator

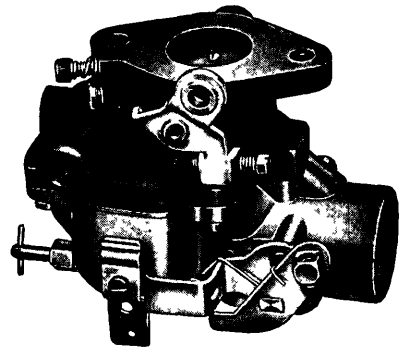
NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

CARTER CARBURETOR

DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

OLIVER 923S—2257S
November, 1952
Revised September, 1956

MODELS
(923S)
"66" — 4 Cylinder
"77" — 6 Cylinder
(2257S)
"Super 55" — 4 Cylinder



OLIVER TRACTOR

(High Compression)

UT UPDRAFT **CARBURETERS Nos. 923S-2257S**

CARBURETER SPECIFICATIONS

For Oliver Tractor 4 and 6 Cylinder Engines: 3-5/16 Inch Bore, 3¾ Inch Stroke (923S)
For Oliver Tractor 4 Cylinder Engine: 3½ Inch Bore, 3¾ Inch Stroke (2257S)

Dimensions: Flange size, 1 inch S. A. E.
Throttle bore, (923S) 1-1/16 inch.
Throttle bore, (2257S) 1-3/16 inch.
Main venturi (923S) 23/32 inch.
Main venturi (2257S) 13/16 inch.

Float Setting: See Adjustments.

Vents: Outside, none. Inside, balance vent (923S(1), (2257S(2).

Gasoline Intake Needle: Square vertical needle. Size, (923S) No. 48 (.076 inch), (2257S) No. 50 (.070 inch) drill.

Idle Jet: Jet (923S) tube size .0276 inch diameter. (2257S) - plug size No. 70 (.028 inch) drill.
Lower bleed: (923S) size No. 60 (.040 inch), (2257S) size No. 61 (.039 inch) drill. Upper bleed: size No. 65 (.035 inch) drill. Economizer: No. 61 (.039 inch) drill.

Idle Port: Lower port, slot type, round end length .049 to .051 inch, width .029 to .031 inch.
Bottom of port (923S) .044 to .048 inch, (2257S) .054 to .058 inch below lower edge of valve with valve tightly closed.

Upper Port: (For Idle Adjustment Screw): Size .038 to .042 inch diameter.

Set Idle Adjustment Screw: ¼ to 1½ turns open. For richer mixture turn screw out. Do not idle engine below 350 r.p.m.

Main Metering Jet: Adjustable. See Adjustments.

Nozzle: Inside diameter (923S) No. 46 (.081 inch) drill (2257S) No. 38 (.1015 inch) drill.
Accelerating Jets: 4 No. 64 (.036 inch) drill.

Air Bleed to Nozzle: (Through plug) (923S) No. 55 (.052 inch) (2257S) No. 58 (.042 inch) drill.

Choke: Manual—Butterfly type, with pressure relief (poppet) valve.

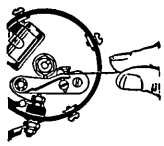
Vacuum Spark: NONE.

Motor Tune-Up—Be Accurate!

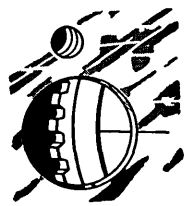
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



Spark Plug Gap .025"



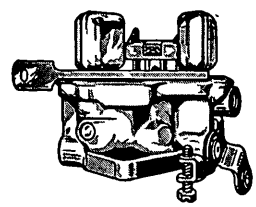
Breaker Point Setting .022"



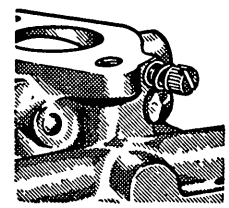
Ignition Timing Breaker Points to Open:
(923S)
22° B.T.D.C.
at 1750 R.P.M.
(2257S)
28° B.T.D.C.
at 2200 R.P.M.



Valve Setting
(Cold)
Intake .008"-.010"
Exhaust .015"-.017"



Float Setting
17/64 Inch
(Plus or minus 1/64 inch)



Idle Adjustment Screw Setting
¼ to 1½
Turns Open

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CARBURETER
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CARBURETER ADJUSTMENTS

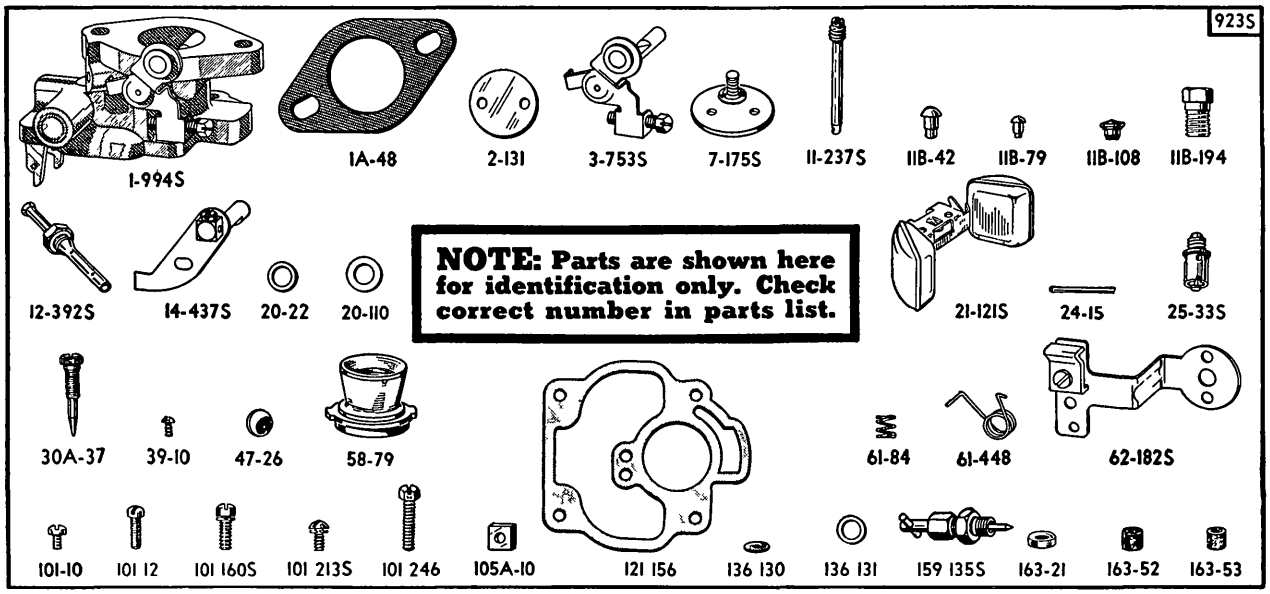
Float Adjustment With throttle body inverted and gasket removed there should be 17/64 inch clearance (plus or minus 1/64 inch) between machined surface of throttle body and seam of float (both sides) To adjust bend lip on float lever

Idle Adjustment Set throttle lever adjusting screw until motor runs approximately 350 r p m Then set idle adjustment screw for highest steady vacuum gauge reading or smoothest engine operation Correct setting will be found between ¼ to 1½ turns open

High Speed Adjustment With hand throttle wide open and engine operating at (923S) 1750 (2257S) 2200 r p m (maximum governed speed), adjust high speed adjusting needle until smoothest engine operation is obtained This setting will be found between (923S) ¾ to 1¾ (2257S) 1½ to 2½ turns open

Maximum Performance can be secured only when breaker points spark plugs valves and motor timing are set to manufacturer s specifications

If carbureter does not respond to the above adjustments, disassemble clean all parts in carbureter cleaner rinse and blow out all passages with compressed air Replace all worn or damaged parts Always use new gaskets See form No 3525 for complete overhaul procedure



Oliver Carbureters Nos. 923S-2257S

WHEN SERVICING USE GASKET ASST No 228 (923S), No 259 (2257S), REPAIR PKG No 1722 (923S), No 1808 (2257S)

PART NAMES IN CAPITAL LETTERS LISTED BELOW INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-994S	Throttle body assembly (923S)	
1-1265S	Throttle body assembly (2257S)	
1A-48	FLANGE GASKET	
2-131	Throttle valve (923S)	
2-147	Throttle valve (2257S)	
3-753S	Throttle shaft and lever assembly (923S)	
3-771S	Throttle shaft and lever assembly (2257S)	
7-175S	Choke valve assembly (923S)	
7 205S	Choke valve assembly (2257S)	
11-237S	LOW SPEED JET ASSEMBLY (923S)	
11B-42	Rivet plug (923S)	(2)
11B-79	Rivet plug	
11B-108	IDLE PORT RIVET PLUG	
11B-194	Bowl drain plug	
11B-236	LOW SPEED JET SCREW PLUG (2257S)	
12-392S	Nozzle assembly (923S)	
12-439S	Nozzle assembly (2257S)	
14-437S	Choke shaft and lever assembly (923S)	
14-504S	Choke shaft and lever assembly (2257S)	
20 22	NEEDLE SEAT AND NOZZLE GASKET	(2)
20-110	MAIN METERING SCREW GASKET	
21-121S	Float and lever assembly	
24-15	Float lever pin	
25-33S	NEEDLE AND SEAT ASSEMBLY (923S)	
25-233S	NEEDLE AND SEAT ASSEMBLY (2257S)	
30A-37	Idle adjustment screw	
39-10	THROTTLE AND CHOKE VALVE ATTACHING SCREW	(4)

Part No	PART NAME	
47-26	Welsh plug	(2)
58-79	Venturi (923S)	
58-91	Venturi (2257S)	
61-84	Idle adjustment screw spring	
61-448	Choke return spring (923S)	
61-543	Choke return spring (2257S)	
62 182S	Choke tube bracket assembly (923S)	
62-202S	Choke tube bracket assembly (2257S)	
101-10	Wire clamp screw	
101-12	Tube clamp screw	
101-160S	Body attaching screw and washer assembly	(4)
101-213S	Choke tube bracket attaching screw and washer assembly	(2)
101-246	Throttle adjusting screw	
105A-10	Tube clamp nut	
121-156	BODY GASKET (923S)	
121-228	BODY GASKET (2257S)	
136-130	AIR HORN DUST SEAL RETAINER	
136-131	CHOKE AND THROTTLE SHAFT DUST SEAL RETAINER	(2)
159-135S	Adjustable main metering screw and needle assembly (923S)	
159-165S	Adjustable main metering screw and needle assembly (2257S)	
163 21	CHOKE AND THROTTLE SHAFT DUST SEAL	(2)
163-52	AIR HORN DRAIN FELT	
163-53	MAIN METERING SCREW PACKING	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

ONAN

MOTOR GENERATOR

ENGINE MODELS "AJ" & "LK"

N-2463S (AJ & LK) Manual Choke

N-2464S (LK) Automatic Choke

Horizontal, Model N Type, **Carbureters Nos. N-2463S, N-2464S**

CARBURETER SPECIFICATIONS

For Onan One (1) Cylinder 25 Cu. In. Engine

Dimensions: Flange size 1/2 inch S A E (slotted). Venturi size, 5/8 inch

Float Level: Distance from top of float (at free end) opposite needle seat to outer edge of float chamber cover when needle is seated to be 11/64 inch plus or minus 1/32 inch.

Vents: Outside

Gasoline Intake: Size No 55 (.052 inch) drill in needle seat

Low Speed Jet Tube: Jet size No 68 (.031 inch) drill Idle bleed, (4) size No 70 (.028 inch) drill.

Idle Port: Slot type, length .080 inch Width .030 inch

Idle Port Opening: Bottom of port to be .010 to .014 inch above upper edge of valve with valve tightly closed.

Idle Screw Seat: Size .0465 inch diameter

Set Idle Adjustment Screw: 1/2 to 3 1/4 turns open For richer mixture turn screw out

Main Nozzle: Accelerating jets (in side of nozzle), 2 size No. 62 (.038 inch) drill Nozzle passage (nozzle well to air horn) size No. 32 (.116 inch) drill

High Speed Adjusting Needle: Seat (in base of nozzle), size .040 inch diameter Setting, see adjustments

Choke: (N-2464S) Butterfly type Choke shaft extended and slotted for automatic choke thermostatic coil
(N 2463S) Manual—Butterfly type

Spark Plug Gap .025"	Breaker Point Setting .022"	Ignition Timing Breaker Points to Open: 19° B. T. C. At 1800 R.P.M.	Valve Setting (Cold) Int. .016" Exh. .016"	Float Setting 11/64" (Plus or Minus 1/32")	High Speed Adj. Screw Setting 2 to 3 Turns Open	Idle Adjustment Screw Setting 1/2 to 3 Turns Open

SERVICE PROCEDURE

To Disassemble

1. Remove carbureter from engine.
2. Remove choke thermostatic coil (note position for reassembling). (N-2464S)
3. Remove bowl nut, gasket and bowl.
4. Remove float pin, float, needle and needle seat. Check float for dents, leaks, and wear on float lip or in float pin holes.
5. Remove bowl ring gasket
6. Remove low speed jet and high speed adjusting needle assembly and spring
7. Remove idle adjustment screw and spring
8. Nozzle installed permanently DO NOT REMOVE
9. Remove throttle valve screws valve, shaft and lever.
10. Remove choke valve screws, valve assembly and shaft
11. Clean all parts in clean solvent making sure all carbon accumulation is removed from bore, especially where throttle valve seats in casting Blow out all passages with compressed air Replace all worn or damaged parts Always use new gaskets

To Assemble

12. Install throttle shaft and valve Valve must be installed with trademark "c" on side toward idle port when viewing from flange side Always use new screws With valve screws loose and throttle lever set screw backed out, seat valve by tapping lightly with a small screw driver Hold valve in place while tightening screws
13. Install choke shaft and valve Always use new screws With valve screws loose, seat valve by tapping lightly with a small screw driver Hold in place while tightening screws
14. Install needle seat, needle, float and float pin
15. Set float level. With carbureter casting inverted, float resting lightly against needle in its seat, there should be 11/64 inch clearance between outer edge of casting and free end of float (side opposite needle seat) Adjust by bending lip of float with small screw driver
16. Install bowl ring gasket, bowl and bowl nut and gasket assembly. Tighten securely after making sure bowl is centered in gasket
17. Install low speed jet and high speed adjusting needle assembly Turn in until it seats in nozzle, then back out 2 turns
18. Then install idle adjusting screw finger tight Back out approximately 2 turns DO NOT USE PLIERS OR SCREW DRIVER AS IT MAY DAMAGE IDLE SCREW.
19. (N-2464S) Install thermostatic coil making certain that it is in the same position as it was before disassembly

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CARBURETER
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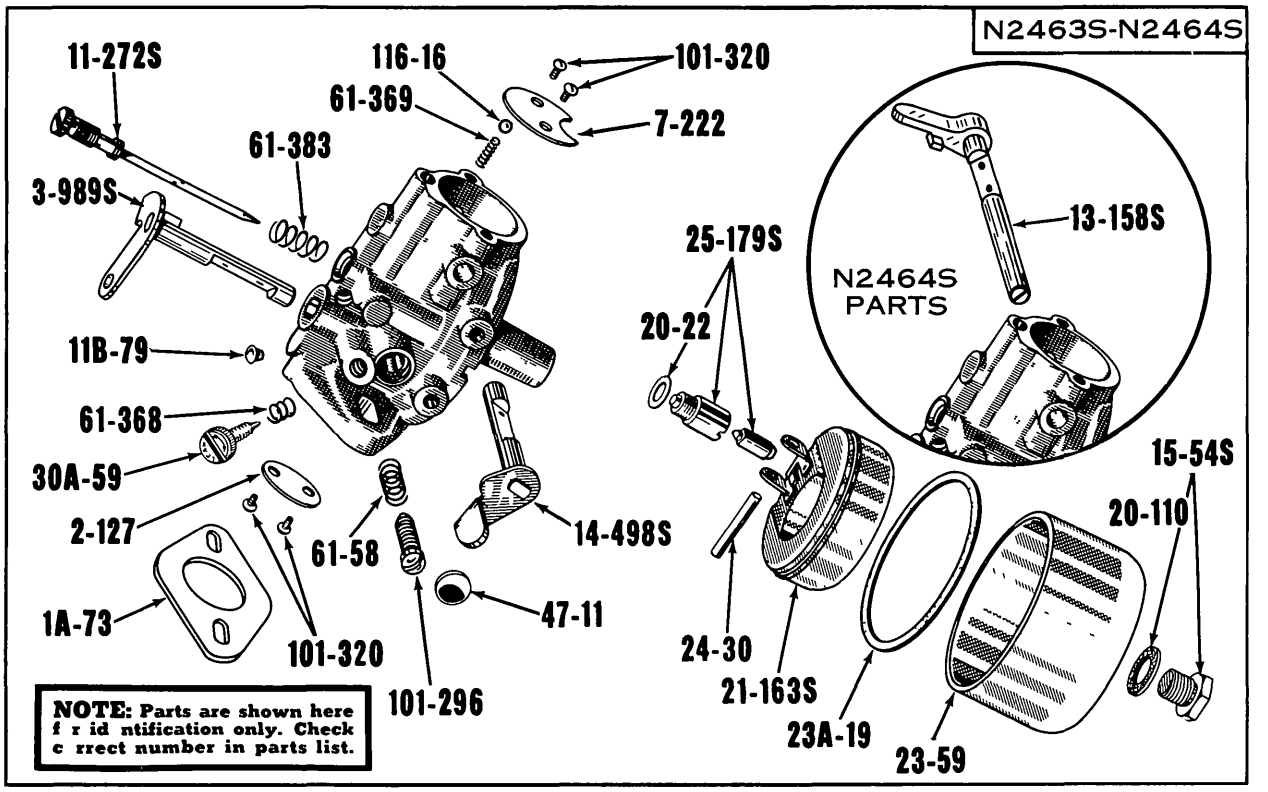
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HIGH SPEED AND IDLE SCREW ADJUSTMENT N-2463S, N-2464S

After rebuilding and installation on engine is complete the high speed and idle screw adjustments must be made With the high speed adjusting needle turned counter clockwise (from closed position) 2 turns and idle screw turned 2 turns open, start engine

With the engine at normal operating temperature, accelerate engine and check response The high speed adjusting needle should be adjusted for leanest possible mixture which will allow satisfactory acceleration and steady governor operation If the engine misses and backfires the high speed mixture is too lean and the high speed adjusting needle must be turned counter clockwise 1/4 turn at a time to correct this condition If the engine loads (heavy exhaust) and is sluggish, the mixture is too rich and the high speed adjusting needle must be turned clock wise 1/4 turn at a time to correct To make final check of the high speed adjustment operate the engine under load and adjust

Set idle adjustment screw from 1/2 to 3 turns open **DO NOT USE FORCE ON THE HIGH SPEED NEEDLE OR IDLE SCREW AS DAMAGE MAY RESULT.**



Onan—Carbureters Nos. N-2463S, N-2464S

Part No.	PART NAME
1A-73	Flange gasket
2-127	Throttle valve
3-989S	Throttle shaft and lever assembly
7-222	Choke valve
11-272S	Idle jet and high speed adjusting needle assembly
11B-79	Idle passage plug
13-158S	Choke shaft and weight assembly (N-2464S)
14-498S	Choke lever and shaft assembly (N 2463S)
15-54S	Bowl nut assembly (Sup by 15 64S)
15-64S	Bowl nut assembly
20-22	Needle seat gasket
20-110	Bowl nut gasket
21-163S	Float and lever assembly

Part No.	PART NAME	
23-59	Bowl	
23A-19	Bowl ring gasket	
24-30	Float lever pin	
25-179S	Needle and seat assembly	
30A-59	Idle adjustment screw	
47-11	Welsh plug	
61-58	Throttle lever adjusting screw spring	
61-368	Idle adjustment screw spring	
61-369	Choke shaft spring (N 2463S)	
61-383	High speed adjusting needle spring	
101-296	Throttle lever adjusting screw	
101-320	Choke and throttle valve attaching screw	(4)
116-16	Choke shaft ball (N 2463S)	

NOTE. Figures in parentheses indicate number f pieces used in one carbureter. Where no figure is shown, only one is used.

ONAN

MOTOR GENERATOR

ENGINE MODELS "AJ" & "AK"

(N-2270S, N-2460S)
Manual Choke

(N-2271S, N-2461S)
Automatic Choke

Horizontal, Model N Type, **Carbs. Nos. N-2270S, N-2271S, N-2460S, N-2461S**

CARBURETER SPECIFICATIONS

For Onan One (1) Cylinder Engine 2¾ Inch Bore, 2½ Inch Stroke (AJ)

For Onan One (1) Cylinder Engine 2½ Inch Bore 2½ Inch Stroke (AK)

Dimensions Flange size ½ inch S A E (slotted) Venturi size ½ inch

Float Level Distance from top of float (at free end) opposite needle seat to outer edge of float chamber cover when needle is seated to be 11/64 inch (gauge T109 166)

Vents Outside

Gasoline Intake Size No 55 (052 inch) drill in needle seat

Low Speed Jet Tube Jet size No 68 (031 inch) drill Idle bleed 4 size No 70 (028 inch) drill

Idle Port Slot type length 080 inch Width 030 inch

Idle Port Opening Bottom of port to be 018 to 022 inch above upper edge of valve with valve tightly closed

Idle Screw Seat Size 051 inch diameter

Set Idle Adjustment Screw 1¾ to 3¼ turns open For richer mixture turn screw out

Main Nozzle (N 2270S N 2271S) Accelerating jets (in side of nozzle) 4—size No 62 (038 inch) drill (N 2460S N 2461S) Nozzle installed permanently DO NOT REMOVE Nozzle passage (nozzle well to air horn) size No 32 (116 inch) drill

High Speed Adjusting Needle Seat (in base of nozzle) size 040 inch diameter Setting see adjustments

Choke (N 2271S N 2461S) Butterfly type Choke shaft extended and slotted for automatic choke thermostatic coil (N 2270S N 2460S) Manual—Butterfly type

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open	Valve Setting (Cold)	Float Setting	High Speed Adj Screw Setting	Idle Adjustment Screw Setting
.025"	.022"	19° B T D C	Int 012" Exh 012"	11/64" (Plus or Minus 1/32")	1¾ to 3¼ Turns Open	1¾ to 3¼ Turns Open

SERVICE PROCEDURE

To Disassemble

1 Remove carbureter from engine

2 Remove choke thermostatic coil (note position for reassembling) (N 2271S N 2461S)

3 Remove bowl nut gasket and bowl

4 Remove float pin float needle and needle seat Check float for dents leaks and wear on float lip or in float pin holes

5 Remove bowl ring gasket

6 Remove low speed jet and high speed adjusting needle assembly and spring

7 Remove idle adjustment screw and spring

8 (N 2270S N 2271S) Remove nozzle (N 2460S N 2461S) Nozzle installed permanently DO NOT REMOVE

9 Remove throttle valve screws valve shaft and lever

10 Remove choke valve screws valve assembly and shaft

11 Clean all parts in clean solvent making sure all carbon accumulation is removed from bore especially where throttle valve seats in casting Blow out all passages with compressed air Replace all worn or damaged parts Always use new gaskets

To Assemble

12 Install throttle shaft and valve Valve must be installed with trademark c on side toward idle port when viewing from flange side Always use new screws With valve screws loose and throttle lever set screw backed out seat valve by tapping lightly with a small screw driver Hold valve in place while tightening screws

13 Install choke shaft and valve Always use new screws With valve screws loose seat valve by tapping lightly with a small screw driver Hold in place while tightening screws

14 (N 2270S N 2271S) Install nozzle making sure it seats in casting

15 Install needle seat needle float and float pin

16 Set float level With carbureter casting inverted float resting lightly against needle in its seat there should be (N 2270S N 2271S) 11/64 inch (N 2460S N 2461S) 13/64 inch clearance between outer edge of casting and free end of float (side opposite needle seat) Adjust by bending lip of float with small screw driver

17 Install bowl ring gasket bowl and bowl nut and gasket assembly Tighten securely after making sure bowl is centered in gasket

18 Install low speed jet and high speed adjusting needle assembly Turn in until it seats in nozzle then back out 2 turns

19 Then install idle adjusting screw finger tight Back out approximately 2 turns DO NOT USE PLIERS OR SCREW DRIVER AS IT MAY DAMAGE IDLE SCREW

20 (N 2271S N 2461S) Install thermostatic coil making certain that it is in the same position as it was before disassembly

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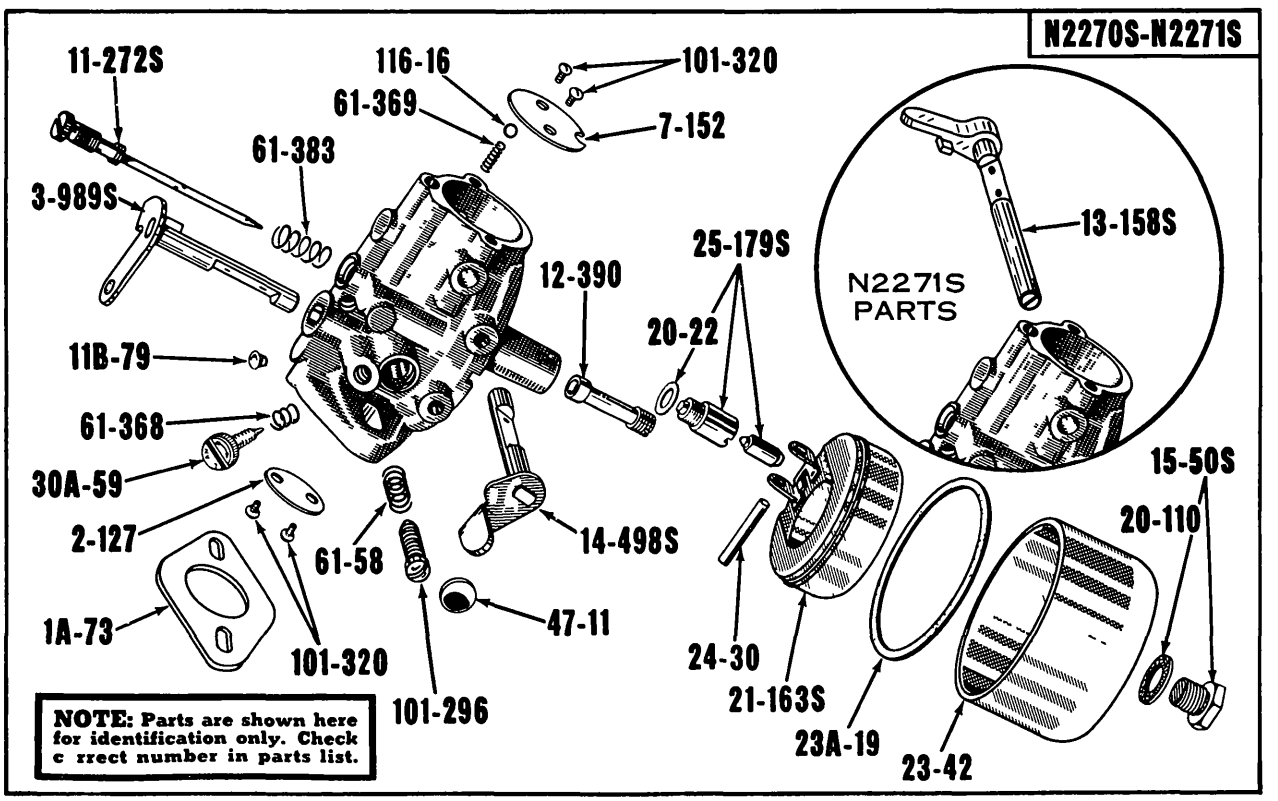
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HIGH SPEED AND IDLE SCREW ADJUSTMENT

After rebuilding and installation on engine is complete the high speed and idle screw adjustments must be made With the high speed adjusting needle turned counter clockwise (from closed position) 2 turns and idle screw turned 2 turns open start engine

With the engine at normal operating temperature accelerate engine and check response The high speed adjusting needle should be adjusted for leanest possible mixture which will allow satisfactory acceleration and steady governor operation If the engine misses and backfires the high speed mixture is too lean and the high speed adjusting needle must be turned counter clockwise 1/4 turn at a time to correct this condition If the engine loads (heavy exhaust) and is sluggish the mixture is too rich and the high speed adjusting needle must be turned clockwise 1/4 turn at a time to correct To make final check of the high speed adjustment operate the engine under load and adjust

Set idle adjustment screw from one to three turns open DO NOT USE FORCE ON THE HIGH SPEED NEEDLE OR IDLE SCREW AS DAMAGE MAY RESULT



Onan—Carbureters Nos. N-2270S, N-2271S, N-2460S, N-2461S

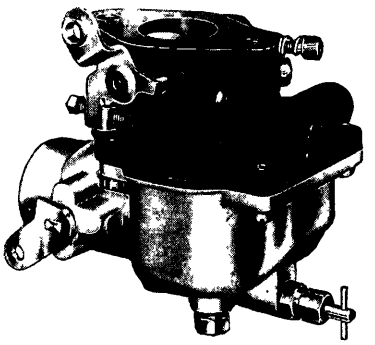
Part No.	PART NAME
1A-73	Flange gasket
2-127	Throttle valve
3-989S	—Throttle shaft and lever assembly
7-152	Choke valve (N 2270S N 2271S N 2460S) (Sup by 7 222 on N 2461S)
7 222	—Choke valve (N 2461S)
11-272S	—Idle jet and high speed adjusting needle assembly
11B-79	Idle passage plug
12-390	Nozzle (N 2270S N 2271S)
13-158S	—Choke shaft and weight assembly (N-2271S N 2461S)
14-498S	Choke lever and shaft assembly (N 2270S N 2460S)
15-50S	Bowl nut assembly (N 2270S N 2271S) (Sup by 15 54S)
15-54S	Bowl nut assembly (oil lightly before assembly) (Sup by 15 64S)
15-64S	—Bowl nut assembly
20-22	Needle seat gasket

Part No.	PART NAME	
20-110	Bowl nut gasket	
21-163S	—Float and lever assembly	
23-42	Bowl (N 2270S N 2271S)	
23-59	Bowl (N 2460S N 2461S)	
23A-19	Bowl ring gasket	
24-30	Float lever pin	
25-179S	Needle and seat assembly	
30A-59	Idle adjustment screw	
47-11	Welsh plug	
61-58	Throttle lever adjusting screw spring	
61-368	Idle adjustment screw spring	
61-369	Choke shaft spring (N 2270S N 2460S)	
61-383	High speed adjusting needle spring	
101-296	Throttle lever adjusting screw	
101-320	Choke and throttle valve attaching screw	(4)
116-16	Choke shaft ball (N 2270S N 2460S)	

—Parts so marked are new and listed for the first time

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

Model
15HQ-3/1A
Generating Unit



ONAN MOTOR GENERATOR 1953

UT UPDRAFT CARBURETER No. 2054S

CARBURETER SPECIFICATIONS

For Onan 4 Cylinder Engine: 3-7/16 Inch Bore, 4⅜ Inch Stroke

Dimensions: Flange size, 1 inch S.A.E.
Throttle bore, 1-3/16 inch.
Main venturi, ¾ inch.

Float Setting: See adjustments.

Vents: Outside, none. Inside, balance vent, in air horn ahead of choke valve, size No. 12 (.189 inch) drill.

Gasoline Intake: Size No. 55 (.052 inch) drill in needle seat.

Idle Jet Tube: Jet, size No. 66 (.033 inch) drill.

Lower bleed, size No. 60 (.040 inch) drill.
Upper bleed, size No. 65 (.035 inch) drill.
Economizer, size No. 61 (.039 inch) drill.

Idle Port: Lower port, slot type, round end, length .050: Width .030.

Idle Port Opening: Bottom of port to be .044 to .048 inch below lower edge of valve with valve tightly closed.

Upper Port (For Idle Adjustment Screw): Size .038 to .042 inch diameter.

Set Idle Adjustment Screw: ¼ to 1 turn open. For richer mixture turn screw out.

Main Metering Jet: Adjustable. Seat size No. 51 (.067 inch) drill. Setting see adjustments.

Nozzle: Size No. 36 (.106 inch) drill.

Air Bleed To Nozzle: (Thru plug) size No. 65 (.035 inch) drill.

Choke: Manual, butterfly type with poppet valve.

Vacuum Spark Port: None.

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open:	Valve Setting (Hot)	Float Setting (See Adjustments)	Idle Adjustment Screw Setting
.025"	.020"	19° B. T. C.	Intake .014" Exhaust .014"		¼ to 1 Turn Open

CARBURETER ADJUSTMENTS

Float adjustment: With throttle body inverted and gasket removed, there should be 17/64 inch clearance (plus or minus 1/64 inch) between machined surface of throttle body and seam of float (both sides). To adjust, bend lip on float lever.

Idle adjustment: Set throttle lever adjusting screw until motor runs approximately 400 r.p.m. Then set idle adjustment screw for highest steady vacuum gauge reading or smoothest engine operation. Correct setting will be found between ¼ to 1 turn open.

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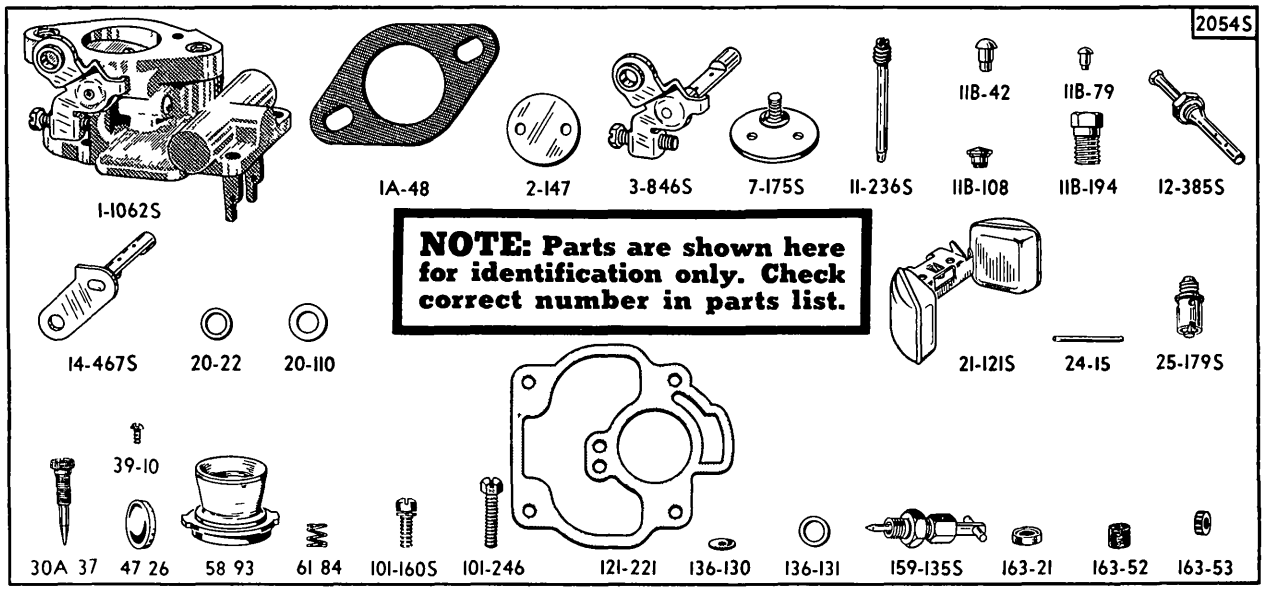
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High speed adjustment With hand throttle wide open and engine operating at 1800 r p m (maximum governed speed) adjust high speed adjusting needle until smoothest engine operation is obtained This setting will be found between 1/4 to 1 1/4 turns open

Maximum performance can be secured only when breaker points spark plugs valves and motor timing are set to manufacturer s specifications

If carbureter does not respond to the above adjustments, disassemble, clean all parts in carbureter cleaner, rinse and blow out all passages with compressed air Replace all worn or damaged parts Always use new gaskets See form No 3525 for complete overhaul procedure



Onan—1953—Carbureter No. 2054S

Part No	PART NAME
1-1062S	Throttle body assembly
1A-48	Flange gasket
2-147	Throttle valve
3-846S	Throttle shaft and lever assembly
7-175S	Choke valve assembly
11-236S	Low speed jet assembly
11B-42	Rivet plug (2)
11B-79	Rivet plug
11B 108	Idle port rivet plug
11B-194	Bowl drain plug
12 385S	Nozzle assembly
14-467S	Choke shaft and lever assembly
20-22	Nozzle and needle seat gasket (2)
20-110	Main metering screw gasket
21-121S	Float and lever assembly
24-15	Float lever pin

Part No	PART NAME
25-179S	Needle and seat assembly
30A-37	Idle adjustment screw
39-10	Throttle and choke valve attaching screw (4)
47-26	Welsh plug (2)
58-93	Venturi
61-84	Idle adjustment screw spring
101-160S	Body attaching screw and washer assembly (4)
101-246	Throttle adjusting screw
121-221	Body gasket
136-130	Air horn dust seal retainer
136-131	Choke and throttle shaft dust seal retainer (2)
159-135S	Adjustable main metering screw and needle assy
163-21	Choke and throttle shaft dust seal (2)
163-52	Air horn drain felt
163-53	Main metering screw packing

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

PACKARD "V-8"

MODELS
"5620" – CLIPPER DELUXE
"5640" – CLIPPER SUPER

1956

WGD Dual Down-Draft Climatic® Control **Carbureter No. 2393S**

CARBURETER SPECIFICATIONS

For Packard 8 Cylinder Engine: 4 Inch Bore, 3½ Inch Stroke

Dimensions: Flange size 1¼ inch dual, 4 bolt type Primary venturi, 11/32 inch I D Secondary venturi, 21/32 inch I D Main venturi, 1-3/16 inch I. D.
Vent: Outside, I
Gasoline Intake: Size .1015 inch diameter in needle seat
Low Speed Jet Tube: Jet, size 032 inch diameter By pass, in bowl cover, size No 54 (055 inch) drill Economizer, in bowl cover, size No 55 (052 inch) drill Idle bleed, in bowl cover, size 051 inch diameter
Idle Port: Upper, slot type, length 160 inch, width 030 inch
Idle Port Opening: 109 to 115 inch above top edge of valve with valve tightly closed
Lower Port (For Idle Adjustment Screw): Size 065 to 069 inch diameter
Set Idle Adjustment Screw: ¾ to 1¾ turns open For richer mixture turn screw out Do not idle engine below 400 RPM in drive range
Nozzle: Nozzle is installed permanently DO NOT REMOVE Anti percolating well jet, size No 70 (028 inch) drill.
Metering Rod (Vacumeter Type): Economy step, 064 inch diameter Middle step tapers to 0555 inch diameter Power step 048 inch diameter These rods designed with idle stabilizing flats on economy step
Metering Rod Jet: Size 086 inch diameter
Accelerating Pump: Discharge jet (twin) size No 72 (025 inch) drill Intake ball check, in plunger shaft Discharge (needle seat) size No 50 (070 inch) drill
Choke Carter Climatic® Control—set two points rich, butterfly type offset valve Choke heat suction hole in piston housing, size No 46 (081 inch) drill
Vacuum Spark Port: Horizontal slot (round end) 040 x 130 inch Bottom of port to be 000 to 006 inch above upper edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION. Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .015"	Ignition Timing Breaker Points to Open: 5° B. T. C. At Vibration Damper	Float Setting 3/16 Inch (Use Gauge T109-28)	Idle Adjustment Screw Setting ¾ to 1¾ Turns Open Idle Engine at 400 R.P.M. In Drive Range

NOTE: These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT.

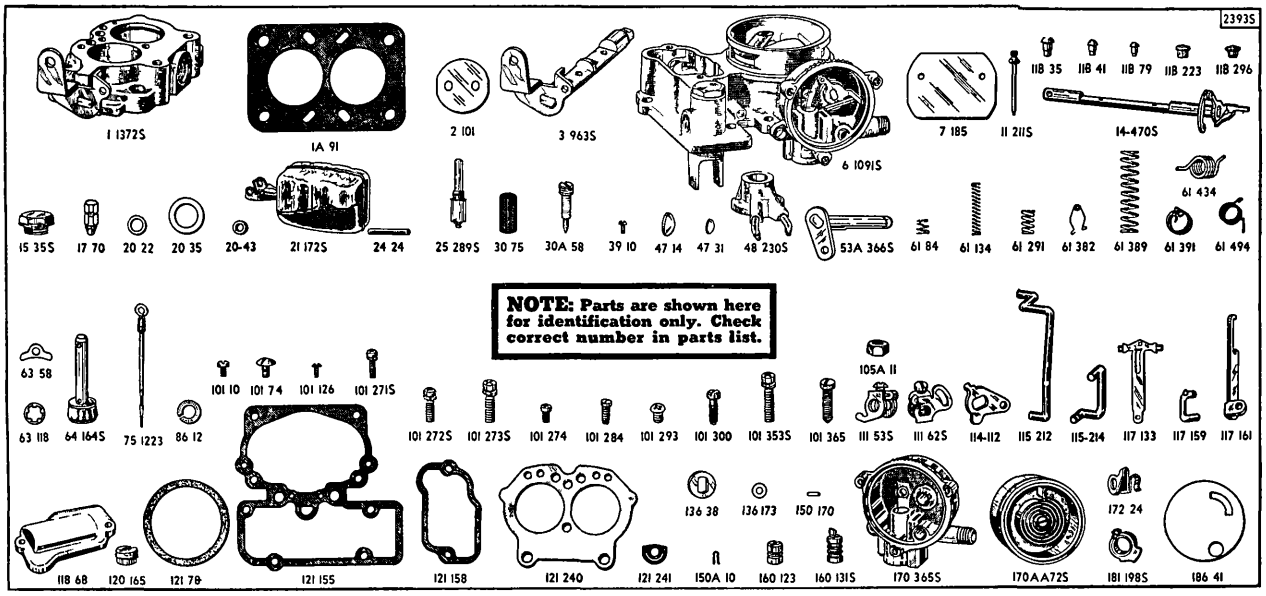
CARBURETER ADJUSTMENTS

Float Adjustment: With bowl cover gasket removed, bowl cover inverted and needle seated, there should be 3/16 inch (gauge T109-28) between top of float and bowl cover Adjust by bending float lever.
Float Alignment: Side of float parallel to edge of casting Minimum clearance between lever and air horn lugs without binding Adjust by bending float lever
Pump Adjustment: Back out throttle lever set screw until throttle valves seat in bores of carbureter Hold straight edge across top of dust cover at pump arm The flat on top of pump arm should be parallel to straight edge Adjust by bending throttle connector rod at upper angle (Use bending tool T109-213)
Metering Rod Adjustment: The metering rods must be adjusted after the pump adjustment No metering rod gauges are necessary; procedure is as follows With the throttle lever set screw backed out and throttle valves seated in bores of carbureter, press down on vacumeter link until metering rods bottom in casting With rods held in this position, revolve metering rod arm until lip contacts vacumeter link Hold in place and carefully tighten metering rod arm set screw
Fast Idle Adjustment: With the thermostatic coil housing gasket and baffle plate removed, crack throttle valve and hold choke valve closed Then close throttle There should now be 024 inch clearance (gauge T109-189) between throttle valve and bore of carbureter (side opposite idle port) Adjust by bending the choke connector rod at lower angle (Use bending tool T109-213)
Unloader Adjustment: This adjustment must be made after fast idle adjustment Hold throttle valve in wide open position and close choke valve as far as possible without forcing There should be ⅛ inch (gauge T109 36) clearance between upper edge of choke valve and inner wall of air horn Adjust by bending unloader arm on choke piston lever (Use bending tool T109-213)

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Packard "V-8"—1956—Carbureter No. 2393S

WHEN SERVICING, USE GASKET ASSORTMENT No 249, REPAIR PACKAGE No. 1831

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

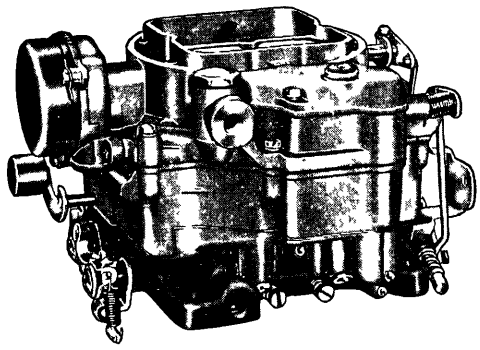
Part No.	PART NAME	
1-1372S	—Body flange assembly	
1A-91	FLANGE GASKET	
2-101	Throttle valve	(2)
3-963S	Throttle shaft and lever assembly	
6-1091S	—Air horn assembly	
7-185	Choke valve	
11-211S	LOW SPEED JET ASSEMBLY	(2)
11B-35	Rivet plug	(3)
11B-41	Rivet plug	(3)
11B-79	Rivet plug	
11B-223	Nozzle passage rivet plug	(2)
11B-296	IDLE PORT RIVET PLUG	(2)
14-470S	Choke piston lever link and shaft assembly	
15-35S	Strainer nut assembly	
17-70	PUMP CHECK NEEDLE	
20 22	Needle seat gasket	
20-35	BOWL STRAINER GASKET	
20-43	Piston housing gasket	
21-172S	—Float and lever assembly	
24-24	Float lever pin	
25-289S	NEEDLE AND SEAT ASSEMBLY	
30-75	BOWL COVER STRAINER	
30A-58	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
47-14	Piston housing welsh plug	
47-31	Spark port welsh plug	
48-195S	Pump jet and housing assembly	
48-230S	—Pump jet and housing assembly (Sup by 48 195S)	
53A-366S	Pump operating lever and countershaft assembly	
61-84	Idle adjustment screw spring	(2)
61-134	VACUUM PISTON SPRING	
61-291	Throttle adjusting screw spring	
61-382	METERING ROD SPRING	
61-389	UPPER PUMP SPRING	
61-391	Fast idle cam spring	
61-434	Throttle return spring	
61-494	Countershaft spring	
63-58	Coil housing retainer	(3)
63-118	Throttle shaft retaining ring	
64-194S	—PUMP PLUNGER ROD AND CHECK ASSEMBLY	
75-1223	—METERING ROD—STANDARD	(2)
86-12	Flange stud lock washer	(4)
101-10	Pump arm clamp screw	

Part No	PART NAME	
101-74	Throttle shaft arm attaching screw	
101-126	Throttle valve attaching screw	(4)
101-271S	Dust cover attaching screw and washer assembly	(2)
101-272S	Air horn attaching screw and washer assembly	(8)
101-273S	Body flange attaching screw and washer assembly	(2)
101-274	Coil housing attaching screw	(3)
101-284	Piston housing attaching screw	(3)
101-293	Metering rod arm clamp screw	
101-300	Pump jet housing attaching screw	
101-353S	Body flange attaching screw and washer assembly	(2)
101-365	Throttle lever adjustment screw	
105A-11	Flange stud nut	(4)
111-53S	Metering rod arm and screw assembly	
111-62S	Pump arm and screw assembly	
114-112	Throttle shaft arm	
115-212	THROTTLE CONNECTOR ROD	
115-214	Choke connector rod	
117-133	Vacumeter piston link	
117-159	Pump connector link	
117-161	Fast idle link	
118-68	Dust cover	
120-165	METERING ROD JET	(2)
121-78	COIL HOUSING GASKET	
121-155	AIR HORN GASKET	
121-158	DUST COVER GASKET	
121-240	BODY FLANGE GASKET	
121-241	PUMP JET HOUSING GASKET	
136-38	Throttle shaft washer	
136-173	Pump connector link washer	(2)
150-170	Choke piston pin	
150A-10	Pin spring	(2)
160-123	Choke piston	
160-131S	Vacuum piston and pin assembly	
170-365S	—Piston housing and plug assembly	
170AA-72S	Thermostatic coil and housing assembly	
172-24	CHOKE AND THROTTLE CONNECTOR ROD RETAINER	(3)
181-198S	Fast idle cam assembly (Sup by 181 236S)	
181-236S	—Fast idle cam assembly	
186-41	Choke baffle plate	

—Parts so marked are new and listed for the first time

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, nly one is used.

MODELS
"5660"—CLIPPER SUPER
"5660"—CLIPPER CUSTOM



PACKARD "V-8" 1956

WCFB Four-Bore Down-Draft Climatic® Control **Carbureter No. 2394S**

CARBURETER SPECIFICATIONS

For Packard 8 Cylinder Engine: 4 Inch Bore, 3½ Inch Stroke

Dimensions: Flange size, 1¼ inch Four Bore—4 bolt type.
Primary venturi size, 11/32 inch I. D.
Main venturi (primary) size, 1-1/16 inch I. D.
Main venturi (secondary) size, 1¼ inch I. D.

Vents: Outside, 4. Inside, 5.

Gasoline Intake: Size No. 42 (.0935 inch) drill hole in needle seat.

Low Speed Jet Tube: (Primary side only). Jet, size No. 65 (.035 inch) drill.
By-Pass, in body, size No. 54 (.055 inch) drill.
Economizer, in screw plug, size .0492 inch diameter.
Idle Bleed, in body, size .063 inch diameter.

Idle Port: (Upper) slot type. Primary, length .185 inch; width .030 inch. Secondary, none.

Idle Port Opening: Primary, .130 to .136 inch above top edge of valve with valve tightly closed. Secondary, none.

Lower Port: Primary (for idle adjustment screw), size No. 53 (.0595 inch) drill. Secondary, none.

Set Idle Adjustment Screw: ¾ to 1¾ turns open. For richer mixture turn screw out. Do not idle engine below 400 r.p.m. Automatic Trans.—in Drive Range; 475 r.p.m. for Standard and Overdrive Trans.

Main Nozzle: Installed permanently. DO NOT REMOVE. Anti-percolating jet, primary and secondary, size No. 70 (.028 inch) drill.

Metering Rod: Primary, economy step .072 inch diameter. Middle step tapers to .055 inch diameter. Power step, .040 inch diameter. Secondary, none.

Metering Rod Jet: Primary size .0935 inch; secondary size .0635 inch diameter.

Accelerating Pump: Discharge jet (Twin) primary side only, size No. 72 (.025 inch) drill. Intake ball check seat, size .115 to .120 diameter. Discharge needle seat, size .070 inch diameter. Pump passage disk check, size No. 55 (.052 inch) drill.

Choke: Carter Climatic® Control, set on index. Butterfly type—offset choke valve, primary side only. Choke heat suction hole, restriction in piston housing, size No. 43 (.089 inch) drill.

Vacuum Spark Port: Horizontal, slot, round end type—.130 x .040 inch. Bottom of port to be .000 to .006 inch above top edge of valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .015"	Ignition Timing Breaker Points to Open: 5° B. T. C. At Vibration Damper	Float Setting See Adjustments	Idle Adjustment Screw Setting ¾ to 1¾ Auto. Trans. 400 R.P.M. Std. & O'Drive 475 R.P.M.

NOTE: These cars are equipped with hydraulic valve lifters.—NO ADJUSTMENT.

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CARBURETER
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S 8 PRINTED IN U.S.A.

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: Two separate float adjustments must be made—lateral and vertical. LATERAL ADJUSTMENT: With bowl cover assembly inverted, bowl cover gasket removed and float resting on seated needle, place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting. Side of floats should just clear the vertical uprights of float gauge. Adjustment should be made by bending arms of floats. VERTICAL ADJUSTMENT: With float gauge in same position, floats should just clear the horizontal portion of gauge. Vertical distance between top of float and machined surface of casting must be 1/8 inch (gauge T109-232) for primary floats and 3/16 inch (gauge T109-222) for secondary floats. Adjust by bending float arms.

FLOAT DROP ADJUSTMENT: With bowl cover held in upright position and measuring from center of float, the distance between top of floats and bowl cover should be 5/8 inch for primary floats and 11/16 inch for secondary floats. Adjust by bending stop tabs on float brackets.

PUMP ADJUSTMENT: Install pump connector link in outer hole (long stroke) of pump arm, with ends extending toward countershaft arm. Back out throttle lever set screw until throttle valves seat in bores of carbureter. Hold straight edge across top of dust cover boss at pump arm. The flat on top of pump arm should be parallel to straight edge. Adjust by bending throttle connector rod at lower angle. (Use tool T109-213.)

METERING ROD ADJUSTMENT: Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows: (1) Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw. (2) With metering rods in place, press down on vacumeter link until metering rods bottom in carbureter body casting. (3) Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link. Hold in place and carefully tighten clamp screw.

BOWL VAPOR VENT ADJUSTMENT: This adjustment should be made after completing pump and metering rod adjustments. Install dust cover and dust cover gasket. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter. There should be 1/16 inch (gauge T109-197) between lower edge of bowl vapor vent valve and dust cover. To adjust, remove dust cover and bend vapor vent arm.

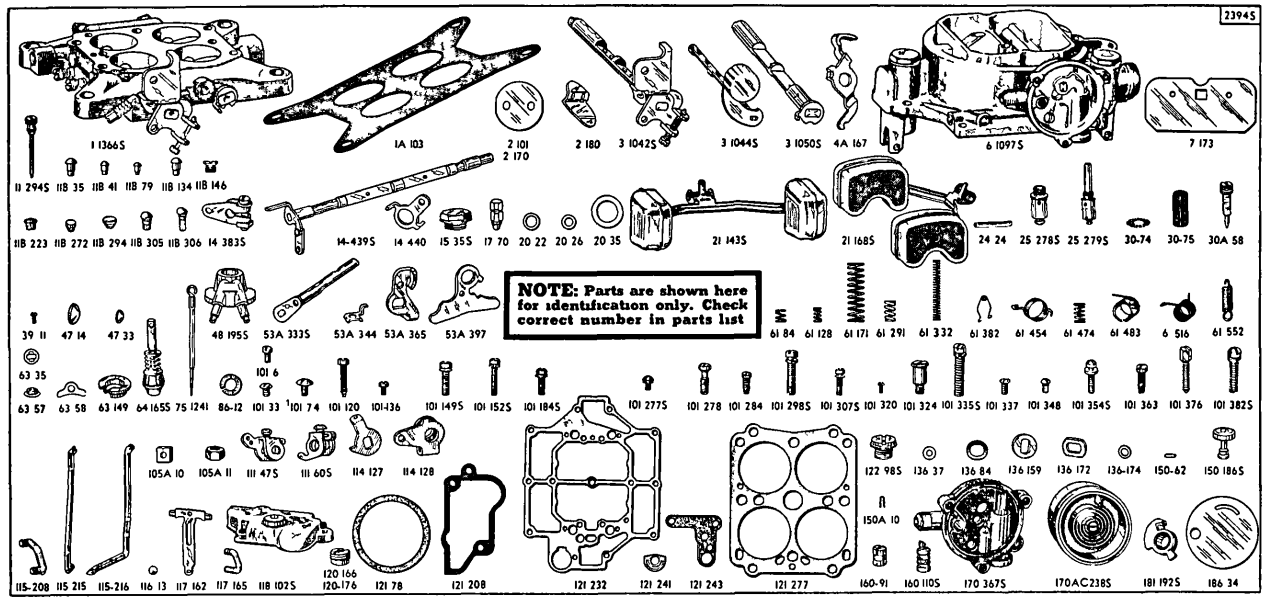
FAST IDLE ADJUSTMENT: (a) Loosen choke lever clamp screw on choke shaft. Insert .025 inch wire gauge (T109-189) between lip of fast idle cam and boss of flange casting. Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw. (b) With choke valve tightly closed tighten fast idle adjusting screw until there is .023 inch (gauge T109-189) opening between throttle valve and bore of carbureter side opposite idle port. Be sure fast idle adjusting screw is on high step of cam while making this adjustment.

UNLOADER ADJUSTMENT: With throttle wide open there should be 9/32 inch (gauge T109-126) clearance between upper edge of choke valve and inner wall of air horn. Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41).

SECONDARY THROTTLE LEVER ADJUSTMENT: Primary and secondary throttle valves should reach wide open position at the same time. To adjust, bend throttle operating rod at upper angle. (Use bending tool T109-213.) With primary and secondary throttle valves in tightly closed position there should be .008-.013 inch (gauge T109-200) clearance between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on primary lever.

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: This adjustment should be made after completing fast idle and secondary throttle lever adjustments. Crack throttle valves and hold choke valve tightly closed. Then close throttle. Tang on secondary throttle lever should freely engage in notch of lockout dog. If necessary to adjust, bend tang on secondary throttle lever.

CARBURETER
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Packard "V-8"—1956—Carbureter No. 2394S

WHEN SERVICING, USE GASKET ASSORTMENT No 283, REPAIR PACKAGE No 1829

PART NAMES IN CAPITAL LETTERS LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1366S	—Body flange assembly	
1A-103	FLANGE GASKET	
2-101	Primary throttle valve	(2)
2-170	Secondary throttle valve	(2)
2-180	—Auxiliary throttle valve	(2)
3-1042S	—Primary throttle shaft and lever assembly	
3-1044S	—Auxiliary throttle shaft and weight assembly	
3-1050S	—Secondary throttle shaft and dog assembly	
4A-158	Throttle shaft dog (Sup by 4A 167)	
4A-167	—Throttle shaft dog	
6-1097S	—Air horn assembly	
7-173	Choke valve	
11-287S	Low speed jet assembly (Sup by 11 294S)	(2)
11-294S	—LOW SPEED JET ASSEMBLY	(2)
11B-35	Rivet plug	(4)
11B-41	Rivet plug	(2)
11B-79	Rivet plug	(4)
11B-134	Rivet passage plug	
11B-146	Level sight plug	(2)
11B-223	Nozzle passage rivet plug	(4)
11B-272	Rivet plug	(2)
11B-294	Idle port rivet plug	(2)
11B-305	Rivet plug	
11B-306	Rivet plug	(2)
14-383S	Choke lever and screw assembly	
14-439S	Choke piston lever link and shaft assembly	
14-440	Cam trip lever	
15-35S	Strainer nut assembly	(2)
17-70	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	(2)
20-26	Pump relief plug gasket	
20-35	BOWL STRAINER GASKET	(2)

Part No.	PART NAME	
21-143S	Primary float and lever assembly	
21-168S	—Secondary float and lever assembly	
24-24	Float lever pin	(2)
25-278S	PRIMARY NEEDLE AND SEAT ASSEMBLY	
25-279S	SECONDARY NEEDLE AND SEAT ASSEMBLY	
30-74	Secondary fuel inlet strainer	
30-75	BOWL STRAINER	
30A-58	Idle adjustment screw	(1)
39-11	Choke valve attaching screw	(2)
47-14	Welsh plug (choke housing)	
47-33	Welsh plug (spark port)	
48-195S	Pump jet and housing assembly	
53A-333S	Pump operating lever and countershaft assembly	
53A-344	VENT ARM	
53A-365	Secondary operating lever	
53A-397	—Lockout arm	
61-84	Idle adjustment screw spring	(2)
61-128	Connector rod spring	
61-171	PUMP SPRING (LOWER)	
61-291	Throttle lever adjusting screw spring	
61-332	VACUUM PISTON SPRING	
61-382	METERING ROD SPRING	
61-454	Fast idle cam spring	
61-474	Bowl vent spring	
61-483	SECONDARY THROTTLE RETURN SPRING	
61-516	Countershaft spring	
61-552	Throttle flex spring	
63-35	Connector rod spring retainer	
63-57	INTAKE CHECK BALL RETAINER	
63-58	Coil housing retainer	(3)
63-149	Bowl vent spring retainer	

Part N .	PART NAME	
64-165S	PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
75-1230	Metering rod—standard (Sup by 75 1241)	(2)
75-1241	—METERING ROD—STANDARD	(2)
86-12	Flange stud lock washer	(4)
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	(2)
101-120	Fast idle adjustment screw	
101-136	Coil housing attaching screw	(3)
101-149S	Body flange attaching screw and washer assembly	
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet and housing attaching screw	
101-284	Piston housing attaching screw	(2)
101-298S	Body flange attaching screw and washer assembly	(2)
101-307S	Air horn attaching screw and washer assembly	(8)
101-320	Auxiliary throttle valve attaching screw	(4)
101-324	Fast idle cam attaching screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-348	Primary throttle valve attaching screw	(4)
101-354S	Choke lever clamp screw assembly	
101-363	Piston housing attaching screw	
101-376	Throttle lever adjusting screw	
101-382S	Body flange attaching screw and washer assembly	(3)
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
114-127	Throttle shaft arm (outer)	
114-128	Throttle shaft arm (inner)	
115-208	THROTTLE OPERATING ROD	
115-215	Choke connector rod	
115-216	Throttle connector rod	
116-13	PUMP INTAKE CHECK BALL	
117-162	Vacumeter piston link	
117-165	Pump connector link	
118-102S	Dust cover assembly	
120 165	Primary metering rod jet (Sup by 120 166)	(2)
120-166	PRIMARY METERING ROD JET	(2)
120-176	SECONDARY METERING JET	(2)
120-194	Secondary metering jet (Sup by 120 176)	(2)
121-78	COIL HOUSING GASKET	
121-208	DUST COVER GASKET	
121-232	AIR HORN GASKET	
121-241	PUMP JET HOUSING GASKET	
121-243	PISTON HOUSING GASKET	
121-277	—BODY FLANGE GASKET	
122-98S	Pump relief valve plug assembly	
136-37	Throttle connector rod and operating rod washer	(5)
136-84	Spring washer	
136-159	Throttle shaft washer	
136-172	Secondary throttle shaft washer	
136-174	Throttle lever adjusting screw washer	
150-62	Choke piston pin	
150-186S	Pin and valve cap assembly	
150A-10	PIN SPRING	(5)
160-91	Choke piston	
160 110S	Vacuum piston and pin assembly	
170-367S	Piston housing and plug assembly	
170AC238S	Thermostatic coil and housing assembly	
181-192S	Fast idle cam and spring assembly	
186-34	Choke baffle plate	

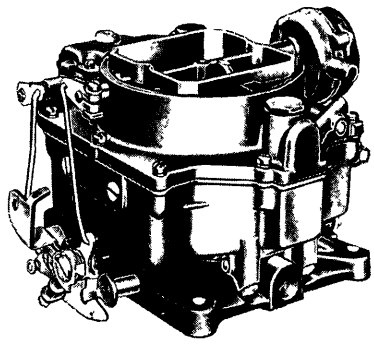
—Parts so marked are new and listed for the first time

NOTE **Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used**

CARBURETER
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(2232S)
Used on engines with cylinder head casting No. 440689

(2284S)
Used on engines with cylinder head casting No. 440854



PACKARD "V-8"

MODELS
"5540"—CLIPPER DELUXE
"5540"—CLIPPER SUPER
1955

(Use 2284S and (2) 75-1163 (Packed with Carb.) to replace 2232S)

WCFB Four-Bore Down-Draft Climatic® Control **Carbureters Nos. 2232S-2284S**

CARBURETER SPECIFICATIONS

For Packard 8 Cylinder Engine: 3-13/16 Inch Bore, 3½ Inch Stroke

Dimensions: Flange size, 1⅛ inch Four Bore—4 bolt type.
Primary venturi size, 11/32 inch I. D.
Main venturi (primary) size, 1-1/16 inch.
Main venturi (secondary) size, 15/16 inch I. D.

Float Level: See adjustments.

Vents: Outside, none. Inside, balance vent tube in air horn, 2 on primary side, 3 on secondary side.

Gasoline Intake: Size No. 42 (.0935 inch) drill hole in needle seat.

Low Speed Jet Tube: (Primary side only).
Jet, size No. 68 (.031 inch) drill.
By Pass, in body, size No. 52 (.0635 inch) drill.
Economizer, in low speed jet assembly, size (.051 inch) diameter.
Idle bleed, in body, size No. 54 (.055 inch) drill.

Idle Port: (Upper) slot type. Primary, length .185 inch; width .030 inch. Secondary, none.

Idle Port Opening: Primary, .126 to .132 inch above top edge of valve with valve tightly closed. Secondary, none.

Lower Port: Primary (for idle adjustment screw), size No. 53 (.0595 inch) drill. Secondary, none.

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture turn screw out. Do not idle engine below 400 r.p.m. Automatic Trans.—in Drive Range.

Main Nozzle: Installed permanently. DO NOT REMOVE. Anti-percolating jet (off nozzle well), size No. 71 (.026 inch) drill.

Metering Rod: Primary, economy step (2232S) .074, (2284S) .078 inch diameter. Middle step tapers to (2232S) .069, (2284S) .0715 inch diameter. Power step, .0625 inch diameter. Secondary, none.

Metering Rod Jet: Primary, size .098 inch diameter (for metering rod). Secondary, size (2232S) (.052 inch); (2284S) (.055 inch) diameter.

Metering Rod Setting: See adjustments.

Accelerating Pump: Discharge jet (twin) primary side only, size No. 70 (.025 inch) drill.
Intake ball check seat, size .115 to .120 inch diameter.
Discharge needle seat, size .070 inch diameter.
Pump passage, disk check size No. 55 (.052 inch) drill.

Pump Adjustment: See adjustments.

Choke: Carter Climatic® Control, set one point rich. Butterfly type—offset choke valve, primary side only. Choke heat suction hole, restriction in piston housing, size No. 43 (.089 inch) drill.

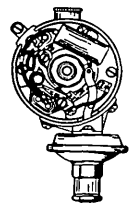
Vacuum Spark Port: Round type—.103-.105 inch diameter. Top of port .046 to .056 inch above valve with valve tightly closed.

Motor Tune-Up—Be Accurate! Always Use Feeler Gauges!

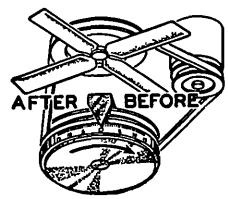
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



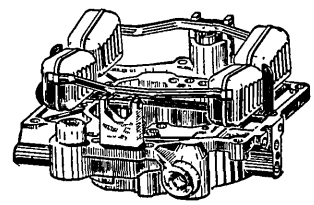
Spark Plug Gap .035"



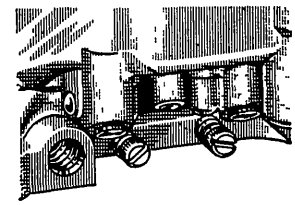
Breaker Point Setting .015"



Ignition Timing Breaker Points to Open: 5° B. T. C.



Float Setting (See Adjustments)



Idle Adjustment Screw Setting ½ to 1½ Turns Open

NOTE: These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: Two separate float adjustments must be made—lateral and vertical. **LATERAL ADJUSTMENT:** With bowl cover assembly inverted, bowl cover gasket removed and float resting on seated needle, place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting. Side of floats should just clear the vertical uprights of float gauge. Adjustment should be made by bending arms of floats. **VERTICAL ADJUSTMENT:** With float gauge in same position, floats should just clear the horizontal portion of gauge. Vertical distance between top of float and machined surface of casting must be 1/8 inch (gauge T109-232) for primary floats and 5/32 inch (gauge T109-236) for secondary floats. Adjust by bending float arms.

FLOAT DROP ADJUSTMENT: With bowl cover held in upright position and measuring from center of float, the distance between top of floats and bowl cover should be 5/8 inch for primary floats and 21/32 inch for secondary floats. Adjust by bending stop tabs on float brackets.

PUMP ADJUSTMENT: Install pump connector link in outer hole (long stroke) of pump arm, with ends extending toward countershaft arm. Back out throttle lever set screw until throttle valves seat in bores of carbureter. Hold straight edge across top of dust cover boss at pump arm. The flat on top of pump arm should be parallel to straight edge. Adjust by bending throttle connector rod at lower angle. (Use tool T109-213.)

METERING ROD ADJUSTMENT: Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows: (1) Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw. (2) With metering rods in place, press down on vacumeter link until metering rods bottom in carbureter body casting. (3) Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link. Hold in place and carefully tighten clamp screw.

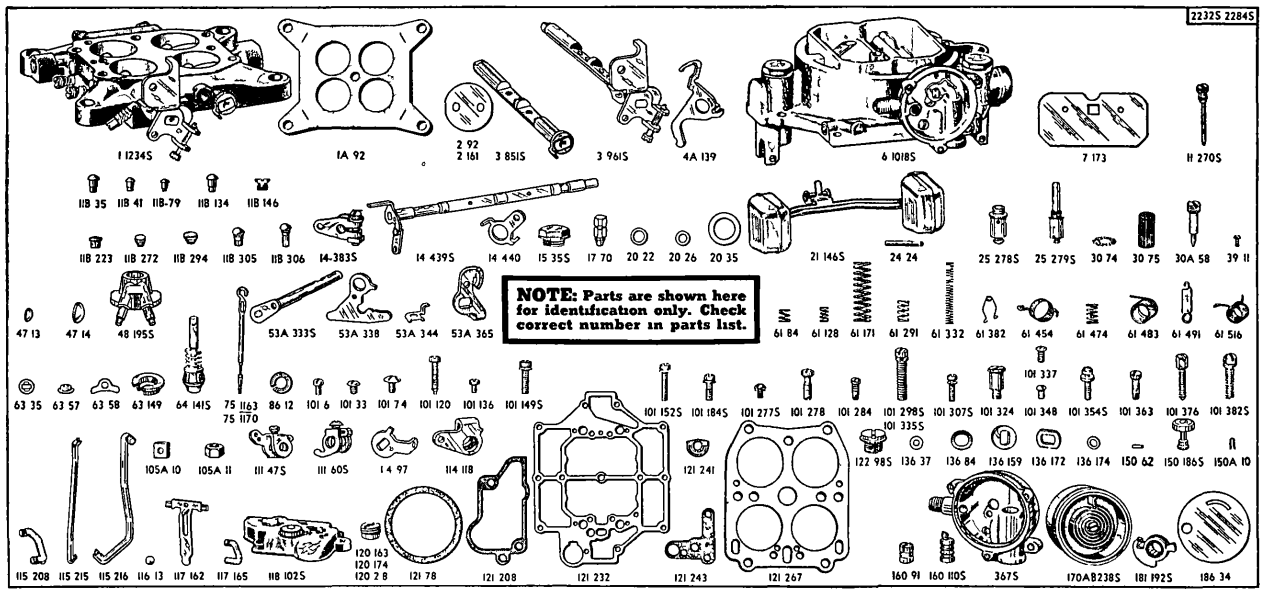
BOWL VAPOR VENT ADJUSTMENT: This adjustment should be made after completing pump and metering rod adjustments. Install dust cover and dust cover gasket. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter. There should be 1/16 inch (gauge T109-197) between lower edge of bowl vapor vent valve and dust cover. To adjust, remove dust cover and bend vapor vent arm.

FAST IDLE ADJUSTMENT: (a) Loosen choke lever clamp screw on choke shaft. Insert .020 inch feeler gauge (T109-29) between lip of fast idle cam and boss of flange casting. Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw. (b) With choke valve tightly closed tighten fast idle adjusting screw until there is .031 inch (gauge T109-29 may be used) opening between throttle valve and bore of carbureter side opposite idle port. Be sure fast idle adjusting screw is on high step of cam while making this adjustment.

UNLOADER ADJUSTMENT: With throttle wide open there should be 3/16 inch (gauge T109-28) clearance between upper edge of choke valve and inner wall of air horn. Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41).

SECONDARY THROTTLE LEVER ADJUSTMENT: Primary and secondary throttle valves should reach wide open position at the same time. To adjust, bend throttle operating rod at upper angle. (Use bending tool T109-213). With primary and secondary throttle valves in tightly closed position there should be .017-.022 inch (gauge T109-29) clearance between positive closing shoes on primary and secondary throttle levers. To adjust bend shoe on primary lever.

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: This adjustment should be made after completing fast idle and secondary throttle lever adjustments. Crack throttle valves and manually open and close the choke valve. Tang on secondary throttle lever should freely engage in notch of lockout dog. If necessary to adjust, bend tang on secondary throttle lever.



Packard—1955—Carbureters Nos. 2232S-2284S

WHEN SERVICING, USE GASKET ASSORTMENT No. 266; REPAIR PACKAGE No. 1799 (2232S), No. 1800 (2284S)

PART NAMES IN CAPITAL LETTERS LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1234S	Body flange assembly	
1A-103	FLANGE GASKET	
2-92	Primary throttle valve	(2)
2-161	Secondary throttle valve	(2)
3-851S	Secondary throttle shaft and dog assembly	
3-961S	Primary throttle shaft and lever assembly	
4A-139	Throttle shaft dog	
6-1018S	Air horn assembly (Casting No 6 889) (Sup by 6 1217S)	
6 1217S	Air horn assembly (Casting No 6 1147)	
7-173	Choke valve	
11-270S	LOW SPEED JET ASSEMBLY	(2)
11B-35	Rivet plug	(4)
11B-41	Rivet plug (6 1018S (2) (6 1217S (1)	
11B-79	Rivet plug	(4)
11B-134	Rivet passage plug	
11B-146	Level sight plug	(2)
11B-223	Nozzle passage rivet plug	(4)
11B-272	Rivet plug	(2)
11B-294	Idle port rivet plug	(2)
11B-305	Rivet plug (6 1018S (1) (6 1217S (2)	
11B-306	Rivet plug (6 1018S (2) (6 1217S (1)	
14-383S	Choke lever and screw assembly	
14-439S	Choke piston lever link and shaft assembly	
14-440	Cam trip lever	
15-35S	Strainer nut assembly	(2)
17-70	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	(2)
20-26	Pump relief plug gasket	
20-35	BOWL STRAINER GASKET	(2)

Part No.	PART NAME	
21-146S	Float and lever assembly	(2)
24-24	Float lever pin	(2)
25-278S	PRIMARY NEEDLE AND SEAT ASSEMBLY	
25-279S	SECONDARY NEEDLE AND SEAT ASSEMBLY	
30-74	SECONDARY FUEL INLET STRAINER	
30-75	BOWL STRAINER	
30A-58	Idle adjustment screw	(2)
39-11	Choke valve attaching screw	(2)
47-13	Welsh plug (spark port)	
47-14	Welsh plug (choke housing)	
48-195S	Pump jet and housing assembly	
53A-333S	Pump operating lever and countershaft assembly	
53A-338	Lockout arm	
53A-344	VENT ARM	
53A-365	Secondary operating lever	
61-84	Idle adjustment screw spring	(2)
61-128	Connector rod spring	
61-171	PUMP SPRING (LOWER)	
61-291	Throttle lever adjusting screw spring	
61-332	VACUUM PISTON SPRING	
61-382	METERING ROD SPRING	
61-454	Fast idle cam spring	
61-474	Bowl vent spring	
61-483	SECONDARY THROTTLE RETURN SPRING	
61-491	Throttle flex spring	
61-516	Countershaft spring	
63-35	Connector rod spring retainer	
63-57	INTAKE CHECK BALL RETAINER	
63-58	Coil housing retainer	(3)
63-149	Bowl vent spring retainer	

Part No.	PART NAME	
64-141S	Pump plunger rod spring and retainer assembly (Sup by 64-165S)	
64-165S	PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
75-1163	METERING ROD—STANDARD (2232S)	(2)
75-1170	METERING ROD—STANDARD (2284S)	(2)
75-1195	Metering rod—1 size lean (2284S)	(2)
75-1197U	Metering rod and jet unit—2 sizes lean (consists of 2—75 1196 and 2—120 217) (2284S)	
75-1211	Metering rod—1 size lean (2232S)	(2)
75-1213U	Metering rod and jet unit—2 sizes lean (consists of 2—75 1212 and 2—120 181) (2232S)	
86-12	Flange stud lock washer	(4)
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	(2)
101-120	Fast idle adjustment screw	
101-136	Coil housing attaching screw	(3)
101-149S	Body flange attaching screw and washer assembly	
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-275	Piston housing attaching screw (Use with 6 1217S)	
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet and housing attaching screw	
101-284	Piston housing attaching screw (6 1018S (2)	
101-298S	Body flange attaching screw and washer assembly	(2)
101-307S	Air horn attaching screw and washer assembly	(8)
101-324	Fast idle cam attaching screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-348	Primary throttle valve attaching screw	(4)
101-354S	Choke lever clamp screw assembly	
101-363	Piston housing attaching screw (6 1018S (1) (6-1217S (2)	
101-376	Throttle lever adjusting screw	
101-382S	Body flange attaching screw and washer assembly	(
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	( )

Part No.	PART NAME	
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
114-97	Throttle shaft arm (outer)	
114-118	Throttle shaft arm (inner)	
115-208	Throttle operating rod	
115-215	Choke connector rod	
115-216	THROTTLE CONNECTOR ROD	
116-13	PUMP INTAKE CHECK BALL	
117-162	Vacumeter piston link	
117-165	Pump connector link	
118-102S	Dust cover assembly	
120-163	PRIMARY METERING ROD JET	(2)
120-174	SECONDARY METERING JET (2284S)	(2)
120-218	SECONDARY METERING JET (2232S)	(2)
121-78	COIL HOUSING GASKET	
121-208	DUST COVER GASKET	
121-232	AIR HORN GASKET	
121-241	PUMP JET HOUSING GASKET	
121-243	PISTON HOUSING GASKET (Use with 6 1018S)	
121-267	BODY FLANGE GASKET	
121-283	Piston housing gasket (Use with 6 1217S)	
122-98S	PUMP RELIEF VALVE PLUG ASSEMBLY	
136-37	Throttle connector rod and operating rod washer	(5)
136-84	Spring washer	
136-159	Throttle shaft washer	
136-172	Secondary throttle shaft washer	
136-174	Throttle lever adjusting screw washer	
150-62	Choke piston pin	
150-186S	Pin and valve cap assembly	
150A-10	PIN SPRING	(5)
160-91	Choke piston	

PACKARD

Form 5141B

Carbs. 2232S-2284S

170AB-238S Changed to
170AC-238S Thermostatic coil and housing assembly

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown only one is used.

CARBURETER
TRADE MARK REG U S PAT OFF
MARCA REGISTRADA

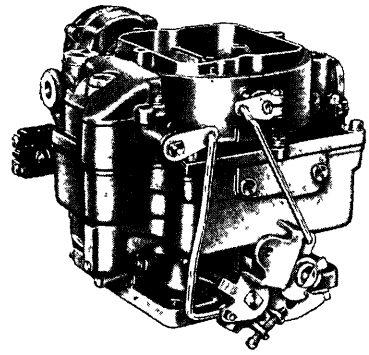
CARTER CARBURETOR
DIVISION OF **acf** INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

PACKARD 2084S-2103S-2112S-2142S
July, 1953
Revised October, 1956

(2084S)
CAVALIER "300" AND
PATRICIAN "400"—1953

(2142S-2103S)
CAVALIER—1954

(2112S)
PATRICIAN—1954



Cut shows 2084S Carbureter

PACKARD
1953-1954

(2103S can be used in place of 2142S)

WCFB Four-Bore Down-Draft Climatic® Cont. **Carbs. Nos. 2084S-2103S-2112S-2142S**

CARBURETER SPECIFICATIONS

For Packard 8 Cylinder Engine: 3½ Inch Bore, 4¼ Inch Stroke (2084S-2103S-2142S)
For Packard 8 Cylinder Engine: 3-9/16 Inch Bore, 4½ Inch Stroke (2112S)

Dimensions: Flange size, 1⅛ inch Four Bore 4 bolt type.
Primary venturi size, 11/32 inch I. D.
Main venturi (Primary side) 1-1/16 inch I. D.
Main venturi (Secondary side) (2084S, 2103S, 2112S) 15/16 inch I. D.; (2142S) 1-1/16 inch I. D.

Float Level: See adjustments.

Vents: Outside, none. Inside, balance vent tube in air horn, 2 on primary side, 3 on secondary side.

Gasoline Intake: Size No. 42 (.0935 inch) drill hole in needle seat.

Low Speed Jet Tube: Primary side: Jet, size (2084S, 2103S, 2112S) No. 67 (.032 inch) drill; (2142S) No. 66 (.033 inch) drill. By-pass, in body, size (2084S, 2103S, 2142S) No. 53 (.0595 inch) drill; (2112S) No. 55 (.052 inch) drill. Economizer, in body, size .0452 inch diameter. Idle bleed, in body, size (2084S, 2103S, 2142S) No. 51 (.067 inch) drill; (2112S) No. 55 (.052 inch) drill.
Secondary side: Jet, size (2084S, 2103S) No. 70 (.028 inch) drill; (2112S) No. 67 (.032 inch) drill; (2142S) No. 66 (.033 inch) drill. By-pass, in body, size No. 53 (.0595 inch) drill. Economizer, in body, size (2142S) .0452 inch diameter; (2084S, 2103S, 2112S) None. Idle bleed, in body, size (2142S) No. 51 (.067 inch) drill; (2084S, 2103S, 2112S) None.

Idle Port: Upper, slot type. Primary: (2084S, 2103S, 2142S) length .175 inch, (2112S) .190 inch; width .030 inch. Secondary, length .103 inch; width .030 inch.

Idle Port Opening: Primary (2084S, 2103S, 2142S) .122 to .128 inch; (2112S) .137 to .143 inch; secondary .070 to .076 inch above top edge of valve with valve tightly closed.

Lower Port: Primary (for idle adjustment screw) size No. 52 (.0635 inch) drill. Secondary, none.

Set Idle Adjustment Screw: (2084S, 2103S) 1¼ to 2¼ turns; (2112S) ¾ to 1¾ turns; (2142S) 1 to 2 turns open. For richer mixture turn screw out. Do not idle engine below 400 r.p.m. (shift lever in neutral).

Main Nozzle: Installed permanently. DO NOT REMOVE. Anti-percolating plug (in nozzle well), size No. 64 (.036 inch) drill.

Metering Rod: Primary: Economy step .066 inch diameter. Power step .052 inch diameter.
Secondary, none.

Metering Rod Jet: Primary: Size .086 inch diameter.
Secondary: Size (2084S, 2103S) .073 inch; (2112S) .0785 inch; (2142S) .067 inch diameter.

Metering Rod Setting: See adjustments.

Accelerating Pump: Discharge jet (twin) primary side only, size No. 74 (.0225 inch) drill. Intake ball check seat, size .115 to .120 inch diameter. Discharge needle seat, size .070 inch diameter. Relief ball check, size No. 55 (.052 inch) drill. (2112S)

Pump Adjustments: See adjustments.

Choke: Carter Climatic® Control, (2084S, 2103S, 2142S) set on index, (2112S) 1½ points lean. Butterfly type offset choke valve, primary side only. Choke heat suction hole, restriction in piston housing, size No. 44 (.086 inch) drill.

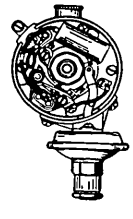
Vacuum Spark Port: Round type, .104 inch diameter. Top of port .052-.062 inch above valve, with valve tightly closed.

Motor Tune-Up—Be Accurate!

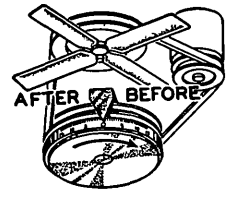
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



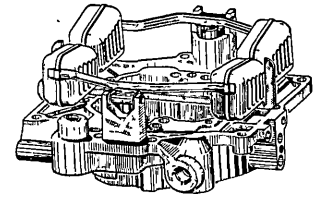
Spark Plug Gap .028"



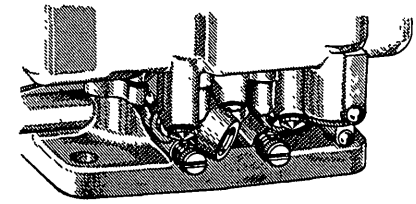
Breaker Point Setting .015"



Ignition Timing
Breaker Points to Open:
T.D.C. (Patrician—1954)
6° B.T.D.C. (All Others)



Float Setting
(See Adjustments)



Idle Adjustment Screw Setting
1¼ to 2¼ (2084S-2103S)
¾ to 1¾ (2112S)
1 to 2 (2142S)
Turns Open

NOTE: These cars are equipped with hydraulic valve lifters.—NO ADJUSTMENT.

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CARBURETER
TRADE MARK REG. U. S. PAT. FF.
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CARBURETER ADJUSTMENTS

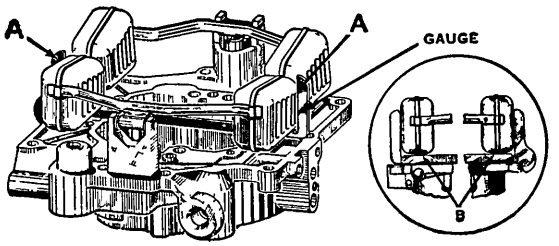


Figure 1
Float Adjustment

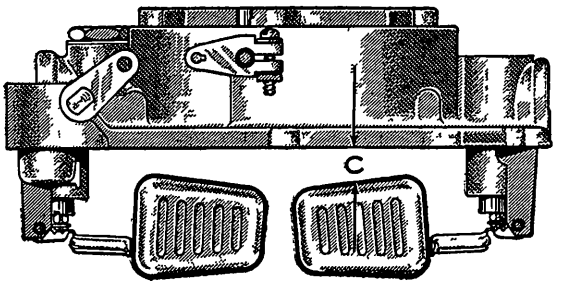


Figure 2
Float Drop Adjustment

FLOAT ADJUSTMENT (Fig 1)

Two separate float adjustments must be made—lateral and vertical

LATERAL ADJUSTMENT With bowl cover assembly inverted bowl cover gasket removed and float lip resting on seated needle place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting Side of floats should just clear the vertical uprights of float gauge (A) Adjustment should be made by bending arms of floats VERTICAL ADJUSTMENT With float gauge in same position floats should just clear the horizontal portion of gauge Vertical distance (B) between top of float and machined surface of casting must be (Primary) (2084S 2103S 2142S) 5/32 inch (Gauge T109 236) (2112S) 1/8 inch (Gauge T109 232) Secondary floats 5/32 inch (Gauge T109 236) Adjust by bending float arms

FLOAT DROP ADJUSTMENT (Fig 2)

With bowl cover held in upright position and measuring from center of floats (C) the distance between top of floats and bowl cover should be 5/8 inch for both primary and secondary floats Adjust by bending stop tabs on float brackets

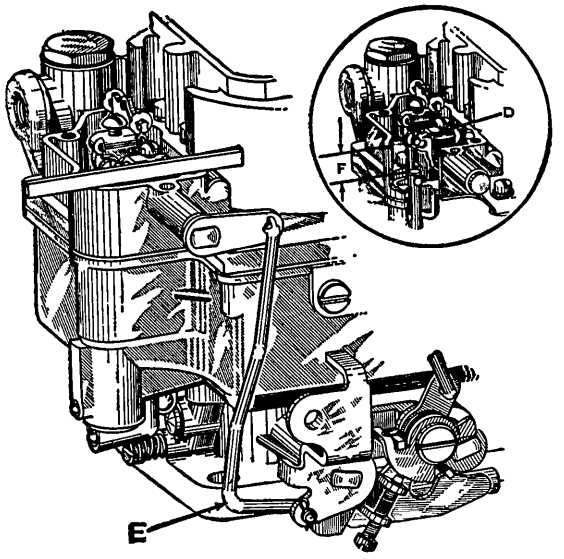


Figure 3
Pump Adjustment

PUMP ADJUSTMENT (Fig 3)

Install pump connector link in outer hole (long stroke) of pump arm (D) with ends extending toward countershaft arm Back out throttle lever set screw until throttle valves seat in bores of carbureter Hold straight edge across top of dust cover boss at pump arm The flat on top of pump arm should be parallel to straight edge Adjust by bending throttle connector rod at lower angle (E) (Use tool T109 213)

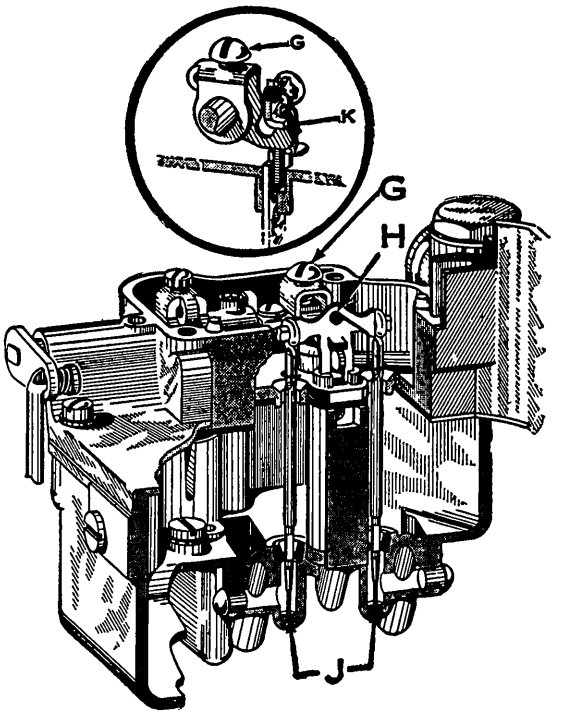


Figure 4
Metering Rod Adjustment

METERING ROD ADJUSTMENT (Fig 4)

Metering rod adjustment is important and must be made after completing the pump adjustment No metering rod gauges are necessary Procedure is as follows 1 Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw (G) 2 With metering rods in place press down on vacumeter link (H) until metering rods bottom in carbureter body casting (J) 3 Holding rods in downward position and throttle valves seated revolve metering rod arm until finger on arm contacts lip of vacumeter link (K) Hold in place and carefully tighten clamp screw (G)

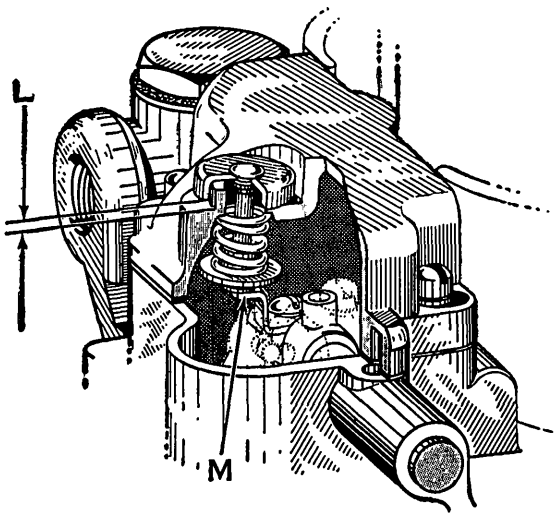


Figure 5
Bowl Vapor Vent Adjustment

BOWL VAPOR VENT ADJUSTMENT (Fig. 5):

This adjustment should be made after completing pump and metering rod adjustments. Install dust cover and dust cover gasket. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter. There should be 3/32 inch (L) (gauge T109-125) between lower edge of bowl vapor vent valve and dust cover. To adjust remove dust cover and bend vapor vent arm (M).

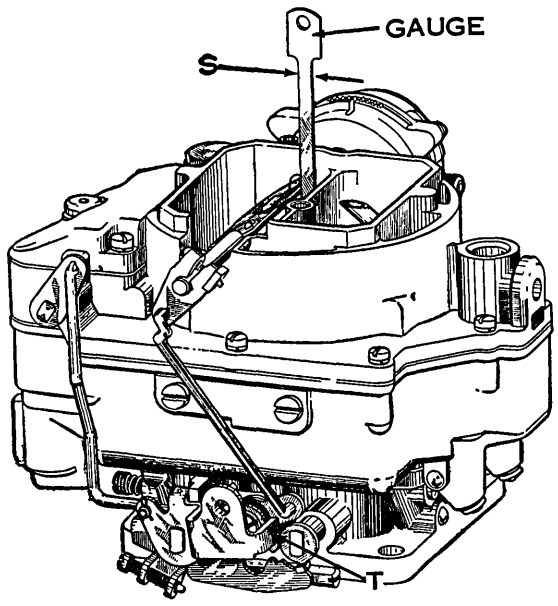


Figure 7
Unloader Adjustment

UNLOADER ADJUSTMENT (Fig. 7):

With throttle wide open there should be 9/32 inch (Gauge T109-126) clearance (S) between upper edge of choke valve and inner wall of air horn. Adjust by bending unloader lip (T) on throttle shaft lever (use bending tool T109-41).

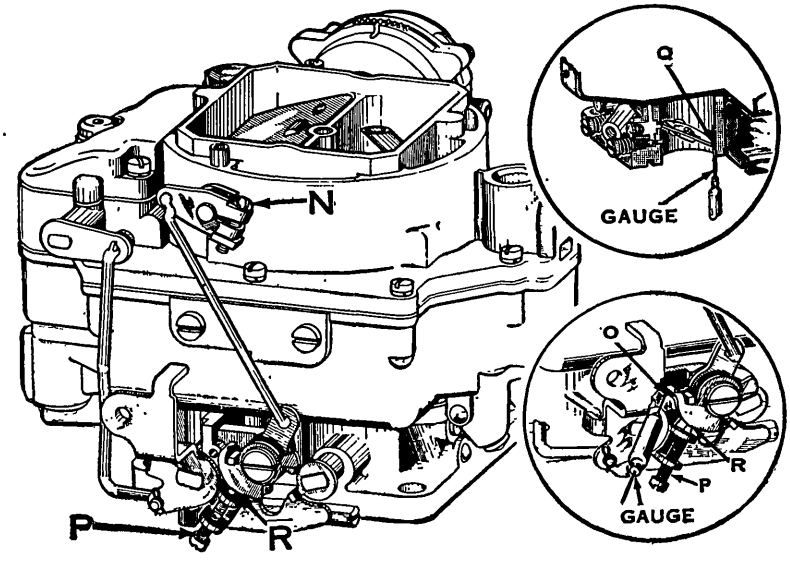


Figure 6
Fast Idle Adjustment

FAST IDLE ADJUSTMENT (Fig. 6):

(a) Loosen choke lever clamp screw (N) on choke shaft. Insert .020" feeler gauge (T109-29) between lip of fast idle cam and boss of flange casting (O). Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw (N). (b) With choke valve tightly closed, tighten fast idle adjusting screw (P) until there is (2084S-2103S-2142S) .020 inch (Gauge T109-29), (2112S) .026 inch (Gauge T109-189) opening between throttle valve and bore of carbureter (side opposite idle port (Q). Be sure fast idle adjusting screw is on high step of cam (R) while making this adjustment.

Part No	PART NAME	
49-182	Switch plunger (2084S)	
53A-333S	Pump operating lever and countershaft assembly	
53A-338	Lockout arm	
53A-344	VENT ARM	
53A-358	Secondary operating lever	
61-84	Idle adjustment screw spring	(2)
61-128	Connector rod spring	
61-171	PUMP SPRING (lower)	
61-243S	Contact spring and washer assembly (2084S)	
61-291	Throttle lever adjusting screw spring	
61-382	METERING ROD SPRING	
61-388	Switch return spring (2084S)	
61-453	Throttle flex spring	
61-454	Fast idle cam spring	
61-474	Bowl vent spring	
61-483	SECONDARY THROTTLE RETURN SPRING	
61-485	VACUUM PISTON SPRING	
63-35	Spring retainer	
63-57	INTAKE CHECK BALL RETAINER	
63-58	Coil housing retainer	(3)
63-149	Bowl vent spring retainer	
64-141S	PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
75 942	METERING ROD—standard	(2)
75-987	Metering rod—1 size lean	(2)
75 988	Metering rod—2 sizes lean	(2)
86-12	Flange stud lock washer	(4)
86-37	Switch terminal lock washer (2084S)	(2)
101-6	Pump arm clamp screw	
101-10	Pump arm clamp screw (Sup by 101 6)	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	(2)
101-109	Switch terminal screw (2084S)	
101-136	Coil housing attaching screw	(3)
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	
101-160S	Air horn attaching screw and washer assembly (2142S) (early prod—2084S 2103S 2112S)	(8)
101-184S	Dust cover attaching screw and washer assembly	(2)
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet and housing attaching screw	
101-284	Piston housing attaching screw	(2)
101-296	Fast idle adjustment screw	
101-307S	Air horn attaching screw and washer assembly (late prod—2084S 2103S 2112S)	(8)
101-324	Fast idle cam screw	
101-325S	Switch terminal cap attaching screw (2084S)	(2)
101-332	Throttle lever adjusting screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-348	Primary throttle valve attaching screw	(4)
101-352S	Switch housing attaching screw and washer assembly (2084S)	(2)

Part No	PART NAME	
101-354S	Choke lever clamp screw assembly	
101-363	Piston housing attaching screw	
101-383	Fast idle adjustment screw (Sup by 101 296)	
105A-10	Choke lever nut	
105A-11	Flange stud nut	(4)
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
114-96	Primary throttle shaft arm (Inner)	
114-97	Primary throttle shaft arm (Outer) (2103S 2112S)	
114-107	Primary throttle shaft arm (Outer) (2084S 2142S)	
115-189	Choke connector rod	
115-197	THROTTLE CONNECTOR ROD	
115-202	Starter switch operating rod (2084S)	
115-208	Throttle operating rod	
116-13	PUMP INTAKE CHECK BALL	
116-19	Switch ball (2084S)	
117-28	Pump connector link	
117-155	Vacumeter piston link	
118-98S	Dust cover assembly	
120-165	PRIMARY METERING ROD JET	(2)
120-175	SECONDARY METERING JET (2084S 2103S)	(2)
120-185	Secondary metering jet (2142S)	(2)
120-194	Secondary metering jet (2112S)	(2)
121-78	COIL HOUSING GASKET	
121-149	Pump jet housing gasket (2084S) (Sup by 121 241)	
121-208	DUST COVER GASKET	
121-229	AIR CLEANER GASKET	
121-231	BODY FLANGE GASKET (2084S 2142S)	
121-232	AIR HORN GASKET	
121-241	PUMP JET HOUSING GASKET	
121-242	Body flange gasket (2103S 2112S)	
121-243	PISTON HOUSING GASKET	
122-98S	Pump relief valve assembly (2112S)	
136-37	Throttle and starter switch operating rod washer (2084S—7) (2103S 2112S 2142S—5)	
136-84	Throttle shaft spring washer	
136-159	Primary throttle shaft washer	
136-172	Secondary throttle shaft washer	
150-62	Choke piston pin	
150-186S	Pin and valve cap assembly	
150A-10	PIN SPRING (2084S—7) (2103S 2112S 2142S—5)	
153-11	Switch contact spring shim (.018") (2084S)	
153-12	Switch contact spring shim (.006") (2084S)	
160-91	Choke piston	
160-110S	Vacuum piston and pin assembly	
170-259S	Piston housing and plug assembly	
170AC238S	Thermostatic coil and housing assembly	
172-15	Cable clip (2084S)	
181-192S	Fast idle cam and spring assembly	
184-64S	Terminal cap assembly (2084S)	
186-34	Choke baffle plate	
192-21U	Carter starter switch unit (2084S)	
192-28S	Carter starter switch complete (2084S)	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

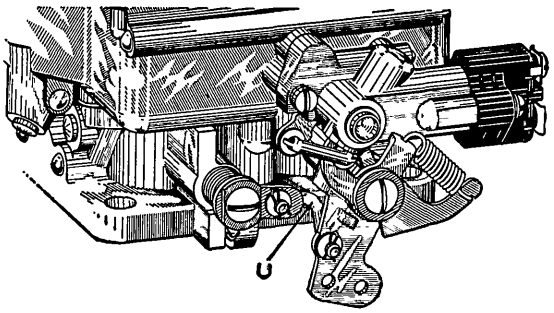


Figure 8
Secondary Throttle Lever Adjustment

SECONDARY THROTTLE LEVER ADJUSTMENT (Fig. 8):

Primary and secondary throttle valves should reach wide open position at the same time. To adjust: Bend throttle operating rod at upper angle (U). (Use bending tool T109-213.)

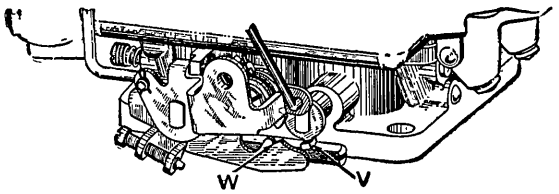


Figure 9
Secondary Throttle Lock-Out Adjustment

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT (Fig. 9):

This adjustment should be made after completing fast idle and secondary throttle lever adjustments. (a) With choke valve tightly closed, open primary throttle valves all the way. Tang (V) on secondary throttle arm should engage in notch (W) on lock-out lever preventing secondary throttle shaft movement. (b) Hold choke valve in wide open position. Open primary throttle valves all the way. Lock-out lever should fall free allowing secondary throttle valves to be opened before primary throttle valves are fully open. If necessary, bend tang (V) on secondary throttle lever to provide clearance for proper operation of lock-out lever.

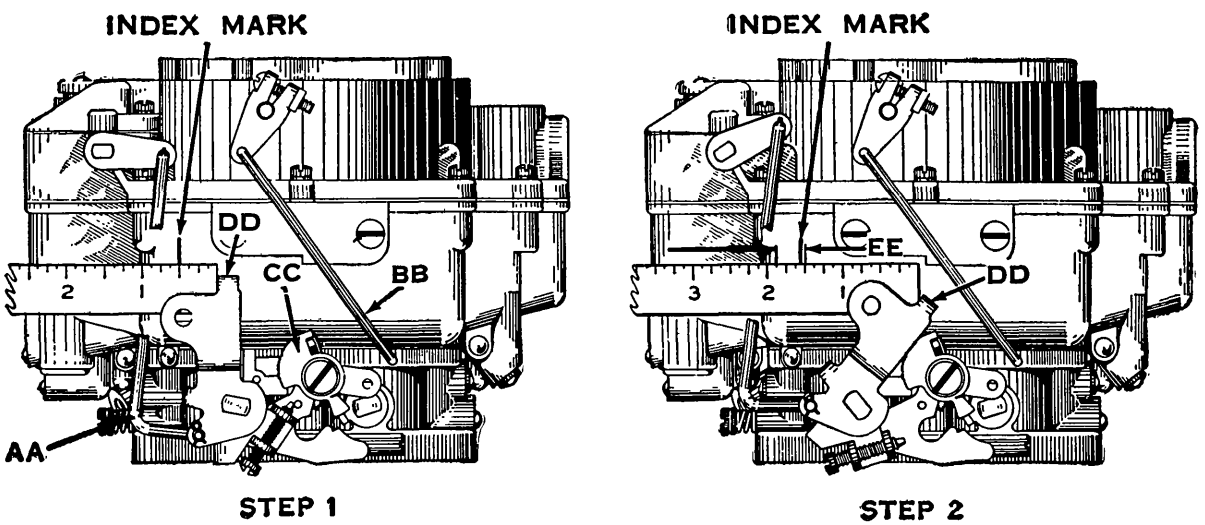
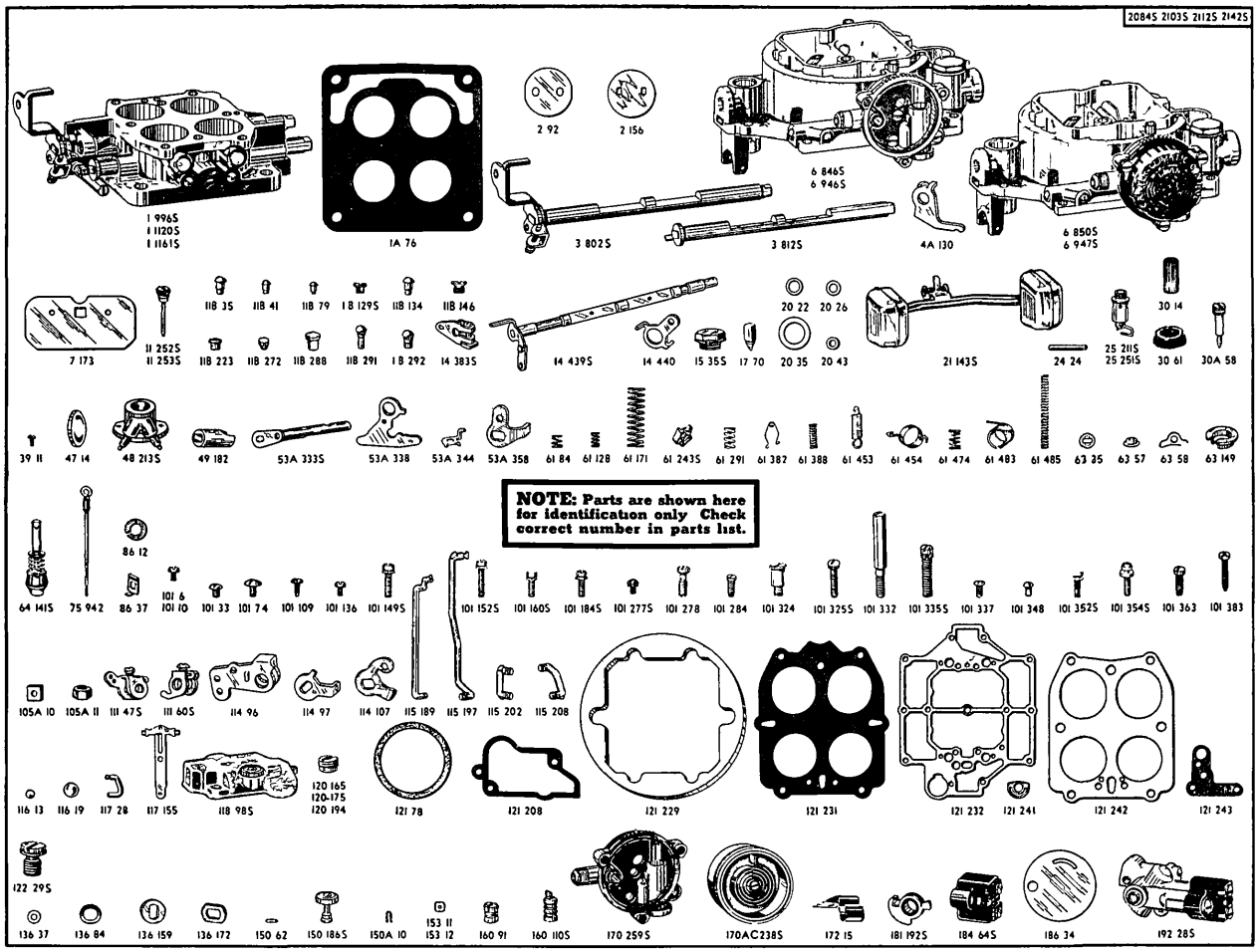


Figure 10
Checking and Adjusting Starter Switch

CHECKING AND ADJUSTING STARTER SWITCH (2084S Only) (Fig. 10):

Connect a 6-volt battery and test lamp across switch terminal, so that lamp will light when switch makes contact. 1. Back off throttle stop screw, remove throttle connector rod (AA) and choke connector rod (BB), rotate fast idle cam (CC) to slow idle position, and fully close the throttle valves. 2. While holding throttle valves fully closed, place a scale against choke unloader arm of throttle lever and make an index mark on carbureter body at the 1/2 inch division of scale. 3. With test lamp connected hold end of scale against unloader arm (DD) and slowly open throttle until test lamp lights. 4. If switch is correctly timed, the scale will then read between 1 1/2 and 1 7/8 inch at mark on carbureter body (EE) (1 inch to 1 3/8 inch travel of arm). 5. If necessary, make switch adjustment by reducing or increasing the total thickness of the brass shims. If switch timing was found to be too early, reduce the total thickness of the shims. If timing was too late, increase total thickness of shims. Two sizes of shims are available: 153-11 .018 inch—153-12 .006 inch.



Packard 8—1953-1954—Carbureters Nos. 2084S-2103S-2112S-2142S

WHEN SERVICING, USE GASKET ASSORTMENT No 229 (2084S-2142S), No 233 (2103S-2112S), REPAIR PACKAGE No. 1841 (2084S-2103S-2112S)

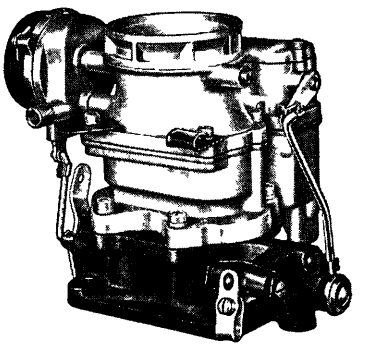
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-996S	Body flange assembly (2084S, 2142S)	
1-1120S	Body flange assembly (2103S)	
1-1161S	Body flange assembly (2112S)	
1A-76	Flange gasket (Sup by 1A 97)	
1A-97	Flange gasket (Sup by 1A 108)	
1A-108	FLANGE GASKET	
2-92	Primary throttle valve	(2)
2-156	Secondary throttle valve	(2)
3-802S	Primary throttle shaft and lever assembly	
3-812S	Secondary throttle shaft and dog assembly	
4A-130	Throttle shaft dog	
6-846S	Air horn assembly (2084S) (Sup by 6 946S)	
6-850S	Air horn and Climatic® control assembly (2084S) (Sup by 6 947S)	
6-946S	Air horn assembly	
6-947S	Air horn and Climatic® control assembly	
7-173	Choke valve	
11-234S	Low speed jet assembly (2142S)	(4)
11-252S	LOW SPEED JET ASSEMBLY (Secondary 2084S 2103S)	(2)
11-253S	LOW SPEED JET ASSEMBLY (2112S—4) (Primary 2084S 2103S)	(2)
11B-35	Rivet plug (Early Prod (5) (Late Prod (6)	
11B-41	Rivet plug	(2)
11B-79	Rivet plug (2084S—8) (2103S 2112S—4) (2142S—7)	
11B-129S	Pump discharge passage plug assembly (Sup by 122 98S on 2112S)	

Part No.	PART NAME	
11B-134	Rivet plug	
11B-146	Level sight plug (2142S 2084S early prod)	(2)
11B-223	Idle port and nozzle passage rivet plug (2084S 2142S—8) (2103S 2112S—4)	
11B-272	Rivet plug (2142S) (Early Prod 2084S 2103S)	(2)
11B-288	Nozzle passage rivet plug (2103S 2112S)	(4)
11B-291	Rivet plug	
11B-292	Rivet plug	
14-383S	Choke lever and screw assembly	
14-439S	Choke piston lever, link and shaft assembly	
14-440	Cam trip lever	
15-35S	Strainer nut assembly	
17-70	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	(2)
20-26	Pump passage and relief plug gasket	
20-35	BOWL STRAINER GASKET	
20-43	Switch housing gasket (2084S)	
21-143S	Float and lever assembly	(2)
24-24	Float lever pin	(2)
25-211S	Needle and seat assembly (2084S 2142S)	(2)
25-251S	NEEDLE AND SEAT ASSEMBLY (2103S 2112S)	(2)
30-14	BOWL STRAINER	
30-61	SWITCH STRAINER (2084S)	
30A-58	Idle adjustment screw	(2)
39-11	Choke valve attaching screw	(2)
47-14	Welsh plug	
48-213S	Pump jet and housing assembly	

(928S)
"300" AND "400"—1952
CLIPPER DE LUXE "2611"—1953

(2102S)
CLIPPER DE LUXE "5411",
"5411-R"—1954



Cut shows 928S Carbureter

PACKARD
1952-1954

WGD Dual Down-Draft Climatic® Control Carbureters—**Nos. 928S-2102S**

CARBURETER SPECIFICATIONS

For Packard 8 Cylinder Engine 3½ Inch Bore 4¼ Inch Stroke

Dimensions Flange size 1¼ inch dual 4 bolt type
Primary venturi 11/32 inch I D
Secondary venturi 21/32 inch I D
Main venturi 1 3/16 inch I D

Float Level See Adjustments

Vents Inside none Outside vent No 10 (1935") drill

Gasoline Intake Size No 42 (0935 inch) drill in needle seat

Low Speed Jet Jet size No 67 (032 inch) drill By Pass in air horn size No 55 (052 inch) drill Economizer in air horn size 045 inch diameter Idle bleed in air horn size No 56 (0465 inch) drill

Idle Ports Upper port slot type length 187 inch Width 030 inch

Idle Port Opening 135 to 141 inch above upper edge of valve with valve tightly closed

Lower Port (for Idle Adjustment Screw) Size 0615 to 0655 inch diameter

Set Idle Adjustment Screw ½ to 1½ turns open For richer mixture turn screw out Do not idle engine above 400 r p m on ultramatic transmission or above 450 r p m on standard transmission

Nozzle In primary venturi angle 45° Nozzle is installed permanently **Do not remove** Anti percolating well plug jet size No 66 drill Anti percolating well to idle passage restriction size No 68 (031") drill

Metering Rod (Vacumeter Type) Economy step 0695 inch diameter Middle step tapers to 067 inch diameter Power step 061 inch diameter Length 2 59/64 inches

Metering Rod Jet 089 inch diameter

Metering Rod Setting See Adjustments

Accelerating Pump Discharge jet (twin) size No 74 (0225 inch) drill Intake check ball seat size No 40 (098 inch) drill Discharge needle seat size No 50 (070 inch) drill

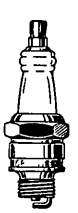
Pump Adjustment See Adjustments

Choke Carter Climatic® Control set one point rich Butterfly type offset valve Choke heat suction hole in piston housing, size No 36 (1065 inch) drill

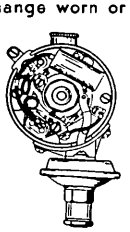
Vacuum Spark Port 103 to 105 inch diameter Top of port 052 to 062 inch above valve

Motor Tune-Up—Be Accurate!

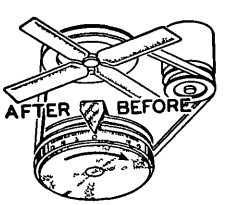
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



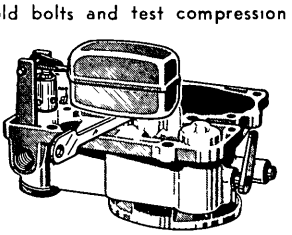
Spark Plug
Gap
028"



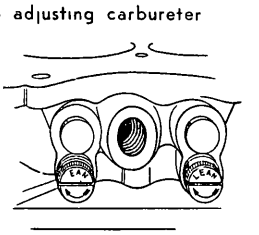
Breaker Point
Setting
015"



Ignition Timing
Breaker Points to Open
6° B T D C



Float Setting
13/64 Inch
(Use Gauge T109 39)



Idle Adjustment
Screw Setting
½ to 1½
Turns Open

NOTE These cars equipped with hydraulic valve lifters —No adjustment

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT With bowl cover gasket removed bowl cover inverted and needle seated there should be 13/64 inch (gauge T109-39) between top of float and bowl cover Adjust by bending float arm

PUMP ADJUSTMENT Install pump link in outer hole of pump arm and back out throttle lever set screw until throttle valves seat in bores of carbureter Place Universal pump travel gauge T109 117S inverted on edge of dust cover boss of bowl cover Turn knurled nut of gauge until finger on gauge just touches top of plunger shaft Number indicated on gauge should be 43 Adjust by bending throttle connector rod at upper angle
Optional Adjustment The distance from the dust cover boss to the top of the plunger shaft should be 32/64 inch Adjust as mentioned above

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CARBURETER
TRADE MARK REG U S PAT OFF
MARCA REGISTRADA

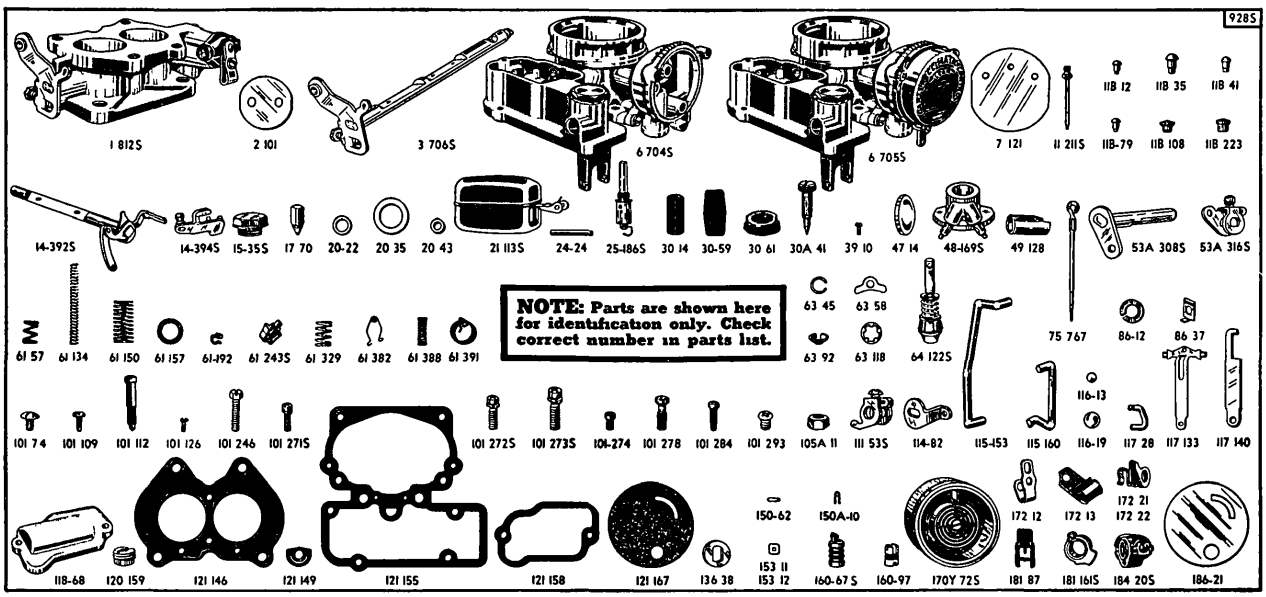
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METERING ROD ADJUSTMENT The metering rods must be adjusted after the pump adjustment or when leaner than standard rods are installed No metering rod gauges are necessary procedure is as follows With the throttle lever set screw backed out and throttle valves seated in bores of carbureter press down on vacumeter link until metering rods bottom With rods held in this position, revolve metering rod arm until lip contacts vacumeter link Hold in place and carefully tighten metering rod arm set screw

FAST IDLE ADJUSTMENT With the thermostatic coil housing, gasket and baffle plate removed, crack throttle valve and hold choke valve closed Then close throttle There should now be 023" clearance (gauge T109-189) between throttle valve and bore of carbureter (side opposite idle port) Adjust by bending the choke connector rod at lower angle

UNLOADER ADJUSTMENT Must be made after fast idle adjustment Hold throttle valve wide open and close choke valve as far as possible without forcing there should now be 1/8 clearance between upper edge of choke valve and inner wall of air horn Adjust by bending arm on choke trip lever (tool T109-214)

STARTER SWITCH Adjustment should be made with Carter tool No T109-155S obtainable from your Carter distributor, with complete instructions Switch must make contact between 30° and 45° throttle opening



Packard 8—1952-1954—Carbureters Nos. 928S-2102S

WHEN SERVICING, USE GASKET ASSORTMENT No 196, REPAIR PACKAGE No 1765

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

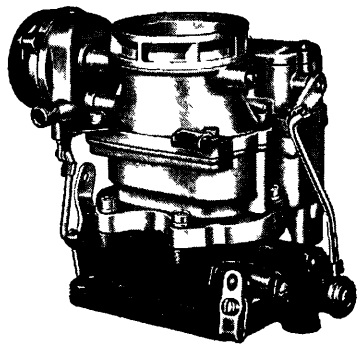
Part No	PART NAME	
1-812S	Body flange assembly (928S)	
1 1126S	Body flange assembly (2102S)	
1A-39	FLANGE GASKET	
2 101	Throttle valve	(2)
3 706S	Throttle shaft and lever assembly (928S)	
3 793S	Throttle shaft and lever assembly (2102S)	
6 704S	Air horn assembly	
6 705S	Air horn and Climatic® control assembly	
7 121	Choke valve	
11 211S	LOW SPEED JET ASSEMBLY	(2)
11B-12	Plug (928S)	
11B 35	Rivet plug	(3)
11B-41	Rivet plug	(3)
11B 79	Rivet plug	
11B-108	Idle port rivet plug	(2)
11B-223	Nozzle rivet plug	(2)
14 392S	Choke piston lever link and shaft assembly	
14-394S	Choke trip lever and pin assembly	
15 35S	Strainer nut assembly	
17 70	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	
20 35	BOWL STRAINER GASKET	
20 43	Piston housing gasket	
21 113S	Float and lever assembly (Sup by 21 172S)	
21 172S	Float and lever assembly	
24 24	Float lever pin	
25-186S	NEEDLE AND NEEDLE SEAT ASSEMBLY	
30-14	BOWL COVER STRAINER	
30 59	STRAINER	
30 61	Switch strainer (928S)	
30A 41	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
47 14	Choke cylinder welsh plug	
48 169S	Pump jet and housing assembly	
49 128	Switch plunger (928S)	
53A-308S	Pump operating lever and countershaft assembly	
53A-316S	Pump arm and screw assembly	
61 57	Idle adjustment screw lock spring	(2)
61-134	VACUUM PISTON SPRING	
61-150	PUMP SPRING (LOWER)	
61 243S	Switch contact spring and washer ass y (928S)	
61 382	METERING ROD SPRING	
61-388	Switch return spring (928S)	
61 391	Fast idle cam spring	
63 45	PUMP CHECK BALL RETAINER RING	
63 58	Coil housing retainer	(3)
63 118	Throttle shaft retaining ring	
64-122S	PLUNGER ROD, SPRING AND RETAINER ASSEMBLY	
75-767	METERING ROD—STANDARD	(2)
75 814	Metering rod, 1 size lean	(2)
75 815	Metering rod 2 sizes lean	(2)
86 12	Flange stud lock washer	
86 37	Terminal lock washer (928S)	(2)

Part No	PART NAME	
101-74	Throttle shaft arm attaching screw	
101-109	Switch terminal screw (928S)	(2)
101 112	Terminal cap attaching screw (928S)	
101-126	Throttle valve attaching screw	(4)
101 246	Throttle lever adjustment screw	
101-271S	Dust cover attaching screw and washer assembly	(2)
101 272S	Air horn attaching screw and washer assembly	(8)
101-273S	Body flange attaching screw and washer assembly	(4)
101-274	Coil housing attaching screw	(3)
101-278	Pump jet housing attaching screw	
101-284	Piston housing attaching screw	(3)
101-293	Metering rod arm clamp screw	(2)
105A-11	Flange stud nut	
111-53S	Pump arm and screw assembly	
114 39	Throttle shaft arm (2102S)	
114 82	Throttle shaft arm (928S)	
115-113	Throttle connector rod (2102S)	
115-153	Throttle connector rod (928S)	
115 160	Choke connector rod	
116-13	PUMP INTAKE CHECK BALL	
116-19	Switch ball (928S)	
117-28	Pump arm link	
117-133	Vacumeter piston link	
117-140	Fast idle link	
118-68	Dust cover	
120-159	METERING ROD JET	(2)
121-146	BODY FLANGE GASKET	
121-149	Pump jet gasket (928S) (Sup by 121-241)	
121-155	AIR HORN GASKET	
121-158	Dust cover gasket (Discont d) (928S)	
121-167	COIL HOUSING GASKET	
121-241	PUMP JET HOUSING GASKET	
136-38	Throttle shaft washer	
150 62	Choke piston pin	
150A 10	Pin spring	
153-11	Switch contact spring shim (018) (928S)	(3)
153 12	Switch contact spring shim (006) (928S)	(2)
160 67S	Vacuum piston and pin assembly	
160 97	Choke piston	
170Y-72S	Thermostatic coil and housing assembly	
172-12	Terminal cap hold down clip (928S)	
172 13	Cable clip (928S)	
172-21	Throttle connector rod retainer	
172-22	Throttle and choke connector rod retainer	(2)
181 87	Switch guide block (928S)	
181-161S	Fast idle cam assembly	
184-20S	Terminal cap assembly (928S)	
186-21	Baffle plate	
192-11U	Carter starter switch unit (928S)	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

(784S)
"200"—1951-52
CLIPPER "2601"—1953

(986S)
CLIPPER SPECIAL
"5401", "5401-R"—1954



Cut shows 784S Carbureter

PACKARD
1951-1954

(2102S can be used in place of 986S)

WGD Dual Down-Draft Climatic® Control Carbureters—**Nos. 784S-986S**

CARBURETER SPECIFICATIONS

For Packard 8 Cylinder Engine: 3½ Inch Bore, 3¾ Inch Stroke

Dimensions: Flange size, 1¼ inch dual, 4 bolt type.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 21/32 inch I. D.
Main venturi, 1-3/16 inch I. D.

Float Level: See Adjustments.

Vents: Inside, none. Outside vent, No. 10 (.1935") drill.

Gasoline Intake: Size No. 42 (.0935 inch) drill in needle seat.

Low Speed Jet Tube: Jet, size No. 67 (.032 inch) drill. By Pass, in air horn, size No. 55 (.052 inch) drill. Economizer, in air horn, size .045 inch diameter. Idle bleed, in air horn, size No. 56 (.0465 inch) drill.

Idle Ports: Upper port, slot type, length .187 inch. Width, .030 inch.

Idle Port Opening: .135 to .141 inch above upper edge of valve with valve closed tight.

Lower Port (For Idle Adjustment Screw): Size, .0615 to .0655 inch diameter.

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture turn screw out. Do not idle engine above 400 r.p.m. on ultramatic transmission or above 450 r.p.m. on standard transmission.

Nozzle: In primary venturi, angle 45°. Nozzle is installed permanently. **Do not remove.** Anti-percolating well; plug jet size, No. 66 drill. Anti-percolating well to idle passage, restriction size: No. 68 (.031") drill.

Metering Rod (Vacumeter Type): Economy step, .0685 inch diameter. Middle step tapers to .066 inch diameter. Power step, .0595 inch diameter. Length 2-59/64 inches.

Metering Rod Jet: .089 inch diameter.

Metering Rod Setting: See Adjustments.

Accelerating Pump: Discharge jet (twin) size No. 74 (.0225 inch) drill. Intake check ball seat, size No. 40 (.098 inch) drill. Discharge needle seat, size No. 50 (.070 inch) drill.

Pump Adjustment: See Adjustments.

Choke: Carter Climatic® Control set one point rich. Butterfly type, offset valve. Choke heat suction hole in piston housing, size No. 36 (.1065 inch) drill.

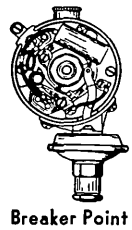
Vacuum Spark Port: .103 to .105 inch diameter. Top of port .052 to .062 inch above valve.

Motor Tune-Up—Be Accurate!

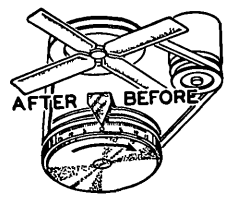
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



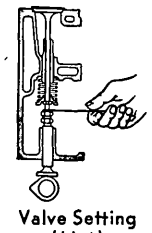
Spark Plug Gap .028"



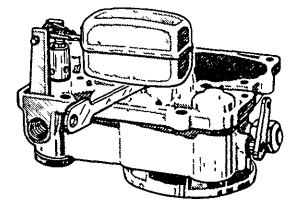
Breaker Point Setting (1951) .017" (1952-54) .015"



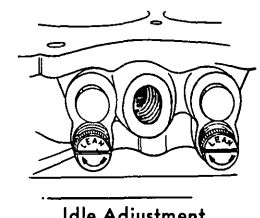
Ignition Timing Breaker Points to Open: 6° B. T. D. C.



Valve Setting (Hot) Intake .007" Exhaust .010"



Float Setting 13/64 Inch (Use Gauge T109-39)



Idle Adjustment Screw Setting ½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: With bowl cover gasket removed, bowl cover inverted and needle seated, there should be 13/64 inch (gauge T109-39) between top of float and bowl cover. Adjust by bending float arm.

PUMP ADJUSTMENT: Install pump link in outer hole of pump arm and back out throttle lever set screw until throttle valves seat in bores of carbureter. Place Universal pump travel gauge T109-117S inverted on edge of dust cover boss of bowl cover. Turn knurled nut of gauge until finger on gauge just touches top of plunger shaft. Number indicated on gauge should be "43". Adjust by bending throttle connector rod at upper angle.
Optional Adjustment: The distance from the dust cover boss to the top of the plunger shaft should be 32/64 inch. Adjust as mentioned above.

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CARBURETER
TRADE MARK REG. U. S. PAT. OFF.
MARCA REGISTRADA

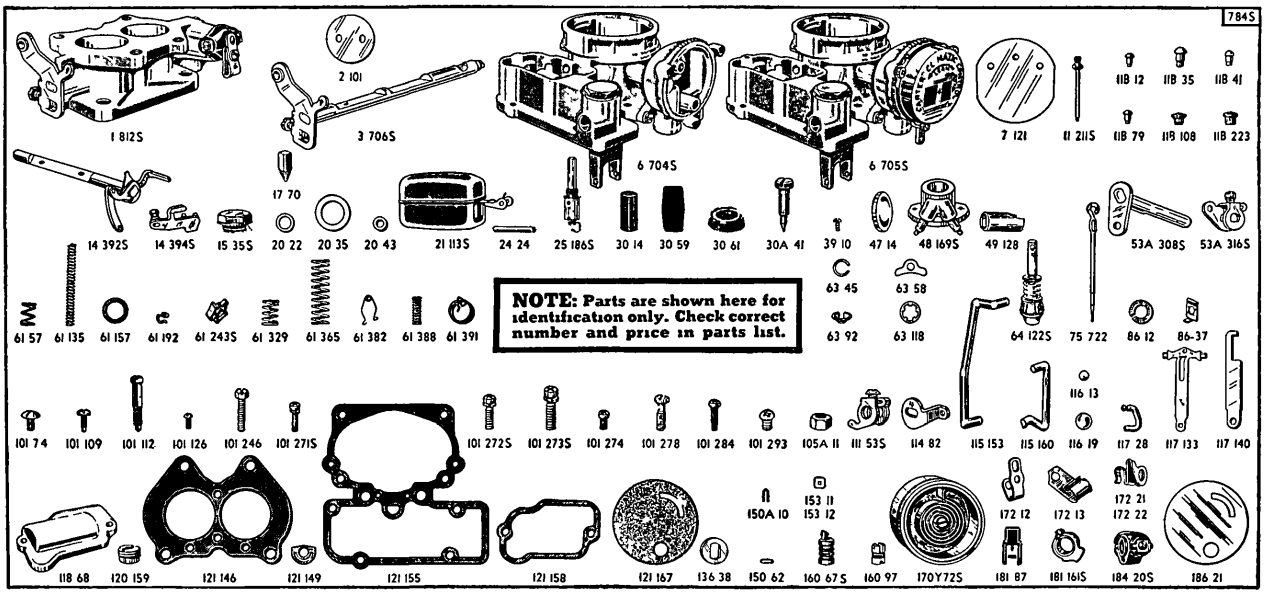
PRINTED IN U.S.A.

METERING ROD ADJUSTMENT The metering rods must be adjusted after the pump adjustment or when leaner than standard rods are installed No metering rod gauges are necessary, procedure is as follows With the throttle lever set screw backed out and throttle valves seated in bores of carbureter, press down on vacumeter link until metering rods bottom With rods held in this position, revolve meter ing rod arm until lip contacts vacumeter link Hold in place and carefully tighten metering rod arm set screw

FAST IDLE ADJUSTMENT With the thermostatic coil housing, gasket and baffle plate removed, crack throttle valve and hold choke valve closed Then close throttle There should now be 023" clearance (gauge T109-189) between throttle valve and bore of carbureter (side opposite idle port)

Adjust by bending the choke connector rod at lower angle

UNLOADER ADJUSTMENT. Must be made after fast idle adjustment Hold throttle valve wide open and close choke valve as far as possible without forcing, there should now be ⅛ inch clearance between upper edge of choke valve and inner wall of air horn Adjust by bending arm on choke trip lever (tool T109-214)



Packard 8—1951-1954—Carbureters Nos. 784S-986S

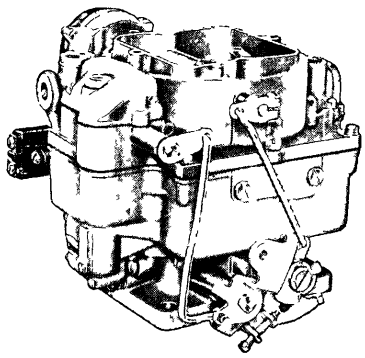
WHEN SERVICING, USE GASKET ASSORTMENT No 196, REPAIR PACKAGE No 1568A (784S)

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-812S	Body flange assembly (784S)	
1-1126S	Body flange assembly (986S)	
1A 39	Flange gasket	
2-101	Throttle valve	(2)
3-706S	Throttle shaft and lever assembly (784S)	
3-793S	Throttle shaft and lever assembly (986S)	
6-704S	Air horn assembly	
6 705S	Air horn and Climatic® control assembly	
7-121	Choke valve	
11-211S	LOW SPEED JET ASSEMBLY	(2)
11B-12	Rivet plug (784S)	
11B-35	Rivet plug	(3)
11B-41	Rivet plug	(3)
11B-79	Rivet plug	
11B-108	IDLE PORT RIVET PLUG	(2)
11B 223	NOZZLE RIVET PLUG	(2)
14-392S	Choke piston lever link and shaft assembly	
14-394S	Choke trip lever and pin assembly	
15-35S	Strainer nut assembly	
17-70	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	
20-35	BOWL STRAINER GASKET	
20-43	Piston housing gasket	
21-113S	Float and lever assembly (Sup by 21-172S)	
21-172S	Float and lever assembly	
24-24	Float lever pin	
25-186S	NEEDLE AND SEAT ASSEMBLY	
30-14	BOWL COVER STRAINER	
30-59	STRAINER	
30-61	Switch strainer (784S)	
30A-41	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
47-14	Choke cylinder welsh plug	
48-169S	Pump jet and housing assembly	
49-128	Switch plunger (784S)	
53A-308S	Pump operating lever and countershaft assembly	
53A-316S	Pump arm and screw assembly	
61-57	Idle adjustment screw lock spring	(2)
61-134	VACUUM PISTON SPRING	
61-135	Vacuum piston spring (784S) (Sup by 61-134)	
61-150	LOWER PUMP SPRING	
61-243S	Switch contact spring and washer assy (784S)	
61-365	Lower pump spring (784S) (Sup by 61-150)	
61-382	METERING ROD SPRING	
61-388	Switch return spring (784S)	
61-391	Fast idle cam spring	
63-45	PUMP CHECK BALL RETAINER RING	
63 58	Coil housing retainer	(3)
63-118	Throttle shaft retaining ring	
64-122S	PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
75 722	METERING ROD, STANDARD	(2)
75-767	Metering rod, 1 size lean	(2)
75-768	Metering rod, 2 sizes lean	(2)

Part No	PART NAME	
86-12	Flange stud lock washer	(4)
86-37	Terminal lock washer (784S)	(2)
101-74	Throttle shaft arm attaching screw	
101-109	Switch terminal screw (784S)	(2)
101-112	Terminal cap attaching screw (784S)	
101-126	Throttle valve attaching screw	(4)
101-246	Throttle lever adjustment screw	
101 271S	Dust cover attaching screw and washer assembly	(2)
101 272S	Air horn attaching screw and washer assembly	(8)
101-273S	Body flange attaching screw and washer assembly	(4)
101-274	Coil housing attaching screw	(3)
101-278	Pump jet housing attaching screw	
101-284	Piston housing attaching screw	(3)
101 293	Metering rod arm clamp screw	(2)
105A 11	Flange stud nut	(4)
111 53S	Metering rod arm and screw assembly	
114-39	Throttle shaft arm (986S)	
114-82	THROTTLE SHAFT ARM (784S)	
115 113	Throttle connector rod (986S)	
115-153	THROTTLE CONNECTOR ROD (784S)	
115 160	Choke connector rod	
116-13	PUMP INTAKE CHECK BALL	
116-19	Switch ball (784S)	
117-28	Pump arm link	
117-133	Vacumeter piston link	
117-140	Fast idle link	
118-68	Dust cover	
120-159	METERING ROD JET	(2)
121-146	BODY FLANGE GASKET	
121-149	Pump jet gasket (784S) (Sup by 121-241)	
121-155	AIR HORN GASKET	
121-158	DUST COVER GASKET (784S) (DISCONT D)	
121-167	COIL HOUSING GASKET	
121-241	PUMP JET HOUSING GASKET	
136-38	Throttle shaft washer	
150-62	Choke piston pin	
150A-10	Pin spring	
153-11	Switch contact spring shim (.018") (784S)	(3)
153-12	Switch contact spring shim (.006") (784S)	(2)
160 67S	Vacuum piston and pin assembly	
160 97	Choke piston	
170Y-72S	Thermostatic coil and housing assembly	
172-12	Terminal cap hold down clip (784S)	
172-13	Cable clip (784S)	
172-21	Throttle connector rod retainer	
172-22	THROTTLE AND CHOKE CONNECTOR ROD RETAINER	(2)
181-87	Switch guide block (784S)	
181-161S	Fast idle cam assembly	
184-20S	Terminal cap assembly (784S)	
186-21	Baffle plate	
192-11U	Carter starter switch unit (784S)	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used



PACKARD EIGHT
MODELS
"300" AND PATRICIAN "400"
1953

(2084S can also be used)

WCFB Four Bore Down-Draft Climatic® Control **Carbureter No. 985S**

CARBURETER SPECIFICATIONS

For Packard 8 Cylinder Engine: 3½ Inch Bore, 4¼ Inch Stroke

Dimensions: Flange size, 1⅛ inch Four Bore 4 bolt type.
Primary venturi size: 11/32 inch I. D.
Main venturi size: 1-1/16 inch I. D.

Float Level: See adjustments.

Vents: Outside, none.
Inside, (6-846S and 6-850S) 2 on primary side; one on secondary side. (6-946S and 6-947S) 2 on primary side; 3 on secondary side.

Gasoline Intake: Size No. 42 (.0935 inch) drill hole in needle seat.

Low Speed Jet Tube: Jet, size No. 66 (.033 inch) drill.
By-pass, size No. 53 (.0595 inch) drill.
Economizer, size No. .04527 inch diameter.
Idle bleed, size No. 51 (.067 inch) drill.

Idle Port: (Upper) Slot type, Primary, length .175 inch, width .030 inch.
Secondary: Length .103 inch, width .030 inch.

Idle Port Opening: Primary, .122 to .128 inch. Secondary (Early Production), .062 to .068 inch, (Late Production), .070 to .076 inch, above upper edge of valve, with valve tightly closed.

Lower Port: Primary (for idle adjustment screw) Size No. 52 (.0635 inch) drill.
Secondary, none.

Set Idle Adjustment Screw: 1 to 2 turns open. For richer mixture turn screw out. Do not idle engine below 390 r.p.m.

Main Nozzle: Installed permanently. DO NOT REMOVE.
Anti-percolating plug (in nozzle well), Size No. 64 (.036 inch) drill.

Metering Rod: Primary; Economy step .066 inch diameter. Power step, .052 inch diameter. (These rods designed with stabilizing flat on economy step.)
Secondary, none.

Metering Rod Jet: Primary; Size .086 inch diameter (for metering rod). Secondary; Size .067 inch diameter (no metering rod).

Metering Rod Setting: See adjustments.

Accelerating Pump: Discharge jet (twin) primary side only, size No. 74 (.0225 inch) drill. Intake ball check seat, size .115 to .120 inch diameter. Discharge needle seat, size .070 inch diameter. Relief ball check, size No. 55 (.052 inch) drill. (Early Production **Only.**)

Pump Adjustment: See adjustments.

Choke: Carter Climatic ® Control, set on index. Butterfly type offset choke valve, primary side only. Choke heat suction hole, restriction in piston housing, size No. 44 (.086 inch) drill.

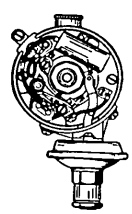
Vacuum Spark Port: Round type, .104 inch diameter. Top of port .052-.062 inch above valve, with valve tightly closed

Motor Tune-Up—Be Accurate!

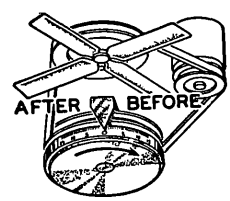
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



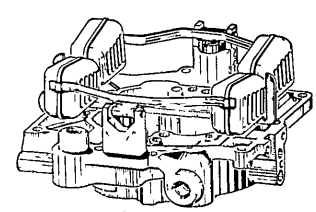
Spark Plug Gap .023" to .028"



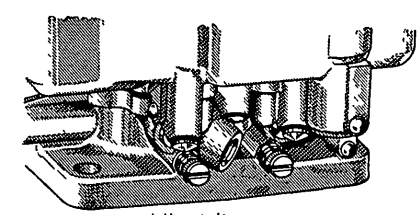
Breaker Point Setting .019"



Ignition Timing Breaker Points to Open: 6° B. T. D. C.



Float Setting 5/32 Inch (Use Gauge T109-236)



Idle Adjustment Screw Setting 1 to 2 Turns Open

NOTE: These cars equipped with Hydraulic Valve Lifters.—NO ADJUSTMENT.

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CARBURETER
TRADE MARK REG. U. S PAT. OFF.
MARCA REGISTRADA

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CARBURETER ADJUSTMENTS

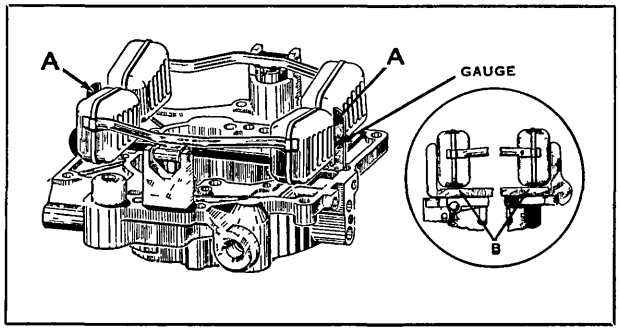


Figure 1
Float Adjustment

FLOAT ADJUSTMENT (Fig. 1):

Two separate float adjustments must be made—lateral and vertical

LATERAL ADJUSTMENT With bowl cover assembly inverted bowl cover gasket removed and float lip resting on seated needle, place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting Side of floats should just clear the vertical uprights of float gauge (A) Adjustment should be made by bending arms of floats VERTICAL ADJUSTMENT With float gauge in same position floats should just clear the horizontal portion of gauge Vertical distance (B) between top of float and machined surface of casting must be 5/32 inch (Gauge T109-236) for both primary and secondary floats Adjust by bending float arms

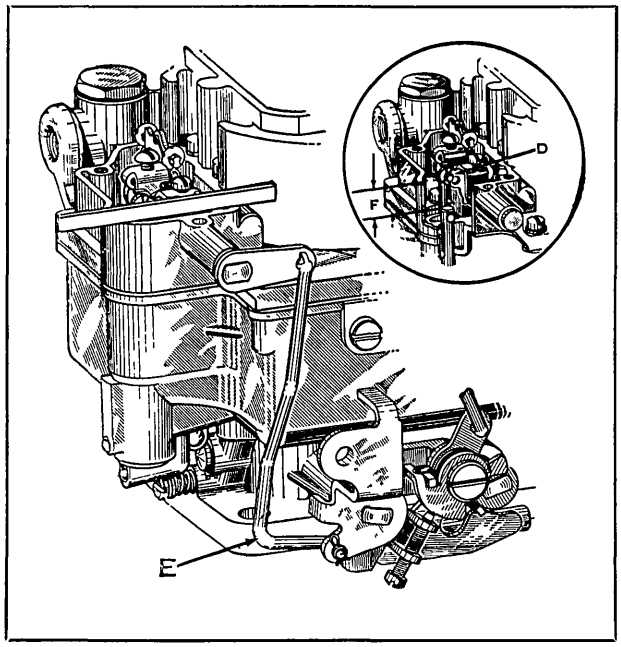


Figure 3
Pump Adjustment

PUMP ADJUSTMENT (Fig. 3):

Install pump connector link in outer hole (long stroke) of pump arm (D), with ends extending toward countershaft arm Back out throttle lever set screw until throttle valves seat in bores of carbureter. Hold straight edge across top of dust cover boss at pump arm. The flat on top of pump arm should be parallel to straight edge. Adjust by bending throttle connector rod at lower angle (E). (Use tool T109-213.)

Optional Adjustment: With throttle valves seated in bores of carbureter, the distance from the top of the plunger shaft to the top of the dust cover boss should be 18/64 inch (F). Adjust as mentioned above.

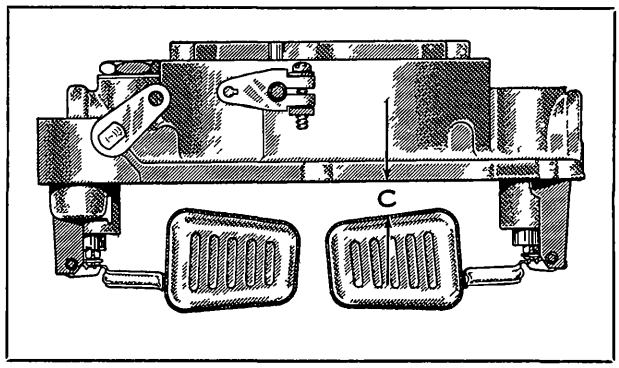


Figure 2
Float Drop Adjustment

FLOAT DROP ADJUSTMENT (Fig. 2):

With bowl cover held in upright position and measuring from center of floats (C) the distance between top of floats and bowl cover should be 5/8 inch for both primary and secondary floats Adjust by bending stop tabs on float brackets

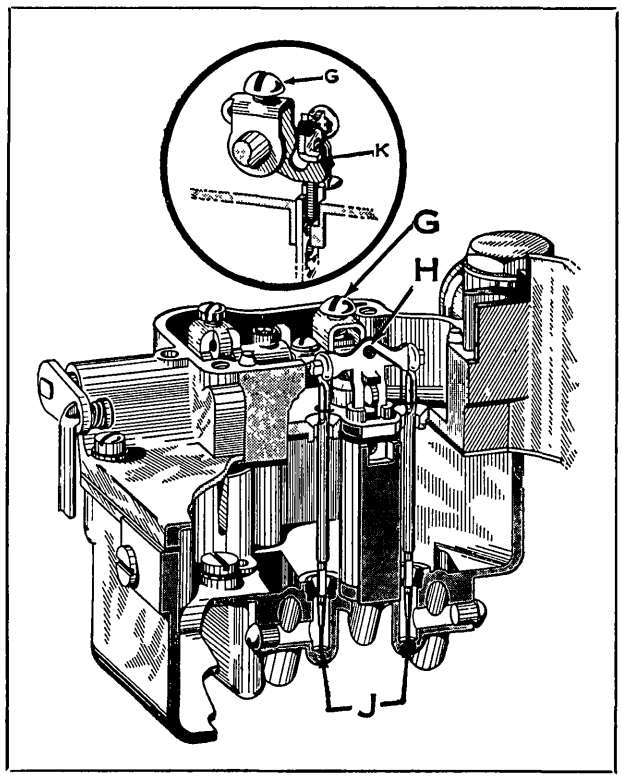


Figure 4
Metering Rod Adjustment

METERING ROD ADJUSTMENT (Fig. 4):

Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows: 1. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw (G). 2. With metering rods in place, press down on vacumeter link (H) until metering rods bottom in carbureter body casting (J). 3 Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link (K) Hold in place and carefully tighten clamp screw (G).

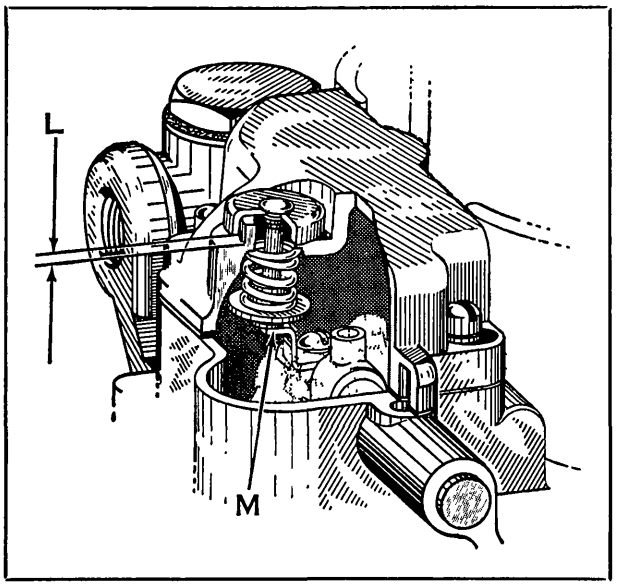


Figure 5
Bowl Vapor Vent Adjustment

BOWL VAPOR VENT ADJUSTMENT (Fig. 5):

This adjustment should be made after completing pump and metering rod adjustments. Install dust cover and dust cover gasket. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter. There should be 3/32 inch (L) (gauge T109-125) between lower edge of bowl vapor vent valve and dust cover. To adjust remove dust cover and bend vapor vent arm (M).

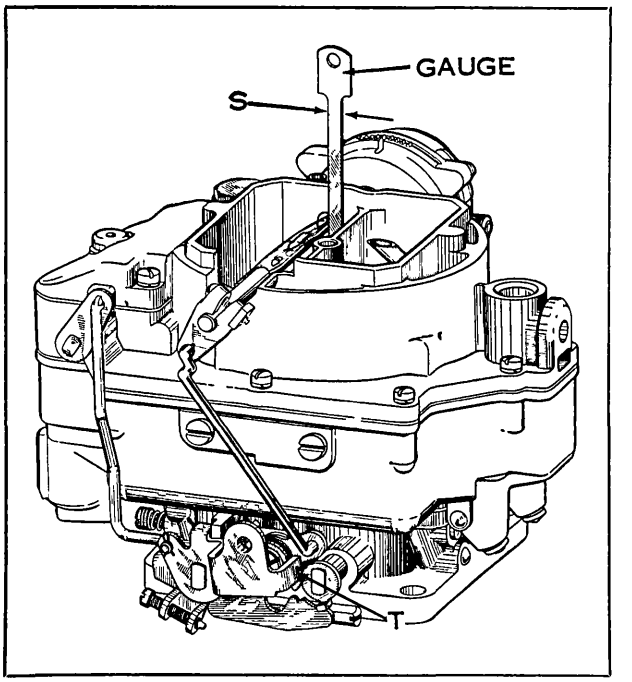


Figure 7
Unloader Adjustment

UNLOADER ADJUSTMENT (Fig. 7):

With throttle wide open there should be 9/32 inch (Gauge T109-126) clearance (S) between upper edge of choke valve and inner wall of air horn. Adjust by bending unloader lip (T) on throttle shaft lever (use bending tool T109-41).

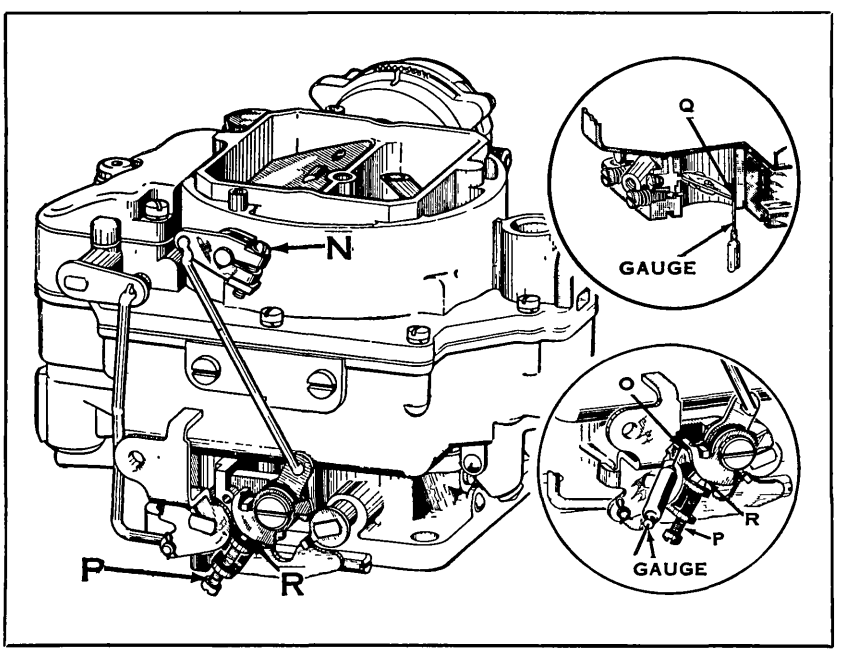


Figure 6
Fast Idle Adjustment

FAST IDLE ADJUSTMENT (Fig. 6):

(a) Loosen choke lever clamp screw (N) on choke shaft. Insert .020" feeler gauge (T109-29) between lip of fast idle cam and boss of flange casting (O). Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw (N). (b) With choke valve tightly closed, tighten fast idle adjusting screw (P) until there is .020 inch (Gauge T109-29) opening between throttle valve and bore of carbureter (side opposite idle port) (Q). Be sure fast idle adjusting screw is on high step of cam (R) while making this adjustment.

Part No.	PART NAME	
53A-333S	Pump operating lever and countershaft assembly	
53A-338	Lockout arm	
53A-344	Vent arm	
53A-358	Secondary operating lever	
61-84	Idle adjustment screw spring	(2)
61-128	Connector rod spring	
61-171	PUMP SPRING (LOWER)	
61-238	Throttle flex spring (Sup by 61-453)	
61-243S	Contact spring and washer assembly	
61-291	Throttle lever adjusting screw spring	
61-382	METERING ROD SPRING	
61-388	Switch return spring	
61-453	Throttle flex spring	
61-454	Fast idle cam spring	
61-467	Idle adjustment screw lock spring (Sup by 61 84)	(2)
61-474	Bowl vent spring	
61-483	SECONDARY THROTTLE RETURN SPRING	
61-485	VACUUM PISTON SPRING	
63-35	Spring retainer	
63-57	INTAKE BALL CHECK RETAINER	
63-58	Coil housing retainer	(3)
64-141S	PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
75-824	Metering rod—standard (Sup by 75 942)	(2)
75-892	Metering rod—1 size lean	(2)
75-893	Metering rod—2 sizes lean	(2)
75-942	METERING ROD—STANDARD	(2)
86-12	Flange stud lock washer	(4)
86 37	Switch terminal lock washer	(2)
101-10	Pump arm clamp screw	
101-19	Choke lever clamp screw (Sup by 101 354S)	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	(2)
101-109	Switch terminal screw	(2)
101-136	Coil housing attaching screw	(3)
101-149S	Body flange attaching screw and washer assembly	(4)
101-152	Air horn attaching screw and washer assembly	
101-160S	Air horn attaching screw and washer assembly	(8)
101-184S	Dust cover attaching screw and washer assembly	(2)
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet housing attaching screw	
101-284	Piston housing attaching screw	(2)
101-296	Fast idle adjustment screw	
101-324	Fast idle cam screw	
101-325S	Switch terminal cap attaching screw and washer assembly	(2)
101-332	Throttle lever adjusting screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101 337	Secondary throttle valve attaching screw	(4)

Part No	PART NAME	
101-348	Primary throttle valve attaching screw	(4)
101-352S	Switch housing attaching screw and washer assembly	(2)
101-354S	Choke lever clamp screw assembly	
101-363	Piston housing attaching screw	
105A-10	Choke lever nut	
105A-11	Flange stud nut	(4)
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
114-96	Primary throttle shaft arm (inner)	
114-107	Throttle shaft arm	
115-189	Choke connector rod	
115-197	THROTTLE CONNECTOR ROD	
115-202	Starter switch operating rod	
115-208	Throttle operating rod	
116-13	PUMP INTAKE CHECK BALL	
116-19	Switch ball	
117-28	Pump connector link	
117-155	Vacumeter piston link	
118-98S	Dust cover assembly	
120-165	PRIMARY METERING ROD JET	(2)
120-185	SECONDARY METERING JET	(2)
121-78	COIL HOUSING GASKET	
121-149	Pump jet housing gasket (Sup by 121 241)	
121-208	DUST COVER GASKET	
121-229	AIR CLEANER GASKET	
121-231	BODY FLANGE GASKET	
121-232	AIR HORN GASKET	
121-241	PUMP JET HOUSING GASKET	
121-243	Piston housing gasket	
122-75S	Pump relief plug assembly (Sup by 11B 129S)	
136-37	Throttle and starter switch operating rod washer	(7)
136-84	Throttle shaft spring washer	
136-159	Throttle shaft washer	
136-172	Throttle shaft washer	
150-62	Choke piston pin	
150-186S	Pin and valve cap assembly	
150A-10	PIN SPRING	(7)
153-11	Switch contact spring shim (.018)	(3)
153-12	Switch contact spring shim (.006)	(2)
160-91	Choke piston	
160-110S	Vacuum piston and pin assembly	
170-259S	Piston housing and plug assembly	
170AC238S	Thermostatic coil and housing assembly	
172-15	Cable clip	
181-87	Switch guide block	
181-192S	Fast idle cam assembly	
184-64S	Terminal cap assembly	
186 34	Choke baffle plate	
192-21U	Carter starter switch unit	
192-28S	Carter starter switch complete	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

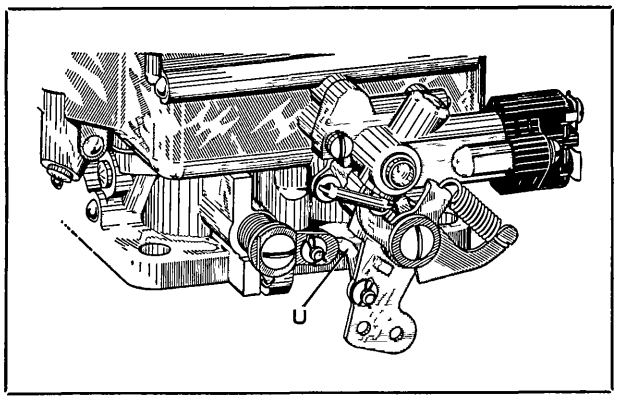


Figure 8
Secondary Throttle Lever Adjustment

SECONDARY THROTTLE LEVER ADJUSTMENT (Fig. 8):

Primary and secondary throttle valves should reach wide open position at the same time To adjust Bend throttle operating rod at upper angle (U) (Use bending tool T109-213)

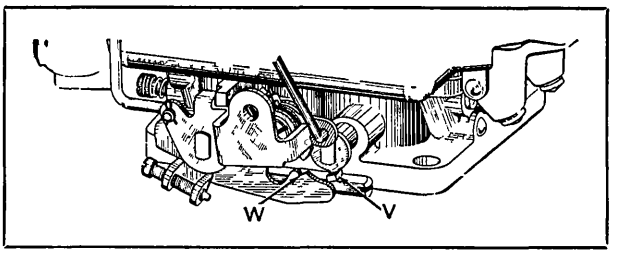


Figure 9
Secondary Throttle Lock-Out Adjustment

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT (Fig. 9):

This adjustment should be made after completing fast idle and secondary throttle lever adjustments (a) With choke valve tightly closed, open primary throttle valves all the way Tang (V) on secondary throttle arm should engage in notch (W) on lock out lever preventing secondary throttle shaft movement (b) Hold choke valve in wide open position Open primary throttle valves all the way. Lock-out lever should fall free allowing secondary throttle valves to be opened before primary throttle valves are fully open. If necessary, bend tang (V) on secondary throttle lever to provide clearance for proper operation of lock-out lever.

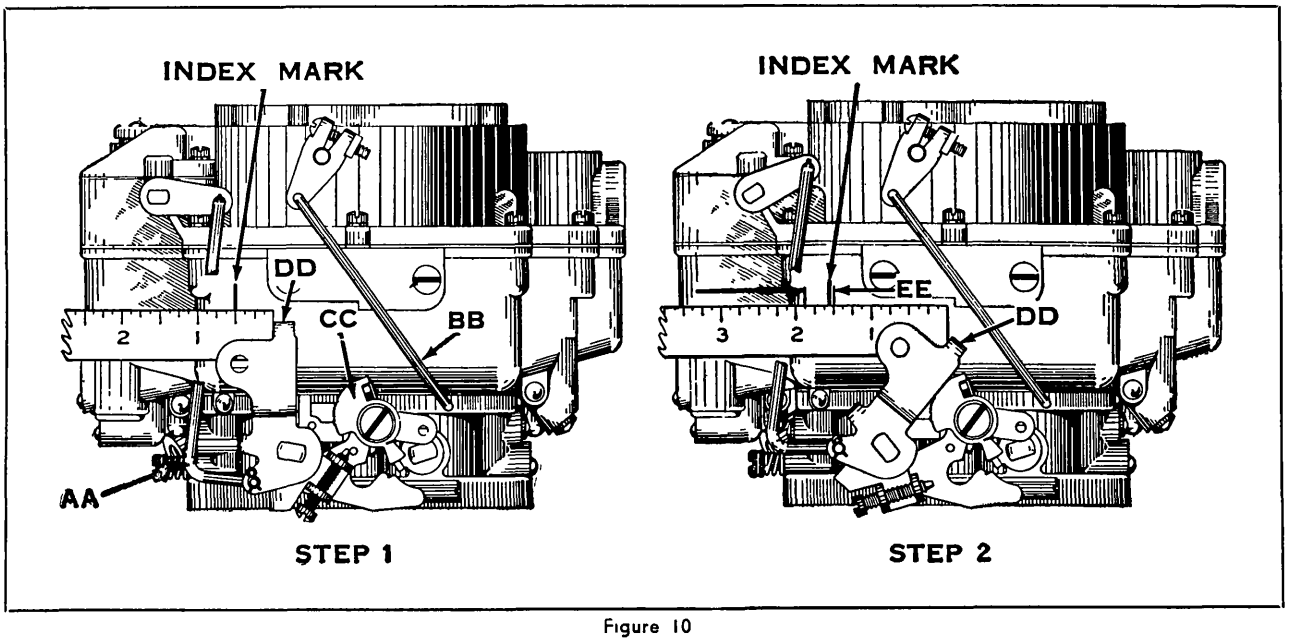
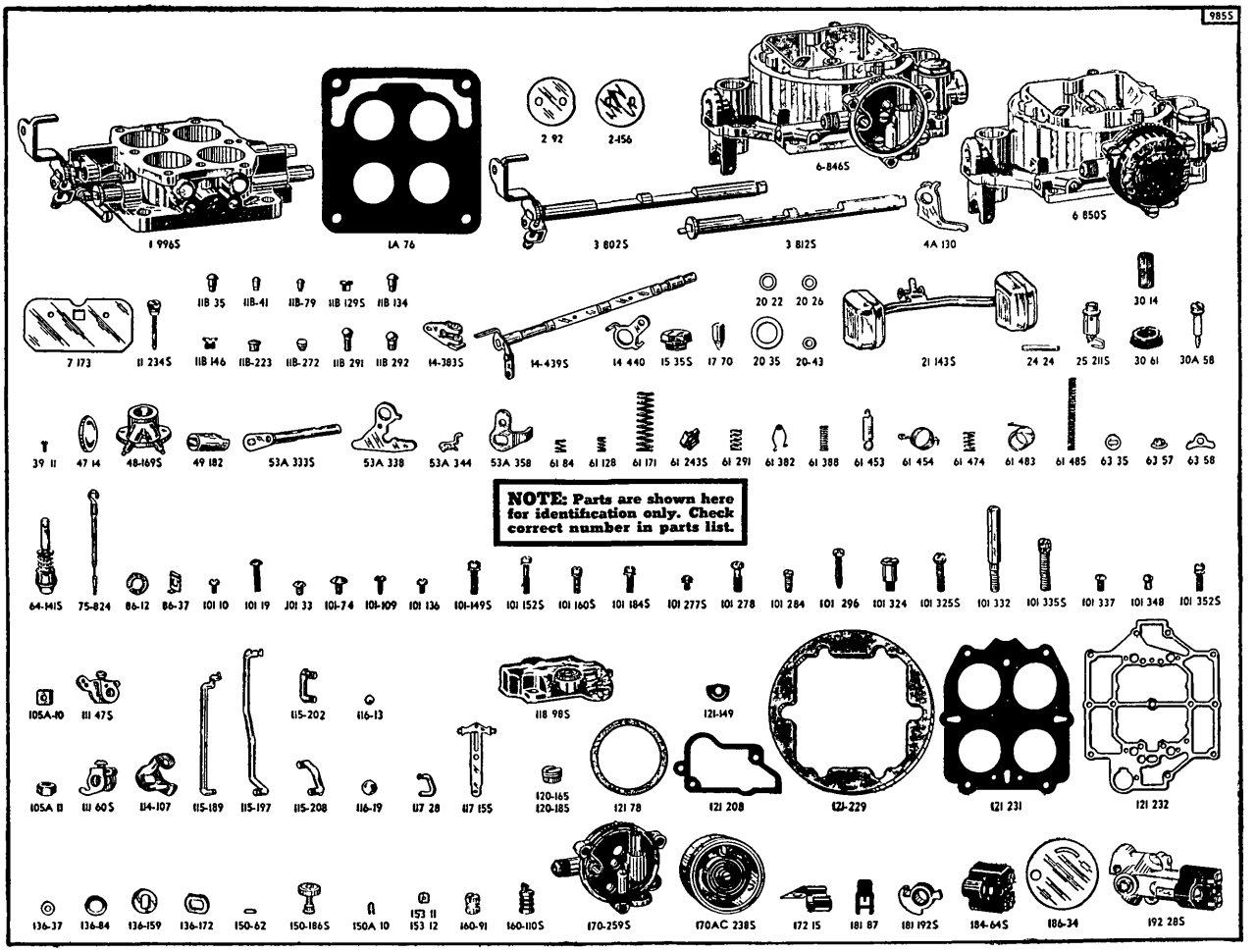


Figure 10
Checking and Adjusting Starter Switch

CHECKING AND ADJUSTING STARTER SWITCH (Fig. 10):

Connect a 6-volt battery and test lamp across switch terminal, so that lamp will light when switch makes contact. 1. Back off throttle stop screw, remove throttle connector rod (AA) and choke connector rod (BB), rotate fast idle cam (CC) to slow idle position, and fully close the throttle valves. 2. While holding throttle valves fully closed, place a scale against choke unloader arm of throttle lever and make an index mark on carbureter body at the 1/2 inch division of scale. 3. With test lamp connected hold end of scale against unloader arm (DD) and slowly open throttle until test lamp lights. 4. If switch is correctly timed, the scale will then read between 1 1/2 and 1 7/8 inch at mark on carbureter body (EE) (1 inch to 1 3/8 inch travel of arm). 5. If necessary, make switch adjustment by reducing or increasing the total thickness of the brass shims If switch timing was found to be too early, reduce the total thickness of the shims. If timing was too late, increase total thickness of shims. Two sizes of shims are available: 153-11 .018 inch—153-12 .006 inch.



Packard 8—1953—Carbureter No. 985S

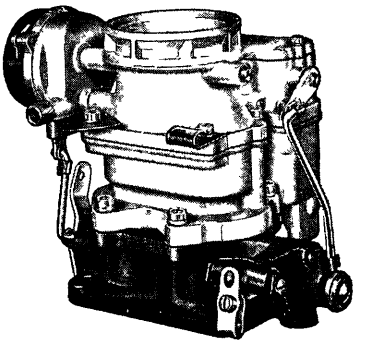
WHEN SERVICING, USE GASKET ASSORTMENT No 229, REPAIR PACKAGE No 1727A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-996S	Body flange assembly	
1A-76	Flange gasket (Sup by 1A 97)	
1A-97	Flange gasket (Sup by 1A 108)	
1A-108	FLANGE GASKET	
2-92	Primary throttle valve	(2)
2-156	Secondary throttle valve	(2)
3-802S	Primary throttle shaft and lever assembly	
3-812S	Secondary throttle shaft and dog assembly	
4A-130	Throttle shaft dog	
6-846S	Air horn assembly (Sup by 6 946S)	
6-850S	Air horn and climatic® control assembly (Sup by 6 947S)	
6-946S	Air horn assembly	
6-947S	Air horn and climatic® control assembly	
7-173	Choke valve	
11-234S	LOW SPEED JET ASSEMBLY	(4)
11B-35	Rivet plug	(5)
11B-41	Rivet plug	(2)
11B-79	Rivet plug	(8)
11B-129S	PUMP DISCHARGE PASSAGE PLUG ASSEMBLY	
11B-134	Rivet plug	
11B-146	Level sight plug	(2)
11B-223	Idle port and nozzle passage rivet plug	(8)
11B-272	Rivet plug	
11B-291	Rivet plug	(2)

Part No.	PART NAME	
11B-292	Rivet plug	
14-383S	Choke lever and screw assembly	
14-439S	Choke piston lever link and shaft assembly	
14-440	Cam trip lever	
15-35S	Strainer nut assembly	
17-70	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	(2)
20-26	Relief valve gasket	
20-35	BOWL STRAINER GASKET	
20-43	Starter switch housing gasket	
21-143S	Float and lever assembly	(2)
24-24	Float lever pin	(2)
25-211S	NEEDLE AND SEAT ASSEMBLY	(2)
30-14	BOWL STRAINER	
30-61	SWITCH STRAINER	
30A-44	Idle adjustment screw (Sup by 30A 58)	(2)
30A-58	Idle adjustment screw	(2)
39-11	Choke valve attaching screw	(2)
47-14	WELSH PLUG	
48-169S	Pump jet and housing assembly (Sup by 48 213S)	
48-213S	Pump jet and housing assembly	
49-182	Switch plunger	

MODELS
"300" AND
PATRICIAN "400"



Casting No. 803 on face of flange

PACKARD EIGHT 1951

(928S can also be used)

WGD Dual Down-Draft Climatic® Control Carbureter—**No. 767S**

CARBURETER SPECIFICATIONS

For Packard 8 Cylinder Engine: 3½ Inch Bore, 4¼ Inch Stroke

Dimensions: Flange size, 1¼ inch dual 4 bolt type
Primary venturi, 11/32 inch I D.
Secondary venturi, 21/32 inch I D
Main venturi, 1-3/16 inch I D

Float Level: Distance from float to bowl cover when needle is seated to be 13/64 inch Use gauge No T109-39

Vents: Inside, none Outside vent, No 10 (1935") drill

Gasoline Intake: Square vertical (push-pull) needle, seat size No 42 drill

Low Speed Jet Tube: Jet size, No 67 (032") drill
By-pass, size No 55 (052") drill
Economizer, size 1.15 mm (045") drill
Idle bleed, size No 56 (0465") drill

Idle Ports: Upper port, slot type, length 187 inch Width 030 inch

Idle Port Opening: 135 to 141 inch above upper edge of valve with valve closed tight

Lower Port (for Idle Adjustment Screw): Size 0615 to 0655 inch diameter

Set Idle Adjustment Screw: ½ to 1½ turns open For richer mixture turn screw out. Do not idle engine above 400 r p m on ultramatic transmission or above 450 r p m on standard transmission

Nozzle: In primary venturi, angle 45°. Nozzle is installed permanently **Do not remove.** Anti percolating well, plug jet size, No 66 drill Anti-percolating well to idle passage restriction size No 68 (031") drill

Metering Rod (Vacumeter Type): Economy step, 0685 inch diameter Middle step tapers to 066 inch diameter Power step 057 inch diameter Length 2-59/64 inches

Metering Rod Jet: 089 inch diameter

Metering Rod Setting: After adjusting for pump stroke set metering rod as follows With throttle tightly closed, hold metering rods (assembled on vacumeter link) in maximum down position, tighten clamp screw securely with metering rod arm contacting vacumeter link

Accelerating Pump: Pressure type delayed action plunger (non adjustable lever) Discharge jet (twin) size No 74 drill Intake ball check size No 40 (098") drill Discharge (needle seat) size No 50 (.070") drill

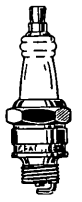
Pump Adjustment: "42" as indicated on gauge T109-117S with throttle valves seated in bores of carbureter or 15/32 inch from top of dust cover boss to top of plunger shaft

Choke: Carter Climatic® Control set one point rich Butterfly type offset valve Choke heat suction hole size No 36 drill

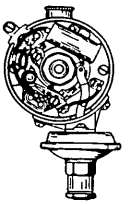
Vacuum Spark Port: 103 to 105 inch diameter Top of port 052 to 062 inch above valve

Motor Tune-Up—Be Accurate!

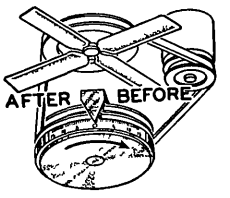
CAUTION Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter



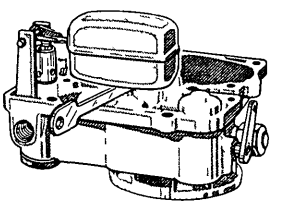
Spark Plug
Gap
.028"



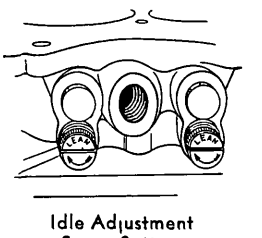
Breaker Point
Setting
.015"



Ignition Timing
Breaker Points to Open:
6° B.T.D.C



Float Setting
13/64 Inch
(Use Gauge T109-39)



Idle Adjustment
Screw Setting
½ to 1½
Turns Open

NOTE· These cars equipped with hydraulic valve lifters.—No adjustment

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: With bowl cover gasket removed, bowl cover inverted and needle seated, there should be 13/64 inch (gauge T109-39) between top of float and bowl cover Adjust by bending float arm

PUMP ADJUSTMENT: Back out throttle lever set screw until throttle valves seat in bores of carbureter Place Universal pump travel gauge T109-117S inverted on edge of dust cover boss of bowl cover. Turn knurled nut of gauge

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CARBURETER
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until finger on gauge just touches top of plunger shaft Number indicated on gauge should be ' 42 Adjust by bend ing throttle connector rod at upper angle

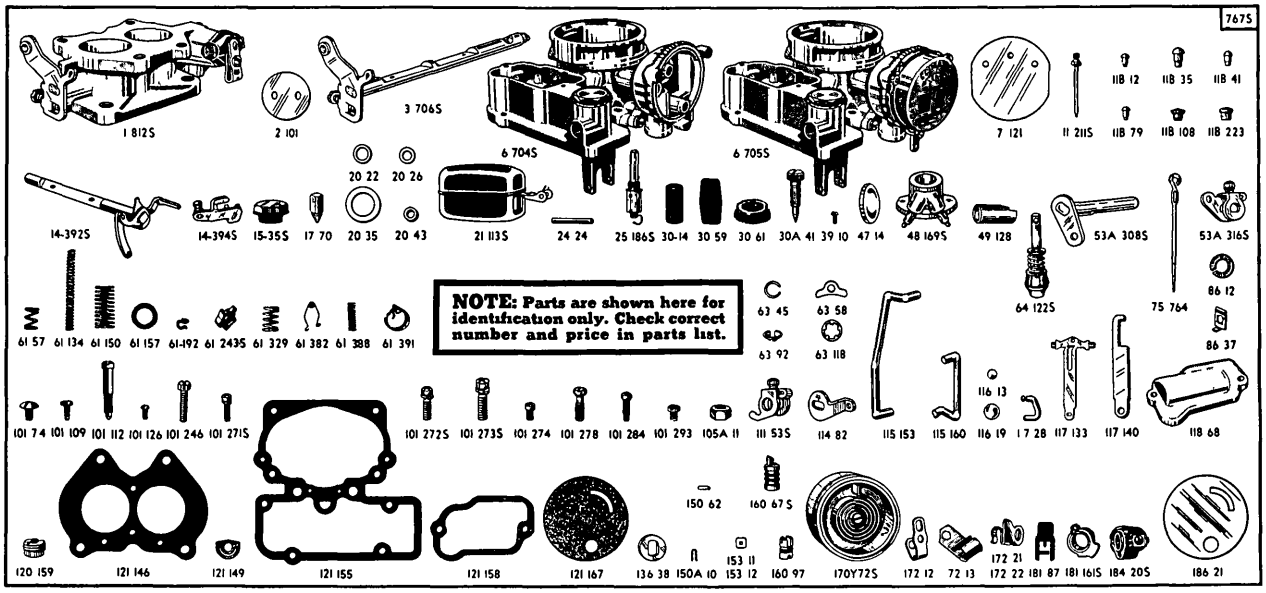
Optional Adjustment The distance from the dust cover boss to the top of the plunger shaft should be 15/32' Adjust as mentioned above

METERING ROD ADJUSTMENT The metering rods must be adjusted after the pump adjustment or when leaner than standard rods are installed No metering rod gauges are necessary procedure is as follows With the throttle lever set screw backed out and throttle valves seated in bores of carbureter, press down on vacumeter link until metering rods bottom With rods held in this position, revolve meter ing rod arm until lip contacts vacumeter link Hold in place and carefully tighten metering rod arm set screw

FAST IDLE ADJUSTMENT With the thermostatic coil housing, gasket and baffle plate removed, crack throttle valve and hold choke valve closed Then close throttle There should now be 023" clearance (guage T109-189) between throttle valve and bore of carbureter (side opposite idle port) Adjust by bending the choke connector rod at lower angle

UNLOADER ADJUSTMENT Must be made after fast idle adjustment Hold throttle valve wide open and close choke valve as far as possible without forcing, there should now be 1/8 clearance between upper edge of choke valve and inner wall of air horn Adjust by bending arm on choke trip lever (tool T109-187)

STARTER SWITCH Adjustment should be made with Carter tool No T109-155S obtainable from your Carter distributor, with complete instructions Switch must make contact between 30° and 45° throttle opening



Packard 8—1951—Carbureter No. 767S

WHEN SERVICING, USE GASKET ASSORTMENT No 196, REPAIR PACKAGE No 1542

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

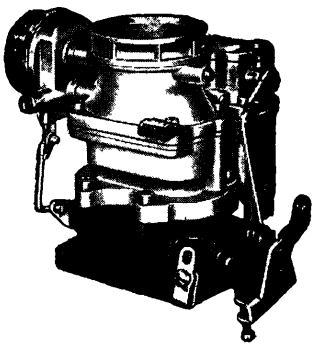
Part No	PART NAME	
1 812S	Body flange assembly	
1A-39	Flange gasket	
2-101	Throttle valve	(2)
3-706S	Throttle shaft and lever assembly	
6 704S	Air horn assembly	
6-705S	Air horn and Climatic® control assembly	
7-121	Choke valve	
11-211S	LOW SPEED JET ASSEMBLY	(2)
11B 12	Plug	
11B-35	Rivet plug	(3)
11B-41	Rivet plug	(3)
11B-79	Rivet plug	
11B 108	IDLE PORT RIVET PLUG	(2)
11B-223	NOZZLE RIVET PLUG	(2)
14-392S	Choke piston lever link and shaft assembly	
14 394S	Choke trip lever and pin assembly	
15-35S	Strainer nut assembly	
17 70	PUMP CHECK NEEDLE	
20 22	Needle seat gasket	
20-26	Gasket	
20-35	BOWL STRAINER GASKET	
20 43	Piston housing gasket	
21-113S	Float and lever assembly (Sup by 21-172S)	
21-172S	Float and lever assembly	
24 24	Float lever pin	
25 186S	NEEDLE AND SEAT ASSEMBLY	
30-14	BOWL COVER STRAINER	
30 59	STRAINER	
30 61	Switch strainer	
30A 41	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
47 14	Choke cylinder welsh plug	
48 169S	Pump jet and housing assembly	
49-128	Switch plunger	
53A-308S	Pump operating lever and countershaft assembly	
53A-316S	Pump arm and screw assembly	
61 57	Idle adjustment screw lock spring	(2)
61 134	VACUUM PISTON SPRING	
61-150	PUMP SPRING (LOWER)	
61-157	Plunger spring	
61-192	Needle pull clip	
61-243S	Switch contact spring and washer assembly	
61-329	Pump spring (upper)	
61-382	METERING ROD SPRING	
61 388	Switch return spring	
61 391	Fast idle cam spring	
63 45	PUMP CHECK BALL RETAINER RING	
63 58	Coil housing retainer	(3)
63 92	Pump spring retainer	
63 118	Throttle shaft retaining ring	
64-122S	PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
75-764	METERING ROD (STANDARD)	(2)
75-777	Metering rod 1 size lean	(2)

Part No	PART NAME	
75-778	Metering rod 2 sizes lean	(2)
86-12	Flange stud lock washer	
86 37	Terminal lock washer	(2)
101-74	Throttle shaft arm attaching screw	
101-109	Switch terminal screw	(2)
101 112	Terminal cap attaching screw	
101-126	Throttle valve attaching screw	(4)
101-246	Throttle lever adjustment screw	
101-271S	Attaching screw and washer assembly (dust cover)	(2)
101-272S	Air horn attaching screw and washer assembly	(8)
101 273S	Body flange attaching screw and washer assembly	(4)
101-274	Coil housing attaching screw	(3)
101 278	Pump jet housing attaching screw	
101-284	Piston housing attaching screw	(3)
101 293	Metering rod arm clamp screw	(2)
105A-11	Flange stud nut	
111 53S	Metering rod arm and screw assembly	
114-82	THROTTLE SHAFT ARM	
115-153	THROTTLE CONNECTOR ROD	
115-160	Choke connector rod	
116-13	PUMP INTAKE CHECK BALL	
116-19	Switch ball	
117-28	Pump arm link	
117-133	Vacumeter piston link	
117-140	Fast idle link	
118-68	Dust cover	
120 159	METERING ROD JET	(2)
121 146	BODY FLANGE GASKET	
121 149	Pump jet gasket (Sup by 121-241)	
121-155	AIR HORN GASKET	
121-158	DUST COVER GASKET (DISCONTINUED)	
121 167	COIL HOUSING GASKET	
121-241	PUMP JET HOUSING GASKET	
136 38	Throttle shaft washer	
150-62	Choke piston pin	
150A-10	Pin spring	
153-11	Switch contact spring shim (018")	(3)
153-12	Switch contact spring shim (006")	(2)
160 67S	Vacuum piston and pin assembly	
160 97	Choke piston	
170Y-72S	Thermostatic coil and housing assembly	
172-12	Terminal cap hold down clip	
172-13	Cable clip	
172-21	Throttle connector rod retainer	
172-22	THROTTLE AND CHOKE CONNECTOR ROD RETAINER	(2)
181-87	Switch guide block	
181-161S	Fast idle cam assembly	
184-20S	Terminal cap assembly	
186-21	Baffle plate	
192-11U	Carter Starter Switch Unit	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where n figure is shown, only one is used

MOTOR SERIAL NUMBERS

H-238000 and higher



Casting No 615 on face of flange

PACKARD EIGHT MODEL 2301 1949-1950

WGD **728S-728SA** DUAL DOWN-DRAFT CLIMATIC® CONTROL CARBURETERS

CARBURETER SPECIFICATIONS

For Packard 8 Cylinder Engine 3½ Inch Bore 3¾ Inch Stroke

Dimensions Flange size 1¼ inch dual 4 bolt type
Primary venturi 11/32 inch I D
Secondary venturi 21/32 inch I D
Main venturi 1 3/16 inch I D

Float Level Distance from float to bowl cover when needle is seated to be 13/64 inch Use gauge No T109 39

Vents Outside none Inside balance vent in air horn above choke valve

Gasoline Intake Square vertical (push pull) needle Seat size No 42 drill

Low Speed Jet Tube Jet size No 66 (.033") drill
By pass size No 55 (.052") drill
Economizer size 1 15 mm (.045") drill
Idle bleed size No 56 (.0465") drill

Idle Ports Upper port slot type length 187 inch Width 030 inch

Idle Port Opening 135 to 141 inch above upper edge of valve with valve closed tight

Lower Port (For Idle Adjustment Screw) Size 0615 to 0655 inch diameter

Set Idle Adjustment Screw 1 to 1½ turns open For richer mixture turn screw out Do not idle engine above 450 r p m

Nozzle In primary venturi angle 45° Closed tip round nose Nozzle is installed permanently **Do not remove**
Anti percolating well jet size No 66 drill

Metering Rod (Vacumeter Type) Economy step 0665 inch diameter Middle step tapers to 064 inch diameter Power step 043 inch diameter (728S) Power step 056 inch diameter (728SA) Length 2 59/64 inches

Metering Rod Jet 089 inch diameter

Metering Rod Setting After adjusting for pump stroke set metering rod as follows With throttle tightly closed hold metering rods (assembled on vacumeter link) in maximum down position tighten clamp screw securely with metering rod arm contacting vacumeter link

Accelerating Pump Pressure type delayed action plunger (non adjustable lever)
Discharge jet (twin) size No 74 drill
Intake ball check size No 40 (.098") drill
Discharge (needle seat) size No 50 (.070") drill

Pump Adjustment 42 as indicated on gauge T109 117S with throttle valves seated in bores of carbureter or 15/32" from top of dust cover boss to top of plunger shaft

Choke Carter Climatic® Control (728S) set 2½ points lean (728SA) set 2 points lean Butterfly type offset valve Choke heat suction hole in body size No 36 drill

Vacuum Spark Port 103 to 105 inch diameter Top of port 052 to 062 inch above valve

Motor Tune-Up—Be Accurate! Always Use Feeler Gauges!

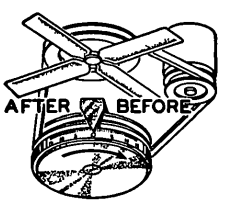
CAUTION **Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter**



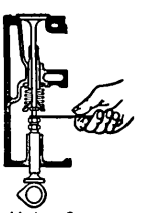
Spark Plug
Gap
025" 030"



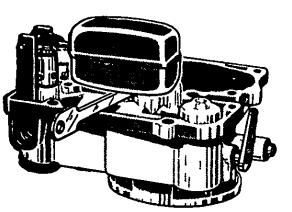
Breaker Point
Setting
012"-017"



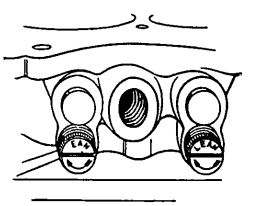
Ignition Timing
Breaker Points to Open
6° B T D C



Valve Setting
(Hot)
Intake 007"
Exhaust 010"



Float Setting
13/64 Inch
(Use Gauge T109 39)



Idle Adjustment
Screw Setting
1 to 1½
Turns Open

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CARBURETER
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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT (Fig 1)

With bowl cover gasket removed bowl cover inverted and needle seated there should be 13/64 inch (gauge T109 39) between top of float and bowl cover

Adjust by bending float arm

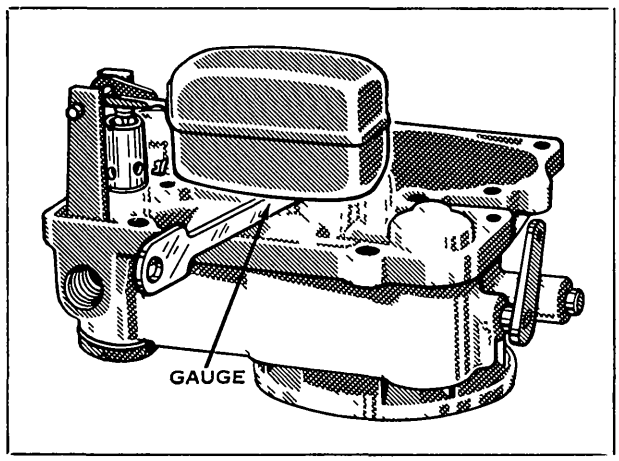


Figure 1
Float Adjustment

PUMP ADJUSTMENT (Fig 2)

Back out throttle lever set screw until throttle valves seat in bores of carbureter Place Universal pump travel gauge T109 117S inverted on edge of dust cover boss of bowl cover Turn knurled nut of gauge until finger on gauge just touches top of plunger shaft (A) Number indicated on gauge should be 42

Adjust by bending throttle connector rod at upper angle (B)

Optional Adjustment The distance from the dust cover boss to the top of the plunger shaft should be 15/32" Adjust as mentioned above

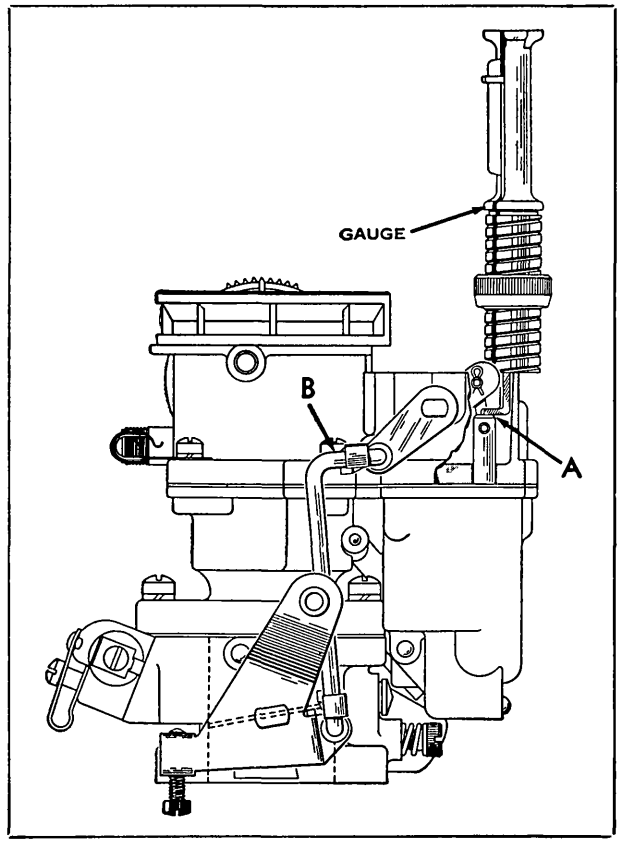


Figure 2
Pump Adjustment

METERING ROD ADJUSTMENT (Fig 3)

The metering rods must be adjusted after the pump adjustment or when leaner than standard rods are installed No metering rod gauges are necessary procedure is as follows With the **throttle lever** set screw backed out and throttle valves seated in bores of carbureter press down on vacumeter link (D) until metering rods bottom With rods held in this position revolve metering rod arm until lip contacts vacumeter link (E) Hold in place and carefully tighten metering rod arm set screw (F)

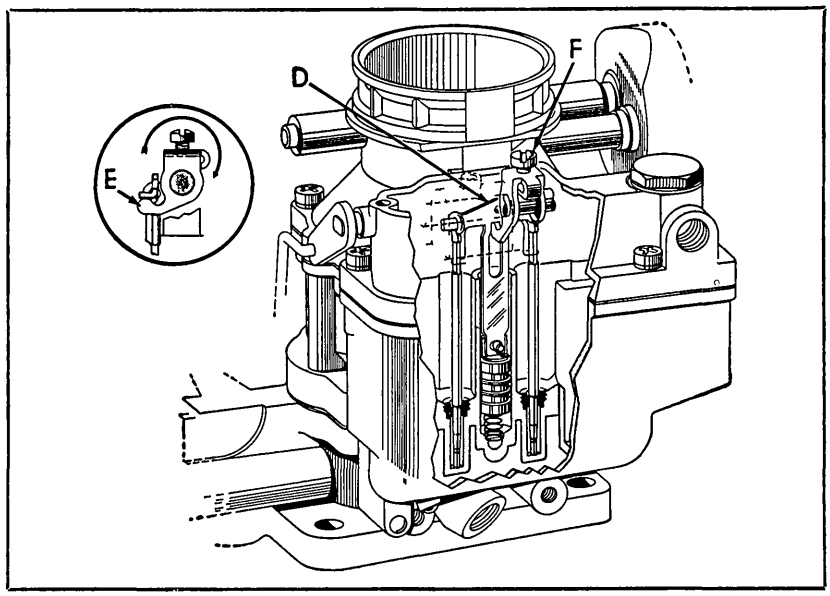


Figure 3
Metering Rod Adjustment

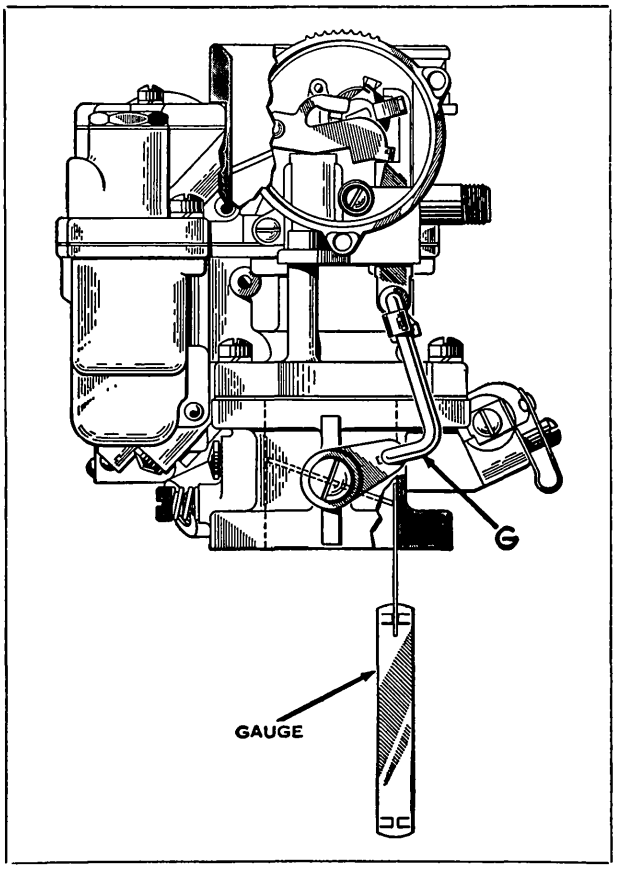


Figure 4
Fast Idle Adjustment

FAST IDLE ADJUSTMENT (Fig. 4):

With the thermostatic coil housing, gasket and baffle plate removed, crack throttle valve and hold choke valve closed Then close throttle. There should now be .026" clearance (gauge T109-189) between throttle valve and bore of carbureter (side opposite idle port).

Adjust by bending the choke connector rod at lower angle (G).

UNLOADER ADJUSTMENT (Fig. 5):

Must be made after fast idle adjustment. Hold throttle valve wide open and close choke valve as far as possible without forcing; there should now be 1/8 inch clearance between upper edge of choke valve and inner wall of air horn. Adjust by bending arm (H) on choke trip lever (tool T109-187)

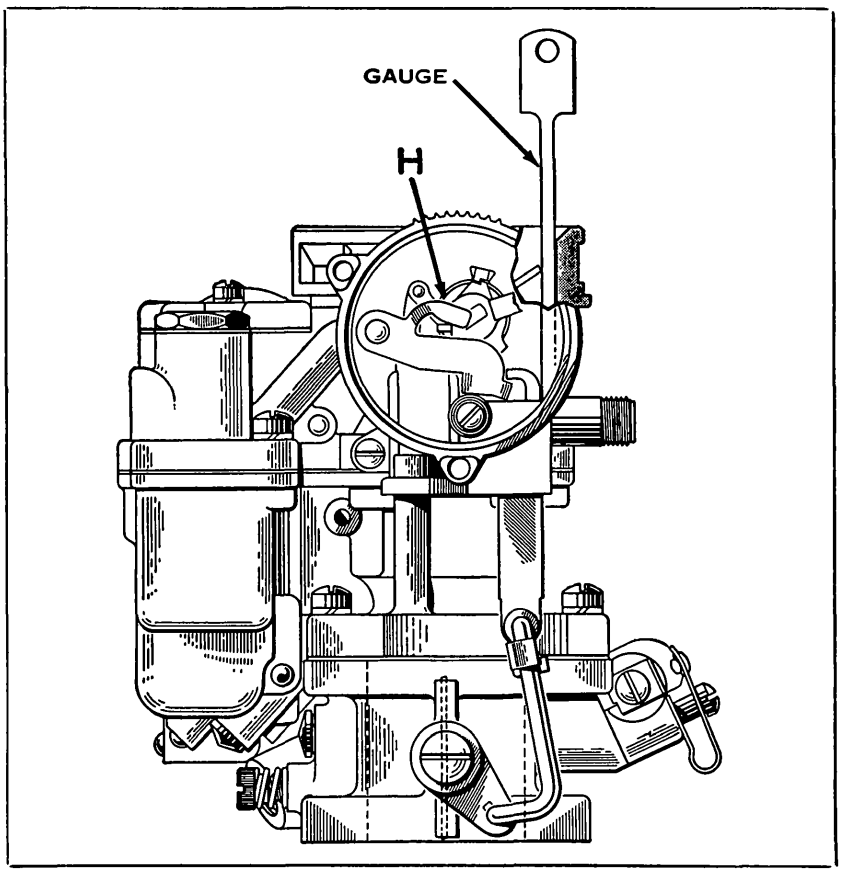
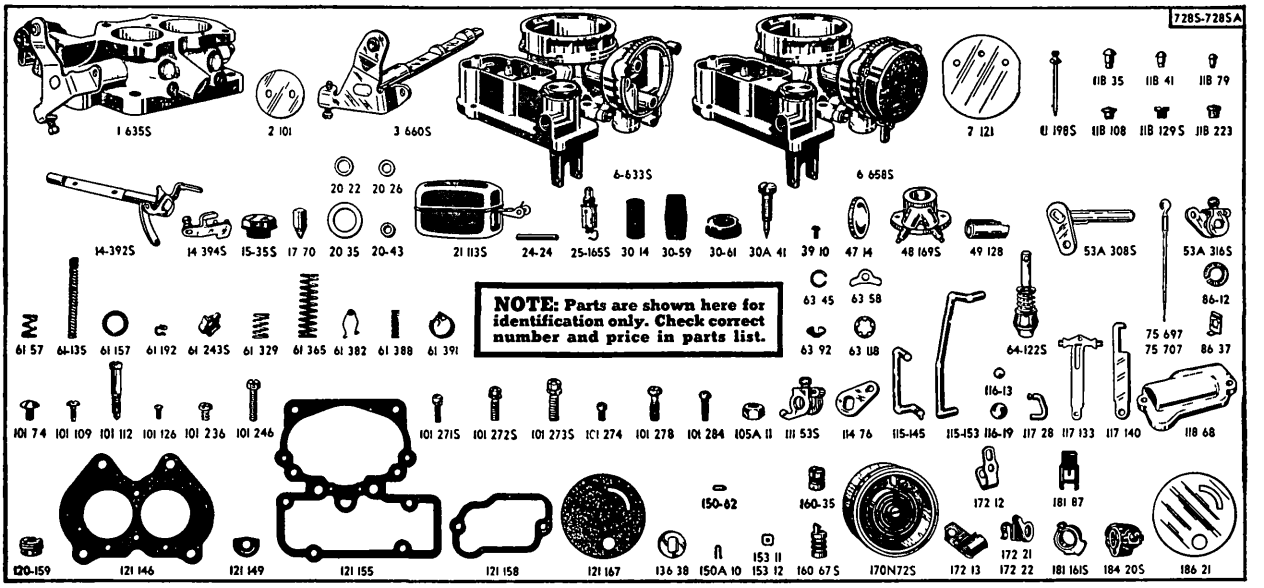


Figure 5
Unloader Adjustment



Packard 8—1949-1950—Carbureters 728S-728SA

WHEN SERVICING, USE REPAIR PACKAGE No 1524A (728S), No 1525A (728SA), GASKET ASSORTMENT No. 196

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

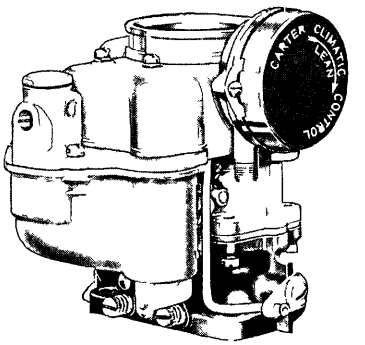
Part No.	PART NAME	
1-635S	Body flange assembly	
1A-39	Flange gasket	
2-101	Throttle valve	(2)
3-660S	Throttle shaft and lever assembly	
6-633S	Air horn and piston housing assembly (Sup by 6-687S)	
6 658S	Air horn assembly (Sup by 6-688S)	
6-687S	Air horn and piston housing assembly	
6-688S	Air horn assembly	
7-121	Choke valve	
11-198S	LOW SPEED JET ASSEMBLY	(2)
11B-12	Rivet plug	
11B-35	Rivet plug	(3)
11B-41	Rivet plug	(3)
11B-79	Rivet plug	
11B-108	IDLE PORT RIVET PLUG	(2)
11B-129S	Plug assembly (early production)	
11B-223	NOZZLE RIVET PLUG	(2)
14-392S	Choke piston lever, link and shaft assembly	
14-394S	Choke trip lever and pin assembly	
15-35S	Strainer nut assembly	
17-70	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	
20 26	Gasket	
20 35	BOWL STRAINER GASKET	
20-43	Piston housing gasket	
21-113S	Float and lever assembly	
24 24	Float lever pin	
25 165S	Needle and seat assembly (Sup by 25-186S)	
25-186S	NEEDLE AND SEAT ASSEMBLY	
30-14	BOWL COVER STRAINER	
30-59	STRAINER	
30-61	Switch strainer	
30A-41	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
47-14	Choke cylinder welsh plug	
48-169S	Pump jet and housing assembly	
49-128	Switch plunger	
53A 308S	Pump operating lever and countershaft assembly	
53A-316S	Pump arm and screw assembly	
61-57	Idle adjustment screw lock spring	(2)
61-135	VACUUM PISTON SPRING	
61 157	Plunger spring	
61-192	Needle pull clip	
61-243S	Switch contact spring and washer assembly	
61-329	Pump spring (upper)	
61-365	PUMP SPRING (LOWER)	
61-382	METERING ROD SPRING	
61-388	Switch return spring	
61-391	Fast idle cam spring	
63-45	PUMP CHECK BALL RETAINER RING	
63-58	Coil housing retainer	(3)
63-92	Pump spring retainer	
63-118	Throttle shaft retaining ring	
64-122S	PLUNGER, ROD, SPRING AND RETAINER ASSEMBLY	
75-679	METERING ROD—STANDARD— 0665"- 0665" to 064"- 043" (728S)	(2)
75-707	METERING ROD—STANDARD— 0665' - 0665" to 064"- 056" (728SA)	(2)

Part No.	PART NAME	
75-709	Metering rod—1 size lean (728S)	(2)
75-710	Metering rod—2 sizes lean (728S)	(2)
75-721	Metering rod—1 size lean (728SA)	(2)
75-722	Metering rod—2 sizes lean (728SA)	(2)
86-12	Flange stud lock washer	(4)
86-37	Terminal lock washer	(2)
101-74	Throttle shaft arm attaching screw	
101-109	Switch terminal screw	(2)
101-112	Terminal cap attaching screw	
101-126	Throttle valve attaching screw	(4)
101-236	Metering rod arm clamp screw (Sup by 101-293)	(2)
101-246	Throttle lever adjustment screw	
101-271S	Dust cover attaching screw and washer assembly	(2)
101-272S	Air horn attaching screw and washer assembly	(8)
101-273S	Body flange attaching screw and washer assembly	(4)
101-274	Coil housing attaching screw	(3)
101-278	Pump jet housing attaching screw	
101-284	Piston housing attaching screw	(3)
101-293	Metering rod arm clamp screw	(2)
105A-11	Flange stud nut	(4)
111-53S	Metering rod arm and screw assembly	
114-76	THROTTLE SHAFT ARM	
115-145	Choke connector rod	
115-153	THROTTLE CONNECTOR ROD	
116-13	PUMP INTAKE CHECK BALL	
116-19	Switch ball	
117-28	Pump arm link	
117-133	Vacumeter piston link	
117 140	Fast Idle link	
118-68	Dust cover	
120-159	METERING ROD JET	(2)
121-146	BODY FLANGE GASKET	
121-149	Pump jet gasket (Sup by 121-241)	
121-155	AIR HORN GASKET	
121-158	DUST COVER GASKET	
121-167	COIL HOUSING GASKET	
121-241	PUMP JET HOUSING GASKET	
136-38	Throttle shaft washer	
150-62	Choke piston pin	
150A-10	Pin spring	
153-11	Switch contact spring shim (018')	(3)
153-12	Switch contact spring shim (006")	(2)
160-35	Choke piston	
160-67S	Vacuum piston and pin assembly	
170N-72S	Thermostatic coil and housing assembly	
172-12	Terminal cap hold down clip	
172-13	Cable clip	
172-21	Throttle connector rod retainer	
172-22	THROTTLE AND CHOKE CONNECTOR ROD RETAINER	(2)
181-87	Switch guide block	
181-161S	Fast idle cam assembly	
184-20S	Terminal cap assembly	
186-21	Baffle plate	
192-11U	Carter starter switch unit	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

CARTER CARBURETOR

DIVISION OF acf INDUSTRIES INCORPORATED
ST LOUIS, MO, U S A



Casting No 561 on Face of Flange

PACKARD STANDARD EIGHT

MODELS 2201-2211

1948-1949

MODEL 2301

1949-1950

WDO Dual Down-Draft Climatic® Control Carbureters—**Models 644S-644SA**

CARBURETER SPECIFICATIONS

For Packard (Std) 8 Cyl Eng 3½" Bore, 3¾" Stroke

Dimensions Flange size 1¼ inch dual 4 bolt type
Primary venturi 11/32 inch
Secondary venturi 21/32 inch
Main venturi, 1⅛ inch

Float Level Distance from float bowl cover when needle is seated to be 5/32 inch (Use gauge No T109 154)

Vents Outside No 10 drill—four holes Inside none

Gasoline Intake Square vertical needle Size No 38 drill hole in needle seat

Low Speed Jet Tube Jet size No 70 drill (early production) No 69 drill (late production)
By pass size No 52 drill
Economizer size No 50 drill
Idle bleed size No 54 drill

Idle Ports Upper port slot type length 180 inch width 030 inch
Opening 127 to 133 inch above upper edge of valve with valve closed tight
Lower Port (For Idle Adjustment Screw) Size 0615 to 0655 inch diameter

Set Idle Adjustment Screw ⅝ to 1⅛ turns open For richer mixture turn screw out Do not attempt to idle engine below 350 r p m

Main Nozzle In primary venturi angle 45° Closed tip
Inside diameter No 30 drill
Upper hole 028 inch diameter on 45° angle
Lower hole 0635 inch diameter on 60° angle

Metering Rod (Vacumeter Type) Economy step 064 inch diameter
Middle step tapers to 060 inch diameter
Power step 045 inch diameter
Length of rod 2 59/64 inches

Metering Rod Jet 0846 inch diameter

Metering Rod Setting Use gauge part No T109 113 (2 280 inches)

Accelerating Pump High pressure type (spring operated lever)
Pump discharge jets (twin) No 70 drill
Intake ball check size No 40 drill
Discharge (needle seat) size No 50 drill
Outside relief to pump jet none

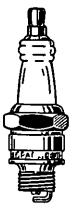
Pump Adjustment 14/64" plunger travel (full throttle position) Use gauge T109 117S

Choke Carter Climatic® Control set at index Butterfly type, offset valve Choke heat suction hole in body size No 37 (104") drill

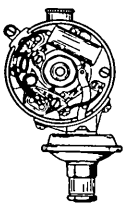
Vacuum Spark Port 103 to 105 inch diameter Top of port 060 inch above valve

Motor Tune-Up—Be Accurate!

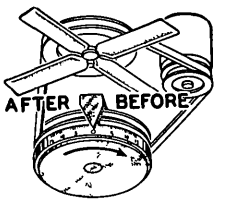
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



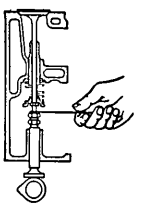
Spark Plug Gap
028"
± 0025"



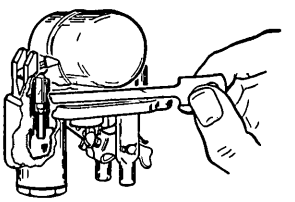
Breaker Point Setting
0125" to 0175"



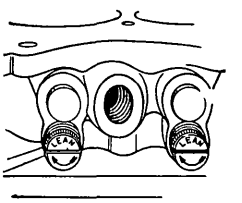
Ignition Timing
Breaker Points to Open
6° B T D. C
Plus 0°, Minus 1½°



Valve Setting
Intake 007"
Exhaust 010"



Float Setting
5/32"
(Use Gauge T109-154)



Idle Adjustment Screw Setting
⅝ to 1⅛
Turns Open

CARBURETER ADJUSTMENTS

PUMP ADJUSTMENT With pump connector link in inner hole and throttle adjustment screw backed out, pump plunger should travel 14/64" from closed to wide open throttle position Measure pump travel by placing gauge T109-117S on raised portion of bowl cover around the plunger shaft Projecting portion of indicator should be placed on top surface of connector link where it extends through the plunger shaft The difference between readings at wide open and closed throttle positions should be "14" (14/64") Adjust by bending throttle connector rod at lower angle

METERING ROD ADJUSTMENT. Must be made when reassembling carbureter or when leaner than standard rods are installed Do not disturb pump adjustment Procedure is as follows (a) Back out throttle lever adjustment screw until throttle valves seat Insert one metering rod gauge T109-113 in place of metering rod Be sure gauge seats in jet (b) Install metering rod pin and pin spring in vacuum piston and link assembly (c) Press lightly on top of vacuum piston ink until lip contacts tongue on anti-percolator arm There should now be less than 005" clearance between metering rod pin and shoulder in notch of gauge with throttle valves seated

Adjust by bending tongue on pump arm Remove gauge and metering rod pin and install metering rods, discs, spring, and metering rod pin, and hook spring to metering rod Vacuum piston and link must not bind or drag in any position

ANTI-PERCOLATOR ADJUSTMENT After adjusting pump and metering rods, and with throttle valves seated, insert 015" flat feeler gauge T109-72 between anti-percolator stems and lips on anti-percolator arm Center of indicator lines must be flush with top of anti-percolator plug Adjust by bending lips, be sure both valves are adjusted evenly

UNLOADER ADJUSTMENT With throttle wide open, distance between upper edge of choke valve and inner wall of air horn should be 11/64" (gauge T109-166) Adjust by bending lip on fast idle connector link When unloader is adjusted properly with throttle valve wide open move choke valve to wide open position and choke valve will lock in open position

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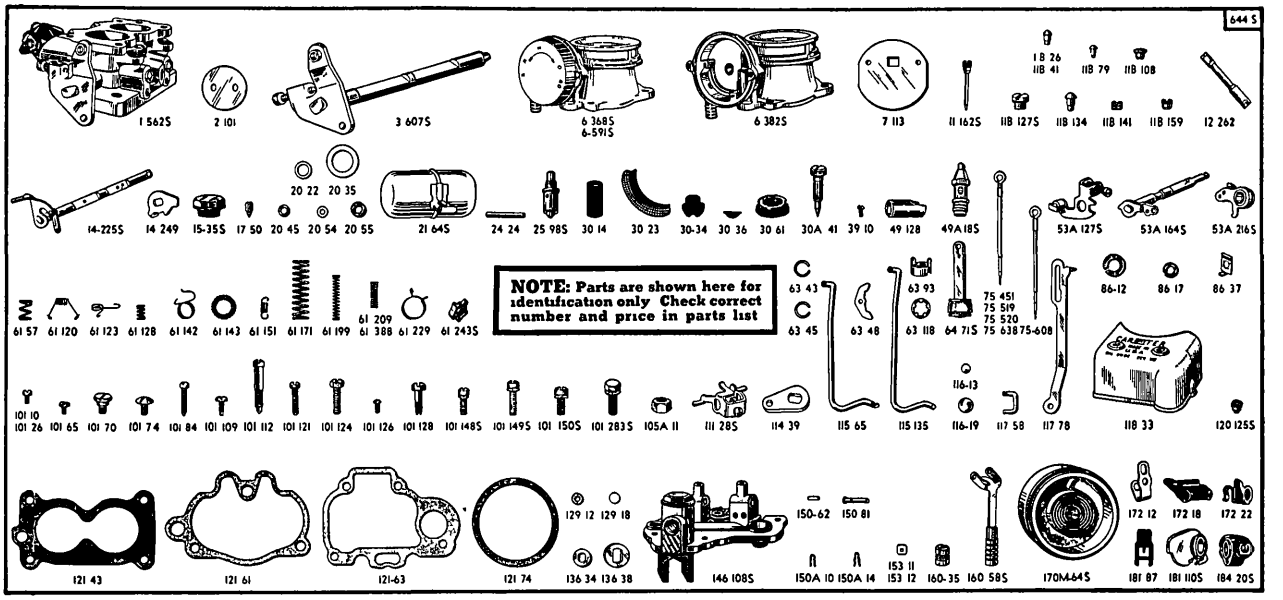
CARBURETER
TRADE MARK REG U S PAT OFF
MARCA REGISTRADA

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FAST IDLE ADJUSTMENT: Hold choke valve tightly closed and adjust fast idle arm screw until there is .020" (T109-29) clearance between edge of throttle valve and bore of carbureter, side opposite idle port

FLANGE ASSEMBLY: Assemble 1-562S in the following manner in order to center throttle valves properly and eliminate excessive endplay in the throttle shaft. Install throttle shaft and lever assembly and place throttle shaft retaining ring firmly on stub of shaft with prongs extended outward. Take out all endplay by pressing retaining ring on shaft as far as possible. Then install throttle valves with "c" in circle toward the idle port when viewed from the manifold side. To center valves tap lightly holding in place with fingers while tightening screws

STARTER SWITCH: The Carter starter switch must be qualified with Carter protractor gauge T109-155S. Switch must make contact between 30° and 45° throttle opening. When qualifying the starter switch, do not use more than three 153-11 (.018" shim) and two 153-12 (.006" shim) and not less than one 153-11 shim



Packard—1948-1950—Carbureters Nos. 644S-644SA

WHEN SERVICING, USE GASKET ASSORTMENT No. 156, REPAIR PACKAGE No. 1376C

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-562S	Body flange and switch assembly	
1A 39	Flange gasket	
2-101	Throttle valve	(2)
3-607S	Throttle shaft and lever assembly	
6-368S	Air horn and Climatic® control assembly (Sup. by 6 591S)	
6-382S	Air horn and pump jet assembly	
6-591S	Air horn and Climatic® control assembly	
7-113	Choke valve	
11-162S	LOW SPEED JET ASSEMBLY	(2)
11B 26	Body flange passage plug	(2)
11B-41	Pump discharge passage plug	(2)
11B-79	Rivet passage plug	(4)
11B-108	IDLE PORT PASSAGE PLUG	(2)
11B-127S	Nozzle passage plug assembly	(2)
11B-134	Rivet passage plug	(2)
11B-141	Nozzle retainer plug	(2)
11B-159	BY PASS BLEEDER SCREW PLUG	(2)
12 262	Nozzle	(2)
14-225S	Choke piston lever, link and shaft assembly	
14-249	Choke trip lever	
15-35S	Strainer nut assembly	
17-50	PUMP CHECK NEEDLE	
20 22	Needle seat gasket	(3)
20-35	BOWL STRAINER GASKET	
20-45	NOZZLE GASKET	(2)
20-54	Metering rod jet gasket	(2)
20-55	IDLE PASSAGE GASKET	(3)
21-64S	Float and lever assembly	
24 24	Float lever pin	
25-98S	NEEDLE AND SEAT ASSEMBLY	
30-14	Bowl cover strainer	
30-23	PISTON HOUSING STRAINER	
30 34	PUMP STRAINER	
30-36	Switch strainer (Sup. by 30 61)	
30 61	SWITCH STRAINER	
30A-41	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
49-128	Switch plunger	
49A-18S	Anti percolator valve plug assembly	(2)
53A-127S	Fast idle arm pin and screw assembly	
53A-164S	Pump operating lever and countershaft assembly	
53A-216S	Pump arm and collar assembly	
61-57	Idle adjustment screw spring	(2)
61-120	Metering rod spring	
61-123	Connector link spring	
61-128	Connector rod spring (Use with 115 65)	
61-142	Fast idle arm spring	
61-143	Plunger spring	
61-151	Pump arm spring	
61-171	Pump spring	
61-199	VACUUM PISTON SPRING	
61-209	Switch return spring (Sup. by 61 388)	
61 229	Fast idle cam spring	
61-243S	Switch contact spring and washer assembly	
61-388	Switch return spring	
63-43	Switch strainer retainer ring (Use with 30 36)	
63-45	Check ball retainer ring	
63 48	Thermostatic coil housing retainer	(2)
63-93	Spring retainer (Use with 115 65)	
63-118	THROTTLE SHAFT RETAINING RING	
64-71S	PUMP PLUNGER AND ROD ASSEMBLY (Identify by shaft No. 49 127)	

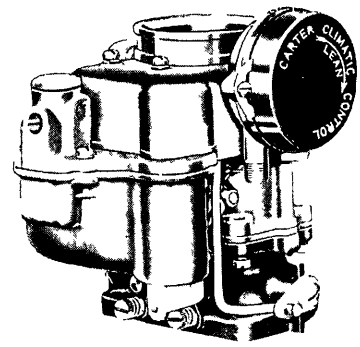
Part No	PART NAME	
75-519	Metering rod—1 size lean—.065"-.065" to .062", .052'	(2)
75-520	Metering rod—2 sizes lean—.066" .066" to .0635" .0535"	(2)
75-638	METERING ROD—STANDARD—.064"-.064 to .060"-.045"	(2)
86-12	Flange stud lock washer	
86-17	Body flange lock washer (Sup. by 101 283S)	
86-37	Terminal lock washer	(2)
101-10	Anti percolator arm clamp screw	
101-26	Coil housing attaching screw	(2)
101 65	Choke shaft attaching screw	
101 70	Fast idle arm attaching screw	
101-74	Throttle shaft arm attaching screw	
101-84	Fast idle adjustment screw	
101-109	Switch terminal screw	(2)
101-112	Terminal cap attaching screw	
101-121	Throttle lever adjustment screw	
101-124	Body flange attaching screw (Sup. by 101 283S)	
101-126	THROTTLE VALVE ATTACHING SCREW	(4)
101-128	Air horn attaching screw—special	
101-148S	Bowl cover attaching screw and washer assembly	(6)
101-149S	Body flange attaching screw and washer assembly	(3)
101-150S	Air horn attaching screw and washer assembly	(2)
101-283S	Body flange attaching screw and washer assembly	
105A-11	Flange stud nut	
111-28S	Anti percolator arm and screw assembly	
114-39	Throttle shaft arm	
115-65	Throttle connector rod (Sup. by 115 135)	
115-135	THROTTLE CONNECTOR ROD	
116-13	BALL	
116-19	Ball (Switch)	
117-58	Pump arm link	
117-78	Fast idle connector link	
118-33	Dust cover	
120-125S	METERING ROD JET ASSEMBLY	(2)
121-43	BODY FLANGE GASKET	
121-61	AIR HORN GASKET	
121-63	BOWL COVER GASKET	
121-74	COIL HOUSING GASKET	
129-12	Metering rod disk (Sup. by 129 18)	
129-18	Metering rod disk	(2)
136-34	Choke shaft washer	
136-38	Throttle shaft washer	
146-108S	Bowl cover assembly	
150-62	Piston pin	
150-81	Metering rod pin	
150A-10	PIN SPRING	(4)
150A-14	PIN SPRING (COUNTERSHAFT)	
153-11	Contact spring shim (.018")—(Switch)	(3)
153-12	Contact spring shim (.006")—(Switch)	(2)
160-35	Choke piston	
160-58S	Vacuum piston and link assembly	
170M-64S	Thermostatic coil and housing assembly	
170M-64SU	Unitized package (Consists of 1—170M 64S 3—63 48 3—101 26 1—121 74)	
172 12	Hold down clip (Terminal cap)	
172-18	Cable clip	
172-22	THROTTLE CONNECTOR ROD RETAINER	
181-87	Guide block (Switch)	
181-110S	Fast idle cam assembly	
184-20S	Terminal cap assembly	
192-11U	Carter starter switch unit	

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

MOTOR SERIAL NUMBERS

1948-49—G-400015 and up

1949-50—H-400016 and up



Cut shows 643S Carbureter

Casting No 377 on Face of Flange (643S) No 561 (643SA)

PACKARD SUPER EIGHT

MODELS 2202-2222-2232

1948-49

MODELS 2302-2322-2332

1949-50

INDUSTRIAL ENGINE MODEL I-D-327

WDO Dual Down-Draft Climatic® Control Carbs — **Models 643S-643SA** (Super 8)

CARBURETER SPECIFICATIONS

For Packard (Super) 8 Cyl Eng 3½" Bore 4¼" Stroke

Dimensions Flange size 1¼ inch dual 4 bolt type
Primary venturi 11/32 inch
Secondary venturi 19/32 inch
Main venturi 1 7/32 inch

Float Level Distance from float bowl cover when needle is seated to be 5/32 inch (Use gauge No T109 154)

Vents Outside No 10 drill—four holes Inside none

Gasoline Intake Square vertical needle Size No 38 drill hole in needle seat

Low Speed Jet Tube Jet size No 70 drill
By pass size No 52 drill
Economizer size No 50 drill
Idle bleed size No 52 drill

Idle Ports Upper port slot type length 180 inch width 030 inch
Opening 127 to 133 inch above upper edge of valve with valve closed tight
Lower Port (For Idle Adjustment Screw) Size 0615 to 0655 inch diameter

Set Idle Adjustment Screw ¾ to 1¼ turns open For richer mixture turn screw out Do not attempt to idle engine below 350 r p m

Main Nozzle In primary venturi angle 45° Closed tip
Inside diameter No 30 drill
Upper hole 0292 inch diameter on 45° angle
Lower hole 0635 inch diameter on 60° angle

Metering Rod (Vacumeter Type) Economy step 0655 inch diameter
Middle step tapers to 0585 inch diameter
Power step 051 inch diameter
Length of rod 2 59/64 inches

Metering Rod Jet 2 3 mm (09055 inch) diameter

Metering Rod Setting Use gauge part No T109 113 (2 280 inches)

Accelerating Pump High pressure type (spring operated lever)
Pump discharge jets (twin) size No 72 drill
Intake ball check size No 40 drill
Discharge (needle seat) size No 50 drill
Outside relief to pump jet none

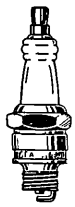
Pump Adjustment 28/64" plunger travel (full throttle position) Use gauge T109 117S

Choke Carter Climatic® Control set at index Butterfly type offset valve Choke heat suction hole in body size No 37 (104) drill

Vacuum Spark Port (643S) 054 056 inch diameter (643SA) 103 to 105 inch diameter Top of port (643S) 050 to 054 inch above valve (643SA) 060 inch above valve

Motor Tune-Up—Be Accurate!

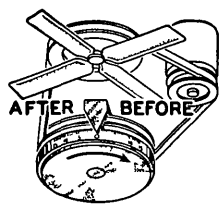
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



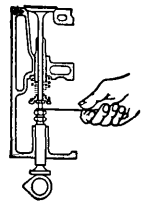
Spark Plug Gap
028"
± 0025"



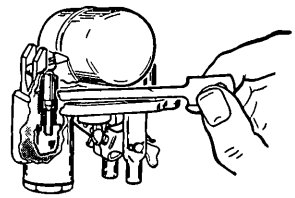
Breaker Point Setting
0125" to 0175"



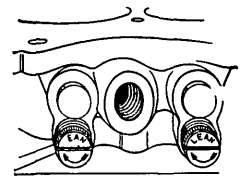
Ignition Timing
Breaker Points to Open
6° B T D C
Plus 0° Minus 1½°



Valve Setting
Intake 007"
Exhaust 010"



Float Setting
5/32"
(Use Gauge T109 154)



Idle Adjustment Screw Setting
¾ to 1¼
Turns Open

CARBURETER ADJUSTMENTS

PUMP ADJUSTMENT With pump connector link in place and throttle adjustment screw backed out, pump plunger should travel 28/64 from closed to wide open throttle position Measure pump travel by placing gauge T109-117S on raised portion of bowl cover around the plunger shaft Projecting portion of indicator should be placed on top surface of connector link where it extends through the plunger shaft The difference between readings at wide open and closed throttle positions should be 28 (28/64) Adjust by bending throttle connector rod at lower angle

METERING ROD ADJUSTMENT Must be made when reassembling carbureter or when leaner than standard rods are installed Do not disturb pump adjustment Procedure is as follows (a) Back out throttle lever adjustment screw until throttle valves seat Insert one metering rod gauge T109-113 in place of metering rod Be sure gauge seats in jet (b) Install metering rod pin and pin spring in vacuum piston and link assembly (c) Press lightly on top of vacuum piston link until lip contacts tongue on anti-percolator arm There should now be less than 005" clearance between metering rod pin and shoulder in notch of gauge with throttle valves seated

Adjust by bending tongue on pump arm Remove gauge and metering rod pin and install metering rods, discs, spring and metering rod pin and hook spring to metering rod Vacuum piston and link must not bind or drag in any position

ANTI PERCOLATOR ADJUSTMENT After adjusting pump and metering rods and with throttle valves seated, insert 015 flat feeler gauge T109 72 between anti-percolator stems and lips on anti-percolator arm Center of indicator lines must be flush with top of anti-percolator plug Adjust by bending lips be sure both valves are adjusted evenly

UNLOADER ADJUSTMENT With throttle wide open distance between upper edge of choke valve and inner wall of air horn should be 11/64 (gauge T109-166) Adjust by bending lip on fast idle connector link When unloader is adjusted properly with throttle valve wide open move choke valve to wide open position and choke valve will lock in open position

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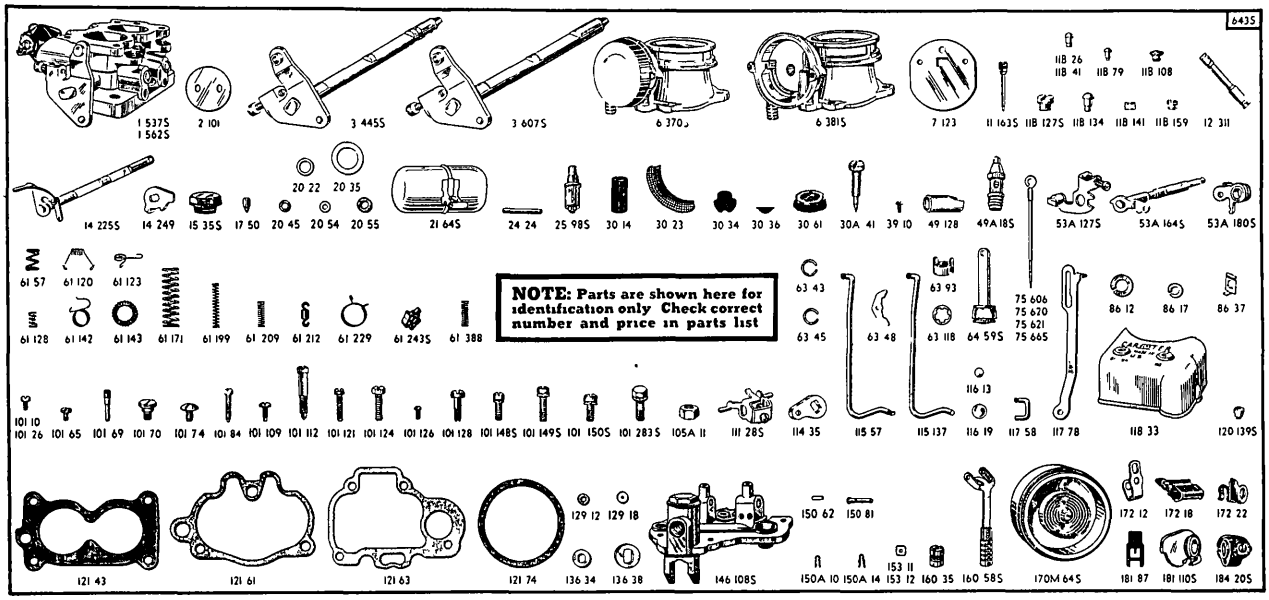
CARBURETER
TRADE MARK REG U S PAT OFF
MARCA REGISTRADA

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FAST IDLE ADJUSTMENT: Hold choke valve tightly closed and adjust fast idle arm screw until there is .026" (T109-189) clearance between edge of throttle valve and bore of carbureter, side opposite idle port.

FLANGE ASSEMBLY: Assemble 1-562S in the following manner in order to center throttle valves properly and eliminate excessive endplay in the throttle shaft Install throttle shaft and lever assembly and place throttle shaft retaining ring firmly on stub of shaft with prongs extended outward Take out all endplay by pressing retaining ring on shaft as far as possible Then install throttle valves with c" in circle toward the idle port when viewed from the manifold side To center valves tap lightly holding in place with fingers while tightening screws.

STARTER SWITCH: The Carter starter switch must be qualified with Carter protractor gauge T109-155S Switch must make contact between 30° and 45° throttle opening When qualifying the starter switch, do not use more than three 153-11 (018" shim) and two 153-12 (006" shim) and not less than one 153-11 shim



Packard—1948-1950—Carbureters Nos. 643S-643SA

WHEN SERVICING, USE GASKET ASSORTMENT No 156; REPAIR PACKAGE No. 1375B
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME
1-537S	Body flange and switch assembly (Sup by 1 562S)
1-562S	Body flange and switch assembly
1A-39	Flange gasket
2-101	Throttle valve (2)
3-445S	Throttle shaft and lever assembly (Use with 1 537S)
3-607S	Throttle shaft and lever assembly (Use with 1 562S)
6-370S	Air horn and Climatic® control assembly
6-381S	Air horn and pump jet assembly
7-123	Choke Valve
11-163S	LOW SPEED JET ASSEMBLY (2)
11B-26	Body flange passage plug (2)
11B-41	Pump discharge passage plug (2)
11B-79	Rivet passage plug (4)
11B-108	IDLE PORT PASSAGE PLUG (2)
11B-127S	Nozzle passage plug assembly (2)
11B-134	Rivet passage plug (2)
11B-141	Nozzle retainer plug (2)
11B-159	BY PASS BLEEDER SCREW PLUG (2)
12-311	Nozzle (2)
14-225S	Choke piston lever, link and shaft assembly
14-249	Choke trip lever
15-35S	Strainer nut assembly
17-50	PUMP CHECK NEEDLE
20-22	Needle seat gasket (3)
20-35	BOWL STRAINER GASKET
20-45	NOZZLE GASKET (2)
20-54	Metering rod jet gasket (2)
20-55	IDLE PASSAGE GASKET (3)
21 64S	Float and lever assembly
24-24	Float lever pin
25-98S	NEEDLE AND SEAT ASSEMBLY
30-14	Bowl cover strainer
30-23	PISTON HOUSING STRAINER
30-34	PUMP STRAINER
30-36	Switch strainer (Sup by 30 61)
30-61	SWITCH STRAINER
30A-41	Idle adjustment screw (2)
39-10	Choke valve attaching screw (2)
49-128	Switch plunger
49A-18S	Anti percolator valve plug assembly (2)
53A-127S	Fast idle arm pin and screw assembly
53A-164S	Pump operating lever and countershaft assembly
53A-180S	Pump arm and collar assembly
61-57	Idle adjustment screw spring (2)
61-120	Metering rod spring
61-123	Connector link spring
61-128	Connector rod spring (Use with 115 57)
61-142	Fast idle arm spring
61-143	Plunger spring
61-171	Pump spring
61-199	VACUUM PISTON SPRING
61-209	Switch return spring (Sup by 61 388)
61-212	Pump arm spring
61-229	Fast idle cam spring
61-243S	Switch contact spring and washer assembly
61-388	Switch return spring
63-43	Switch strainer retainer ring (Use with 30 36)
63-45	Check ball retainer ring
63-48	Thermostatic coil housing retainer (2)
63-93	Spring retainer (Use with 115 57)
63-118	Throttle shaft retaining ring
64-59S	PUMP PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49 119)
75-606	METERING ROD—STANDARD— 0655" 0655" to 0585"- 051" (2)

Part No.	PART NAME
75-620	Metering rod—1 size lean— 067"- 067" to 0605"- 0535" (2)
75-621	Metering rod—2 sizes lean— 0685" 0685" to 0625"- 056" (2)
75-665	Metering rod (Industrial only)— 0655"- 0655" to 0585" 042"
86-12	Flange stud lock washer
86-17	Body flange lock washer (Sup by 101 283S)
86-37	Terminal lock washer (2)
101-10	Anti percolator arm clamp screw
101-26	Coil housing attaching screw (2)
101-65	Choke shaft attaching screw
101-69	Throttle centering screw (Use with 1 537S)
101-70	Fast idle arm attaching screw
101-74	Throttle shaft arm attaching screw
101-84	Fast idle adjustment screw
101-109	Switch terminal screw (2)
101-112	Terminal cap attaching screw
101-121	Throttle lever adjustment screw
101-124	Body flange attaching screw (Sup by 101 283S)
101-126	THROTTLE VALVE ATTACHING SCREW (4)
101-128	Air horn attaching screw—special
101-148S	Bowl cover attaching screw and washer assembly (6)
101-149S	Body flange attaching screw and washer assembly (3)
101-150S	Air horn attaching screw and washer assembly (2)
101-283S	Body flange attaching screw and washer assembly
105A-11	Flange stud nut
111-28S	Anti percolator arm and screw assembly
114-35	Throttle shaft arm
115-57	Throttle connector rod (Sup by 115-137)
115-137	THROTTLE CONNECTOR ROD
116-13	BALL
116-19	Ball (Switch)
117-58	Pump arm link
117-78	Fast idle connector link
118-33	Dust cover
120-139S	METERING ROD JET ASSEMBLY (2)
121-43	BODY FLANGE GASKET
121-61	AIR HORN GASKET
121-63	BOWL COVER GASKET
121-74	COIL HOUSING GASKET
129-12	Metering rod disk (Sup by 129-18)
129-18	Metering rod disk (2)
136-34	Choke shaft washer
136-38	Throttle shaft washer
146-108S	Bowl cover assembly
150-62	Piston pin
150-81	Metering rod pin
150A-10	PIN SPRING (4)
150A-14	PIN SPRING (COUNTERSHAFT)
153-11	Contact spring shim (018")—(Switch) (3)
153-12	Contact spring shim (006")—(Switch) (2)
160-35	Choke piston
160 58S	Vacuum piston and link assembly
170M-64S	Thermostatic coil and housing assembly
170M-64SU	Unitized package (Consists of 1—170M 64S 3—63 48 3—101 26 1—121 74)
172-12	Hold down clip (Terminal cap)
172-18	Cable clip
172-22	THROTTLE CONNECTOR ROD RETAINER
181-87	Guide block (Switch)
181-110S	Fast idle cam assembly
184-20S	Terminal cap assembly
192-11U	Carter starter switch unit

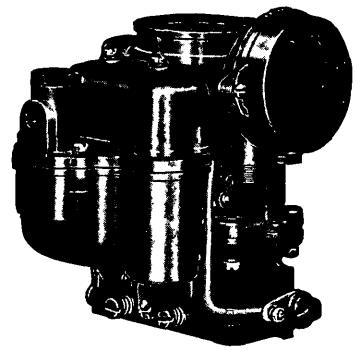
NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

Form 4620S

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST LOUIS, MO, U S A

PACKARD 531S-531SA
October 1941
Revised December, 1952

MOTOR SERIAL NUMBERS
1942
"160"—E500001 and higher
"180"—CE500001 and higher
1946-1947
F-500001 and higher
1948-1949
G-600015 and higher
1949-1950
H-600015 and higher



PACKARD SUPER EIGHT
MODELS "160" & "180"
1942-1947
CUSTOM EIGHT
MODELS "2206-2226-2233"
1948-1949
MODELS "2306-2333"
1949-1950

Casting Number on Face of Flange: 531S—377; 531SA—564.

WDO Dual Down-Draft Climatic® Control Carbureters—**Models 531S-531SA**

CARBURETER SPECIFICATIONS

For Packard 8 Cylinder Engine· 3½ Inch Bore, 4⅝ Inch Stroke

Dimensions Flange size 1¼ inch dual 4 bolt type
Primary venturi 11/32 inch
Secondary venturi 19/32 inch
Main venturi 1-7/32 inch

Float Level· Distance from float bowl cover when needle is seated to be 5/32 inch (Use gauge No T109-154)

Vents Outside No 10 drill—four holes Inside none

Gasoline Intake Square vertical needle Size No 38 drill hole in needle seat

Low Speed Jet Tube· Jet size No 70 drill
By pass size No 52 drill (Early production)
By pass size No 53 drill (Later production)
Economizer, size No 50 drill
Idle bleed size No 52 drill

Idle Ports Upper port slot type length 190 inch width 030 inch
Opening 152 to 158 inch above upper edge of valve with valve closed tight
Lower Port (For Idle Adjustment Screw) Size 0615 to 0655 inch diameter

Set Idle Adjustment Screw 1½ to 2 turns open For richer mixture turn screw out Do not attempt to idle engine below 350 r p m

Main Nozzle In primary venturi angle 45° Closed tip
Inside diameter No 30 drill
Upper hole 037 inch diameter on 45° angle
Lower hole 071 inch diameter on 60° angle

Metering Rod (Vacumeter Type): (531S) Economy step, 064 inch diameter
Middle step tapers to 057 inch diameter
Power step 054 inch diameter
Length of rod 2-59/64 inches
(531SA) Economy step 0665 inch diameter
Middle step tapers to 060 inch diameter
Power step, 056 inch diameter
Length of rod 2-59/64 inches

Metering Rod Jet 2 3 mm (09055 inch) diameter

Metering Rod Setting Use gauge part No T109 113 (2 280 inches)

Accelerating Pump High pressure type (spring operated lever)
Pump discharge jets (twin) size No 72 drill
Intake ball check size No 40 drill
Discharge (needle seat) size No 50 drill
Outside relief to pump jet none

Pump Adjustment: 26/64 inch plunger travel (full throttle position) short stroke Use gauge T109 117S

Choke: Carter Climatic® Control, set at index Butterfly type offset valve Choke heat suction hole in body size No 37 (104") drill

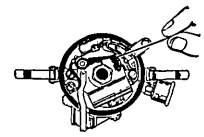
Vacuum Spark Port 054 to 056 inch diameter Top of port to be 047 to 057 inch above valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



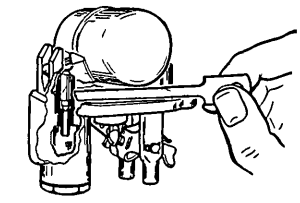
Spark Plug
Gap
028"
± 0025"



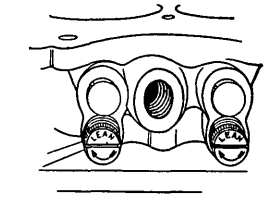
Breaker Point
Setting
0125" to 0175"



Breaker Points to Open
Standard Head: 4° B.T.D.C.
Plus 0°, Minus 1½° (Super Eight)
6° B T.D C. Plus 0°, Minus 1½°
(Custom Eight)



Float Setting
5/32"
(Use Gauge T109 154)



Idle Adjustment
Screw Setting
1½ to 2
Turns Open

BRIEF CARBURETER ADJUSTMENTS

PUMP ADJUSTMENT: With pump connector link in inner hole (short stroke) and throttle adjustment screw backed out to allow throttle valves to seat in bores of carbureter, pump plunger should travel 26/64" from closed to wide open throttle position Pump travel can be measured by placing gauge T109-117S on rim of bowl cover around the plunger shaft and measuring to top surface of connector link where it extends through the plunger shaft The difference in reading obtained at closed and wide open throttle position should be "26' (26/64" plunger travel)

Adjust by bending the throttle connector rod at lower angle

METERING ROD ADJUSTMENT: Should be made when reassembling carbureter or when leaner than standard rods are installed (Do not disturb pump adjustment) Correct setting of metering rods is important Procedure is as follows

A Insert one metering rod gauge T109-113 in place of metering rods Be sure gauge seats in metering rod jet
B Install metering rod pin and pin spring in vacuum piston and link assembly
C Press lightly on top of vacuum piston link until lip on link contacts lip on anti-percolator arm There should now be less than 005' clearance between metering rod pin and shoulder in notch of gauge
D Adjustment should be made by bending lip on anti-percolator arm (use tool T109-105)
E Remove gauge and metering rod pin and install metering rods, discs, spring, pin and pin spring, and hook spring to metering rods

ANTI-PERCOLATOR ADJUSTMENT Should be made after pump and metering rod adjustments Back out throttle lever adjusting screw so that throttle valves seat in bores of carbureter With throttle valve seated insert 015" feeler gauge (T109-72) between anti-percolator stem and lips on anti-percolator arm Then bend lips so that center of indicator lines are just flush with top of anti-percolator plug Care should be taken so there is an even adjustment made on both anti-percolator lips

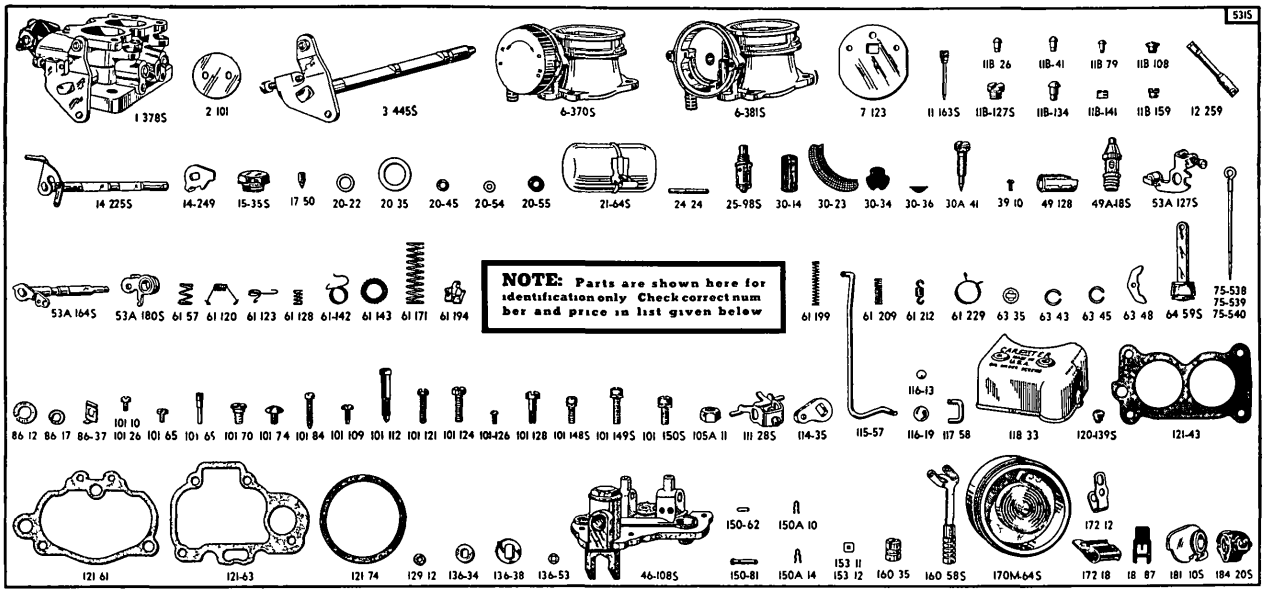
UNLOADER ADJUSTMENT With throttle wide open, distance between upper edge of choke valve and inner wall of air horn should be 11/64" (Use gauge T109-166) Adjustment can be made by bending lip on fast idle connector link With throttle wide open, push choke valve open Choke should lock within 5° of wide open position If it does not lock, recheck unloader adjustment Closing the throttle will

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release choke valve Choke trip lever is notched out for this setting

FAST IDLE ADJUSTMENT: Hold choke valve tightly closed and adjust fast idle arm screw to giv 023" to 028" opening between edge of throttle valve and bore of carbureter, side opposite port (Use gauge T109-189)

STARTER SWITCH Adjustment should be made with Carter tool No T109-155S, obtainable from your Carter distributor with complete instructions Switch must make contact between 30° and 45° throttle opening



Packard—1942-50—Carbureters Nos. 531S-531SA

WHEN SERVICING, USE GASKET ASSORTMENT No. 156, REPAIR PACKAGE No 1321D

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

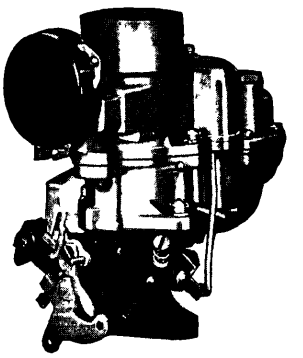
Part No.	PART NAME	
1-378S	Body flange and switch assembly (Sup by 1-563S)	
1-563S	Body flange and starter switch assembly	
1A 39	Flange gasket	
2-101	Throttle valve	(2)
3-445S	Throttle shaft and lever assembly (Use with 1-378S only)	
3-607S	Throttle shaft and lever assembly (Use with 1-563S only)	
6-370S	Air horn and Climatic ® control assembly	
6-381S	Air horn and pump jet assembly	
7-123	Choke valve	
11-163S	LOW SPEED JET ASSEMBLY	(2)
11B 26	Body flange rivet plug	(2)
11B-41	Pump discharge rivet plug	(2)
11B-79	Rivet plug	(4)
11B-108	Idle port rivet plug	(2)
11B-126	Nozzle passage plug (Sup by 11B-127S)	(2)
11B 127S	Nozzle passage plug assembly	(2)
11B 134	Rivet plug	(2)
11B-141	Nozzle retainer plug	(2)
11B-168	BY-PASS BLEEDER SCREW PLUG	(2)
12 259	Nozzle	(2)
14-225S	Choke piston lever, link and shaft assembly	
14 249	Choke trip lever	
15-35S	Strainer nut assembly	
17-50	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	
20-35	BOWL STRAINER GASKET	
20 45	NOZZLE GASKET (UPPER)	(2)
20-54	Metering rod jet gasket	(2)
20-55	IDLE PASSAGE GASKET	(3)
21-64S	Float and lever assembly	
24 24	Float lever pin	
25-98S	NEEDLE AND SEAT ASSEMBLY	
30-14	Bowl cover strainer gauze	
30-23	PISTON HOUSING STRAINER	
30 34	PUMP STRAINER	
30-36	Switch strainer (Sup by 30-61)	
30 61	SWITCH STRAINER	
30A-41	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
49-128	Switch plunger	
49A 18S	Anti-percolator valve plug assembly	(2)
53A-127S	Fast idle arm, pin and screw assembly	
53A-164S	Pump operating lever and countershaft assembly	
53A-180S	Pump arm and collar assembly	
61-57	Adjustment screw lock spring	(2)
61-120	Metering rod spring	
61-123	Connector link spring	
61-128	Connector rod spring (Use with 115-57)	
61-142	Fast idle arm spring	
61-143	Plunger spring	
61-171	Pump spring	
61-199	VACUUM PISTON SPRING	
61 209	Switch return spring (Sup by 61-388)	
61-212	Pump arm spring	
61-229	Fast idle cam spring	
61-243S	Switch contactor spring assembly	
61-388	Switch return spring	
63-43	Switch strainer retainer ring (Use with 30 36)	
63-45	Ball retainer ring	
63-48	Thermostat housing retainer	(2)
63-93	Spring retainer (Use with 115-137)	
63-118	Throttle shaft retaining ring	
64-59S	PUMP PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49-119)	

Part No	PART NAME	
75-538	Metering rod—standard (Sup by 75-616)	(2)
75-539	Metering rod—1 size lean (Sup by 75 639)	(2)
75-540	Metering rod—2 sizes lean (Sup by 75-640)	(2)
75-616	METERING ROD—STANDARD	(2)
75-639	Metering rod—1 size lean	(2)
75-640	Metering rod—2 sizes lean	(2)
86-12	Flange stud lock washer	(4)
86 17	Body flange lock washer (Sup by 86-56)	
86-37	Terminal lock washer	(2)
86-56	Body flange lock washer (Use with 101-124)	
101-10	Clamp screw	
101 26	Coil housing attaching screw	(2)
101 65	Choke shaft attaching screw	
101-69	Throttle centering screw (Use with 1-378S only)	
101-70	Fast idle arm attaching screw	
101-74	Throttle shaft arm attaching screw	
101-84	Fast idle adjustment screw	
101 109	Switch terminal screw	(2)
101-112	Terminal cap attaching screw	
101-121	Throttle lever adjustment screw	
101-124	Body flange attaching screw (Sup by 101-283S)	
101 126	THROTTLE VALVE ATTACHING SCREW	
101-128	Air horn attaching screw—special	
101-148S	Bowl cover screw and washer assembly	(6)
101-149S	Body flange screw and washer assembly	(3)
101-150S	Air horn screw and washer assembly	(2)
101-283S	Body flange attaching screw and washer assembly	
105A 11	Flange stud nut	(4)
111-28S	Anti-percolator arm and screw assembly	
114 35	Throttle shaft arm	
115 57	Throttle connector rod (Sup by 115-137)	
115 137	THROTTLE CONNECTOR ROD	
116-13	PUMP CHECK BALL	
116 19	Switch ball	
117-58	Pump arm link	
117 78	Fast idle connector link	
118-33	Dust cover	
120 139S	METERING ROD JET ASSEMBLY	(2)
121-43	BODY FLANGE GASKET	
121-61	AIR HORN GASKET	
121 63	BOWL COVER GASKET	
121 74	COIL HOUSING GASKET	
129 18	Metering rod disk	(2)
136 34	Choke shaft washer	
136 38	Throttle shaft washer	
146-108S	Bowl cover and strainer assembly	
150-62	Choke piston pin	
150 81	Metering rod pin	
150A-10	PIN SPRING	(4)
150A 14	COUNTERSHAFT PIN SPRING	
153-11	Switch contact spring shim (018')	
153-12	Switch contact spring shim (006)	
160-35	Choke piston	
160 58S	Vacuum piston and link assembly	
170M 64S	Thermostatic coil and housing assembly	
170M 64SU	Unitized package (Consists of 1—170M 64S 3—63-48, 3—101-26, 1—121-74)	
172-12	Terminal cap hold down clip	
172-18	Cable clip	
172-22	THROTTLE CONNECTOR ROD RETAINER (Use with 115-137)	
181 87	Switch guide block	
181 110S	Fast idle cam assembly	
184 20S	Terminal cap assembly	
192 11U	Carter starter switch unit	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

MOTOR SERIAL No.

1942—E1501 and higher
1946-47—F1501 and higher
1948-49—(Taxi) G1516 and higher
1949-50—(Taxi) H1516 and higher



Casting No. 317 on Face of Flange

PACKARD SIX

Model	Series	Year
"110"	"2000-2010-2020"	1942
"110"	"2100-2130"	1946-47
Taxi	"2220"	1948-50
Taxi	"2240"	1948-50
Taxi	"2320"	1948-50

WA1 Down-Draft Vacumeter Climatic® Control Carbureter—**Model 530S**

CARBURETER SPECIFICATIONS

For Packard Six Cylinder Engine: 3½ Inch Bore, 4¼ Inch Stroke

Dimensions: Flange size, 1¼ inch S.A.E.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 11/16 inch I. D
Main venturi, 1-5/16 inch I. D.

Float Level: Distance from seam of float (at free end) to tip on lower edge of float chamber cover, when needle is seated to be ⅜ inch

Vents: Outside, No 10 drill. Inside, none.

Gasoline Intake: Square vertical needle. Size No. 38 drill in needle seat

Low Speed Jet Tube: Jet size No. 65 drill
By-pass, size No 53 drill.
Economizer 073 inch diameter.
Idle bleed, size No. 50 drill

Idle Port: Slot type length .200 inch. Width 030 inch
Opening 158 to 162 inch above upper edge of valve with valve closed tight

Idle Screw Seat: No 46 drill

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture turn screw out Do not attempt to idle engine below 350 r p m

Main Nozzle: In primary venturi, angle 45°. Closed tip Inside diameter No. 30 drill
Upper hole: No. 68 drill on 45° angle.
Lower hole: No 45 drill on 60° angle.

Metering Rod (Vacumeter Type): Economy step, 076 inch diameter. Middle step tapers to .065 inch diameter Power step .040 inch diameter. Length 3-9/64 inches

Metering Rod Jet: .1015 inch diameter.

Metering Rod Setting: Use gauge, part No. T109-102 (2.468 inches).

Accelerating Pump: High pressure type (spring operated lever), with no seasonal adjustment
Discharge jet, size No. 72 drill
Intake ball check size No. 40 drill.
Discharge ball check, size No 32 drill.
Relief passage to outside size No 42 drill

Pump Adjustment: 16/64 inch plunger travel (full throttle position). Use gauge No. T109-117S

Choke: Carter Climatic® Control, set at index Butterfly type, offset valve. Choke heat suction hole, in body size No 37 (104 inch) drill

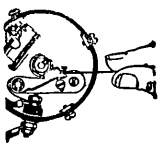
Vacuum Spark Port: 061 to .064 inch diameter. Bottom of port, 022 to 027 inch above valve

Motor Tune-Up—Be Accurate!

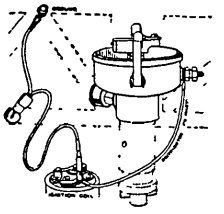
CAUTION Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter



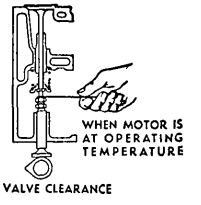
Spark Plug Gap 028" ± 0025"



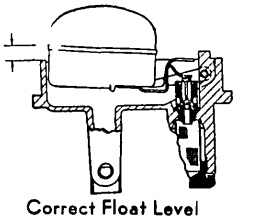
Set Breaker Points .018"-.022"



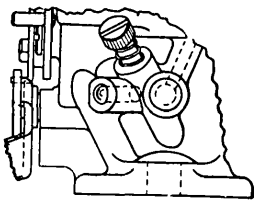
Use Timing Light Set Timing 4° (Plus 0°, Minus 1½°) B.T.D.C



Set Valves
Intake 007"
Exhaust 010"



Correct Float Level (Measure from machined surface of small projection to top of seam) ⅜ Inch



Idle Adjustment Screw Setting ½ to 1½ Turns Open

BRIEF CARBURETER ADJUSTMENTS

PUMP ADJUSTMENT: With throttle valve seated and connector link in place, pump plunger should travel 16/64" from closed to wide open position. Pump travel can be measured by using the universal pump travel gauge T109-117S, placing base of gauge on ridged portion of bowl cover so that indicator lip of gauge contacts top surface of connector link where it extends through plunger shaft. Hold gauge vertical Turn knurled nut of gauge until lip just contacts connector link. The difference between the numbers shown on gauge at wide open and closed throttle should be "16", (16/64' plunger travel.)

METERING ROD ADJUSTMENT: Correct setting of metering rod is important and must be made after pump adjustment Insert gauge (No T109-102) in place of metering rod, seating tapered end in metering rod jet Hold gauge vertical to insure seating With throttle valve seated, press down lightly on piston link directly over piston until lip on link contacts pin on pump arm. There should be less than 005" clearance between metering rod pin and shoulder in notch of gauge. Gauge must not drag on pin Adjustment can be made by bending lip on piston link. Remove gauge and install metering rod and disc. Connect metering rod and spring

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CARBURETER
TRADE MARK REG. U. S PAT. OFF.
MARCA REGISTRADA

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ANTI-PERCOLATOR ADJUSTMENT: Crack throttle valve .030" by placing gauge T109-29 between valve and bore of carbureter (side opposite port) Bend rocker arm (use tool T109-105) until there is a clearance of .005" to .015" between rocker arm and pump arm

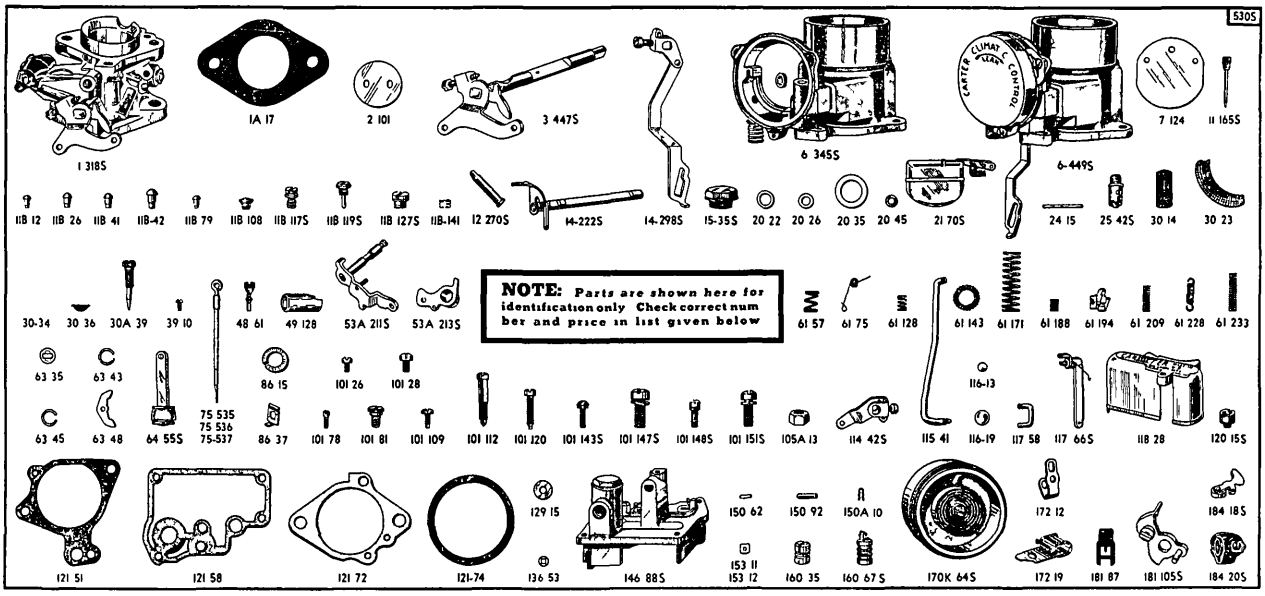
FAST IDLE ADJUSTMENT. With fast idle cam held in normal idle position, tighten throttle lever adjusting screw until it just seats against cam Hold throttle lever closed and pull cam back until first (or lower) step on cam is against (not on) set screw

There should now be 5/64" clearance between inside wall of air horn and lower edge of choke valve (Use tool T109-85) Adjustment can be made by bending at offset portion of fast idle link (Use tool T109-41)

UNLOADER ADJUSTMENT: With throttle valve wide open there should be 7/16" clearance between lower edge of choke valve and inner wall of air horn (Use tool T109-81) Adjustment should be made by bending cam on throttle lever (Use tool T109-41)

LOCK-OUT ADJUSTMENT: With throttle and choke valves wide open, choke should lock in wide open position Adjustment should be made by bending lip at lower end of fast idle link to give 1/32" clearance between lip and throttle lever lock, with throttle and choke valves held wide open (Use tool T109-105)

STARTER SWITCH ADJUSTMENT: Adjustment should be made with Carter tool T109-155S, obtainable from your Carter distributor with complete instructions Switch must make contact between 30° and 45° throttle opening



Packard 6—1942-1950—No. 530S

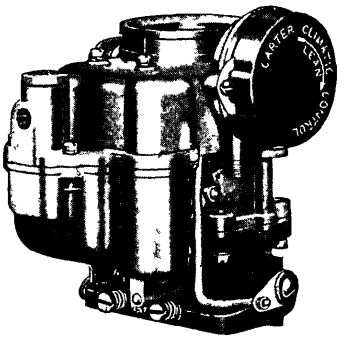
WHEN SERVICING, USE GASKET ASSORTMENT No. 139A; REPAIR PACKAGE No 1320A
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-318S	Body flange and switch assembly	
1A-17	FLANGE GASKET—1¼" S A E	
2-101	Throttle valve	
3-447S	Throttle shaft and lever assembly	
6-345S	Air horn and piston housing assembly	
6-449S	Air horn and Climatic® control assembly	
7-124	Choke valve	
11-165S	LOW SPEED JET ASSEMBLY, No 65 DR	
11B-12	Vacuum spark passage rivet plug	
11B-26	Starterator passage rivet plug	
11B-41	Nozzle passage rivet plug	
11B-42	Vacuum spark passage rivet plug	
11B-79	Rivet plug	(5)
11B-108	Idle port rivet plug	
11B-117S	Idle plug assembly	
11B-119S	Ball retainer plug assembly	
11B-127S	Passage plug assembly	(2)
11B-141	Nozzle retainer plug	
12-270	Nozzle	
14-222S	Choke piston lever, link and shaft assembly	
14-298S	Choke lever screw and link assembly	
15-35S	Strainer nut assembly	
20-22	Needle seat and plug gasket	(3)
20-26	Metering rod jet and plug gasket	(3)
20-35	BOWL STRAINER GASKET	
20-45	NOZZLE GASKET	
21-70S	Float and lever assembly	
24-15	Float lever pin	
25-42S	NEEDLE AND SEAT ASSEMBLY	
30-14	Bowl strainer gauze	
30-23	PISTON HOUSING STRAINER	
30-34	PUMP STRAINER	
30-36	Switch strainer (Sup by 30-61)	
30-61	Switch strainer	
30A-39	Idle adjustment screw	
39-10	VALVE ATTACHING SCREW	(4)
48-61	PUMP JET, No 72 DR	
49-128	Switch plunger	
53A-211S	Pump operating lever and countershaft assembly	
53A-213S	Pump arm and collar assembly	
61-57	Adjustment screw spring	
61-75	Metering rod spring	
61-128	Connector rod spring (Use with 115-41)	
61-143	Plunger spring	
61-171	Pump spring	
61-188	Rocker arm spring	
61-194	Switch contact spring (Not sold separately, part of 61-243S)	
61-209	Switch return spring (Sup by 61-388)	
61-228	Pump operating lever spring	
61-233	VACUUM PISTON SPRING	
61-243S	Switch contactor spring assembly	
61-388	Switch return spring	
63-35	Spring retainer (Sup by 63-93)	
63-43	Switch strainer retainer (Use with 30-36)	
63-45	Ball retainer ring	
63-48	Thermostat housing retainer	(3)
63-93	Spring retainer (Use with 115-41)	
64-55S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49-113)	

Part No	PART NAME	
75-535	METERING ROD—STANDARD— 076"- 076" to 065"- 040"	
75-536	Metering rod—1 size lean— 07725"- 07725" to 0675"- 046"	
75-537	Metering rod—2 sizes lean— 0785"- 0785" to 0685'- 051"	
86-15	Flange stud lock washer	(2)
86-37	Terminal lock washer	(2)
101-26	Coil housing attaching screw	(3)
101-28	Throttle shaft arm clamp screw	
101-78	Choke lever clamp screw	
101-81	Fast idle cam screw	
101-109	Switch terminal screw	(2)
101-112	Terminal cap attaching screw	
101-120	Throttle lever adjusting screw	
101-143S	Piston housing screw and washer assembly	
101-147S	Body flange screw and washer assembly	(2)
101-148S	Bowl cover screw and washer assembly	(5)
101-151S	Air horn screw and washer assembly	(2)
105A-13	Flange stud nut	(2)
114-42S	THROTTLE SHAFT ARM AND SCREW ASSEMBLY	
115-41	Throttle connector rod (Sup by 115-122)	
115-122	THROTTLE CONNECTOR ROD	
116-13	BALL	(2)
116-19	Switch ball	
117-58	Pump connector link	
117-66S	Piston link and spring assembly	
118-28	Dust cover	
120-15S	METERING ROD JET ASSEMBLY—1015" DRILL	
121-51	AIR HORN GASKET	
121-58	BOWL COVER GASKET	
121-72	BODY FLANGE GASKET	
121-74	COIL HOUSING GASKET	
129-15	Metering rod disk	
136-53	Return spring washer (Not sold separately, part of 61-243S)	
146-69	Bowl cover (Not sold separately, part of 146-88S)	
146-88S	Bowl cover and strainer assembly	
150-62	Choke piston pin	
150-92	Anti-percolator pin	
150A-10	PIN SPRING	(3)
153-11	Switch contact spring shim (.018")	
153-12	Switch contact spring shim (.006")	
160-35	Choke piston	
160-67S	Vacuum piston and pin assembly	
170K-64S	Thermostatic coil and housing assembly	
170K-64SU	Unitized package (Consists of 1—170K-64S 3—63-48, 3—101-26 1—121-74)	
172-12	Terminal cap hold down clip	
172-19	Cable clip	
172-21	THROTTLE CONNECTOR ROD RETAINER (Use with 115-122)	
181-87	Switch guide block	
181-105S	Fast idle cam and pin assembly	
184-18S	ANTI-PERCOLATOR CAP AND ROCKER ARM ASSEMBLY	
184-20S	Terminal cap assembly	
192-11U	Carter starter switch unit	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

MOTOR SERIAL NUMBERS
1941—D400051 and higher
1942—E300001 and higher
1946-47—F300001 and higher



Casting No. 371 on Face of Flange

PACKARD EIGHT

MODEL	SERIES	YEAR
"120"	"1951"	1941
"120"	"2001"	1942
"120"	"2101"	1946-47

WDO Dual Down-Draft Climatic® Control Carbureter—**Model 512S**

CARBURETER SPECIFICATIONS

For Packard 8 Cylinder Engine· 3¼ Inch Bore, 4¼ Inch Stroke

Dimensions: Flange size, 1 inch dual, 4 bolt type
Primary venturi, 11/32 inch
Secondary venturi 21/32 inch
Main venturi 1⅛ inch

Float Level: Distance from float bowl cover when needle is seated to be 5/32 inch (Use gauge No T109-154)

Vents: Outside No 10 drill—four holes Inside none

Gasoline Intake: Square vertical needle Size No 38 drill hole in needle seat

Low Speed Jet Tube: Jet size No 70 drill
By-pass size No 52 drill
Economizer, size No 50 drill
Idle bleed, size No 54 drill

Idle Ports· Upper port, slot type, length 165 inch, width 030 inch Opening 135 to 141 inch above upper edge of valve with valve closed tight
Lower Port (For Idle Adjustment Screw)
Size 0615 to 0655 inch diameter

Set Idle Adjustment Screw: ½ to 1½ turns open For richer mixture turn screw out Do not attempt to idle engine below 350 r p m

Main Nozzle: In primary venturi, angle 45° Closed tip Inside diameter No 30 drill
Upper hole 028 inch diameter on 45° angle
Lower hole 0635 inch diameter on 70° angle

Metering Rod (Vacumeter Type): Economy step, 064 inch diameter
Middle step tapers to 060 inch diameter
Power step, 050 inch diameter
Length of rod 2-59/64 inches

Metering Rod Jet: 2 15 mm (0846 inch) diameter

Metering Rod Setting: Use gauge part No T109-113 (2 280 inches)

Accelerating Pump: High pressure type (spring operated lever) with adjustable pump stroke
Pump discharge jets (twin) size No 70 drill
Intake ball check, size No 40 drill
Discharge (needle seat), size No 50 drill
Outside relief to pump jet none

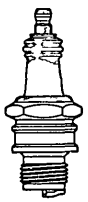
Pump Adjustment: 14/64 inch plunger travel (full throttle position) short stroke Use gauge T109-117S

Choke· Carter Climatic® Control, set at index Butterfly type, offset valve Choke heat suction hole, in body size No 32 (116") drill

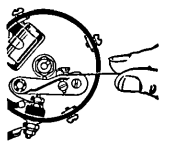
Vacuum Spark Port: 039 to 041 inch diameter Bottom of port 009 to 013 inch (early production), 012 to 022 inch (late production) above top edge of valve

Motor Tune-Up—Be Accurate!

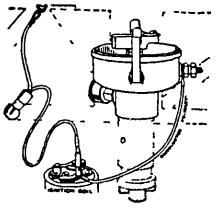
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



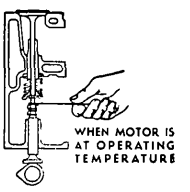
Spark Plug Gap .028" ± .0025"



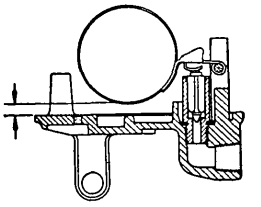
Set Breaker Points 0125" to .0175"



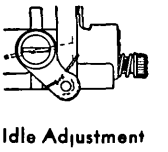
Use Timing Light Breaker Points to Open Standard Head: 5° B.T.D.C. Plus 0°, Minus 1½°



Set Valves Intake .007" Exhaust .010"



Correct Float Level (Remove Cork Gasket) 5/32"



Idle Adjustment Screw Setting ½ to 1½ Turns Open

BRIEF CARBURETER ADJUSTMENTS

PUMP ADJUSTMENT: With the pump connector link in place, inner hole short stroke and throttle adjustment screw backed out, pump plunger should travel 14/64" from closed to wide open throttle position.
Pump travel should be measured by placing gauge T109-117S on rim of bowl cover around plunger shaft, and measure to top surface of connector link where it extends through plunger shaft. Reading should be taken at closed and wide open throttle position. Difference in reading should be "14." Adjustment can be made by bending throttle connector rod at lower angle until correct pump plunger travel is obtained.
METERING ROD ADJUSTMENT: Must be made when reassembling the carbureter or when leaner than standard metering rods are installed. Do not disturb **pump adjustment.** Procedure is as follows·

(A) Back out throttle lever adjustment screw until throttle valves seat. Insert one metering rod gauge T109-113 in place of metering rod Be sure gauge seats in jet

(B) Install metering rod pin and pin spring, in vacuum piston and link assembly

(C) Press lightly on top of vacuum piston until lip contacts tongue on anti-percolator arm There should now be less than .005" clearance between metering rod pin and shoulder in notch of gauge with the valves seated.

Adjust by bending tongue on pump arm. Remove gauge and metering rod pin and install metering rods, discs, spring, pin and pin spring, and hook spring to metering rods. Vacuum piston and link must not bind or drag in any position.

ANTI-PERCOLATOR ADJUSTMENT: Should be made after pump and metering rod adjustments Back out throttle lever adjusting screw so that throttle valves seat in bores of carbureter With throttle valve seated, insert .015" feeler gauge (T109-72) between anti-percolator stem and lips on anti-percolator arm Then bend lips so that center of indi-

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CARBURETER
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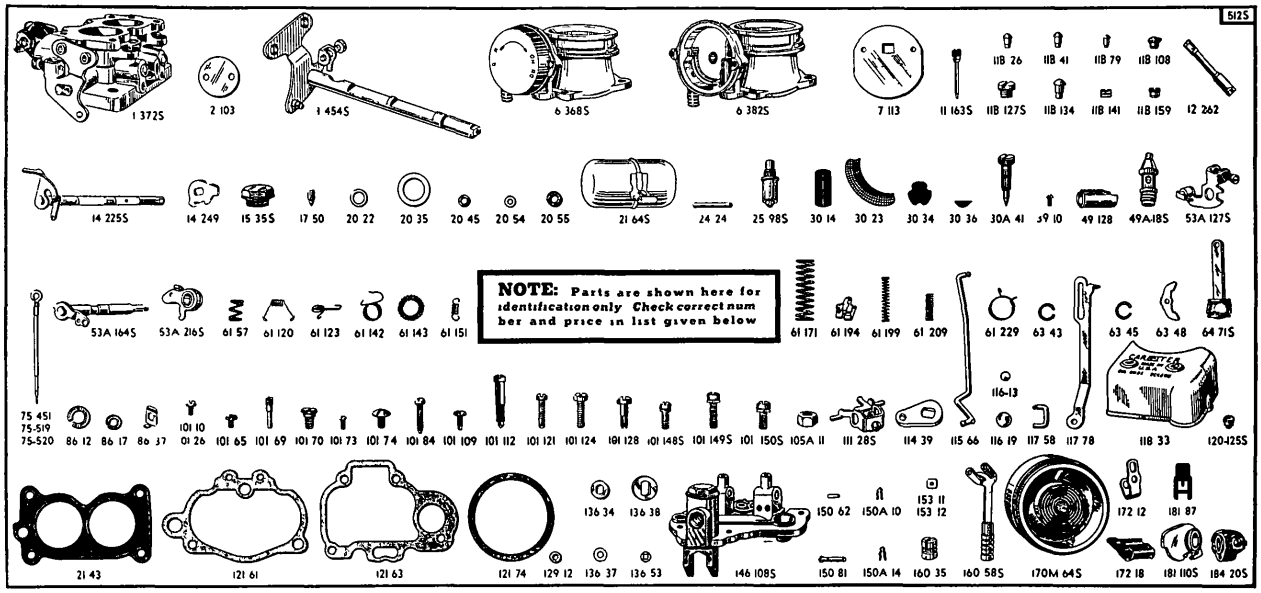
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catoi lines are just flush with top of anti-percolator plug Care should be taken so there is an even adjustment made on both anti-percolator lips

UNLOADER ADJUSTMENT: With throttle wide open, distance between upper edge of choke valve and inner wall of air horn should be 11/64" (Use gauge T109-166) Adjustment can be made by bending lip on fast idle connector link With throttle wide open, push choke valve open Choke should lock within 5° of wide open position If it does not lock, recheck unloader adjustment Closing the throttle will release choke valve Choke trip lever is notched out for this setting

FAST IDLE ADJUSTMENT Hold choke valve tightly closed and adjust fast idle arm screw to give .020" opening between edge of throttle valve and bore of carbureter, side opposite port (Use gauge T109-29)

STARTER SWITCH Adjustment should be made with Carter tool No T109-155S, obtainable from your Carter distributor with complete instructions Switch must make contact between 30° and 45° throttle opening



Packard—1941-42-46-47—Carbureter No. 512S

WHEN SERVICING, USE GASKET ASSORTMENT No. 156, REPAIR PACKAGE No 1092A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-372S	Body flange and switch assembly	
2-103	Throttle valve	(2)
3-433S	Throttle shaft and lever assembly (Sup by 3-454S)	
3-454S	Throttle shaft and lever assembly	
6-368S	Air horn and Climatic® control assembly	
6-382S	Air horn and pump jet assembly	
7-113	Choke valve	
11-163S	LOW SPEED JET ASSEMBLY	(2)
11B-26	Body flange rivet plug	(2)
11B-41	Pump discharge rivet plug	(2)
11B-79	Rivet plug	(4)
11B-108	Idle port rivet plug	(2)
11B-126	Nozzle passage plug (Sup by 11B-127S)	(2)
11B-127S	Nozzle passage plug assembly	(2)
11B-134	Rivet plug	(2)
11B-141	Nozzle retainer plug	(2)
11B-159	BY-PASS BLEEDER SCREW PLUG	(2)
12-262	Nozzle	(2)
14-225S	Choke piston lever, link and shaft assembly	
14-249	Choke trip lever	
15-35S	Strainer nut assembly	
17-50	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	
20-35	Bowl strainer gasket	
20-45	NOZZLE GASKET	(2)
20-54	Metering rod jet gasket	(2)
20-55	IDLE PASSAGE GASKET	(3)
21-64S	Float and lever assembly	
24-24	Float lever pin	
25-98S	NEEDLE AND SEAT ASSEMBLY	
30-14	Bowl cover strainer gauze	
30-23	PISTON HOUSING STRAINER	
30-34	PUMP STRAINER	
30-36	Switch strainer (Sup by 30-61)	
30-61	Switch strainer	
30A-41	Idle adjustment screw	(2)
39-10	VALVE ATTACHING SCREW	(2)
49-128	Switch plunger	
49A-18S	Anti-percolator valve plug assembly	(2)
53A-127S	Fast idle arm, pin and screw assembly	
53A-164S	Pump operating lever and countershaft assembly	
53A-216S	Pump arm and collar assembly	
61-57	Adjustment screw lock spring	(2)
61-120	Metering rod spring	
61-123	Connector link spring	
61-142	Fast idle arm spring	
61-143	Plunger spring	
61-151	Pump arm spring	
61-171	Pump spring	
61-194	Switch contact spring (Not sold separately, part of 61-243S)	
61-199	VACUUM PISTON SPRING	
61-209	Switch return spring (Sup by 61-388)	
61-229	Fast idle cam spring	
61-243S	Switch contactor spring assembly	
61-388	Switch return spring	
63-43	Switch strainer retainer ring (Use with 30-36)	
63-45	Ball retainer ring	
63-48	Housing retainer	(2)
64-71S	PUMP PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49-127)	
75-451	METERING ROD—STANDARD— 064"- 064" to 060"- 050"	(2)
75-519	Metering rod—1 size lean— 065"- 065" to 062"- 052"	(2)

Part No.	PART NAME	
75-520	Metering rod—2 sizes lean— 066"- 066" to 0635"- 054"	(2)
86-12	Flange stud lock washer	(4)
86-17	Body flange attaching screw lock washer	
86-37	Switch terminal lock washer	(2)
101-10	Clamp screw	
101-26	Coil housing attaching screw	(2)
101-65	Tr o lever attaching screw	
101-69	Throttle centering screw	
101-70	Fast idle arm attaching screw	
101 73	Throttle valve attaching screw	(4)
101-74	Throttle shaft arm attaching screw	
101-84	Fast idle adjustment screw	
101-109	Switch terminal screw	(2)
101-112	Terminal cap attaching screw	
101-121	Throttle lever adjustment screw	
101-124	Body flange attaching screw	
101-128	Air horn attaching screw (Special)	
101-148S	Bowl cover attaching screw and washer assembly	(6)
101-149S	Body flange attaching screw and washer assembly	(3)
101-150S	Air horn attaching screw and washer assembly	(2)
105A-11	Flange stud nut	(4)
111-28S	Anti-percolator arm and screw assembly	
114-39	Throttle shaft arm	
115 66	THROTTLE CONNECTOR ROD	
116-13	BALL	
116-19	Switch ball	
117-58	Pump arm link	
117-78	Fast idle connector link	
118 33	Dust cover	
120-125S	METERING ROD JET ASSEMBLY	(2)
121-43	BODY FLANGE GASKET	
121-61	AIR HORN GASKET	
121-63	BOWL COVER GASKET	
121-74	COIL HOUSING GASKET	
129-12	Metering rod disk (Sup by 129-18)	
129-18	Metering rod disk	(2)
136-34	Choke shaft washer	
136-37	Connector rod washer	
136-38	Throttle shaft washer	
136-53	Return spring washer (Not sold separately, part of 61-243S)	
146-107	Bowl cover (Not sold separately, part of 146-108S)	
146-108S	Bowl cover and strainer assembly	
150-62	Choke piston pin	
150-81	Metering rod pin	
150A-10	PIN SPRING	(5)
150A-14	COUNTERSHAFT PIN SPRING	
153-11	Switch contact spring shim (.018")	
153-12	Switch contact spring shim (.006")	
160-35	Choke piston	
160-58S	Vacuum piston and link assembly	
170M-64S	Thermostatic coil and housing assembly	
170M-64SU	Unitized package (Consists of 1—170M-64S, 3—63-48 3—101-26, 1—121-74)	
172-12	Hold down clip (terminal cap)	
172 18	Cable clip	
181-81S	Fast idle cam assembly (Sup by 181-110S)	
181-87	Switch guide block	
181-110S	Fast idle cam assembly	
184-20S	Terminal cap assembly	
192-11U	Carter starter switch unit	

NOTE· Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.

PINCOR

LAWNMOWER

Model SS-3952

(2 Cycle AV Engine)

HORIZONTAL, MODEL N TYPE, **CARBURETERS Nos. N-2056S, N-2450S**

CARBURETER SPECIFICATIONS

For Pincor One Cylinder, Two Cycle Engine 2 Inch Bore 1⅝ Inch Stroke

Dimensions Flange size ½ inch S A E Main venturi size 7/16 inch

Float Level Distance from top of float (at free end) opposite needle seat to outer edge of float chamber cover when needle is seated to be (N 2056S) 11/64 inch (gauge T109-166) (N 2450S) 13/64 inch (gauge T109 39) plus or minus 1/32 inch

Vent Inside none Outside size No 50 (070 inch) drill

Gasoline Intake Size No 48 (076 inch) drill

Low Speed Jet Tube Jet size No 75 (021 inch) drill Auxil iary jets (Idle Bleed) in side of tube 4—size No 70 (028 inch) drill

Idle Port Round type size 027 to 030 inch diameter

Idle Port Opening Top of port to be 006 to 010 inch above top edge of valve with valve tightly closed

Idle Screw Seat Size 051 inch diameter

Set Idle Adjustment Screw 1¼ to 2¾ turns open For richer mixture turn screw out Do not idle engine below 1600 r p m

Main Nozzle (N 2056S) Accelerating jets (in side of nozzle), 4—size No 55 (052 inch) dr ll (N 2450S) Instal'ed permanent'y DO NOT REMOVE Nozzle passage (nozzle well to a r horn) size No 32 (116 nch) drill

High Speed Adjusting Needle Seat (in base of nozzle) size 040 inch diameter Setting see adjustments

Choke Manual—butterfly type with poppet valve

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open	Float Setting	High Speed Adj Screw Setting	Idle Adjustment Screw Setting
025"	023" 025"	28° B T D C	11/64" (Plus or Minus 1/64")	¾ to 2¼ Turns Open	1¼ to 2¾ Turns Open

SERVICE PROCEDURE

To Disassemble

1 Remove carbureter from engine

2 Remove bowl nut gasket and bowl

3 Remove float pin float needle and needle seat Check float for dents leaks and wear on float lip or in float pin holes

4 Remove bowl ring gasket

5 Remove low speed jet and high speed adjusting needle as sembly and spring

6 Remove idle adjustment screw and spring

7 (N 2056S) Remove nozzle (N 2450S) nozzle installed permanently DO NOT REMOVE

8 Remove throttle valve screws valve and shaft and lever assembly

9 Do not remove choke valve and shaft unless replacement of these parts is necessary A spring loaded ball retains choke in wide open position Be sure to use a new ball and spring when replacing choke shaft and lever assembly CAUTION Hold a screw driver handle or a small piece of wood over threaded hole in air horn (side opposite choke lever) to prevent the ball from flying out when shaft is removed

10 Clean all parts in clean solvent making sure all carbon accumulation is removed from bore especially where throt tle valve seats in casting Blow out all passages with com pressed air Replace all worn and damaged parts Always use new gaskets

To Assemble

11 Install throttle shaft and valve Valve must be installed with trademark c on side toward idle port when viewing from flange side Always use new screws With valve screws loose and throttle lever set screw backed out seat valve by tapping lightly with a small screw driver Hold in place while tightening screws

12 (N 2056S) Install nozzle mak ng sure it seats in casting

13 Install needle seat needle float and float p n

14 Set float level With carbureter casting inverted float resting lightly against needle in its seat there should be (N 2056S) 11/64" (N 2450S) 13/64" clearance between outer edge of casting and free end of float (side opposite needle seat) Adjust by bending lip of float with small screw driver

15 Install bowl ring gasket bowl bowl nut gasket and bowl nut Tighten securely after making sure bowl is centered in gasket

16 Install low speed jet and high speed needle assembly Turn in until it seats in nozzle then back out 1½ turns

17 Then install idle adjusting screw finger tight Back out approximately 1½ turns DO NOT USE PLIERS OR SCREW DRIVER AS IT MAY DAMAGE IDLE SCREW

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HIGH SPEED AND IDLE SCREW ADJUSTMENT

After rebuilding and installation on engine s complete the high speed and idle screw adjustments must be made With the high speed needle turned counter clockwise (from closed position) 1½ turns and idle screw turned 1½ turns open start engine

With the engine at normal operating temperature accelerate engine and check response The high speed needle should be adjusted for the leanest possible mixture which will allow satisfactory acceleration and steady governor operation If the engine misses and backfires the high speed mixture is too lean and the high speed adjustment screw must be turned counter clockwise ⅛ turn at a time to correct this condition If the engine loads (heavy exhaust) and is sluggish the mixture is too rich and the high speed adjustment screw must be turned clockwise ⅛ turn at a time to correct To make final check of the high speed adjustment operate the engine under load and adjust

The idle screw should be adjusted intermittently while making the high speed adjustment The final idle adjustment should be made at a speed not less than 1600 r p m DO NOT USE FORCE ON THE HIGH SPEED NEEDLE OR IDLE SCREW AS DAMAGE MAY RESULT

PINCOR—CARBURETERS Nos. N-2056S, N-2450S

Part No.	Part Name
1A-73	Flange gasket
2-127	Throttle valve
3-831S	Throttle shaft and lever assembly
7-165S	Choke valve assembly (N 2056S) (Sup by 7-196S)
7-196S	Choke valve assembly
11-194S	Low speed jet and high speed adjusting needle assembly (N-2056S) (Sup by 11-228S)
11-228S	Low speed jet and high speed adjusting needle assembly
11B-79	Idle passage plug
12-338	Nozzle (N 2056S)
14-463S	Choke shaft and lever assembly
15-50S	Bowl nut assembly (N 2056S) (Sup by 15 54S)
15-54S	Bowl nut assembly
20-22	Needle seat gasket
20-110	Bowl nut gasket
21-139S	Float and lever assembly (N 2056S) (Sup by 21 162S)
21-162S	Float and lever assembly (N-2056S)
21-163S	Float and lever assembly (N 2450S)
23-42	Bowl (N-2056S) (Sup by 23 59)
23-59	Bowl
23A-19	Bowl ring gasket
24-23	Float lever pin (N-2056S) (Sup by 24 30)
24-30	Float pin
25-33S	Needle and seat assembly (N 2450S)
25-219S	Needle and seat assembly (N 2056S)
30A-46	Idle adjustment screw
47-11	Welsh plug
61-368	Idle adjustment screw spring
61-369	Choke shaft spring
61-383	High speed adjusting needle spring
101-31	Throttle lever adjusting screw
101-320	Choke and throttle valve attaching screw (4)
116-16	Choke shaft ball

PINCOR

Form 5058D

Carbs. N-2056S, N 2450S

Change to read

23 59 Bowl (N 2056S) (2450S early prod)

Add

11B 375S—Bowl drain plug assembly (N 2450S late prod)

20 133 —Bowl drain gasket (N 2450S late prod)

23 64 —Bowl (with drain) (N 2450S late prod)

61 600 —Bowl drain spring (N 2450S late prod)

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only ne is used

PLYMOUTH

2856S Automatic Transmission

Model MP2

2855S Standard Transmission

"Golden Commando"

1959

AFB Four-Bore Down-Draft Climatic® Control **Carbureters Nos. 2855S 2856S**

CARBURETER SPECIFICATIONS

For Plymouth 8 Cylinder 360 Cu. In. Engine: Vacuum at Idle 19.5 Inches

Dimensions: Flange, four-bore – 4 bolt type.
Throttle bore, 1-7/16 inch.
Primary venturi size, primary side, 7/16 inch; secondary side, (2856S) 11/32 inch, (2855S) 7/16 inch I.D.
Main venturi size, 1-3/16 inch.

Vents: Inside (4) in air horn; Outside (5) in air horn.

Low Speed Circuit: (Primary side only)
Jet, size No. 66 (.033 inch) drill.
By-pass, size (.0492 inch) diameter.
Economizer, size (2855S) (.0492 inch) (2856S) (.0452 inch) diameter.
Idle Bleed, size (.0492 inch) diameter.
Idle port, slot type, length .198 inch, width .030 inch.

Idle Port Opening: .142 to .148 inch above top edge of valve with valve tightly closed.

Set Idle Adjustment Screw: 1/4 to 2-1/4 turns open. For richer mixture turn screw out. Do not idle engine below 650 R.P.M.
Transmission in neutral.

Main Nozzle: Install permanently. DO NOT REMOVE. Anti-percolator bleed, primary (tube in venturi assembly), size No. 68 (.031 inch) drill.
Secondary (drilled hole in venturi assembly) size No. 60 (.040 inch) drill.

Main Vent Tube: (In venturi assembly) Side holes primary side 11 – size No. 70 (.028 inch) 1 – size No. 65 (.035 inch) drill; secondary side (2856S) 2 – size No. 57 (.043 inch) 1 – size No. 70 (.028 inch) (2855S) 11 – size No. 70 (.028 inch) drill.

Accelerating Pump: Discharge jet (twin) primary side only, size No. 70 (.028 inch) drill. Intake ball check seat (screw plug) size .115 to .120 inch diameter. Discharge needle seat size No. 50 (.070 inch) drill.

Choke: Carter Climatic® Control Cross over type, set on index. Butterfly type offset valve, primary side only. Choke heat suction hole, in air horn, size No. 44 (.086 inch) drill.

Vacuum Spark Port: Slot type (round end) .045 x .110 inch. Top of port .026 to .034 inch above top edge of valve with valve tightly closed.

Motor Tune-Up–Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open:	Float Setting	Idle Adjustment Screw Setting
.035"	.017"	7½° B. T. C. At Vibration Damper	7/32 Inch (Use Gauge T109-106)	¼ to 2¼ Turns Open Idle Engine at 650 R. P. M. In Neutral

NOTE: These cars are equipped with Hydraulic Valve Lifters – NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

FLOAT ALIGNMENT: Side of floats parallel to edge of casting. Minimum clearance between lever and air horn lugs without binding. To adjust, bend float lever.

FLOAT LEVEL: 7/32 inch (gauge T109-106) between top of floats (at outer end) and air horn gasket. To adjust, bend float lever.

FLOAT DROP: 23/32 inch between top of floats (at outer end) and air horn gasket. To adjust, b nd stop tabs on float brackets.

PUMP: 7/16 inch from top of the bowl cover to the top of the plunger shaft with throttle connector rod in center hole (medium stroke) of pump arm. To adjust, bend throttle connector rod.

FAST IDLE LINKAGE ADJUSTMENT: With choke valve tightly closed and lug on outer choke shaft lever contacting stop on inner choke shaft lever align center on fast idle screw with ind x mark on cam. To adjust, bend fast idle connector rod.

FAST IDLE THROTTLE VALVE CLEARANCE: .015 inch (gauge T109-44) between lower edge of valve and bore with adjusting screw on index mark of cam.

FAST IDLE ON CAR: 1400 R.P.M. hot engine with fast idle screw on index mark of cam.

UNLOADER: 1/4 inch (gauge T109-31) betw n upp r dge of choke valve and inner wall of air horn. To adjust, bend unloader lip on throttle lever.

SECONDARY THROTTLE LEVER ADJUSTMENT: 1. Block choke valve wide open. 2. With 3/8 inch between lower edge of primary valve and bore (opposite idle port) secondary valves should just start to open. To adjust, bend throttle operating rod. NOTE: At wide open throttle primary and secondary valves will reach vertical position. 3. With primary and secondary throttle valves in tightly closed position there should be .010" to .030"(gauge T109-29) between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on secondary lever.

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: Crack throttle valves and manually open and close the choke valve. Tang on secondary throttle lever should freely engage in notch of lock-out dog. To adjust, bend tang on secondary throttle lever.

CHOKE ADJUSTMENT (CROSS OVER TYPE) SEE FORM 3657: 1. Loosen mounting post lock nut and turn mounting post with screw driver until index mark on disk is positioned as listed on carbureter specification page. Hold in this position with screw driver and tighten lock nut. NOTE: Screw driver may be held in vise so that one hand may be used to support housing while tightening nut. 2. After adjustment is completed and coil housing and rod assembly and carbureter is installed on engine lift cover disk and open and close choke valve manually to see if connector rod clears side of hole in housing cover. If rod does not clear hole in housing cover without binding replace with a new unit since connector rod cannot be bent without affecting calibration.

TOOLS REQUIRED FOR SERVICING CARBURETERS:

T109-29 .020" Wire gauge
T109-31 1/4" Unloader gauge
T109-41 Bending tool
T109-44 .015" Wire gauge
T109-106 7/32" Float gauge
T109-213 Bending tool

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Plymouth "V-8" – 1959 – Carbureters Nos. 2855S-2856S

WHEN SERVICING, USE GASKET ASSORTMENT No. 317

Part No.	PART NAME	
1A-129	Flange gasket	
2-178	Secondary throttle valve	(2)
2-185	Primary throttle valve	(2)
3-1140S	Secondary throttle shaft and dog assembly	
3-1165S	Primary throttle shaft and lever assembly	
4A-175	Primary throttle shaft dog	
6-1330S	Air horn assembly (2855S)	
6-1392S	Air horn assembly (2856S)	
7-229S	Choke valve and bracket assembly	
11B-69	Rivet plug	(2)
11B-79	Rivet plug	(4)
11B-176	Idle port rivet plug	(2)
11B-363	Pump intake screw plug	
11B-366	Nozzle well lead plug	(4)
11B-385	Fuel passage rivet plug	
14-550	Inside choke shaft lever	
14-613	Outside choke shaft lever	
14-616S	Choke lever and shaft assembly	
15-58S	Fuel inlet assembly	
16-35	Step-up rod .0645" x .058" – standard (2855S)	(2)
16-39	Step-up rod .066" x .061" – 1 size lean	(2)
16-40	Step-up rod .067" x .064" – 2 sizes lean	(2)
16-42	–Step-up rod .065" x .058" – standard (2856S)	(2)
17-51	Pump discharge check needle	
20-126	Needle seat gasket	(2)
20-127	Fuel inlet gasket	
21-179S	Float and lever assembly	(2)
24-29	Float lever pin	(2)
25-343S	Needle and seat assembly (.0935")	(2)
30-78	Fuel inlet strainer	
30A-81	Idle adjustment screw	(2)
38A-107	Pump intake check ball seat	
39-11	Choke valve attaching screw	(2)
47-30	Choke piston walsh plug	
47-33	Venturi welsh plug	(4)
47-34	Spark port welsh plug	
48-264S	Pump jet and housing assembly	
53A-412	Lockout dog	
53A-423	Secondary throttle operating lever	
58-232S	Secondary venturi assembly (opposite pump) (2856S)	
58-233S	Secondary venturi assembly (pump side) (2856S)	
58-254S	Secondary venturi assembly (opposite pump) (2855S)	
58-255S	S condary venturi assembly (pump sid) (2855S)	
58-322S	Primary venturi assembly (opposite pump) (2856S)	
58-323S	Primary venturi assembly (pump side) (2856S)	
58-357S	–Primary venturi assembly (opposite pump) (2855S)	
58-358S	–Primary venturi assembly (pump side) (2855S)	
61-84	Idle adjusting screw spring	(2)
61-171	Pump spring (lower)	
61-291	Throttle lever adjusting screw spring	
61-585	Step-up rod retaining spring	(2)
61-604	Vacuum piston spring	(2)
61-618	Secondary throttle return spring	
61-623	Throttle flex spring	
64-212S	Pump plunger, rod and spring assembly	
65-43	Step-up piston cover plate	(2)
101-65	Choke shaft lever attaching screw	
101-74	Throttle shaft lever attaching screw	(2)
101-120	Fast idle adjustment screw	
101-152S	Air horn attaching screw and washer assembly	
101-184S	Pump jet housing attaching screw and washer assembly	(2)
101-323	Fast idle cam attaching screw	
101-362S	Air horn attaching screw and washer assembly	(8)
101-379S	Secondary venturi attaching screw and washer assembly (2856S)	(4)
101-419	Secondary throttle valve attaching screw	(4)
101-420	Primary throttle valve attaching screw	(4)
101-421	Pump arm attaching screw	
101-431S	Air horn attaching screw and washer assembly	
101-435S	Step-up piston cover plat attaching screw and washer assembly	(2)
101-441	Throttle lever adjusting scr w	
101-442S	Venturi attaching screw and washer assembly (2855S (8) (2856S (4)	
103-12	Lead shot (.130")	(2)
103-14	Lead shot (.180")	
103-16	Lead shot (.200")	
106-19	Cotter pin	
111-76	Pump arm	
114-144	Primary throttle shaft arm (out r)	
114-152	Primary throttle shaft arm (inner)	
115-308	Throttle operating rod	
115-313	Choke conn ctor rod	
115-322	Throttle connector rod	
116-13	Pump intake check ball	

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Part No.	PART NAME	
117-174	Pump connector link	
120-155	Primary metering jet (.091")	(2)
120-185	Secondary metering jet (.067")	(2)
121-287	Pump jet housing gasket	
121-288	Secondary venturi cluster gasket	(2)
121-302	Primary venturi cluster gasket	(2)
121-309	Air horn gasket	
121-312	Air cleaner gasket	
136-34	Choke shaft washer	
136-159	Primary throttle shaft washer	
136-160	Secondary throttle shaft washer	
136-174	Throttle lever adjusting screw washer	

Part No.	PART NAME	
150A-10	Pin spring	(4)
150A-21	Pin spring	
160-153	Step-up piston	(2)
160-174S	Choke piston and link assembly (2855S)	
160-194S	Choke piston and link assembly (2856S) (Use 160-204S)	
160-204S	–Choke piston and link assembly (2856S)	
170AU-515S	Thermostatic coil, housing and rod assembly	
172-22	Throttle connector rod retainer	
181-269S	Fast idle cam and collar assembly	
186-70	Fuel bowl baffle	(2)

–Parts so marked are new and listed for the first time.

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

Form 5327

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

October, 1958

2775S-2864S
Standard Transmission

2776S-2865S
Overdrive Transmission

2777S-2866S
Power Flite Transmission

2896S

PLYMOUTH
MODEL
MP2
1959

Also used on Export DeSoto, Model MF2

Use 2896S to replace 2775S-2777S-2864S-2866S

Use 2896S and 192-36U to replace 2776S-2865S

BBD Down-Draft Climatic® Control **Carbs. 2775S-2776S-2777S-2864S-2865S-2866S-2896S**

CARBURETER SPECIFICATIONS

For Plymouth 8 Cylinder 318 Cu. In. Engine: Vacuum at Idle 19.5 Inches

Dimensions: Flange size 1¼ inch dual 4 bolt type Throttle bore, 1-7/16 inch I D
Primary venturi ⅜ inch I D
Main venturi, 1-3/16 inch I D

Vent: Inside balance vent tube to bowl in air horn above choke valve Outside, none

Low Speed Circuit: Jet (in venturi assembly) size, 0255 inch diameter Idle bleed (in venturi cluster screw) size 059 inch diameter Idle restriction (in venturi cluster screw) size, 055 inch diameter Venturi idle bleed (in body) size 0472 inch diameter Idle port slot type length 189 inch· width 030 inch

Idle Port Opening: 144 to 148 inch above upper edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw): Size 055 inch diameter

Set Idle Adjustment Screw: ¼ to 1½ turns open For richer mixture turn screw out With gear shift lever in neutral position idle engine at 500 R P M

Main Vent Tube: Side holes 10—size 0433 inch 1—size 0393 inch diameter. Main vent in bottom of tube, size 0393 inch diameter

Accelerating Pump: Pump discharge jets (2—in venturi cluster) size 0275 inch diameter Intake ball check seat size 130 to 140 inch diameter Discharge ball check seat size 110 to 120 inch diameter

Choke: Carter Climatic® Control Cross Over Type set at index Butterfly type, offset valve Choke heat suction hole in air horn, size No 44 (086 inch) drill

Vacuum Spark Port: Horizontal, round end type, 045 by 110 inch Top of port to be 025 to 035 inch above upper edge of valve with valve closed tight

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .017"	Ignition Timing Breaker Points to Open: 10° B. T. D. C. At Vibration Damper	Valve Setting (Hot) Intake .010" Exhaust .018"	Float Setting 9/32 Inch (Use Gauge T109-239)	Idle Adjustment Screw Setting ¼ to 1½ Turns Open Idle Engine at 500 R. P. M. In Neutral

CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3656

Float Level 9/32 inch (Gauge T109 239) between top of each float ridge (at center of float) and top surface of body casting To adjust bend lip on float arm

Pump: 1⅛ inch from the top of the bowl cover to the top of the plunger shaft Install throttle connector rod in center hole (medium stroke) of throttle lever and inner hole of pump arm To adjust bend throttle connector rod

Fast Idle Cam Clearance: With choke valve closed and lip on inner choke shaft lever contacting lug on outer lever align index mark with adjusting screw To adjust bend lip on inner choke shaft lever

Fast Idle Throttle Valve Clearance· 015 (Gauge T109-44) between lower edge of valve and bore with adjusting screw on index mark of cam

Fast Idle on Car: 1400 R P M, hot engine with fast idle screw on index mark of cam

Unloader: ¼ inch (Gauge T109 31) between top edge of choke valve and inner wall of air horn with throttle valves wide open To adjust bend unloader arm on throttle lever

Overdrive Kickdown Switch: With throttle valves wide open there should be 1/64 inch to 3/64 inch between kickdown lever and switch stem guide To adjust loosen lock nuts and adjust switch

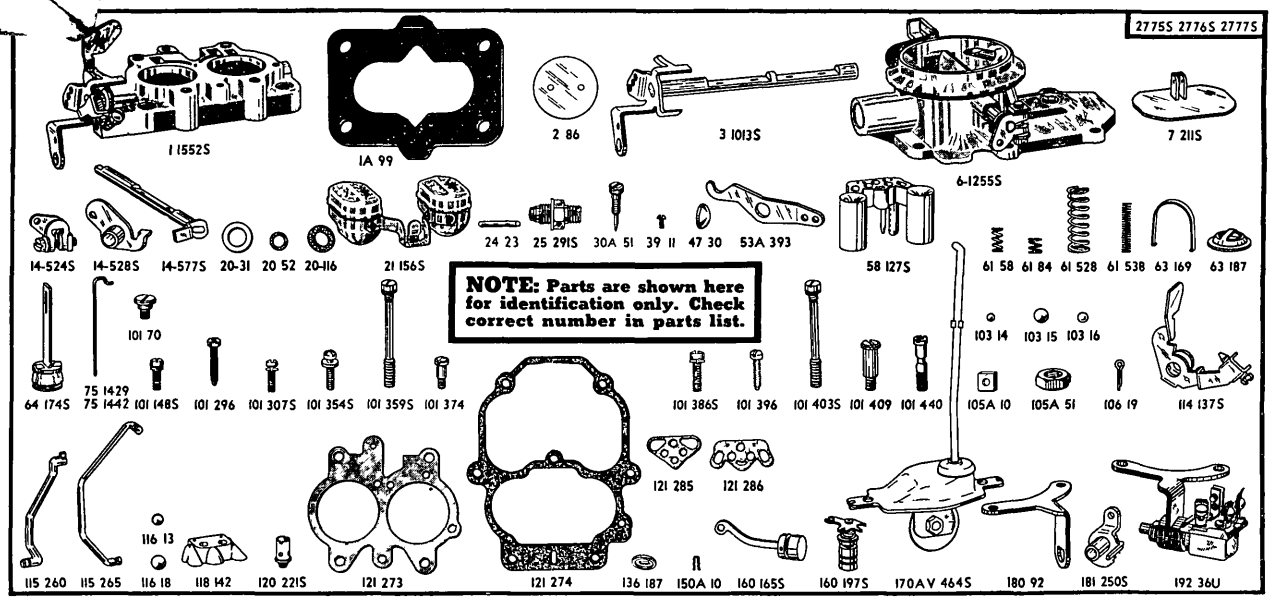
Choke Adjustment (Cross Over Type) See Form 3657: I Loosen mounting post lock nut and turn mounting post with screw driver until index mark on disk is positioned as listed under carbureter specifications Hold in this position with screw driver and tighten lock nut NOTE Screw driver may be held

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one hand may be used to support housing whi
nut 2 After adjustment is completed and cor
d rod assembly and carbureter is installed on engine
disk and open and close choke valve manually to
see if connector rod clears sides of the hole in housing cover
If rod does not clear hole in housing cover without binding
replace with a new unit since connector rod cannot be bent
without effecting calibration



Plymouth—1959—Carbureters Nos. 2775S-76S-77S-2864S-65S-66S-2896S

WHEN SERVICING, USE GASKET ASSORTMENT No. 300, RE-CARBURETION KIT No. 1951N

PART NAMES, IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF RE-CARBURETION KIT

Part No.	PART NAME
1-1552S	Body flange assembly (2775S 76S 77S) (Use 1 1595S)
1-1588S	Body flange assembly (2864S 65S 66S) (Use 1 1595S)
1-1595S	—Body flange assembly
1A-99	FLANGE GASKET
2-86	Throttle valve (2)
3-1013S	Throttle shaft and lever assembly (2775S 76S 77S) (Use 3 1236S)
3-1230S	Throttle shaft and lever assembly (2864S 65S 66S) (Use 3 1236S)
3-1236S	—Throttle shaft and lever assembly
6-1255S	Air horn assembly
7-211S	Choke valve and bracket assembly
14-524S	Choke lever assembly
14-528S	Choke lever and collar assembly
14-577S	Choke lever and shaft assembly
20-31	Needle seat gasket
20-52	STEP UP PISTON GASKET
20-116	Main metering jet gasket (2)
21-156S	Float and lever assembly
24-23	Float lever pin
25-235S	NEEDLE AND SEAT ASSEMBLY (101") (2864S 65S 66S 96S)
25-291S	Needle and seat assembly (101") (2775S 76S 77S)
30A-51	Idle adjustment screw (2)
39-11	Choke and throttle valve attaching screw (6)
47-30	Welsh plug
53A-393	Pump arm
58-127S	Venturi cluster tube and nozzle assembly
61-58	Throttle adjusting screw spring
61-84	Idle adjustment screw spring (2)
61-528	Pump spring
61-538	STEP UP PISTON SPRING
63-169	Float lever pin retainer
63-187	Intake check ball retainer
64-174S	PUMP PLUNGER AND ROD ASSEMBLY
75-1429	Step up rod 028" x 024" (2777S 2866S) (2)
75-1442	—Step up rod 024" x 021" (2775S 76S 2864S 65S 96S) (2)
101-70	Pump arm screw
101-148S	Air horn attaching screw and washer assembly (2775S 77S 2864S 66S 96S (4) (2776S 2865S (3)
101-296	Throttle adjusting screw
101-307S	Air horn attaching screw and washer assembly (2776S 2865S)
101-354S	Choke lever clamp screw and washer assembly
101-359S	Body attaching screw and washer assembly (2775S 77S 2864S 66S) (2)
101-374	Step up piston plate screw
101-386S	Body flange attaching screw and washer assembly (2)
101-396	Fast idle adjusting screw
101-403S	Body attaching screw and washer assembly (2776S 2865S) (2)
101-409	Fast idle cam attaching screw
101-440	Venturi cluster screw (2)
103-14	Lead shot
103-15	Lead shot (2)
103-16	Lead shot (2)
105A-10	Choke lever clamp screw nut
105A-51	Kickdown switch attaching nut (2776S 2865S) (2)
106-19	Cotter pin
114-137S	Dash pot and kickdown lever assembly
115-260	Choke connector rod
115-265	Throttle connector rod
116-13	Pump discharge check ball
116-18	Pump intake check ball
118-142	Venturi cover
120-209S	Main metering jet assembly (302 to 308cc) 2 sizes lean (2)
120-212S	Main metering jet assembly (317 to 323cc) 1 size lean (2)
120-221S	MAIN METERING JET ASSEMBLY (327 to 333cc) STANDARD (2)
121-273	BODY FLANGE GASKET
121-274	BODY GASKET
121-285	VENTURI HOUSING GASKET
121-286	VENTURI COVER GASKET
121-313	AIR CLEANER GASKET
136-187	Pump spring retainer washer
150A-10	Pin spring (3)
160-165S	Choke piston and link assembly
160-197S	Step up piston and plate assembly
170AV-464S	Thermostatic coil housing and rod assembly
180-92	Kickdown switch bracket (2776S 2865S)
181-250S	Fast idle cam assembly
192-36U	Unitized package (2776S 2865S)

—Parts so marked are new and listed for the first time

NOTE· Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

PLYMOUTH "V-8"

LP2 "POWER PAK"

1958

2812S
Automatic
Transmission

2813S
Standard
Transmission

Also used on
Canadian Plymouth LP2
and
Export Plymouth LP2,
Dodge LE2,
DeSoto LF2

AFB Four-Bore Down-Draft Climatic® Control **Carbureters Nos. 2812S-2813S**

CARBURETER SPECIFICATIONS

For Plymouth 8 Cylinder 318 Cu. In. Engine: Vacuum at Idle 19.5 Inches

For Plymouth 8 Cylinder 313 Cu. In. Engine: Vacuum at Idle 19.5 Inches (Canadian)

Dimensions: Flange four-bore—4 bolt type
Throttle bore, 1-7/16 inch
Primary venturi size primary side 7/16 inch, secondary side, (2812S) 11/32 inch, (2813S) 7/16 inch I D
Main venturi size, 1-3/16 inch

Vents: Inside (4) in air horn, Outside (4) in body, (5) in air horn

Low Speed Circuit: (Primary side only)
Jet size (2812S) No 68 (031 inch), (2813S) No 66 (033 inch) drill
By pass, size (0492 inch) diameter
Economizer, size (0452 inch) diameter
Idle bleed size (0492 inch) diameter
Idle port, slot type length 198 inch, width 030 inch

Idle Port Opening: 142 to 148 inch above top edge of valve with valve tightly closed

Set Idle Adjustment Screw: 3/4 to 2 1/4 turns open For richer mixture turn screw out Do not idle engine below 500 r p m Transmission in neutral

Main Nozzle: Install permanently DO NOT REMOVE Anti percolator bleed, primary (tube in venturi assembly) size No 68 (031 inch) drill Secondary (drilled hole in venturi assembly) size No 60 (040 inch) drill

Main Vent Tube (In venturi assembly) Side holes primary side 11—size No 70 (028 inch) 1—size No 65 (035 inch) drill secondary side (2812S) 2—size No 57 (043 inch) 1—size No 70 (028 inch) (2813S) 11—size No 70 (028 inch) drill

Accelerating Pump· Discharge jet (twin) primary side only size No 70 (028 inch) drill Intake ball check seat (screw plug) size 115 to 120 inch diameter Discharge needle seat size No 50 (070 inch) drill

Choke: Carter Climatic® Control Cross over type set (2812S) on index (2813S) 2 points rich Butterfly type offset valve, primary side only Choke heat suction hole in air horn size No 44 (086 inch) drill

Vacuum Spark Port: Slot type (round end) 045 x 110 inch Top of port 026 to 034 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .017"	Ignition Timing Breaker Points to Open: 10° B. T. C. 8° B. T. C. (Canadian) At Vibration Damper	Valve Setting (Hot) Intake .008" Exhaust .018"	Float Setting (See Adjustments)	Idle Adjustment Screw Setting 1/4 to 1 3/4 Turns Open Idle Engine at 500 R. P. M. In Neutral

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CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3734

FLOAT ALIGNMENT: Side of floats parallel to edge of casting. Minimum clearance between lever and air horn lugs without binding. To adjust, bend float lever.

FLOAT LEVEL: 7/32 inch (gauge T109-106) between top of floats (at outer end) and air horn gasket. To adjust, bend float lever.

FLOAT DROP: 23/32 inch between top of floats (at outer end) and air horn gasket. To adjust, bend stop tabs on float brackets.

PUMP: 7/16 inch from top of the bowl cover to the top of the plunger shaft with throttle connector rod in center hole (medium stroke) of pump arm. To adjust, bend throttle connector rod.

FAST IDLE LINKAGE ADJUSTMENT: With choke valve tightly closed and lug on outer choke shaft lever contacting stop on inner choke shaft lever align center on fast idle screw with index mark on cam. To adjust, bend fast idle connector rod.

FAST IDLE THROTTLE VALVE CLEARANCE: .012 inch (gauge T109-200) between lower edge of valve and bore with adjusting screw on index mark of cam.

FAST IDLE ON CAR: 1400 R. P. M. hot engine with fast idle screw on index mark of cam.

UNLOADER: 1/4 inch (gauge T109-31) between upper edge of choke valve and inner wall of air horn. To adjust, bend unloader lip on throttle lever.

SECONDARY THROTTLE LEVER ADJUSTMENT: 1. Block choke valve wide open. 2. With 3/8 inch between lower edge of primary valve and bore (opposite idle port) secondary valves should just start to open. To adjust, bend throttle operating rod. NOTE: At wide open throttle primary and secondary valves will reach vertical position. 3. With primary and secondary throttle valves in tightly closed position there should be .010" to .030" (gauge T109-29) between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on secondary lever.

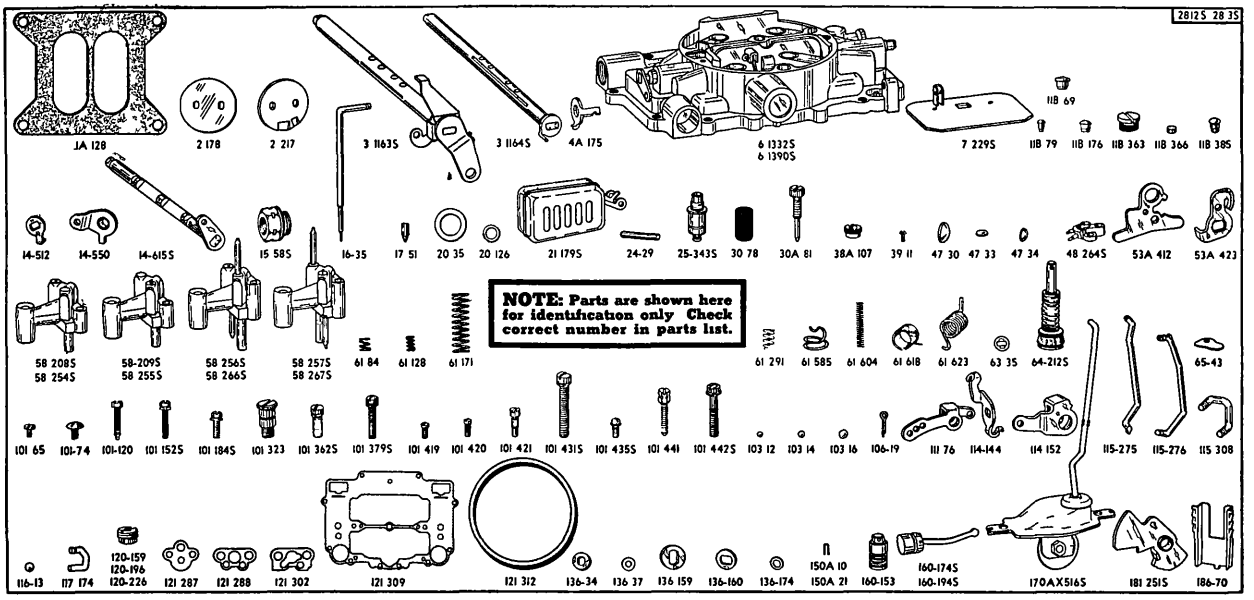
SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: Crack throttle valves and manually open and close the choke valve. Tang on secondary throttle lever should freely engage in notch of lock-out dog. To adjust, bend tang on secondary throttle lever.

CHOKE ADJUSTMENT (CROSS OVER TYPE) SEE FORM 3657: 1. Loosen mounting post lock nut and turn mounting post with screw driver until index mark on disk is positioned as listed on carbureter specification page. Hold in this position with screw driver and tighten lock nut. NOTE: Screw driver may be held in vise so that one hand may be used to support housing while tightening nut. 2. After adjustment is completed and coil housing and rod assembly and carbureter is installed on engine lift cover disk and open and close choke valve manually to see if connector rod clears side of hole in housing cover. If rod does not clear hole in housing cover without binding replace with a new unit since connector rod cannot be bent without affecting calibration.

TOOLS REQUIRED FOR SERVICING CARBURETERS:

T109-29	.020" Wire gauge	T109-106	7/32" Float gauge
T109-31	1/4" Unloader gauge	T109-200	.012" Wire gauge
T109-41	Bending tool	T109-213	Bending tool

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Plymouth "V-8" — 1958 — Carbureters Nos. 2812S-2813S

WHEN SERVICING, USE GASKET ASSORTMENT No. 316, RE-CARBURETION KIT No 1913N

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF RE-CARBURETION KIT

Part No	PART NAME	
1A-128	FLANGE GASKET	
2-178	Secondary throttle valve	(2)
2-217	Primary throttle valve	(2)
3-1163S	Primary throttle shaft and lever assembly	
3-1164S	Secondary throttle shaft and dog assembly	
4A-175	Primary throttle shaft dog	
6-1332S	Air horn assembly (2813S)	
6-1390S	—Air horn assembly (2812S)	
7-229S	Choke valve and bracket assembly	
11B-69	Rivet plug	(2)
11B-79	Rivet plug	(4)
11B-176	Idle port rivet plug	(2)
11B-363	Pump intake screw plug	
11B-366	Nozzle well rivet plug	(4)
11B-385	Fuel passage plug	
14-512	Outside choke shaft lever	
14-550	Inside choke shaft lever	
14-615S	Choke lever and shaft assembly	
15-58S	Fuel inlet assembly	
16-35	STEP UP ROD 0645" x 058"	(2)
16-39	Step up rod 066" x 061" 1 size lean	(2)
16-40	Step up rod 0675" x 064" 2 sizes lean	(2)
17-51	Pump discharge check needle	
20-35	Fuel inlet gasket	
20-126	Needle seat gasket	(2)
21-179S	Float and lever assembly	(2)
24-29	Float lever pin	(2)
25-343S	NEEDLE AND SEAT ASSEMBLY (0935")	(2)

Part No.	PART NAME	
30-78	Fuel inlet strainer	
30A-81	Idle adjustment screw	(2)
38A-107	Pump intake check ball seat	
39-11	Choke valve attaching screw	(2)
47-30	Choke piston welsh plug	
47-33	Venturi welsh plug	(4)
47-34	Spark port welsh plug	
48-264S	Pump jet and housing assembly	
53A-412	Lockout dog	
53A-423	Secondary throttle operating lever	
58-208S	Secondary venturi assembly (opposite pump) (2812S)	
58-209S	Secondary venturi assembly (pump side) (2812S)	
58-254S	Secondary venturi assembly (opposite pump) (2813S)	
58-255S	Secondary venturi assembly (pump side) (2813S)	
58-256S	Primary venturi assembly (opposite pump) (2813S)	
58-257S	Primary venturi assembly (pump side) (2813S)	
58-266S	Primary venturi assembly (opposite pump) (2812S)	
58-267S	Primary venturi assembly (pump side) (2812S)	
61-84	Idle adjusting screw spring	(2)
61-128	Throttle connector rod spring	
61-171	Pump spring (lower)	
61-291	Throttle lever adjusting screw spring	
61-585	Step up rod retaining spring	(2)
61-604	VACUUM PISTON SPRING	(2)
61-618	Secondary throttle return spring	

Part No.	PART NAME	
61-623	Throttle flex spring	
63-35	Throttle connector rod retainer	
64-212S	PUMP PLUNGER ROD AND SPRING ASSEMBLY	
65-43	Step up piston cover plate	(2)
101-65	Choke shaft lever attaching screw	
101-74	Throttle shaft lever attaching screw	(2)
101-120	Fast idle adjustment screw	
101-152S	Air horn attaching screw and washer assembly	
101-184S	Pump jet housing attaching screw and washer assembly	(2)
101-323	Fast idle cam attaching screw	
101-362S	Air horn attaching screw and washer assembly	(8)
101-379S	Secondary venturi attaching screw and washer assembly (length 1") (2812S)	(4)
101-419	Secondary throttle valve attaching screw	(4)
101-420	Primary throttle valve attaching screw	(4)
101-421	Pump arm attaching screw	
101-431S	Air horn attaching screw and washer assembly	
101-435S	Step up piston cover plate attaching screw and washer assembly	(2)
101-441	Throttle lever adjusting screw	
101-442S	Primary and secondary venturi attaching screw and washer assembly (length 1 5/16") (2812S (4) (2813S (8)	
103-12	Lead shot	(2)
103-14	Lead shot (180" dia)	
103-16	Lead shot	
106-19	Cotter pin	
111-76	Pump arm	
114-144	Primary throttle shaft arm (outer)	

Part No	PART NAME	
114-152	Primary throttle shaft arm (inner)	
115-275	Choke connector rod	
115-276	Throttle connector rod	
115-308	Throttle operating rod	
116-13	Pump intake check ball	
117-174	Pump connector link	
120-159	PRIMARY METERING JET (089")	(2)
120-196	Secondary metering jet (0595") (2812S)	(2)
120-226	Secondary metering jet (065") (2813S)	(2)
121-287	PUMP JET HOUSING GASKET	
121-288	SECONDARY VENTURI CLUSTER GASKET	(2)
121-302	PRIMARY VENTURI CLUSTER GASKET	(2)
121-309	AIR HORN GASKET	
121-312	Air cleaner gasket	
136-34	Choke shaft washer	
136-37	Throttle operating rod washer	
136-159	Primary throttle shaft washer	
136-160	Secondary throttle shaft washer	
136-174	Throttle lever adjusting screw washer	
150A-10	Pin spring	(5)
150A-21	Pin spring	
160-153	Step up piston	(2)
160-174S	Choke piston and link assembly (2813S)	
160-194S	—Choke piston and link assembly (2812S)	
170AU-516S	—Thermostatic coil housing and rod assembly (2812S)	
170AX-516S	Thermostatic coil housing and rod assembly (2813S)	
181-251S	Fast idle cam assembly	
186-70	Fuel bowl baffle	(2)

—Parts so marked are new and listed for the first time

NOTE **Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.**

PLYMOUTH "V-8" FURY

MODEL LP2-S 1958

2761S
Front Carbureter

2762S
Rear Carbureter

WCFB Four-Bore Down-Draft Climatic® Control Carbureters Nos. 2761S-2762S

CARBURETER SPECIFICATIONS

For Plymouth 8 Cylinder 318 Cu. In. Engine: Vacuum at Idle 19.5 Inches

Dimensions: Flange size, 1-1/4 inch. Four Bore--4 bolt type.
Primary venturi size, 11/32 inch I. D.
Main venturi (primary) size, 1 inch.
Main venturi (secondary) size, 1-1/8 inch I.D.

Vents: Outside, (4) in air horn, (4) in flange.
Inside, (7) in air horn.

Low Speed Circuit: (Primary side only) Jet, size No. .65 (.035 inch) drill. By-pass, in body, size No. 52 (.0635 inch) drill. Economizer, in low speed jet plug, size (2761S) (.0492 inch), (2762S) No. 54 (.055 inch) drill. Idle bleed; in body, size No. 52 (.0635 inch) drill. Idle port, slot type, length .156 inch; width .030 inch.

Idle Port Opening: .087 to .093 inch above top edge of valve with valve tightly closed.

Lower Port: (For idle adjustment screw), size No. 53 (.0595 inch) drill.

Set Idle Adjustment Screw: 3/4 to 1-3/4 turns open. For richer mixture turn screw out. Do not idle engine below 650 r.p.m. in neutral.

Idle Air Adjusting Screw: Seat size .187 inch diam ter.

Main Nozzle: Installed permanently. DO NOT REMOVE. Anti-percolating bleed (primary, in plug) size N . 60 (.040 inch) drill; Secondary, none.

Accelerating Pump: Discharge jet (twin) primary sid only No. 73 (.023 inch) drill.
Intake ball check seat, size .115 to .120 inch diameter.
Discharge needle seat, size .070 inch diam ter.
Discharge relief plug size No. 55 (.052 inch) drill.

Choke: (2762S only) Carter Climatic® Control, set one point rich. Butterfly type--offset choke valve, primary side only. Choke heat suction hol , restriction in bushing between air horn and pist n housing size No. 50 (.070 inch) drill.

Vacuum Spark Port: (2762S only) Horizontal slot (r und end) .064 x .120 inch. Top of port .016 to .024 inch above top edge of valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open:	Valve Setting (Hot)	Float Setting	Idle Adjustment Screw Setting
.035"	.017"	10° B.T.C. At Vibration Damper	Intake .008" Exhaust .018"	Primary 7/32 Inch (Use Gauge T109-283) S condary 11/32 Inch (Us Gaug T109-285)	¾ to 1¼ Turns Op n Idl Engin at 650 R.P.M. In N utral

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: Two separate float adjustments must be made -- lateral and vertical.
LATERAL ADJUSTMENT: With bowl cover assembly inv rt d, bowl cover gasket removed and float r sting on s ated needle place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting. Side of floats should just clear the vertical uprights of float gaug . Adjustm nt should be made by bending arms of floats. **VERTICAL ADJUSTMENT:** With float gauge in same position, floats should just clear the horizontal portion of gauge. Vertical distance betw en top cent r of float and machined surface of casting must be 7/32 inch (gauge T109-283) for primary floats and 11/32 inch (gauge T109-285) for secondary floats. Adjust by bending float arms.

FLOAT DROP ADJUSTMENT: With bowl cover held in upright position and measuring from center of float, th distance between top of floats and bowl cover should be 23/32 inch for primary floats and 27/32 inch for secondary floats. Adjust by bending stop tabs on float brackets.

PUMP ADJUSTMENT: Install pump connector link in center hole (medium stroke) of pump arm, with ends ext nding toward countershaft arm. Back out throttle lever stop screw until throttle valves seat in bores of carbureter. Hold straight edge across top of dust cov r boss at pump arm. The flat on top of pump arm should be parallel to straight edge. Adjust by bending throttle connector rod at lower angle. (Use tool T109-213.)

METERING ROD ADJUSTMENT: Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows: 1. Back out throttle lever stop screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw. 2. With metering rod in place, press down on vacumeter link until metering rods bottom in carbureter body casting. 3. Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link. Hold in place and carefully tighten clamp screw.

FAST IDLE ADJUSTMENT: (2762S only) (a) Loosen choke lever clamp screw on choke shaft. Insert .010 inch feeler gauge (T109-200) between lip of fast idle cam and boss of flange casting. Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position -- hold in place and tighten clamp screw. (b) With choke valve tightly closed bend fast idle adjusting tang until there is .018 inch (gauge T109-44) opening between throttle valve and bore of carbureter side opposite idle port. Be sure fast idle adjusting tang is on high step of cam while making this adjustment.

FAST IDLE ON CAR: (2762S only) 1550 to 1600 R.P.M. hot engine with idle adjusting tang on high step of cam.

UNLOADER ADJUSTMENT: (2762S only) With throttle wide open there should be 1/8 inch (gauge T109-36) clearance between upper edge of choke valve and inner wall of air horn. Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41).

BOWL VAPOR VENT ADJUSTMENT: This adjustment should be made after completing pump and metering rod adjustments. Install dust cover and dust cover gasket. Back out throttle lever stop screw to allow throttle valves to seat in bores of carbureter. There should be 1/16 inch (gauge T109-197) between lower edge of bowl vapor vent valve and dust cover. To, adjust, remove dust cover and bend vapor vent arm.

SECONDARY THROTTLE LEVER ADJUSTMENT: Primary and secondary throttle valves should reach wide open position at the same time. NOTE: Secondary throttle valves will be a few degrees from wide open. To adjust, bend throttle operating rod at angle. (Use bending tool T109-213). With primary and secondary throttle valves in tightly closed position there should be .010--.030 inch (gauge T109-29) clearance between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on secondary lever.

AUXILIARY THROTTLE LOCK-OUT ADJUSTMENT: (2762S only) This adjustment should be made after completing fast idle and secondary throttle lever adjustments. Crack throttle valves and hold choke valve tightly closed. Then close throttle. Lock-out dog on auxiliary throttle shaft should feely engage in notch of lock-out arm. If necessary to adjust, bend lock-out dog on auxiliary throttle shaft.

IDLE SPEED AND MIXTURE ADJUSTMENT (NORMAL ENGINE TEMP.): In making the idle adjustment on the engine, the air adjustment screw is used to adjust idle speed in a similar manner as the throttle speed screw used previously. Turning the air adjustment screw outward increases engine speed, but also leans mixture supplied to the manifold which must be compensated for by adjustm nt of the idle mixture adjusting screws.

WHEN SERVICING, USE GASKET ASSORTMENT No. 309

Plymouth "V-8" – 1958 – Carbureters Nos. 2761S-2762S

Part No.	PART NAME	
1-1506S	Body flange assembly (2762S)	
1-1508S	Body flange assembly (2761S)	
1A-110	Flange gasket	
2-189	Primary throttle valve	(2)
2-201	Secondary throttle valve	(2)
2-210	Auxiliary throttle valve	(2)
3-1096S	Secondary throttle shaft and dog assembly	
3-1148S	Primary throttle shaft and lever assembly (2762S)	
3-1150S	Primary throttle shaft and lever assembly (2761S)	
3-1152S	Auxiliary throttle shaft and weight assembly	
4A-179	Auxiliary throttle shaft lockout dog (2762S)	
6-1368S	Air horn assembly (2761S)	
6-1379S	Air horn assembly (2762S)	
7-173	Choke valve (2762S)	
11-294S	Low speed jet assembly (.035") (2761S)	(2)
11-312S	Low speed jet assembly (.035") (2762S)	(2)
11B-35	Rivet plug	(4)
11B-41	Rivet plug (2762S)	
11B-79	Rivet plug	
11B-134	Rivet plug	
11B-223	Rivet plug	(4)
11B-272	Rivet plug	(2)
11B-294	Idle port rivet plug	(2)
11B-305	Rivet plug	(2)
11B-306	Rivet plug	
14-383S	Choke lever and screw assembly (2762S)	
14-439S	Choke piston lever, link and shaft assembly (2762S)	
14-440	Cam trip lever (2762S)	
15-63S	Strainer nut assembly	(2)
17-70	Pump check needle	
20-26	Relief valve gasket	
20-126	Needle seat gasket	(2)
20-127	Bowl strainer gasket	(2)
21-143S	Primary float and lever assembly	
21-168S	Secondary float and lever assembly	
24-24	Float lever pin	(2)
25-278S	Primary and secondary needle and seat assembly (.0935")	(2)
30-73	Primary needle seat strainer	
30-75	Bowl strainer	
30A-67	Idle adjustment screw	(2)
30A-79	Idle air adjustment screw	(2)
39-11	Choke valve attaching screw (2762S)	(2)
47-30	Welsh plug (choke housing) (2762S)	
47-33	Welsh plug (spark port)	
48-233S	Pump jet and housing assembly	
53A-333S	Pump operating lever and countershaft assembly	
53A-344	Vent arm	

Part No.	PART NAME	
53A-417	Lockout arm (2762S)	
61-84	Idle adjustment screw spring	(2)
61-128	Connector rod spring	
61-291	Throttle lever adjusting screw spring	
61-332	Vacuum piston spring	
61-382	Metering rod spring	
61-413	Upper pump spring	
61-454	Fast idle cam spring (2762S)	
61-474	Bowl vent spring	
61-483	Secondary throttle return spring	
61-593	Lockout arm spring (2762S)	
61-595	Idle air adjustment screw spring	
63-35	Connector rod spring retainer	
63-57	Intake check ball retainer	
63-144	Delayer plate retainer ring (2762S)	
63-149	Bowl vent spring retainer	
63-176	Pump spring retainer	
63-225	Coil housing retainer (2762S)	
63-229	Heat tube retainer (2762S)	
64-145S	Pump plunger and rod assembly	
75-1273	Metering rod .073" x .062" x .053" - Standard (2762S)	(2)
75-1387	Metering rod .073" x .067" x .062" - Standard (2761S)	(2)
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-65	Lockout dog attaching screw (2762S)	
101-74	Throttle shaft screw	
101-149S	Body flange attaching screw and washer assembly	
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-275	Piston housing attaching screw (2762S)	
101-277S	Vent arm attaching screw and washer assembly	
101-278S	Pump jet housing attaching screw	
101-298S	Body flange attaching screw and washer assembly	(2)
101-307S	Bracket and air horn attaching screw and washer assembly	(8)
101-324	Fast idle cam screw (2762S)	
101-335S	Air horn attaching screw and washer assembly	(7)
101-354S	Choke lever clamp screw and washer assembly (2762S)	
101-363	Piston housing attaching screw (2762S)	(2)
101-382S	Body flange attaching screw and washer assembly	(3)
101-391	Throttle lever adjusting screw	
101-414	Auxiliary throttle valve attaching screw	(4)

Part No.	PART NAME	
101-420	Primary and secondary throttle valve attaching screw	(8)
101-426	Coil housing attaching screw (2762S)	(3)
103-14	Lead shot (2761S (4) (2762S (3)	
105A-10	Choke lever clamp screw nut (2762S)	
111-60S	Mounting rod arm and screw assembly	
111-78S	Pump arm and screw assembly	
114-139	Throttle shaft arm (inner)	
114-145	Throttle shaft arm (outer)	
115-215	Choke connector rod (2762S)	
115-216	Throttle connector rod	
115-292	Throttle operating rod	
116-13	Pump intake check ball	
117-162	Vacumeter piston link	
117-165	Pump connector link	
118-102S	Dust cover assembly	
120-159	Primary metering rod jet (.089")	(2)
120-196	Secondary metering jet (.0595")	(2)
121-78	Coil housing gasket (2762S)	
121-208	Dust cover gasket	
121-241	Pump jet housing gasket	
121-277	Body flange gasket	

Part No.	PART NAME	
121-281	Air horn gasket	
121-291	Heat tube cap gasket (2762S)	
121-298	Piston housing gasket (2762S)	
122-98S	Pump relief valve assembly	
136-37	Throttle operating rod washer	(5)
136-84	Throttle shaft spring washer	
136-159	Throttle shaft washer	
136-199	Copper washer (Use with 101-298S)	(2)
145-142	Choke vacuum passage standpipe (2762S)	
145-148	Cross over bowl vent tube	(2)
150-186S	Pin and valve cap assembly	
150-190	Choke piston pin (2762S)	
150A-10	Pin spring (2761S (4) (2762S (5)	
160-110S	Vacuum piston and pin assembly	
160-190	– Choke piston (2762S)	
170-489S	Piston housing and plug assembly (2762S)	
170AW-484S	Thermostatic coil and housing assembly (2762S)	
181-204S	Fast idle cam assembly (2762S)	
184-88	Choke heat tube cap (2762S)	
186-42	Choke baffle plate (2762S)	

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Form 5304

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

PLYMOUTH 2652S-2653S
August, 1957

2652S Front Carbureter

PLYMOUTH LP2-S "Fury"
DODGE LD3-S "D500-1"
DESOTO LS3-S "Adventurer"
1958

2653S Rear Carbureter

AFB Four-Bore Down-Draft Climatic® Control Carbureters Nos. 2652S-2653S

CARBURETER SPECIFICATIONS

For 8 Cylinder (LP2-S) 350; (LD3-S, LS3-S) 360 Cu. In. Engine

Dimensions: Flange, four bore - 4 bolt type. Throttle Bore, primary, 1-7/16 inch; secondary 1-9/16 inch I. D.
Primary venturi size, primary side, 7/16 inch, secondary side, 11/32 inch I. D.
Main venturi size, primary side 1-1/16 inch, secondary side, 1-1/4 inch I. D.

Vents: Inside (4) in air horn. Outside (5) in air horn (4) in body.

Low Speed Circuit: (Primary side only)
Jet, size (early prod.) No. 70 (.028 inch), (late prod.) No. 68 (.031 inch) drill.
By-pass, size (.0492 inch) diameter.
Economizer, size No. 57 (.043 inch) drill.
Idle bleed, size No. 55 (.052 inch) drill.
Idle port, slot type, length .166 inch; width .030 inch.

Idle Port Opening: (2652S) .094 to .100 inch; (2653S) .085 to .091 inch above top edge of valve with valve tightly closed.

Set Idle Adjustment Screw: 1/4 to 1-1/2 turns open. For richer mixture turn screw out. Do not idle engine blow 650 R.P.M. Transmission in neutral.

Main Nozzle: Installed permanently. DO NOT REMOVE. Anti-percolator bleed, primary, (tube in venturi assembly) size No. 70 (.028 inch) drill. Secondary, drilled hole in venturi assembly) size No. 60 (.040 inch) drill.

Main Vent Tube: (In venturi assembly, primary siz only). Side holes 11 - size No. 70 (.028 inch) drill, 1 - size N . 65 (.035 inch) drill.

Secondary Initial Discharge: (In venturi assembly). Pick up tube size No. 60 (.040 inch) drill. Air bleed siz (.0275 inch) diameter. Discharge port size No. 53 (.0595 inch) drill.

Accelerating Pump: Discharge jet (twin) primary sid only, size No. 68 (.031 inch) drill. Intake ball check seat (screw plug), size .115 to .120 inch diameter. Discharge needle seat size No. 50 (.070 inch) drill.

Choke: (2653S) Carter Climatic® Control set 1 point rich. Butterfly type - offset choke valve, primary side only. Ch ke heat suction hole, bushing between body and piston housing, size No. 48 (.076 inch) drill.

Vacuum Spark Port: (2653S) Slot type, length .110 inch, width .045 inch. Top of port .000 to .004 inch above upper edge f valve withvalve tightly closed.

Motor Tune-Up – Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open:	Float Setting	Idl Adjustment Screw Setting
.035"	.017"	8° B.T.C. At Vibration Damper	See Adjustments	1/4 to 1-1/2 Turns Op n Idle Engin at 650 R.P.M. In Neutral

NOTE: These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT

CARBURETER ADJUSTMENTS

FLOAT ALIGNMENT: Side of floats parallel to edge of casting. Minimum clearance between lever and air horn lugs without binding. To adjust, bend float lever.

FLOAT LEVEL: (2652S) (with 21-188S floats) 3/8 inch (gauge T109-80), (with 21-179S floats) 9/32 inch (gauge T109-126). (2653S) (with 21-188S floats) 5/16 inch (gauge T109-107) (with 21-179S floats) 7/32 inch (gauge T109-106) between top of floats (at outer end) and air horn gasket. To adjust, bend float lever.

NOTE: Identify 21-188S floats by smooth sides, 21-179S by ribs on floats.

FLOAT DROP: 23/64 inch between top of floats (at outer end) and air horn gasket. To adjust, bend stop tabs on float bracket.

PUMP: 7/16 inch from the top of the bowl cover to the top of the plunger shaft with throttle connector rod in center hole (medium stroke) of pump arm. To adjust, bend throttle connector rod.

CHOKE PISTON LEVER ADJUSTMENT: (2653S only) .040 inch (Gaug T109-193) b tween choke l v r and stop in piston h using with ch ke valve cl sed. To adjust, bend choke connect r r d.

FAST IDLE LINKAGE ADJUSTMENT: (2653S only). With choke valve tightly closed and lug on outer chok shaft l ver contacting stop on inner choke shaft lever align center f fast idle screw with index mark on cam. To adjust, bend fast idle connector rod.

FAST IDLE THROTTLE VALVE CLEARANCE: (2653S only) .012 inch (Gauge T109-200) between low r dge of valve and bore with adjusting screw on index mark f cam.

FAST IDLE ON CAR: (2653S only) 1450 R.P.M. hot engin with fast idle screw on index mark of cam.

UNLOADER: (2653S only) 1/4 inch (Gauge T109-31) betwe n upper edge of choke valve and inner wall of air horn. T adjust, bend unloader lip on throttle lever.

SECONDARY THROTTLE LEVER ADJUSTMENT: 1. Block choke valve wide open. 2. With 23/64 inch b tween l w r edge of primary valve and bore (opposite idl p rt) sec ndary valves should just start to open. To adjust, bend throttle operating rod. NOTE: At wide open throttle primary and secondary valves will reach full vertical position. 3. With primary and secondary valves in tightly closed p sition there should be .010" t .030" (Gaug T109-29) betw en positiv cl sing shoes on primary and secondary thr ttle lev rs. T adjust bend sho n sec ndary l ver.

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SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: (2653S nly) 1. Crack throttle valves and manually open and close the choke 'valve. Tang on secondary throttle lever should freely engage in notch f lock-out dog. T adjust, bend tang on secondary Throttle lever. 2. With lock-out dog held tight against stop on flange casting and secondary throttle valves partially open there should be .020 inch (Gauge T109-29) betw én tang on secondary throttle lever and lock-out arm. To adjust, bend arm at slot on lock-out dog. NOTE: Fast idle cam may be rem ved to facilitate gauging and adjusting.

IDLE SPEED AND MIXTURE ADJUSTMENT (Normal Engin Temp): In making th idle adjustment n the engine, the air adjustment screw is used t adjust idle sp ed in a similar manner as the throttle speed screw used previously. Turning the air adjustment screw outward increases engin speeds, but also leans the mixtur supplied to the manifold which must b compensated for by adjustment of the idle mixture adjusting screws.

TOOLS REQUIRED FOR SERVICING CARBURETERS:

T109-29	.020" – .030" Wire gauge	T109-80	3/8" Float gauge (early)	T109-126	9/32" Float gauge (late)
T109-31	1/4 Unloader gauge	T109-106	7/32" Float gauge (late)	T109-193	.040" Wire gauge
T109-41	Bending tool	T109-107	5/16" Float gauge (early)	T109-200	.012" Wire gauge
				T109-213	Bending tool

PLYMOUTH "V-8" – 1958 – Carbureters Nos. 2652S–2653S

WHEN SERVICING, USE GASKET ASSORTMENT NO. 319 (2652S); NO. 320 (2653S)

Part No.	PART NAME
1A-125	– Flange gasket .....
2-195	– Primary throttle valve (2652S) ..... (2)
2-197	Secondary throttle valve ..... (2)
2-220	– Primary throttle valve (2653S)..... (2)
3-1133	– Secondary throttle shaft (2652S).....
3-1135S	– Secondary throttle shaft and dog assembly (2653S).....
3-1171S	– Auxiliary throttle shaft, valve and weight assembly .. ..
3-1173S	– Primary throttle shaft and lever assembly (2652S).. .....
3-1174S	– Primary throttle shaft and lever assembly (2653S).....
4A-175	Primary throttle shaft dog .....
6-1344S	– Air horn assembly (2652S) .....
6-1362S	– Air horn assembly (2653S).....
7-218	Choke valve (2653S).. .....
11B-69	Rivet plug (late prod.)..... (2)
11B-79	Rivet plug .....(2)
11B-176	Idle port rivet plug ..... (2)
11B-363	Pump intake screw plug.. .....
11B-366	Nozzle well lead plug .. .. (4)
11B-372	Level sight plug ..... (2)
11B-385	– Fuel inlet passage plug .....
14-512	Outside choke shaft lever (2653S).....
14-550	Inside choke shaft lever (2653S).....
14-568S	– Choke lever and shaft assembly (2653S).. .....
14-581S	Choke piston lever, link and pin assembly (2653S).. .....
15-58S	Fuel inlet strainer assembly (2653S) .....
15-62S	Fuel inlet assembly (2652S) .....
16-26	Step-up rod .0675" x .056" – Standard (2653S) .. .. (2)
16-40	Step-up rod .0675" x .064" – Standard (2652S) (2)
17-51	Pump discharge check needle .....
20-35	Fuel inlet gasket (2652S).. .....
20-43	Piston housing gasket (2653S) .....
20-126	Needle seat gasket .....(2)
20-127	Fuel inlet gasket (2653S).....
21-179S	Float and lever assembly .....(2)
21-188S	– Float and lever assembly (Sup. by 21-179S)..... (2)
24-29	Float lever pin .. .. (2)
25-324S	Needle and seat assembly (.1015") (Sup. by 25-343S) ..... (2)
25-343S	Needle and seat assembly (.0935") (Sup. by 25-348S) ..... (2)
25-348S	– Needle and seat assembly (.076") ..... (2)
30-78	Fuel inlet strainer .. ..
30A-81	– Idle adjustment screw .....(2)
30A-83	– Idle air adjustment screw.....
38A-107	Pump intake check ball seat.....
39-11	Choke valve attaching screw (2653S)..... (2)
47-30	Piston housing welsh plug (2653S) .....
47-33	Venturi welsh plug..... (4)
47-34	Spark port welsh plug.....
48-258S	Pump jet and housing assembly .....
53A-412	Lockout dog (2653S) (Sup. by 53A-440S).....
53A-419	Secondary throttle operating lever.....
53A-440S	Lockout arm and collar assembly (2653S).....
58-221S	– Secondary venturi assembly (choke side).....
58-222S	– Secondary venturi assembly (pump side) .....
58-248S	– Primary venturi assembly (choke side).....
58-249S	– Primary venturi assembly (pump side) .. ..
61-84	Idle adjusting screw spring.. .....(2)
61-128	Throttle connector rod spring.....
61-389	Pump spring .....
61-483	Secondary throttle return spring.... .....
61-484	Vacuum piston spring ..... (2)
61-585	Step-up rod retaining spring .. ..(2)
61-592	Throttle flex spring.... .....
61-599	– Idle air adjustment screw spring.....

Part No.	PART NAME
63-35	Throttle connector rod retainer..... .....
63-144	Delayer plate retainer ring (2653S) ....
63-176	Pump spring retainer .....
63-225	Coil housing retainer (2653S) .. ..
63-229	Heat tube retainer (2653S).. .....
64-215S	– Pump plunger and rod assembly .....
65-43	Step-up piston cover plate..... (2)
101-65	Choke shaft lever attaching screw (2653S) (2)
101-74	Throttle shaft lever attaching screw.. .....(2)
101-152S	Air horn attaching screw and washer ass'y.
101-184S	Pump jet housing attaching screw and washer assembly..... ..... (2)
101-362S	Air horn attaching screw and washer assembly ..... (8)
101-379S	Secondary venturi attaching screw and washer assembly .....(4)
101-419	Secondary throttle valve attaching screw.. (4)
101-420	Primary throttle valve attaching screw.... ..(4)
101-421	Pump arm attaching screw .. ..
101-426	Coil housing attaching screw, (2653S)..... (3)
101-429	Fast idle adjustment screw.. .....
101-430	– Fast idle cam attaching screw ....
101-431S	Air horn attaching screw and washer ass'y....
101-435S	Step-up piston cover plate attaching screw and washer assembly .. .. (2)
101-436	Piston housing attaching screw (2653S).... (3)
101-442S	Primary venturi attaching screw and washer assembly.. ..... (4)
103-12	– Lead shot .....(2)
103-15	Lead shot .....
103-16	Lead shot (2652S (1) 2653S (2).....
108-65	– Fast idle cam spacer (2653S) Sup, by 53A-440S).....
111-76	Pump arm .....
113-48S	– Choke shaft and lever assembly (piston housing) (2653S) .....
114-146	– Primary throttle shaft arm (outer)..... .....
114-147	– Primary throttle shaft arm (inner).....
115-284	– Fast idle connector rod (2653S) .....
115-285	– Choke connector rod (2653S).. .....
115-304	– Throttle connector rod .....
115-308	– Throttle operating rod.. .....
116-13	Pump intake check ball.... .....
117-174	Pump connector link ....
120-159	Primary metering jet (.089") ..... (2)
120-176	Secondary metering jet (.0635") (2652S) .. (2)
120-181	Secondary metering jet (0492") (2653S) ....(2)
121-78	Coil housing gasket (2653S).....
121-287	Pump jet housing gasket..... .....
121-291	Heat tube cap gasket (2653S) .....
121-292	Air horn gasket.....
121-293	Secondary venturi cluster gasket..... (2)
121-302	Primary venturi cluster gasket .. .. (2)
121-312	– Air cleaner gasket .. ..
136-34	Choke piston lever retaining washer (2653S)..... (2)
136-37	Throttle operating rod washer.... .....
136-159	Primary throttle shaft washer ....
136-160	Secondary throttle shaft washer .. ..
136-205	– Throttle shaft washer.....
150-190	Choke piston pin (2653S) .....
150A-10	Pin spring (2652S (3) 2653S (6) .....
150A-21	Pin spring.....
160-153	Step-up piston.. .....(2)
160-189	– Choke piston (2653S).....
170-546S	– Piston housing and plug assembly (2653S)....
170AZ-538S	– Thermostatic coil and housing assembly .....
181-254	– Fast idle cam (2653S).... .....
184-85	Choke heat tube cap (2653S).. .....
186-65	Choke baffle plate (2653S).... .....
186-70	Fuel bowl baffle .. ..(2)

–Parts so marked ar new and listed for the first time.

NOTE: Figures in parenth ses indicat number of pieces used in ne carbureter. Wh r n figure is shown, nly ne is us d.

CARTER CARBURETOR

DIVISION OF ACF INDUSTRIES
INCORPORATED
ST. LOUIS 7, MO., U.S.A.

GENERAL BULLETIN

CARBURETER CONTRACT ACCOUNTS
FACTORY AND P.I. SCHOOL GRADUATES

BULLETIN NO. 13 PLYMOUTH
DATE December 9, 1957

SUBJECT: 1958 PLYMOUTH V8 FLAT ON ACCELERATION COMPLAINT BBD-2644S-45S-46S (DUAL) CARBURETERS

Vacuum step-up spring 61-549 has been found helpful in correcting a flat spot or lag in performance upon light or part throttle acceleration.

Vacuum step-up spring 61-549 (pink) is slightly stronger than the early production spring 61-538 (cadmium plated) and causes the step-up rods to move out of the main metering jets and the carbureter to deliver the power mixture more quickly upon acceleration.

Carbureters code dated "M7" (December 1957) or later have the 61-549 spring installed in production.

Plymouth dealers will rely on Carter accounts to supply the 61-549 springs. This is not a new part, however, to insure availability, a skeleton stock shipment is being made to Carter Central Distributors.

Carter warranty is not involved.

V. F. Thompson, Manager
Distribution Sales

RJM:dg
cc: Personnel and Extra Copies - Canada and U.S.A.

IMPORTANT: THIS BULLETIN C NTAINS INFORMATION OF VALUE TO YOU AND WAS PREPARED AT CONSIDERABLE EXPENSE TO BE OF SERVICE T YOU FAILURE TO USE THIS INFORMATION MAY COST YOU MONEY. WE SUGGEST THAT YOU ISSUE COPIES OF IT TO THOSE OF YOUR STAFF INTERESTED, SO THAT THEY CAN BE FILED IN REGULAR CARTER SALES AND SERVICE MANUAL.

FORM C-2914E

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Form 5294A

CARTER CARBURETOR
DIVISION OF ACF INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

PLYMOUTH 2644S-2645S-2646S
October, 1957
Revised December, 1957

2644S
Standard Transmission

2645S
Overdrive Transmission

2646S
Power Flite Transmission

PLYMOUTH
MODEL
LP2-M
1958

(Also used on Export Dodge, Model LE2 and Export DeSoto, Model LF2)

Use 2644S and 192-36U to replace 2645S

BBD Down-Draft Climatic® Control Carbs. Nos. 2644S-2645S-2646S

CARBURETER SPECIFICATIONS

For Plymouth 8 Cylinder 318 Cu. In. Engine: Vacuum at Idle 19.5 Inches

Dimensions: Flange size, 1¼ inch dual, 4 bolt type Throttle bore, 1-7/16 inch I D
Primary venturi 3/8 inch I D.
Main venturi, 1-3/16 inch I. D

Vent: Inside, balance vent tube to bowl, in air horn above choke valve Outside, (2) in flange above throttle valve

Low Speed Circuit: Jet (in venturi assembly) size 0255 inch diameter Idle bleed (in venturi cluster screw) size (2644S 2645S) 055 inch (2646S) 059 inch diameter Idle restriction (in venturi cluster screw) size 055 inch diameter Venturi idle bleed (in body) size 0472 inch diameter. Idle port, slot type length 189 inch, width 030 inch

Idle Port Opening: 144 to 148 inch above upper edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw): Size 055 inch diameter

Set Idle Adjustment Screw: ¼ to 1¼ turns open For richer mixture turn screw out With gear shift lever in neutral position idle engine at 500 R P M

Main Vent Tube: Side holes 10—size 0433 inch 1—size 0393 inch diameter Main vent in bottom of tube size 0393 inch diameter

Accelerating Pump: Pump discharge jets (2—in venturi cluster) size 0275 inch diameter Intake ball check seat size 130 to 140 inch diameter Discharge ball check seat size 110 to 120 inch diameter

Choke: Carter Climatic® Control Cross Over Type, set at index Butterfly type offset valve Choke heat suction hole in air horn size No 44 (086 inch) drill

Vacuum Spark Port: Horizontal round end type 045 by 110 inch Top of port to be 025 to 035 inch above upper edge of valve with valve closed tight

Motor Tune-Up — Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .017"	Ignition Timing Breaker Points to Open: 10° B. T. D. C. At Vibration Damper	Valve Setting (Hot) Intake .008" Exhaust .018"	Float Setting 9/32 Inch (Use Gauge T109-239)	Idle Adjustment Screw Setting ¼ to 1¼ Turns Open Idle Engine at 500 R. P. M. In Neutral

CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3656

Float Level: 9/32 inch (Gauge T109 239) between top of each float ridge (at center of float) and top surface of body casting To adjust bend lip on float arm

Pump: 1-1/32 inch from the top of the bowl cover to the top of the plunger shaft Install throttle connector rod in center hole (medium stroke) of throttle lever and inner hole of pump arm To adjust bend throttle connector rod

Fast Idle Cam Clearance: With choke valve closed and lip on inner choke shaft lever contacting lug on outer lever, align index mark with adjusting screw To adjust bend lip on inner choke shaft lever

Fast Idle Throttle Valve Clearance: 015 (Gauge T109-44) between lower edge of valve and bore with adjusting screw on index mark of cam

Fast Idle on Car: 1400 R P M hot engine with fast idle screw on index mark of cam

Unloader: ¼ inch (Gauge T109-31) between top edge of choke valve and inner wall of air horn with throttle valves wide open To adjust bend unloader arm on throttle lever

Overdrive Kickdown Switch: With throttle valves wide open there should be 1/64 inch to 3/64 inch between kickdown lever and switch stem guide To adjust loosen lock nuts and adjust switch

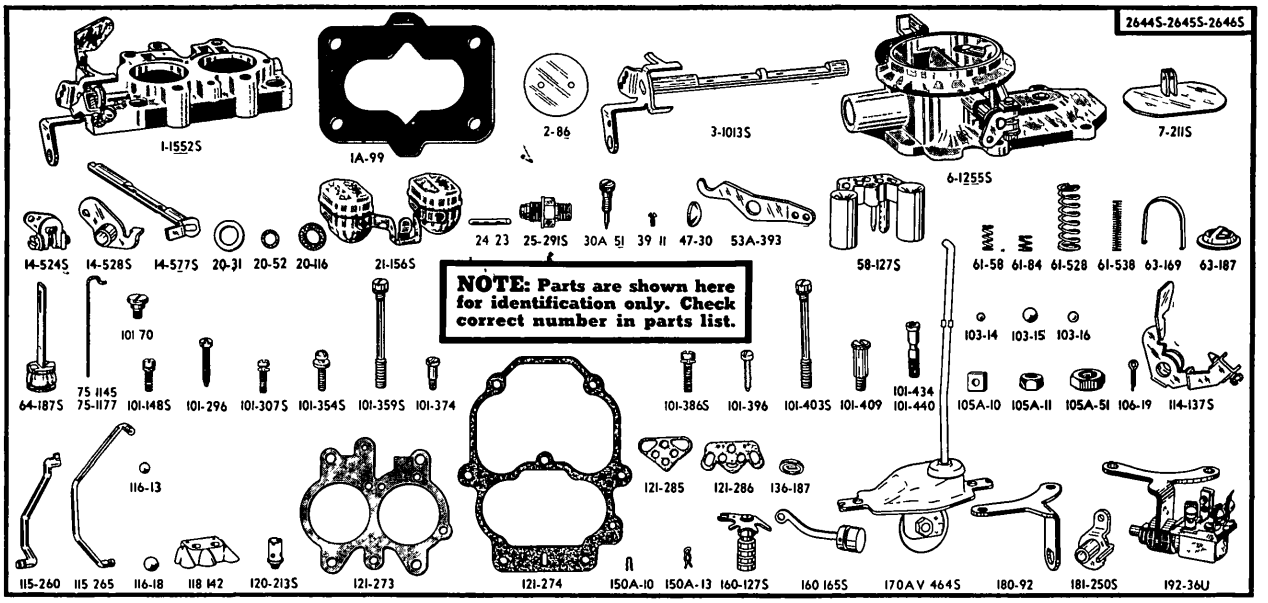
Choke Adjustment (Cross Over Type) See Form 3657: I Loosen mounting post lock nut and turn mounting post with screw driver until index mark on disk is positioned as listed under carbureter specifications Hold in this position with screw

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driver and tighten lock nut. NOTE: Screw driver may be held in vise so that one hand may be used to support housing while tightening nut. 2. After adjustment is completed and coil housing and rod assembly and carbureter is installed on engine lift cover disk and open and close choke valve manually to see if connector rod clears sides of the hole in housing cover. If rod does not clear hole in housing cover without binding, replace with a new unit since connector rod cannot be bent without effecting calibration.



Plymouth — 1958 — Carbureters Nos. 2644S-2645S-2646S

WHEN SERVICING, USE GASKET ASSORTMENT No. 300; RE-CARBURETION KIT No. 1919N

PART NAMES, IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF RE-CARBURETION KIT

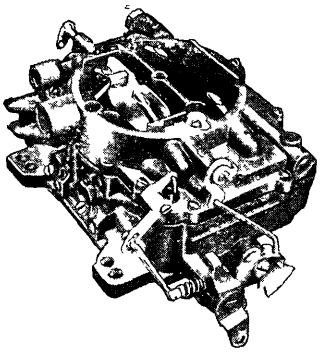
Part No.	PART NAME	
1-1552S	—Body flange assembly	
1A-99	FLANGE GASKET	
2-86	Throttle valve	(2)
3-1013S	Throttle shaft and lever assembly	
6-1255S	Air horn assembly	
7-211S	Choke valve and bracket assembly	
14-524S	Choke lever assembly	
14-528S	Choke lever and collar assembly	
14-577S	Choke lever and shaft assembly	
20-31	Needle seat gasket	
20-52	STEP-UP PISTON GASKET	
20-116	Main metering jet gasket	(2)
21-156S	Float and lever assembly	
24-23	Float lever pin	
25-291S	NEEDLE AND SEAT ASSEMBLY (.1015")	
30A-51	Idle adjustment screw	(2)
39-11	Choke and throttle valve attaching screw	(6)
47-30	Welsh plug	
53A-393	Pump arm	
58-127S	Venturi cluster tube and nozzle assembly	
61-58	Throttle adjusting screw spring	
61-84	Idle adjustment screw spring	(2)
61-528	Pump spring	
61-538	Step-up piston spring (Sup by 61-549)	
61-549	STEP-UP PISTON SPRING	
63-169	Float lever pin retainer	
63-187	Intake check ball retainer	
64-187S	PUMP PLUNGER AND ROD ASSEMBLY	
75-990	Step-up rod (.024") (2646S)	(2)
75-1140	Step-up rod (.022") (2644S-2645S)	(2)
101-70	Pump arm screw	
101-148S	Air horn attaching screw and washer assembly (2644S-2646S) (4) 2645S (3)	
101-296	Throttle adjusting screw	
101-307S	Air horn attaching screw and washer assembly (2645S)	
101-354S	Choke lever clamp screw and washer assembly	
101-359S	Body attaching screw and washer assembly (2644S-2646S)	(2)
101-374	Step-up piston plate screw	
101-386S	Body flange attaching screw and washer assembly	(2)
101-396	Fast idle adjusting screw	
101-403S	Body attaching screw and washer assembly (2645S)	(2)
101-409	Fast idle cam attaching screw	
101-434	Venturi cluster screw (2644S-2645S)	(2)
101-440	Venturi cluster screw (2646S)	(2)
103-14	Lead shot	
103-15	Lead shot	(2)
103-16	Lead shot	(2)
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
105A-51	Kickdown switch attaching nut (2645S)	(2)
106-19	Cotter pin	
114-137S	Dash pot and kickdown lever assembly	
115-260	Choke connector rod	
115-265	Throttle connector rod	
116-13	Pump discharge check ball	
116-18	Pump intake check ball	
118-142	Venturi cover	
120-209S	Main metering jet assembly (302 to 308cc)—1 size lean	(2)
120-211S	Main metering jet assembly (287 to 293cc)—2 sizes lean	(2)
120-212S	MAIN METERING JET ASSEMBLY (317 to 323cc)—STANDARD	(2)
121-273	BODY FLANGE GASKET	
121-274	BODY GASKET	
121-285	VENTURI HOUSING GASKET	
121-286	VENTURI COVER GASKET	
121-313	—Air cleaner gasket	
136-187	Pump spring retainer washer	
150A-10	Pin spring	
150A-13	Pin spring	(2)
160-127S	Step-up piston and plate assembly	
160-165S	Choke piston and link assembly	
170AV-464S	Thermostatic coil housing and rod assembly	
180-92	Kickdown switch bracket (2645S)	
181-250S	—Fast idle cam assembly	
192-36U	Unitized package (2645S)	

—Parts so marked are new and listed for the first time.

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

2744S
Standard Transmission

2641S.
Automatic Transmission



PLYMOUTH
Mod I
LP2 "Power Pak"
1958

(Also used on Export De Soto, Model LF2 and Export Dodge, Model LE2)

AFB Four-Bore Down-Draft Climatic® Control Carbureters Nos. 2641S-2744S

CARBURETER SPECIFICATIONS

For Plymouth 8 Cylinder 318 Cu. In. Engine: Vacuum at Idle 19.5 Inches

Dimensions: Flange four bore—4 bolt type
Throttle bore 1 7/16 inch
Primary venturi size, primary side 7/16 inch secondary side (2641S) 11/32 inch, (2744S) 7/16 inch I D
Main venturi size 1 3/16 inch

Vents: Inside (4) in air horn Outside (4) in body, (5) in air horn

Low Speed Circuit: (Primary side only)
Jet size (2641S) No 68 (031 inch) (2744S) No 66 (033 inch) drill
By pass size (0492 inch) diameter
Economizer size (0452 inch) diameter
Idle bleed, size (0492 inch) diameter
Idle port slot type length 198 inch width 030 inch

Idle Port Opening: 142 to 148 inch above top edge of valve with valve tightly closed

Set Idle Adjustment Screw: 1/4 to 1 3/4 turns open For richer mixture turn screw out Do not idle engine below 500 r p m Transmission in neutral

Main Nozzle: Install permanently DO NOT REMOVE Anti percolator bleed, primary (tube in venturi assembly) size No 68 (031 inch) drill Secondary (drilled hole in venturi assembly) size No 60 (040 inch) drill

Main Vent Tube. (In venturi assembly) Side holes primary side 11—size No 70 (028 inch) 1—size No 65 (035 inch) drill secondary side (2641S) 2—size No 57 (043 inch) 1—size No 70 (028 inch) (2744S) 11—size No 70 (028 inch) drill

Accelerating Pump: Discharge jet (twin) primary side only size No 70 (028 inch) drill Intake ball check seat (screw plug) size 115 to 120 inch diameter Discharge needle seat size No 50 (070 inch) drill

Choke: Carter Climatic® Control Cross over type set 2 points rich Butterfly type offset valve primary side only Choke heat suction hole in air horn size No 44 (086 inch) drill

Vacuum Spark Port: Slot type (round end) 045 x 110 inch Top of port 026 to 034 inch above top edge of valve with valve tightly closed

Motor Tune-Up — Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .017"	Ignition Timing Breaker Points to Open· 10° B. T. C. At Vibration Damper	Valve Setting (Hot) Intake .008" Exhaust .018"	Float Setting (See Adjustments)	Idle Adjustment Screw Setting 1/4 to 1 3/4 Turns Open Idle Engine at 500 R. P. M. In Neutral

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CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3734

FLOAT ALIGNMENT: Side of floats parallel to edge of casting. Minimum clearance between lever and air horn lugs without binding. To adjust, bend float lever.

FLOAT LEVEL: (2641S) (With 21-188S floats) 5/16 inch (gauge T109-107) (with 21-179S floats) 7/32 inch (gauge T109-106). (2744S) (with 21-188S floats) 1/4 inch (gauge T109-31), with 21-179S floats 7/32 inch (gauge T109-106) between top of floats (at outer end) and air horn gasket. To adjust, bend float lever. **NOTE:** Identify 21-188S floats by smooth sides, 21-179S by ribs on floats.

FLOAT DROP: 23/32 inch between top of floats (at outer end) and air horn gasket. To adjust, bend stop tabs on float brackets.

PUMP: 7/16 inch from top of the bowl cover to the top of the plunger shaft with throttle connector rod in center hole (medium stroke) of pump arm. To adjust, bend throttle connector rod.

FAST IDLE LINKAGE ADJUSTMENT: With choke valve tightly closed and lug on outer choke shaft lever contacting stop on inner choke shaft lever align center of fast idle screw with index mark on cam. To adjust, bend fast idle connector rod.

FAST IDLE THROTTLE VALVE CLEARANCE: .012 inch (gauge T109-200) between lower edge of valve and bore with adjusting screw on index mark of cam.

FAST IDLE ON CAR: 1400 R. P. M. hot engine with fast idle screw on index mark of cam.

UNLOADER: 1/4 inch (gauge T109-31) between upper edge of choke valve and inner wall of air horn. To adjust, bend unloader lip on throttle lever.

SECONDARY THROTTLE LEVER ADJUSTMENT: 1. Block choke valve wide open. 2. With 3/8 inch between lower edge of primary valve and bore (opposite idle port) secondary valves should just start to open. To adjust, bend throttle operating rod. NOTE: At wide open throttle primary and secondary valves will reach full vertical position. 3. With primary and secondary throttle valves in tightly closed position there should be .010" to .030" (gauge T109-29) between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on secondary lever.

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: Crack throttle valves and manually open and close the choke valve. Tang on secondary throttle lever should freely engage in notch of lock-out dog. To adjust, bend tang on secondary throttle lever.

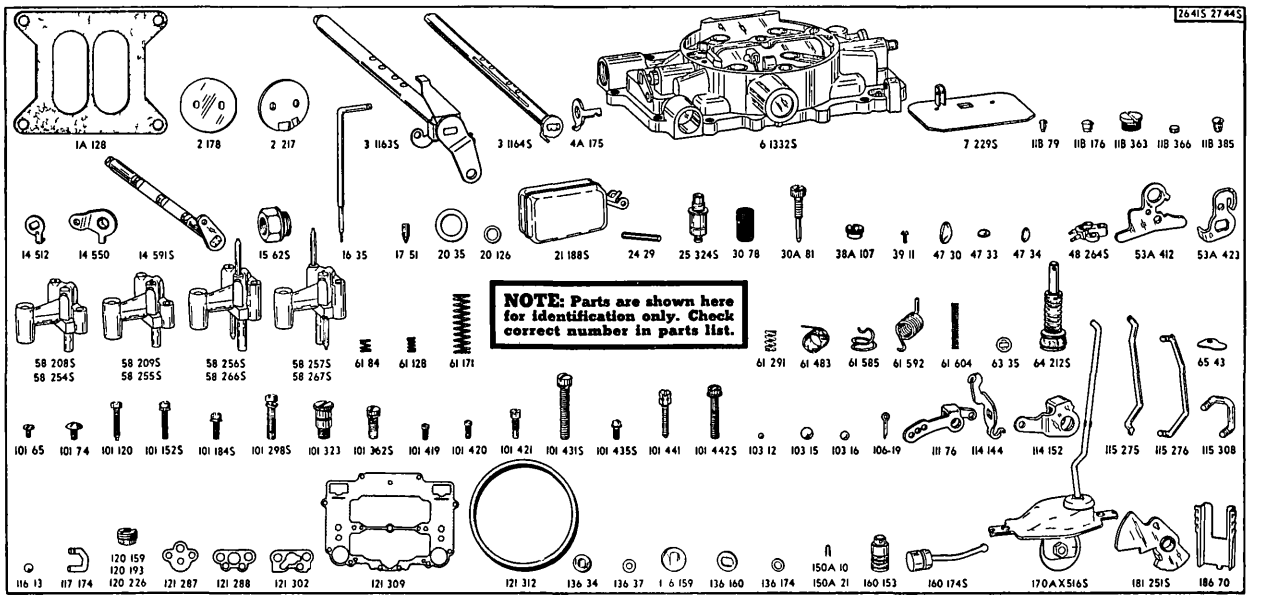
CHOKE ADJUSTMENT (CROSS OVER TYPE) SEE FORM 3657: 1. Loosen mounting post lock nut and turn mounting post with screw driver until index mark on disk is positioned as listed on carbureter specification page. Hold in this position with screw driver and tighten lock nut. NOTE: Screw driver may be held in vise so that one hand may be used to support housing while tightening nut. 2. After adjustment is completed and coil housing and rod assembly and carbureter is installed on engine lift cover disk and open and close choke valve manually to see if connector rod clears sides of hole in housing cover. If rod does not clear hole in housing cover without binding replace with a new unit since connector rod cannot be bent without affecting calibration.

TOOLS REQUIRED FOR SERVICING CARBURETERS:

T109-29	.020" Wire gauge	T109-106	7/32" Float gauge (late)
T109-31	1/4" Unloader gauge	T109-107	5/16" Float gauge (early)
T109-41	Bending tool	T109-200	.012" Wire gauge

T109-213 Bending tool

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Plymouth "V-8" — 1958 — Carbureters Nos. 2641S-2744S

WHEN SERVICING, USE GASKET ASSORTMENT No. 316; RE-CARBURETION KIT No. 1913N

PART NAMES IN CAPITAL LETTERS, LISTED BELOW INDICATE CONTENTS OF RE-CARBURETION KIT

Part No.	PART NAME	
1A-128	—FLANGE GASKET	
2-178	Secondary throttle valve	(2)
2-217	Primary throttle valve	(2)
3-1163S	Primary throttle shaft and lever assembly	
3-1164S	Secondary throttle shaft and dog assembly	
4A-175	Primary throttle shaft dog	
6-1332S	—Air horn assembly	
7-229S	—Choke valve and bracket assembly	
11B-69	Rivet plug (late prod.)	(2)
11B-79	Rivet plug	(2)
11B-176	Idle port rivet plug	(2)
11B-363	Pump intake screw plug	
11B-366	Nozzle well rivet plug	(4)
11B-385	—Fuel passage plug	
14-512	Outside choke shaft lever	
14-550	Inside choke shaft lever	
14-591S	—Choke lever and shaft assembly	
15-62S	Fuel inlet assembly	
16-35	STEP UP ROD .0645" x .058"	(2)
17-51	Pump discharge check needle	
20-35	Fuel inlet gasket	
20-126	Needle seat gasket	(2)
21-179S	Float and lever assembly	(2)
21-188S	Float and lever assembly (Sup. by 21-179S)	(2)
24-29	Float lever pin	(2)
25-324S	Needle and seat assembly (.1015") (Sup. by 25-343S)	(2)
25-343S	—Needle and seat assembly (.0935")	(2)
30-78	Fuel inlet strainer	
30A-81	—Idle adjustment screw	(2)
39A-107	Pump intake check ball seat	
39-11	Choke valve attaching screw	(2)
47-30	Choke piston welsh plug	
47-33	Venturi welsh plug	(4)
47-34	Spark port welsh plug	
48-264S	Pump jet and housing assembly	
53A-412	Lockout dog	
53A-423	Secondary throttle operating lever	
58-208S	Secondary venturi assembly (opposite pump) (2641S)	
58-209S	Secondary venturi assembly (pump side) (2641S)	
58-254S	—Secondary venturi assembly (opposite pump) (2744S)	
58-255S	—Secondary venturi assembly (pump side) (2744S)	
58-256S	—Primary venturi assembly (opposite pump) (2744S)	
58-257S	—Primary venturi assembly (pump side) (2744S)	
58-266S	—Primary venturi assembly (opposite pump) (2641S)	
58-267S	—Primary venturi assembly (pump side) (2641S)	
61-84	Idle adjusting screw spring	(2)
61-128	Throttle connector rod spring	
61-171	Pump spring (lower)	
61-291	Throttle lever adjusting screw spring	
61-483	Secondary throttle return spring	
61-585	Step up rod retaining spring	(2)
61-592	Throttle flex spring	
61-604	VACUUM PISTON SPRING	(2)
63-35	Throttle connector rod retainer	
64-212S	PUMP PLUNGER, ROD AND SPRING ASSEMBLY	

Part No.	PART NAME	
65-43	Step-up piston cover plate	(2)
101-65	Choke shaft lever attaching screw	
101-74	Throttle shaft lever attaching screw	(2)
101-120	Fast idle adjustment screw	
101-152S	Air horn attaching screw and washer assembly	
101-184S	Pump jet housing attaching screw and washer assembly	(2)
101-298S	Secondary venturi attaching screw and washer assembly (length 1 1/8") (2641S), (early prod. 2744S)	(4)
101-323	Fast idle cam attaching screw	
101-362S	Air horn attaching screw and washer assembly	(8)
101-419	Secondary throttle valve attaching screw	(4)
101-420	Primary throttle valve attaching screw	(4)
101-421	Pump arm attaching screw	
101-431S	Air horn attaching screw and washer assembly	
101-435S	Step-up piston cover plate attaching screw and washer assembly	(2)
101-441	Throttle lever adjusting screw	
101-442S	Primary and secondary venturi attaching screw and washer assembly (length 1-5/16") (2641S—early 2744S (4), (late 2744S (8)	
103-12	—Lead shot	(2)
103-15	Lead shot	
103-16	Lead shot	
106-19	Cotter pin	
111-76	Pump arm	
114-144	Primary throttle shaft arm (outer)	
114-152	—Primary throttle shaft arm (inner)	
115-275	Choke connector rod	
115-276	Throttle connector rod	
115-308	—Throttle operating rod	
116-13	Pump intake check ball	
117-174	Pump connector link	
120-159	PRIMARY METERING JET (.089")	(2)
120-193	Secondary metering jet (.057") (2641S)	(2)
120-226	Secondary metering jet (.065") (2744S)	(2)
121-287	PUMP JET HOUSING GASKET	
121-288	SECONDARY VENTURI CLUSTER GASKET	(2)
121-302	PRIMARY VENTURI CLUSTER GASKET	(2)
121-309	—AIR HORN GASKET	
121-312	—Air cleaner gasket	
136-34	Choke shaft washer	
136-37	Throttle operating rod washer	
136-159	Primary throttle shaft washer	
136-160	Secondary throttle shaft washer	
136-174	Throttle lever adjusting screw washer	
150A-10	Pin spring	(5)
150A-21	Pin spring	
160-153	Step-up piston	(2)
160-174S	—Choke piston and link assembly	
170AX-516S	Thermostatic coil, housing and rod assembly	
181-251S	—Fast idle cam assembly	
186-70	Fuel bowl baffle	(2)

—Parts so marked are new and listed for the first time.

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

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CARTER MODEL AFB CARBURETER FOR PLYMOUTH (SERVICE ADJUSTMENT PROCEDURE)

NOTE: The parts and specification pages referred to are catalog pages. These pages can be obtained from Carter Carburetor, Catalog Department, St. Louis (7), Missouri. Specify the carbureter number found on the base of the carbureter, when requesting specification pages.

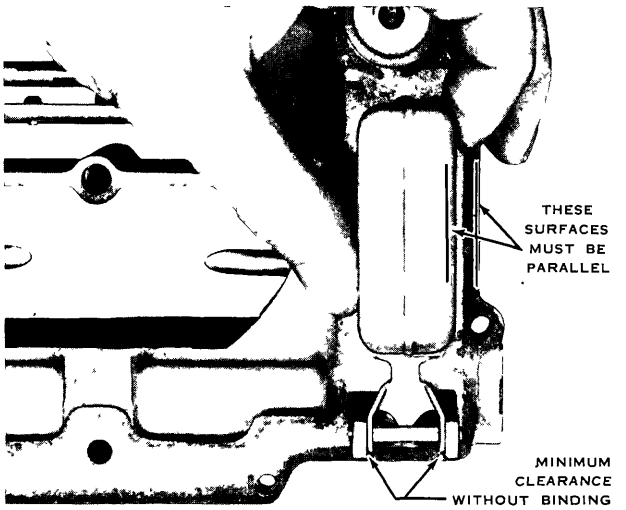


Figure 1

FLOAT ALIGNMENT ADJUSTMENT (Fig. 1):

1. Sight down the side of the float shell to determine if the side of the float is parallel to the outer edge of the air horn casting. TO ADJUST: Bend float lever by applying pressure to the end of the float shell with the fingers while supporting the float lever with the thumb.

   CAUTION: To avoid damaging the float, apply only enough pressure to bend float lever.

2. After aligning float, remove as much clearance as possible between arms of float lever and lugs on air horn by bending the float lever. Arms of float lever should be as parallel to the inner surfaces of lugs on air horn as possible.

   Floats must operate freely without excess clearance on its hinge pin.

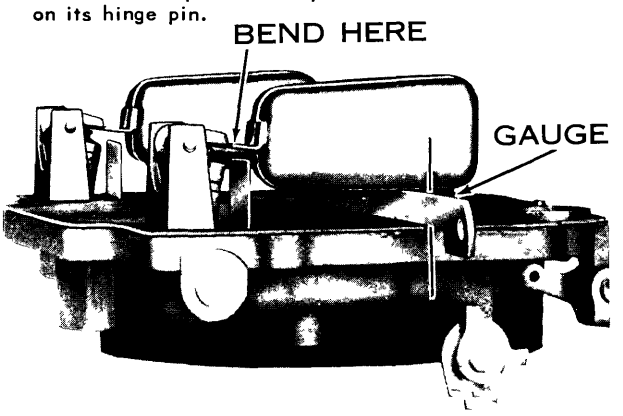


Figure 2

FLOAT LEVEL ADJUSTMENT (Fig. 2):

With air horn inverted, bowl cover gasket in place and n edl s ated, the clearance betwe n t p of float (at outer nd) and air horn gasket should be as listed on carbureter specification page. To adjust, bend float arm. Adjust both floats. Recheck fl at alignment.

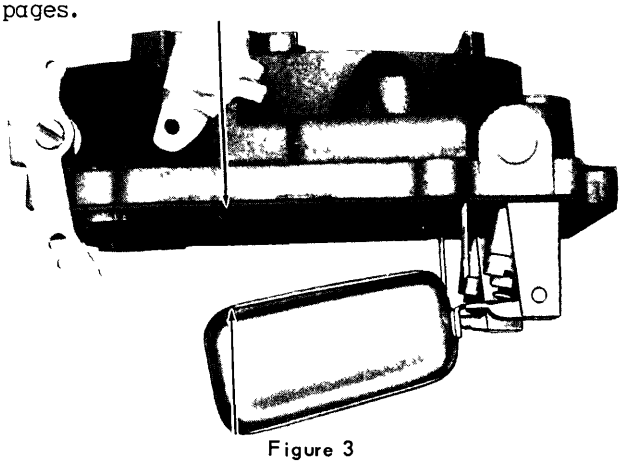


Figure 3

FLOAT DROP ADJUSTMENT (Fig. 3):

With bowl cover held in upright position and measuring from outer end of each float, the distance between top of floats and bowl cover gasket should be as listed on carbureter specification page. To adjust, bend stop tabs on float brackets.

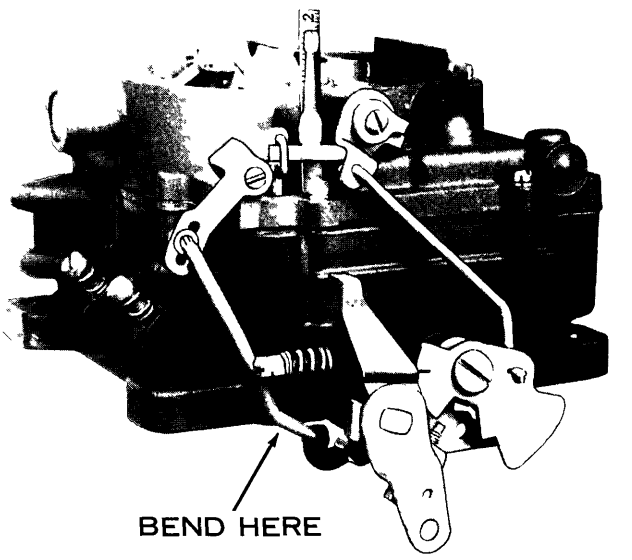


Figure 4

PUMP ADJUSTMENT (Fig. 4):

1. Back out idle speed screw until thr ttle valv s seat in bores of carbureter. NOTE: Be sure fast idle adjusting screw does not contact fast idle cam and h ld throttle valves open.
2. With throttle connector rod in center hole (medium strok) of pump arm, the distance from the top of th bowl cover to th top of the plunger shaft should be as listed n carbureter sp cification page.
3. Adjust by b nding throttle connector rod at lower angle (use tool T109-213).

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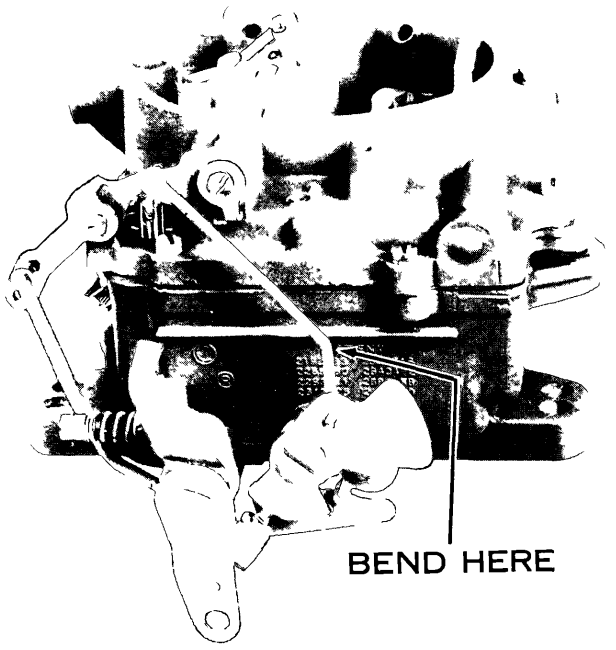


Figure 5

FAST IDLE LINKAGE ADJUSTMENT (Fig. 5):

With choke valv tightly closed and lug on outer choke shaft lever contacting stop on inner choke shaft lever align cent r of fast idle screw with index mark on cam. To adjust, bend fast idle connector rod. (Use tool T109-213.)

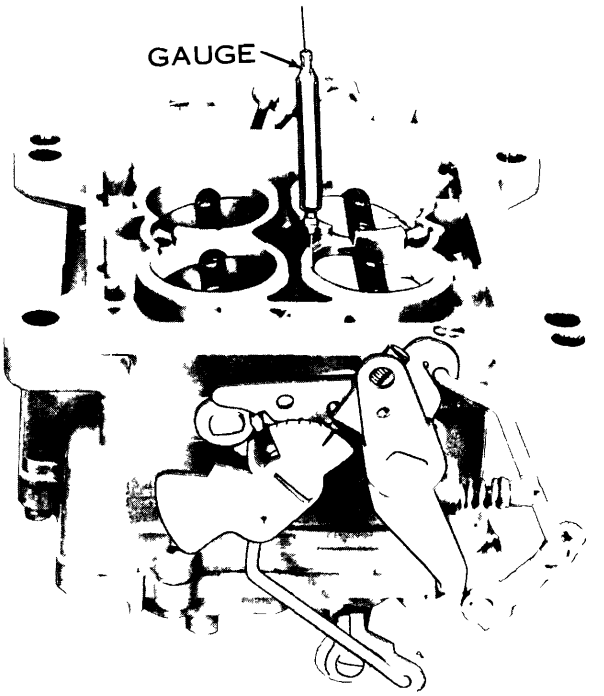


Figure 6

FAST IDLE THROTTLE VALVE CLEARANCE ADJUSTMENT (Fig. 6):

With choke valve tightly closed, tighten fast idle adjusting screw (on index mark of cam) until the clearance between throttle valve and bore of carbureter, side opposite idle port, is as listed on carbureter specification page.

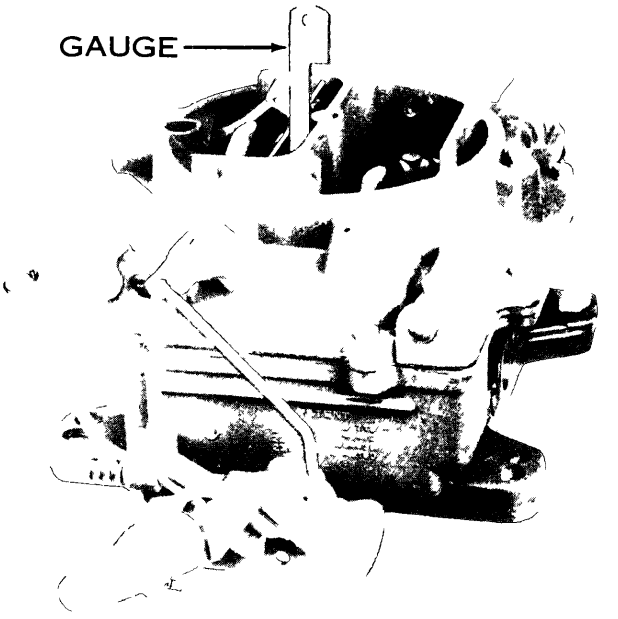


Figure 7

UNLOADER ADJUSTMENT (Fig. 7):

With throttl wide open, th clearance between upper dge of choke valve and inn r wall of air h rn should be as listed on carbureter specification page. To adjust, bend unload r lip on throttle shaft lever. (Use to l T109-41.)

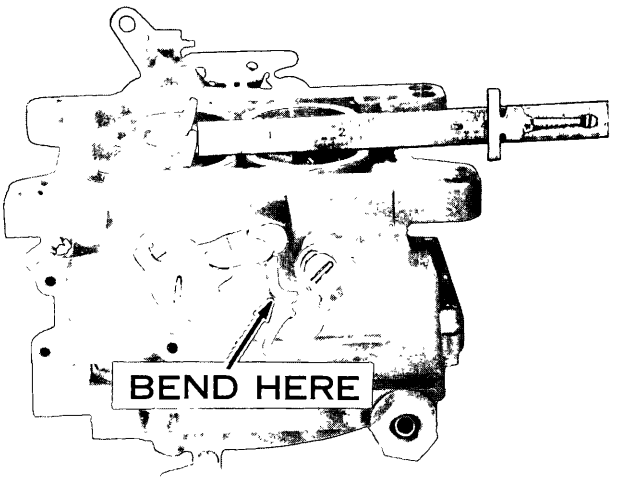


Figure 8A

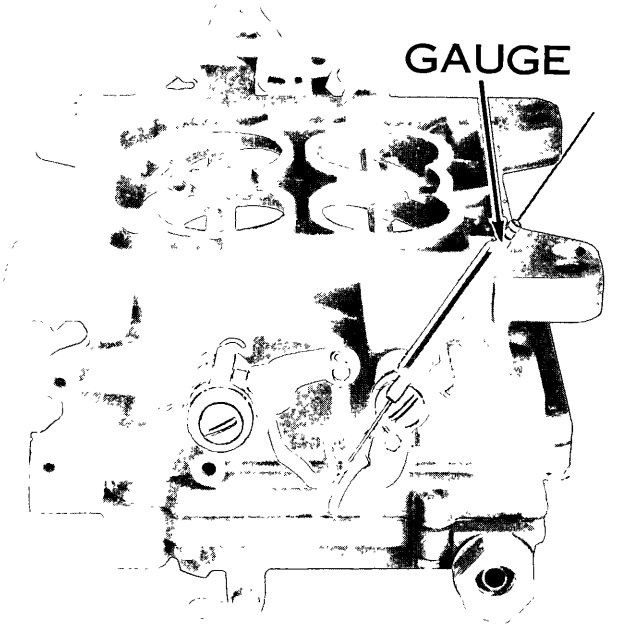


Figure 8B

SECONDARY THROTTLE LEVER ADJUSTMENT (Figs. 8A & 8B):

1. Block choke valve wide open.
2. Secondary throttle valves should just start to open when primary throttle valves are opened to the clearance as listed on specification page between lower edge of valve and bore (opposite idle port). To adjust, bend throttle operating rod. (Use bending tool T109-213). (See Fig. 8A) NOTE: Primary and secondary throttle valves should reach wide open position, full vertical, at the same tim .
3. With primary and s condary throttle valves in tightly clos d position, there should be the clearance as listed n specification page between positive closing shoes on primary and secondary throttle l vers. To adjust, bend sho on sec ndary lev r. (See Fig. 8B)

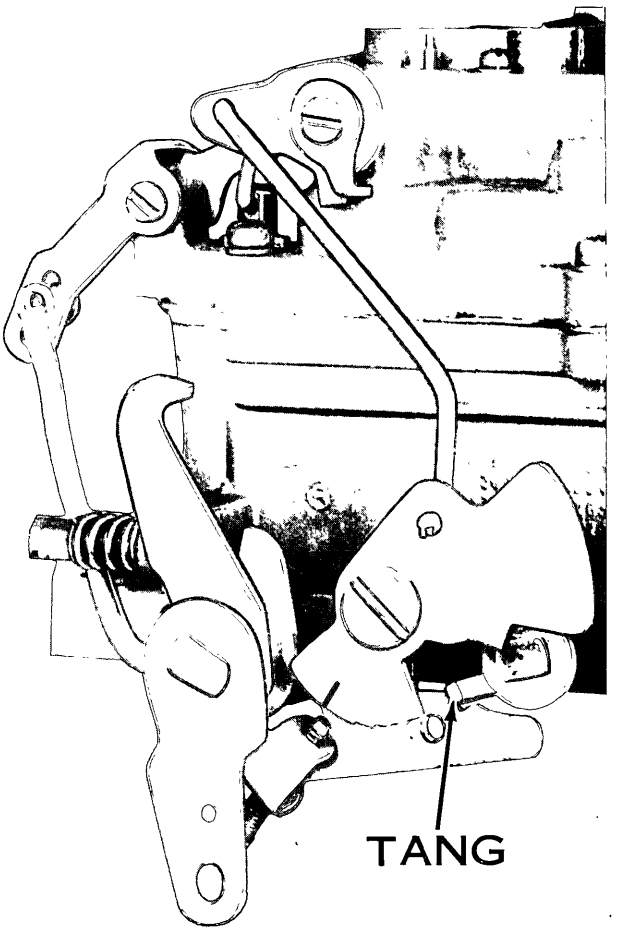


Figure 9

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT (Fig. 9):

Crack throttle valves and manually open and clos the choke valve. Tang on secondary throttle lever sh uld freely engage in notch of lock-out dog. If necessary to adjust, bend tang on secondary throttle lev r.

NOTE: See last page for pertinent service information.

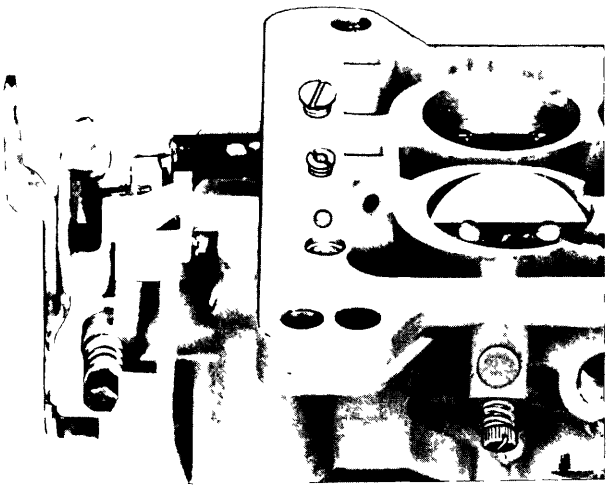


Figure 10

(Fig. 10):

Pump intake check ball, seat and screw plug are removed by inverting carbureter and removing from lower side of flange.

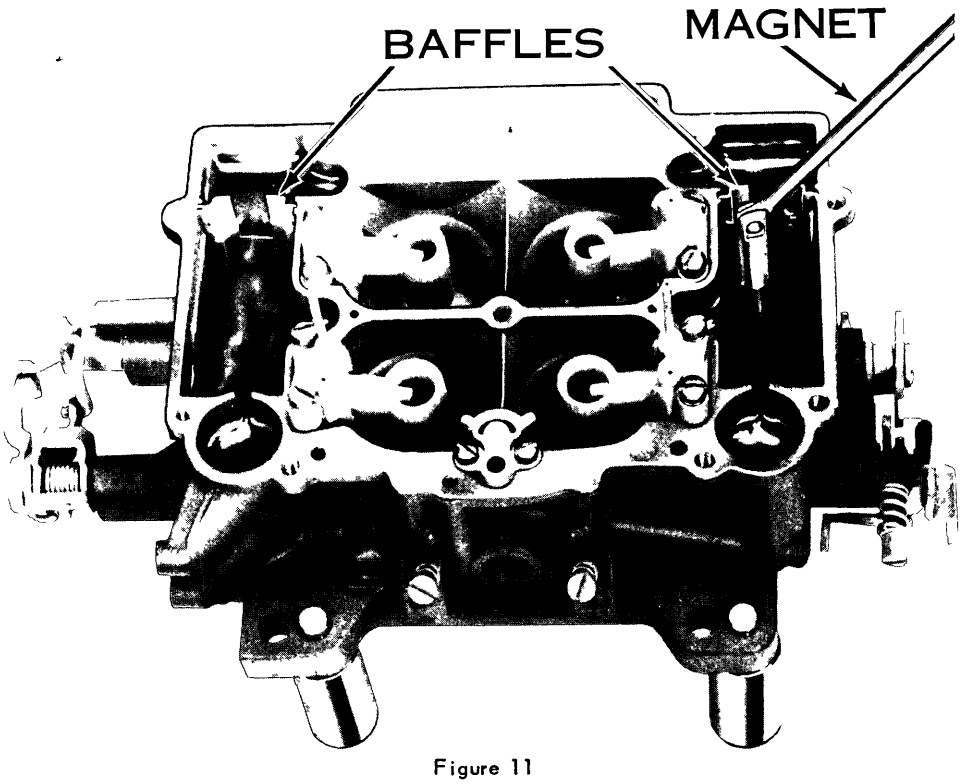


Figure 11

(Fig. 11):

Flooding, stumble on acceleration and other performance complaints are, in many instances, caused by the presence of dirt, water or other foreign matter in the carbureter. To aid in diagnosing the cause of the complaint, the carbureter should be carefully removed from the engine without draining the fuel from the bowl. The contents of the fuel bowl may then be examin d for contamination as the carbureter is disassembled.

Check the fuel in the bowl for contamination by dirt, water, gum or other foreign matter. A magnet moved through the fuel in the bowl will pick up and identify any iron oxide dust that may have caused intake needle and seat leakage.

Insp ct gasketed surfaces between body and air horn. Small nicks or burrs should be smoothed down to eliminate air or fuel leakage. Be especially particular when inspecting the top surface of the inner wall of the bowl around the vacuum piston passage. A poor seal at this location may contribute to a "cutting-out" on turns complaint.

Install fuel baffles as shown (Fig. 11) to prevent damage to floats. Use caution when installing air horn assembly. Baffles on air horn assembly must fit inside of fuel bowl baffles toward primary side of carbureter.

Fill the carbureter bowl with clean fuel before installing on the manifold. This will help prevent dirt trapped in the fuel system from being dislodged by the free flow of fuel as the carburetor is primed. The operation of the floats and intake needle and seats may be checked under pressure if a fuel pump is used at the bench to fill the carbureter bowl. Operate the throttle several times and visually check the discharge from the pump jets.

Before installing the carbureter, hold choke valve open and turn the idle speed screw until it just contacts the throttle lever, then 1/2 a turn more to open the throttle valves enough to keep the engine running until the idle mixture and final R.P.M. adjustment can be made.

PLYMOUTH

(Also used on Export Dodge, Model D-65 and Export De Soto, Model SP-31)

"V-8"

MODEL
P-31 (Power Package)
All Transmissions

1957

WCFB Four-Bore Down-Draft Climatic® Control **Carbureters Nos. 2530S-2530SA**

CARBURETER SPECIFICATIONS

For Plymouth 8 Cylinder Engine 3.91 Inch Bore, 3.125 Inch Stroke

Dimensions Flange size 1⅛ inch Four Bore—4 bolt type
Primary venturi size 11/32 inch I D
Main venturi size 1 1/16 inch I D

Vents Inside (5)

Gasoline Intake Size No 42 (0935 inch) drill in needle seat

Low Speed Jet Tube: Jet size (02925 inch) diameter By pass in body, size No 50 (070 inch) drill Economizer in body size 0502 inch diameter Idle bleed in body size No 50 (070 inch) drill

Idle Port Upper slot type primary length 175 inch, width 030 inch Secondary length 103 inch width 030 inch

Idle Port Opening Primary 116 to 122 inch secondary 059 to 065 inch above top edge of valve with valve tightly closed

Lower Port Primary (for idle adjustment screw), size No 55 (052 inch) drill Secondary (no idle adjustment screw) size 050 inch diameter

Set Idle Adjustment Screw ½ to 1½ turns open For richer mixture turn screw out Do not idle engine below 450 R P M in neutral

Main Nozzle Installed permanently DO NOT REMOVE Anti-percolating bleed (4) size No 70 (028 inch) drill

Metering Rod (Vacumeter type) See parts list for size

Metering Rod Jet Primary size 089 inch diameter Secondary size 061 inch diameter

Accelerating Pump Discharge jet (twin) primary side only size No 74 (0225 inch) drill Intake ball check seat size 115 to 120 inch diameter Discharge needle seat, size No 50 (070 inch) drill Relief passage (vent) to fuel chamber size No 42 (0935 inch) drill Discharge relief plug, size No 55 (052 inch) drill

Choke Carter Climatic® Control Cross Over Type set on index Butterfly type offset choke valve, primary side only Choke heat suction hole restriction in piston housing size No 40 (098 inch) drill

Vacuum Spark Port Horizontal slot (round end) 045 x 110 inch Top of port 035 to 045 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .017"	Ignition Timing Breaker Points to Open 4° B. T. C. At Vibration Damper	Valve Setting (Hot) Intake .008" Exhaust .018"	Float Setting Primary 7/32 Inch (Use Gauge T109-283) Secondary 9/32 Inch (Use Gauge T109-284)	Idle Adjustment Screw Setting ½ to 1½ Turns Open Idle Engine at 450 R.P.M. In Neutral

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CARBURETER
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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: Two separate float adjustments must be made—lateral and vertical. **LATERAL ADJUSTMENT:** With bowl cover assembly inverted, bowl cover gasket removed and float resting on seated needle, place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting. Side of floats should just clear the vertical uprights of float gauge. Adjustment should be made by bending arms of floats. **VERTICAL ADJUSTMENT:** With float gauge in same position, floats should just clear the horizontal portion of gauge. Vertical distance between top of float and machined surface of casting must be 7/32" (gauge T109-283) for primary floats; and 9/32" (gauge T109-284) for secondary floats. Adjust by bending float arms.

FLOAT DROP ADJUSTMENT: With bowl cover held in upright position and measuring from center of floats, the distance between top of floats and bowl cover should be 23/32" for primary floats and 25/32" for secondary floats. Adjust by bending stop tabs on float bracket.

PUMP ADJUSTMENT: Install pump connector link in center hole (medium stroke) of pump arm, with ends extending toward countershaft arm. Back out throttle lever set screw until throttle valves seat in bores of carbureter. Hold straight edge across top of dust cover boss at pump arm. The flat on top of pump arm should be parallel to straight edge. Adjust by bending throttle connector rod at lower angle. (Use tool T109-213.)

METERING ROD ADJUSTMENT: Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows: 1. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw. 2. With metering rods in place, press down on vacumeter link until metering rods bottom in carbureter body casting. 3. Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link. Hold in place and carefully tighten clamp screw.

BOWL VAPOR VENT ADJUSTMENT: This adjustment should be made after completing pump and metering rod adjustments. Install dust cover and dust cover gasket. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter. There should be 1/16 inch (gauge T109-197) between lower edge of bowl vapor vent valve and dust cover. To adjust, remove dust cover and bend vapor vent arm.

FAST IDLE ADJUSTMENT: (a) Loosen choke lever clamp screw on choke shaft. Insert .020" feeler gauge (T109-29) between lip of fast idle cam and boss of flange casting. Hold choke valve tightly closed and take slack out of linkage by pressing lever towards closed position—hold in place and tighten clamp screw. (b) With choke valve tightly closed, tighten fast idle adjusting screw until there is .010" (gauge T109-200) opening between throttle valve and bore of carbureter (side opposite idle port). Be sure fast idle adjusting screw is on high step of cam while making this adjustment.

FAST IDLE ON CAR: 1350 to 1400 R.P.M., hot engine with fast idle screw on high step of cam.

UNLOADER ADJUSTMENT: With throttle wide open there should be 11/64" clearance between upper edge of choke valve and inner wall of air horn (gauge T109-166). Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41).

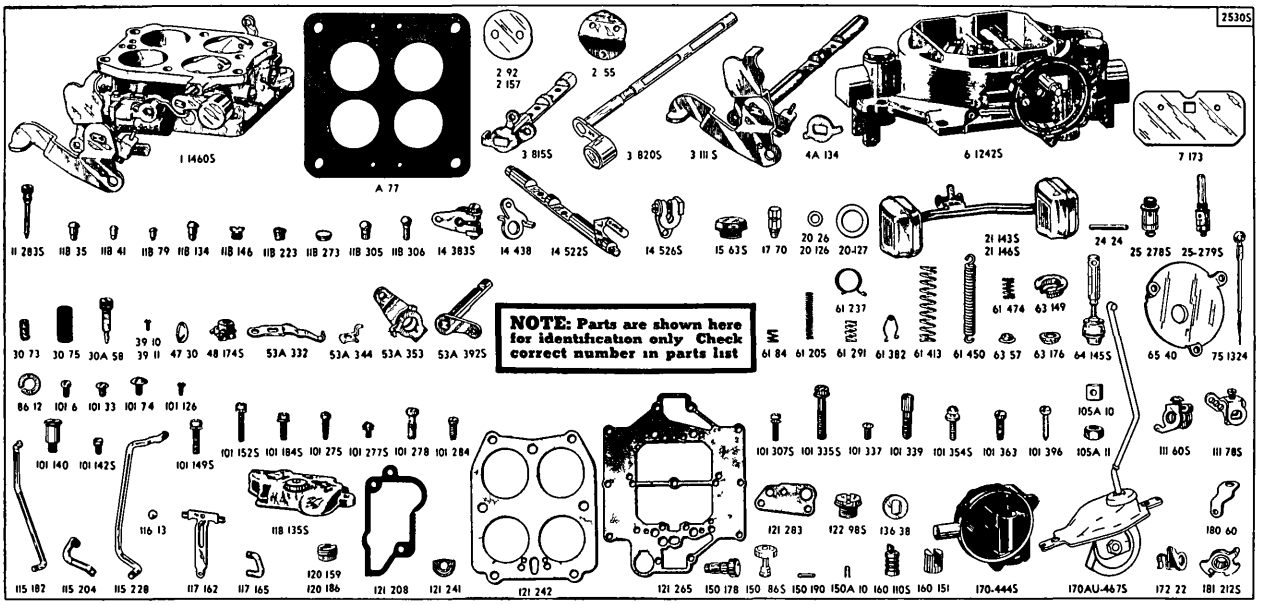
AUXILIARY THROTTLE VALVE ADJUSTMENT: (a) Disconnect secondary throttle operating rod. (b) Adjust stop lug on secondary throttle lever (use bending tool T109-214) until there is 27/64" clearance (gauge T109-242) between lower edge of auxiliary throttle valve and bore, when lug is against stop on flange.

SECONDARY THROTTLE LEVER ADJUSTMENT: The stop lug on both primary and secondary throttle levers should contact boss on flange at the same time. To adjust bend secondary throttle operating rod at angle (use bending tool T109-213).

AUXILIARY THROTTLE LOCK-OUT ADJUSTMENT: This adjustment should be made after completing fast idle adjustment. 1. With choke valve closed, edge of hook on lockout arm should contact auxiliary throttle lever, making maximum contact of locking step on lever. 2. Open choke valve. Auxiliary throttle valve should become unlocked a few degrees before the choke reaches wide open position. Adjust by bending lockout arm.

CHOKE ADJUSTMENT (CROSS OVER TYPE) See Form 3657: 1. Loosen mounting post lock nut and turn mounting post with screw driver until index mark on disk is positioned as listed on carbureter specification page. Hold in this position with screw driver and tighten lock nut. **NOTE:** Screw driver may be held in vise so that one hand may be used to support housing while tightening nut. 2. After adjustment is completed and coil housing and rod assembly and carbureter is installed on engine lift cover disk and open and close choke valve manually to see if connector rod clears sides of hole in housing cover. If rod does not clear hole in housing cover without binding replace with a new unit since connector rod cannot be bent without affecting calibration.

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Plymouth "V-8"—1957—Carbureters Nos. 2530S-2530SA

WHEN SERVICING, USE GASKET ASSORTMENT No 302, REPAIR PACKAGE No 1864
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1460S	—Body flange assembly	
1A-77	FLANGE GASKET	
2-92	Primary throttle valve	(2)
2 155	Auxiliary throttle valve	(2)
2-157	Secondary throttle valve	(2)
3-815S	Secondary throttle shaft and operating lever assembly	
3-820S	Auxiliary throttle shaft lever and weight assembly	
3-1111S	—Primary throttle shaft and lever assembly	
4A-134	Primary throttle shaft dog	
6-1242S	—Air horn assembly (2530S) (Sup by 6 1285S)	
6-1285S	—Air horn assembly	
7-173	Choke valve	
11-283S	Low speed jet assembly (Sup by 11 309S)	(4)
11-309S	—Low speed jet assembly	(4)
11B-35	Rivet plug	(6)
11B-41	Rivet plug	
11B-79	Rivet plug	(4)
11B-134	Rivet plug	
11B-146	Level sight plug	(2)
11B 223	Nozzle passage and idle port rivet plug	(8)
11B-273	Secondary throttle shaft rivet plug	
11B-305	Rivet plug	(2)
11B-306	Rivet plug	
14-383S	Choke lever and screw assembly	
14-438	Cam trip lever	
14-522S	Choke piston lever link and shaft assembly	
14-526S	Choke lever assembly	
15-63S	—Strainer nut assembly	(2)
17-70	PUMP CHECK NEEDLE	

Part No	PART NAME	
20-26	Relief valve gasket	
20-126	—Needle seat gasket	(2)
20-127	—BOWL STRAINER GASKET	(2)
21-143S	Primary float and lever assembly (Sup by 21 192S)	
21-146S	Secondary float and lever assembly	
21-192S	—Primary float and lever assembly	
24-24	Float lever pin	(2)
25-278S	PRIMARY NEEDLE AND SEAT ASSEMBLY	
25-279S	SECONDARY NEEDLE AND SEAT ASSEMBLY	
30-73	PRIMARY NEEDLE SEAT STRAINER	
30-75	BOWL STRAINER	
30A-58	Idle adjustment screw	(2)
39-10	Primary throttle valve attaching screw	(4)
39-11	Choke valve attaching screw	(2)
47-30	Welsh plug	
48-174S	Pump jet and housing assembly	
53A-332	Lockout arm	
53A-344	VENT ARM	
53A-353	Primary operating lever	
53A-392S	Pump operating lever and countershaft assembly	
61-84	Idle adjustment screw spring	(2)
61-205	VACUUM PISTON SPRING	
61-237	Fast idle cam spring	
61-291	Throttle lever adjusting screw spring	
61-382	METERING ROD SPRING	
61-413	Upper pump spring	
61-450	SECONDARY THROTTLE RETURN SPRING	
61-474	Bowl vent spring	
63-57	INTAKE CHECK BALL RETAINER	
63-149	Bowl vent spring retainer	
63-176	Pump spring retainer	

Part N .	PART NAME	
64-145S	PUMP PLUNGER AND ROD ASSEMBLY	
65-40	Piston housing cover plate	
75-1227	Metering rod—standard 074" x 069" x 055" (Sup by 75 1251)	(2)
75-1251	METERING ROD—STANDARD—073" x 068" x 052"	(2)
75-1324	Metering rod—standard—074" x 065" x 052" (Sup by 75 1251)	(2)
86-12	Flange stud lock washer	(4)
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	
101-126	Auxiliary throttle valve attaching screw	(4)
101-140	Fast idle cam screw	
101-142S	Piston housing cover plate attaching screw and washer assembly	(3)
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-275	Piston housing attaching screw	
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet housing attaching screw	
101-307S	Air horn and bracket attaching screw and washer assembly	(8)
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-339	Throttle lever adjusting screw	
101-354S	Choke lever clamp screw assembly	(2)
101-363	Piston housing attaching screw	(2)
101-396	Fast idle adjustment screw	
105A-10	Choke lever clamp screw nut	(2)
105A-11	Flange stud nut	(4)
111-60S	Metering rod arm and screw assembly	
111-78S	—Pump arm and screw assembly	
115-182	Choke connector rod	
115-204	Throttle operating rod	
115-228	THROTTLE CONNECTOR ROD	
116-13	PUMP INTAKE CHECK BALL	
117-162	Vacumeter piston link	
117-165	Pump connector link	
118-102S	Dust cover assembly	
118-135S	—Dust cover assembly (Sup by 118 102S)	
120-159	PRIMARY METERING ROD JET	(2)
120-174	SECONDARY METERING JET	(2)
120-186	Secondary metering jet (Sup by 120-174)	(2)
121-208	DUST COVER GASKET	
121-241	PUMP JET HOUSING GASKET	
121-242	BODY FLANGE GASKET	
121-265	AIR HORN GASKET	
121-283	Piston housing gasket (2530S) (Sup by 121 298)	
121-298	—PISTON HOUSING GASKET	
122-98S	PUMP RELIEF VALVE ASSEMBLY	
136-38	Throttle shaft washer	
150-178	Auxiliary valve lockout arm pin	
150-186S	Pin and valve cap assembly	
150-190	Choke piston pin	
150A-10	PIN SPRING	(5)
160-110S	Vacuum piston and pin assembly	
160-151	Choke piston	
170-444S	Piston housing and plug assembly (2530S)	
170-502S	—Piston housing and plug assembly (2530SA)	
170AU-467S	—Thermostatic coil housing and rod assembly	
172-22	Throttle connector rod retainer	
180-60	Lever return spring bracket	
181-212S	Fast idle cam assembly	

—Parts so marked are new and listed for the first time

NOTE **Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.**

CARBURETER
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2512S-SA-SB-SC
Standard Transmission

2513S-SA-SB-SC
Overdrive Transmission

2514S-SA-SB-SC
Power Flite Transmission

PLYMOUTH "V-8" MODEL P-31 1957

(Also used on Export Dodge, Model D-65 and DeSoto, Model SP-31)

Use 2512SC and 192-36U to replace 2513S-SA-SB-SC

Use 2512SC to replace 2514S-SA-SB-SC

BBD Dual Down-Draft Climatic® Control Carbureters Nos. 2512S-SA-SB-SC, 2513 S-SA-SB-SC, 2514S-SA-SB-SC

CARBURETER SPECIFICATIONS

For Plymouth 8 Cylinder Engine: 3.91 Inch Bore, 3.125 Inch Stroke (301 Cu. In. Eng.) Belvedere, Savoy and (late) Plaza.
For Plymouth 8 Cylinder Engines: 3.75 Inch Bore, 3.13 Inch Stroke (277 Cu. In. Eng.) (early) Plaza.

Dimensions: Flange size, 1¼ inch dual, 4 bolt type Throttle bore, 1-7/16 inch I D
Primary venturi, ⅜ inch I D.
Main venturi, 1-3/16 inch I D.

Vent. Inside, balance vent tube to bowl, in air horn above choke valve Outside, (late prod) (2) No 36 (1065 inch) in flange above throttle valve

Gasoline Intake: Size No 38 (1015 inch) drill hole in needle seat.

Idle Tube: Jet (in venturi assembly 58-155S) size 0275 inch diameter, (58-127S) size 0255 inch diameter. Idle bleed (in venturi cluster screw 101-433) size 0472 inch diameter, (101-434) size 055 inch diameter, (101-440) size 059 inch diameter, (101-448) size 0649 inch diameter. Idle restriction (in venturi cluster screw) size 055 inch diameter.
Venturi idle bleed (in body) size 0472 inch diameter Models S SA-SB have idle passage through top of venturi cluster, Models SC have diagonal passage to screw hole.

Idle Port Upper, slot type, length 189 inch; width, 030 inch

Idle Port Opening 144 to 148 inch above upper edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw): Size 053 to 057 inch diameter.

Set Idle Adjustment Screw: ¼ to 1¼ turns open For richer mixture, turn screw out With gear shift lever in neutral position idle engine between 450 and 500 RPM

Main Nozzle· Nozzle is installed permanently. DO NOT REMOVE

Main Vent Tube: Side holes 10—size 0433 inch, 1—size 0393 inch diameter Main vent in bottom of tube, size 0393 inch diameter

Step-Up Rod: (Vacuum operated) See parts list for size.

Metering Jet See parts list for calibrated flow per minute

Accelerating Pump Pump discharge jets (2—in venturi cluster) size 0275 inch diameter Intake ball check seat, size 130 to 140 inch diameter Discharge ball check seat, size 110 to 120 inch diameter

Choke· Carter Climatic® Control Cross Over Type, set at index Butterfly type offset valve Choke heat suction hole, in air horn size No 44 (086 inch) drill.

Vacuum Spark Port: Horizontal round end type (early prod) 030 by 110 inch (late prod) 045 by 110 inch Top of port to be (early prod) 035 to 045 inch, (late prod) 025 to 035 inch above upper edge of valve with valve closed tight

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .017"	Ignition Timing Breaker Points to Open 10° B. T. C.—(301 Cu. In. Eng.) 4° B. T. C.—(277 Eng. w/distributor IBP 4003C) T. D. C.—(277 Eng. w/distributor IBJ 4301B)	Valve Setting (Hot) Intake .008" Exhaust .018"	Float Setting See Adjustments	Idle Adjustment Screw Setting ¼ to 1¼ Turns Open Idle Engine at 450 to 500 R.P.M. In Neutral

CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3656

Float Level. 9/32" (Gauge T109-239) between top of each float ridge (at center of float) and top surface of body casting To adjust bend lip on float arm

Pump. 1-1/32" from the top of the bowl cover to the top of the plunger shaft Install throttle connector rod in center hole (medium stroke) of throttle lever and inner hole of pump arm To adjust bend throttle connector rod

Fast Idle Cam Clearance: With choke valve closed and lip on inner choke shaft lever contacting lug on outer lever, align index mark with adjusting screw To adjust bend lip on inner choke shaft lever

Fast Idle Throttle Valve Clearance: 020" (Gauge T109-29) between lower edge of valve and bore with adjusting screw on index mark of cam

Fast Idle on Car: 1450 to 1500 R.P.M.

Unloader: ¼" (Gauge T109-31) between top edge of choke valve and inner wall of air horn with throttle valves wide open To adjust bend unloader arm on throttle lever.

Overdrive Kickdown Switch: With throttle valves wide open there should be 1/64" to 3/64" between kickdown lever and switch stem guide To adjust loosen lock nuts and adjust switch

Choke Adjustment (Cross Over Type) See Form 3657: I Loosen mounting post lock nut and turn mounting post with screw driver until index mark on disk is positioned as listed under carbureter specifications Hold in this position with screw driver and tighten lock nut NOTE Screw driver may be held

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in vise so that one hand may be used to support housing while tightening nut 2 After adjustment is completed and coil housing and rod assembly and carbureter is installed on engine lift cover disk and open and close choke valve manually to see if connector rod clears sides of the hole in housing cover If rod does not clear hole in housing cover without binding replace with a new unit since connector rod cannot be bent without effecting calibration

Plymouth "V-8"—1957—Carbureters Nos. 2512S-SA-SB-SC, 2513S-SA-SB-SC, 2514S-SA-SB-SC

WHEN SERVICING, USE GASKET ASSORTMENT No 300, REPAIR PACKAGE No 1860A
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-1349S	Body flange assembly	
1A-99	FLANGE GASKET	
2-86	Throttle valve	(2)
3-1013S	Throttle shaft and lever assembly	
6-1255S	Air horn assembly	
7-211S	Choke valve and bracket assembly	
14-524S	Choke lever assembly	
14-528S	Choke lever and collar assembly	
14-577S	Choke lever and shaft assembly	
20-31	Needle seat gasket	
20-52	STEP UP PISTON GASKET	
20-116	Main metering jet gasket	(2)
21-156S	Float and lever assembly	
24-23	Float lever pin	
25-291S	NEEDLE AND SEAT ASSEMBLY	
30A-51	Idle adjustment screw	(2)
39-11	Choke and throttle valve attaching screw	(6)
47-30	Welsh plug	
53A-393	Pump arm	
58-127S	Venturi cluster tube and nozzle assembly (SC Models)	
58-155S	Venturi cluster tube and nozzle assembly (S SA SB Models)	
61-58	Throttle adjusting screw spring	
61-84	Idle adjustment screw spring	(2)
61-528	Pump spring	
61-538	STEP UP PISTON SPRING	
63-169	Float lever pin retainer	
63-187	Intake check ball retainer	
64-187S	PUMP PLUNGER AND ROD ASSEMBLY	
75-990	Step up rod (024") (prod SA & SB Models used with 120 212S (Sup by 75 1177 and 120 213S)	(2)
75-1177	STEP-UP ROD (026") (PROD S & SC MODELS USED WITH 120 213S	(2)
75-1217	*Step up rod (020")	
101-70	Pump arm screw	
101-148S	Air horn attaching screw and washer assembly (2512S SA SB SC 2514S-SA SB SC (4) (2513S SA SB SC (3)	
101-296	Throttle adjusting screw	
101-307S	Air horn attaching screw and washer assembly (2513S SA SB SC)	
101-354S	Choke lever clamp screw and washer assembly	
101-359S	Body attaching screw and washer assembly 2512S SA SB SC 2514S SA SB SC)	(2)
101-374	Step up piston plate screw	
101-386S	Body flange attaching screw and washer assembly	(2)
101-396	Fast idle adjusting screw	
101-403S	Body attaching screw and washer assembly (2513S SA SB SC)	(2)

Part No.	PART NAME	
101-409	Fast idle cam attaching screw	
101-433	*Venturi cluster screw (2512S SA SB 2513S SA SB) (Sup by 101 440)	(2)
101-434	Venturi cluster screw (2514S) (Sup by 101 440)	(2)
101-440	Venturi cluster screw (2512S SA SB SC 2513S SA SB SC) (Sup by 101 448 on 2514 S SA SB)	(2)
101-448	Venturi cluster screw (2514S SA SB SC)	(2)
103-14	Lead shot	
103-15	Lead shot	(2)
103-16	Lead shot	(2)
105A-10	Choke lever clamp screw nut	
105A 11	Flange stud nut	(4)
105A-51	Kickdown switch attaching nut (2513S SA SB SC)	(2)
106-19	Cotter pin	
114-137S	Dash pot and kickdown lever assembly	
115-260	Choke connector rod	
115-265	Throttle connector rod	
116-13	Pump discharge check ball	
116-18	Pump intake check ball	
118-142	Venturi cover	
120-209S	Main metering jet assembly (305 cc) 1 size lean on SA SB Models 2 sizes lean on S SC Models	(2)
120-211S	Main metering jet assembly (290 cc) 2 sizes lean on SA SB Models	(2)
120-212S	Main metering jet assembly (320 cc) Standard on SA SB Models used with 75 990 (Sup by 120-213S and 75 1177) 1 size lean on S SC Models	(2)
120 213S	MAIN METERING JET ASSEMBLY (340 cc) STANDARD ON S SC MODELS	(2)
121-273	BODY FLANGE GASKET	
121-274	BODY GASKET	
121-285	VENTURI HOUSING GASKET	
121-286	VENTURI COVER GASKET	
121-313	Air cleaner gasket	
136-187	Pump spring retainer washer	
150A-10	Pin spring (late prod)	
150A-13	Pin spring (early prod (3), (late prod (2)	
160-127S	Step up piston and plate assembly	
160-142S	Choke piston and link assembly (2512S SA 2513S SA 2514S SA) (Sup by 160-165S)	
160-165S	Choke piston and link assembly	
170AT-464S	Thermostatic coil housing and rod assembly (2513S SA SB SC-2514S SA SB SC)	
170AV-464S	Thermostatic coil housing and rod assembly (2512S SA SB SC)	
180-92	Kickdown switch bracket (2513S SA SB SC)	
181-219S	Fast idle cam assembly	
192-36U	Unitized package (2513S SA SB SC)	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where n figure is sh wn, nly one is used.

*75 1217 and 101 433 used to correct stumble on part throttle acceleration on cars with automatic transmission If complaint occurs on cars with manual or overdrive transmission use 75 1217 only

Form 5234B

CARTER CARBURETOR
DIVISION OF ACF INDUSTRIES INCORPORATED
ST LOUIS, MO, U S A

PLYMOUTH 2567S-2568S
2569S-2604S
October, 1956
Revised October, 1957

2567S
Standard Transmission

2568S
Overdrive Transmission

2569S
Power Flite Transmission

2604S

PLYMOUTH
MODELS
"P-30" – "LPI"
1957-1958

Use 2604S to replace 2567S

Use 2604S and 192-33U to replace 2568S

Use 2604S and 202-80U to replace 2569S

(Also used on Export Dodge Models D 64—LEI and Export DeSoto, Models SP 30—LFI)

BBS Down-Draft Climatic® Control **Carbs. Nos. 2567S-2568S-2569S-2604S**

CARBURETER SPECIFICATIONS

For Plymouth Six Cylinder Engine 3 25 Inch Bore 4 63 Inch Stroke

Dimensions Flange size 1½ inch S A E Throttle bore 1 11/16 inch Main venturi 1 11/32 inch I D

Vents Outside none Inside balance vent tube

Gasoline Intake Size No 44 (086 inch) drill in needle seat

Idle Tube Jet size 0315 inch diameter Idle passage air bleed in body size 061 inch diameter Restriction in body size 057 inch diameter

Idle Port Upper slot type length 195 inch width 030 inch

Idle Port Opening Top of port located 140 to 144 inch above top edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw) Size 053 to 057 inch diameter

Set Idle Adjustment Screw ½ to 1¾ turns open For richer mixture turn screw out Idle engine between 450 500 r p m gear shift lever in neutral

Main Metering Jet Calibrated to flow 406 cc per minute (Do not gauge for size if in doubt replace with new part)

Main Vent Tube Side holes 6—0354 inch diameter Bleed in top of tube 0236 inch diameter

Step-Up Rod (Vacuum operated) (75 943) size 024 inch (75 1225) size 022 inch diameter

Accelerating Pump Pump intake passage ball check seat size 110 to 120 inch diameter Pump discharge passage ball check seat 110 to 120 inch diameter in body Pump (discharge) jet size 0276 inch drill Bleed hole in pump plunger plate size 020 inch diameter

Choke Carter Climatic® Control set on index Choke heat suction hole in body size No 38 1015 inch) drill NOTE Thermostatic coil should not be removed from delayer mounting post If defective replace with complete thermostatic coil and housing assembly

Vacuum Spark Port Slot (round end) type Size 030 by 110 inch Top of port 044 to 050 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter

Spark Plug Gap .035"	Breaker Point Setting .020"	Ignition Timing Breaker Points to Open T D C (1957) 2° B T C (1958) At Vibration Damper	Valve Setting (Hot) Intake 010" Exhaust .010"	Float Setting 7/32 Inch (Use Gauge T109-239)	Idle Adjustment Screw Setting ½ to 1¾ Turns Open Idle Engine at 450 to 500 R P M. In Neutral

CARBURETER ADJUSTMENTS

Float Adjustment This adjustment must be made with the bowl cover gasket and float pin retainer removed Hold the lip on float arm against the seated intake needle making sure the float pin is at the bottom of its guide slots The distance from the top surface of the body casting to the top of each float should be 7/32 inch (gauge T109 239) If one float is lower than the other equalize by bending the float arm If both floats require the same correction adjust by bending lip on float arm The floats must not rub anywhere against the inner walls of the bowl If necessary bend float arms slightly to provide clearance on all sides of floats

Pump Adjustment Back out throttle adjusting screw and open choke valve so that throttle valve seats in bore of carbureter Install throttle connector rod in center hole of throttle lever The distance from the top of the bowl cover to the top of plunger shaft (not pump arm) should be 54/64 inch Adjust by bending throttle connector rod at lower angle (use Tool T109 213)

Fast Idle Adjustment Remove thermostatic coil housing assembly gasket and baffle plate With throttle adjusting screw backed out crack throttle valve and hold choke valve in fully closed position Then close throttle This will allow fast idle cam to revolve to fast idle position There should now be 016 020 inch clearance (use gauge T109 44) between throttle valve and bore of carbureter (side opposite idle port) Adjust by bending the choke connector rod at lower angle (use Tool T109 213)

Caution Be sure cam trip lever is all the way in piston housing with lug contacting cam

Fast Idle on Car 1600 to 1700 R P M hot engine with choke trip lever on high step of cam

Unloader Adjustment This adjustment must be made after the fast idle adjustment Hold throttle valve wide open and close choke valve as far as possible without forcing There should now be 9/64 inch clearance (use gauge T109 34) between upper edge of choke valve and inner wall of air horn Adjust by bending arm on choke trip lever (use tool T109 214) When fast idle and unloader adjustments have been made

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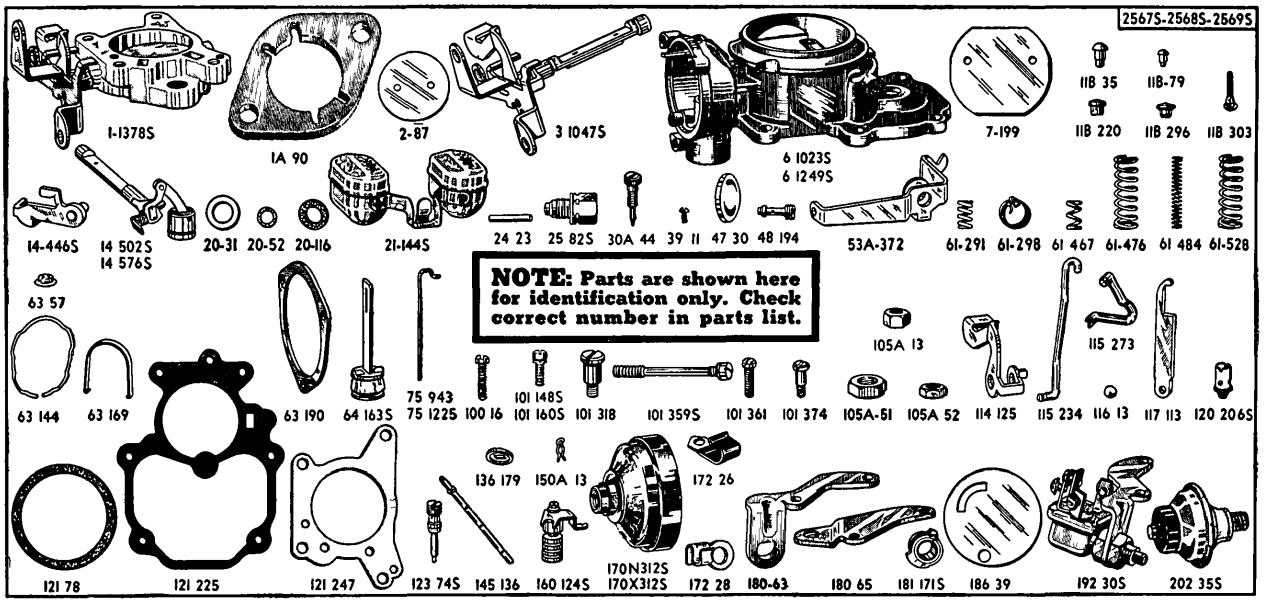
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assemble baffle plate coil housing gasket and thermostatic coil housing assembly on air horn Set Climatic® Control as specified making sure that hook on coil has picked up coil shaft lever

Overdrive Kickdown Switch Adjustment With throttle valve in wide open position adjust hex nuts on switch to have 1/64 inch to 3/64 inch clearance between kickdown lever and switch stem guide

Dashpot (Slow Closing Throttle) Adjustment The purpose of the dashpot is to prevent the car from stalling when the throttle is released rapidly Maximum dashpot action is obtained by loosening lock nut and adjusting the dashpot unit so that the dashpot plunger shaft can be moved inward approximately 3/32 inch with the throttle valve tightly closed Then tighten lock nut



Plymouth—1957-1958—Carbureters Nos. 2567S-2568S-2569S-2604S

WHEN SERVICING, USE GASKET ASSORTMENT No 252, RE-CARBURETION KIT No 1817N

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF RE-CARBURETION KIT

Part No.	PART NAME	
1-1378S	Body flange assembly	
1A-90	FLANGE GASKET—FOR USE WITHOUT GOVERNOR	
2-87	Throttle valve	
3-1047S	Throttle shaft and lever assembly	
6-1023S	Air horn assembly (2569S)	
6-1249S	Air horn assembly (2567S 2568S 2604S)	
7-199	Choke valve	
11B-35	Rivet plug	
11B-79	Rivet plug	(6)
11B-220	HIGH SPEED PASSAGE RIVET PLUG	
11B-296	Pump jet rivet plug	
11B-303	Rivet plug	
14-446S	Choke trip lever and pin assembly	
14-502S	Choke piston lever and shaft assembly (2569S)	
14-576S	Choke piston lever and shaft assembly (2567S 2568S 2604S)	
20-31	Needle seat gasket	
20-52	STEP UP PISTON GASKET	
20-116	Main metering jet gasket	
21-144S	Float and lever assembly	
24-23	Float lever pin	
25-82S	NEEDLE AND SEAT ASSEMBLY	
30A-44	Idle adjustment screw	
39-11	Choke and throttle valve screw	(4)
47-30	Welsh plug	
48-194	Pump jet	
53A-372	Pump arm	
61-291	Throttle lever adjusting screw spring	
61-298	Fast idle cam spring	
61-467	Idle adjustment screw spring	
61-476	Pump spring (2567S 2568S 2604S)	
61-484	STEP UP PISTON SPRING	
61-528	Pump spring (2569S)	
63-57	Intake check ball retainer	
63-144	Delayer plate retainer ring	
63-169	Float lever pin retainer	
63-190	Coil housing retainer	
64-163S	PUMP PLUNGER AND ROD ASSEMBLY	
75-943	Step up rod (2569S)	
75-1225	Step up rod (2567S 2568S 2604S)	
100-16	Throttle adjusting screw	

Part No.	PART NAME	
101-148S	Bowl cover attaching screw and washer assembly (2567S 2569S 2604S)	(2)
101-160S	Bowl cover attaching screw and washer assembly (2568S)	(2,
101-318	Pump arm screw	
101 359S	Air horn attaching screw and washer assembly	(4)
101-361	Coil housing attaching screw	(3)
101-374	Step up piston plate guide screw	
105A-13	Flange stud nut	(2)
105A-51	Kickdown switch to bracket attaching nut (2568S)	(2)
105A-52	Dash pot lock nut (2569S)	
114-125	Dash pot lever (2569S 2604S)	
115-234	Throttle connector rod	
115-273	Choke connector rod	
116-13	Pump intake and discharge check ball	(2)
117-113	Fast idle link	
120-206S	MAIN METERING JET ASSEMBLY—STANDARD	
120-214S	Main metering jet assembly—2 sizes lean	
120-215S	Main metering jet assembly—1 size lean	
121-78	COIL HOUSING GASKET	
121-225	BODY GASKET	
121-247	BODY FLANGE GASKET	
121-310	Air cleaner gasket	
123-74S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
136-179	Pump spring retainer washer	
145-136	MAIN VENT TUBE	
150A-13	Pin spring	
160-124S	Step up piston and plate assembly	
170N-312S	Thermostatic coil and housing assembly (2567S-2568S 2604S)	
170X-312S	Thermostatic coil and housing assembly (2569S)	
172-28	Choke connector rod retainer	
180-63	Kickdown switch bracket (2568S)	
180-65	Dash pot bracket (2569S)	
181-171S	Fast idle cam assembly	
186-39	Choke baffle plate	
192-33U	Unitized package (Kickdown switch) (2568S) (Consists of 1—192 30S and 1—172 26)	
202-35S	Dash pot assembly (2569S)	
202-80U	Unitized package (Dash pot) (2569S) (Consists of 1—202 35S 1—105A 52 and 1—180 65)	

NOTE **Figures in parentheses indicate number of pieces used in one carbureter. Wher no figure is shown, only one is used.**

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST LOUIS, MO, U S A

PLYMOUTH 2302S-2302SA-2302SB-27..
December, 1955
Revised June, 1957

PLYMOUTH "V-8"

2302S-SA-SB
Model P-29
Power Package
1956

All Transmissions
1956-1957

(2530SA can be used in place of 2725S)

2725S
Model P-31
Power Package
1957

WCFB Four-Bore Down-Draft Climatic® Control **Carbs. Nos. 2302S-SA-SB, 2725S**

Note: 2725S (Limited Production) same as 2302SB except has 75-1251 metering r d.

CARBURETER SPECIFICATIONS

For Plymouth 8 Cylinder Engine 3 75 Inch Bore 3 13 Inch Stroke (2302S-SA-SB)
For Plymouth 8 Cylinder Engine 3 91 Inch Bore 3 125 Inch Stroke (2725S)

Dimensions Flange size 1 1/8 inch Four Bore—4 bolt type
Primary venturi size 11/32 inch I D
Main venturi size 1 1/16 inch I D

Vents 4 combination inside and outside (1) angular inside

Gasoline Intake Size No 42 (0935 inch) drill in needle seat

Low Speed Jet Tube Jet size (031 inch) diameter By pass in body size No 50 (070 inch) drill Economizer in body size 0492 inch diameter Idle bleed in body size No 50 (070 inch) drill

Idle Port Upper slot type primary length 175 inch width 030 inch Secondary length 103 inch width 030 inch

Idle Port Opening Primary 116 to 122 inch secondary 059 to 065 inch above top edge of valve with valve tightly closed

Lower Port Primary (for idle adjustment screw) size No 55 (052 inch) drill Secondary (no idle adjustment screw) size No 57 (043 inch) drill

Set Idle Adjustment Screw 1 to 2 turns open For richer mixture turn screw out Do not idle engine below 450 R P M in neutral

Main Nozzle Installed permanently DO NOT REMOVE Anti percolating jet (4) size No 70 (028 inch) drill

Metering Rod (Vacumeter type) see parts list for size

Metering Rod Jet Primary Size 089 inch diameter Secondary Size 053 inch diameter

Accelerating Pump Discharge jet (twin) primary side only size No 74 (0225 inch) drill Intake ball check seat size 115 to 120 inch diameter Discharge needle seat size No 50 (070 inch) drill Relief passage (vent) to fuel chamber size No 42 (0935 inch) drill Discharge relief plug size No 55 (052 inch) drill

Choke Carter Climatic® Control Cross Over Type set on index Butterfly type offset choke valve primary side only Choke heat suction hole restriction in piston housing size No 40 (098 inch) drill

Vacuum Spark Port Horizontal slot (round end) 045 x 110 inch Top of port 035 to 045 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open	Valve Setting (Hot)	Float Setting	Idle Adjustment Screw Setting
035"	017"	T D. C At Vibration Damper	Intake 008" Exhaust 018"	Primary 7/32 Inch (Use Gauge T109-283) Secondary 9/32 Inch (Use Gauge T109 284)	1 to 2 Turns Open Idle Engine at 450 R P M In Neutral

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT Two separate float adjustments must be made—lateral and vertical **LATERAL ADJUSTMENT** With bowl cover assembly inverted bowl cover gasket removed and float resting on seated needle place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting Side of floats should just clear the vertical uprights of float gauge Adjustment should be made by bending arms of floats **VERTICAL ADJUSTMENT** With float gauge in same position floats should just clear the horizontal portion of gauge Vertical distance between top of float and machined surface of casting must be 7/32" (gauge T109 283) for primary floats and 9/32" (gauge T109 284) for secondary floats Adjust by bending float arms

FLOAT DROP ADJUSTMENT With bowl cover held in upright position and measuring from center of floats the distance be tween top of floats and bowl cover should be 23/32" for pri mary floats and 25/32" for secondary floats Adjust by bending stop tabs on float bracket

PUMP ADJUSTMENT Install pump connector link in outer hole (long stroke) of pump arm with ends extending toward coun tershaft arm Back out throttle lever set screw until throttle valves seat in bores of carbureter Hold straight edge across top of dust cover boss at pump arm The flat on top of pump arm should be parallel to straight edge Adjust by bending throttle connector rod (early) at upper angle (late) at lower angle (Use tool T109 213)

METERING ROD ADJUSTMENT Metering rod adjustment is important and must be made after completing the pump adjust ment No metering rod gauges are necessary Procedure is as follows 1 Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw 2 With metering rods in place press down on vacumeter link until metering rods bottom in carbureter body casting 3 Holding rods in downward position and throttle valves seated revolve metering rod arm until finger on arm contacts lip of vacumeter link Hold in place and carefully tighten clamp screw

BOWL VAPOR VENT ADJUSTMENT This adjustment should be made after completing pump and metering rod adjustments Install dust cover and dust cover gasket Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter There should be 1/16 inch (gauge T109 197) be tween lower edge of bowl vapor vent valve and dust cover To adjust remove dust cover and bend vapor vent arm

FAST IDLE ADJUSTMENT (a) Loosen choke lever clamp screw on choke shaft Insert 020" feeler gauge (T109 29) between lip of fast idle cam and boss of flange casting Hold choke valve tightly closed and take slack out of linkage by pressing lever towards closed position—hold in place and tighten clamp screw (b) With choke valve tightly closed tighten fast idle adjusting screw until there is 015" (gauge T109 44) opening between throttle valve and bore of carbureter (side opposite idle port) Be sure fast idle adjusting screw is on high step of cam while making this adjustment

UNLOADER ADJUSTMENT With throttle wide open there should be 11/64" clearance between upper edge of choke valve and inner wall of air horn (gauge T109 166) Adjust by bend ing unloader lip on throttle shaft lever (use bending tool T109 41)

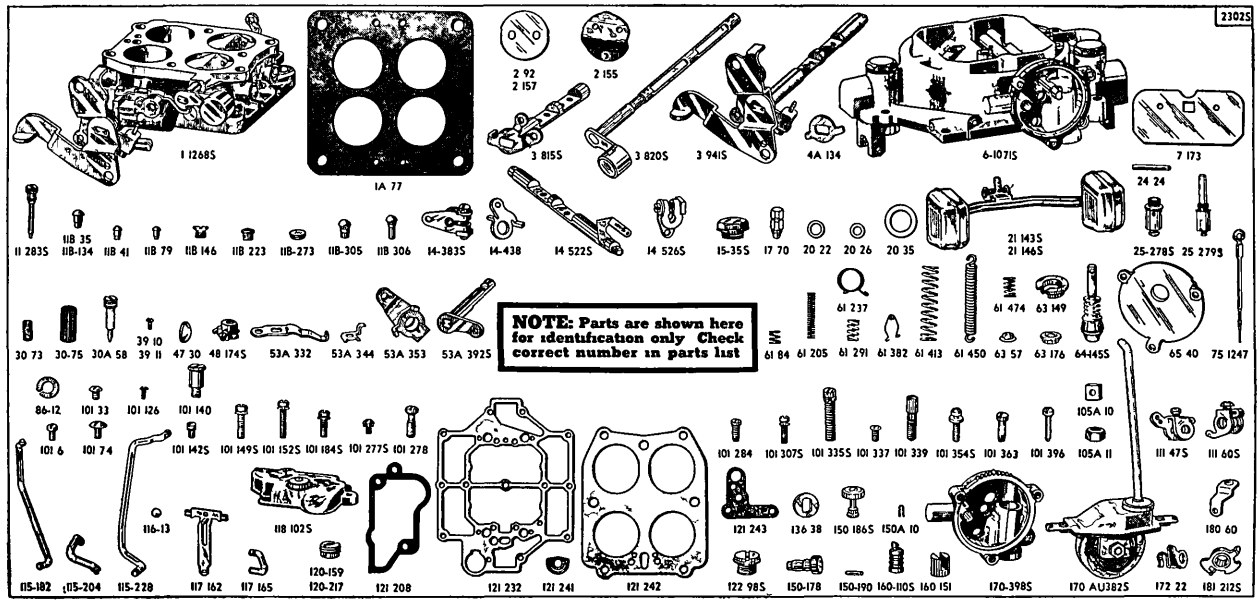
AUXILIARY THROTTLE VALVE ADJUSTMENT (a) Disconnect secondary throttle operating rod (b) Adjust stop lug on sec ondary throttle lever (use bending tool T109 214) until there is 27/64" clearance (gauge T109 242) between lower edge of auxiliary throttle valve and bore when lug is against stop on flange

SECONDARY THROTTLE LEVER ADJUSTMENT The stop lug on both primary and secondary throttle levers should contact boss on flange at the same time To adjust bend secondary throttle operating rod at angle (use bending tool T109 213)

AUXILIARY THROTTLE LOCK-OUT ADJUSTMENT This ad justment should be made after completing fast idle adjustment 1 With choke valve closed edge of hook on lockout arm should contact auxiliary throttle lever making maximum contact of locking step on lever 2 Open choke valve Auxiliary throttle valve should become unlocked a few degrees before the choke reaches wide open position Adjust by bending lockout arm

CHOKE ADJUSTMENT (CROSS OVER TYPE) See Form 3657 1 Loosen mounting post lock nut and turn mounting post with screw driver until index mark on disk is positioned as listed on carbureter specification page Hold in this position with screw driver and tighten lock nut **NOTE** Screw driver may be held in vise so that one hand may be used to support housing while tightening nut 2 After adjustment is completed and coil hous ing and rod assembly and carbureter is installed on engine lift cover disk and open and close choke valve manually to see if connector rod clears sides of hole in housing cover If rod does not clear hole in housing cover without binding replace with a new unit since connector rod cannot be bent without affecting calibration

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Plymouth "V-8"—1956-1957—Carbureters Nos. 2302S-2302SA-2302SB-2725S

WHEN SERVICING, USE GASKET ASSORTMENT No. 234A; REPAIR PACKAGE No 1835A (2302S-SA-SB)

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1268S	Body flange assembly	
1A-77	FLANGE GASKET	
2-92	Primary throttle valve	(2)
2-155	Auxiliary throttle valve	(2)
2-157	Secondary throttle valve	(2)
3-815S	Secondary throttle shaft and operating lever assembly	
3-820S	Auxiliary throttle shaft lever and weight assembly	
3-941S	Primary throttle shaft and lever assembly	
4A-134	Primary throttle shaft dog	
6-1071S	Air horn assembly (2302S) (Casting No 6 1020)	
6-1121S	Air horn assembly (2302SA) (Casting No 6 1117) (Sup by 6 1172S)	
6-1172S	Air horn assembly (2302SB) (Casting No 6 1147)	
7-173	Choke valve	
11-283S	LOW SPEED JET ASSEMBLY	(4)
11B-35	Rivet plug	(6)
11B-41	Rivet plug (2302S SA (2) (2302SB (1)	
11B-79	Rivet plug (early prod (4) (late prod (3)	
11B-134	Rivet plug	
11B-146	Level sight plug	(2)
11B-223	Nozzle passage and idle port rivet plug	(8)
11B-273	Secondary throttle shaft rivet plug	
11B-291	Rivet plug (2302SA)	(2)
11B-292	Rivet plug (2302SA)	
11B-305	Rivet plug (2302S (1) 2302SB (2)	
11B-306	Rivet plug (2302S (2) 2302SB (1)	
14-383S	Choke lever and screw assembly	
14-438	Cam trip lever	
14-522S	Choke piston lever link and shaft assembly	
14-526S	Choke lever assembly	
15-35S	Strainer nut assembly	(2)
17-70	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	(2)
20-26	Relief valve gasket	
20-35	BOWL STRAINER GASKET	(2)
21-143S	Primary float and lever assembly	
21-146S	Secondary float and lever assembly	
24-24	Float lever pin	(2)
25-278S	PRIMARY NEEDLE AND SEAT ASSEMBLY	
25 279S	SECONDARY NEEDLE AND SEAT ASSEMBLY	
30-73	PRIMARY NEEDLE SEAT STRAINER	
30-75	BOWL STRAINER	
30A-58	Idle adjustment screw	(2)
39-10	Primary throttle valve attaching screw	(4)
39-11	Choke valve attaching screw	(2)
47-30	Welsh plug	
48-174S	Pump jet and housing assembly	
53A-332	Lockout arm	
53A-344	VENT ARM	
53A-353	Primary operating lever	
53A-392S	Pump operating lever and countershaft assembly	
61-84	Idle adjustment screw spring	(2)
61-205	VACUUM PISTON SPRING	
61-237	Fast idle cam spring	
61-291	Throttle lever adjusting screw spring	
61-382	METERING ROD SPRING	
61-413	Upper pump spring	
61-450	SECONDARY THROTTLE RETURN SPRING	
61-474	Bowl vent spring	
63 57	INTAKE CHECK BALL RETAINER	
63-149	Bowl vent spring retainer	
63-176	Pump spring retainer	
64-145S	PUMP PLUNGER AND ROD ASSEMBLY	
65-40	Piston housing cover plate	
75-1178	Metering rod—1 size lean 074" x 063" x 052" (2302S SA SB)	(2)
75-1179	Metering rod—2 sizes lean 075" x 065" x 055" (2302S SA SB)	(2)

Part No.	PART NAME	
75-1222	Metering rod—standard (2302S) (Sup by 75 1247)	(2)
75-1247	METERING ROD—STANDARD 073" x 061" x 052" (2302S SA SB)	(2)
75-1251	Metering rod—standard 073" x 068" x 052" (2725S)	(2)
86-12	Flange stud lock washer	(4)
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	
101-126	Auxiliary throttle valve attaching screw	(4)
101-140	Fast idle cam screw	
101-142S	Piston housing cover plate attaching screw and washer assembly	(3)
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-275	Piston housing attaching screw (2302SB)	
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet housing attaching screw	
101-284	Piston housing attaching screw (2302S SA)	(2)
101-307S	Air horn and bracket attaching screw and washer assembly	(8)
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-339	Throttle lever adjusting screw	
101-354S	Choke lever clamp screw assembly	(2)
101-363	Piston housing attaching screw (2302S SA (1), (2302SB (2)	
101-396	Fast idle adjustment screw	
103-14	Lead shot (late prod.)	
105A-10	Choke lever clamp screw nut	(2)
105A-11	Flange stud nut	(4)

Part N.	PART NAME	
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
115-182	Choke connector rod	
115-204	Throttle operating rod	
115-228	THROTTLE CONNECTOR ROD	
116-13	PUMP INTAKE CHECK BALL	
117-162	Vacumeter piston link	
117-165	Pump connector link	
118-98S	Dust cover assembly (2302SA)	
118-102S	Dust cover assembly (2302S SB)	
120-159	PRIMARY METERING ROD JET	(2)
120-181	Secondary metering jet (Sup by 120 217)	(2)
120-217	SECONDARY METERING ROD JET	(2)
121-208	DUST COVER GASKET	
121-232	AIR HORN GASKET	
121-241	PUMP JET HOUSING GASKET	
121-242	BODY FLANGE GASKET	
121-243	PISTON HOUSING GASKET (2302S SA)	
121-283	PISTON HOUSING GASKET (2302SB)	
122-98S	PUMP RELIEF VALVE ASSEMBLY	
136-38	Throttle shaft washer	
150-178	Auxiliary valve lockout arm pin	
150-186S	Pin and valve cap assembly	
150-190	Choke piston pin	
150A-10	PIN SPRING	(5)
160-110S	Vacuum piston and pin assembly	
160-151	Choke piston	
170-398S	Piston housing and plug assembly (2302S SA)	
170-444S	Piston housing and plug assembly (2302SB)	
170AU382S	Thermostatic coil housing and rod assembly	
172-22	Throttle connector rod retainer	
180-60	Lever return spring bracket	
181-212S	Fast idle cam assembly	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

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PLYMOUTH

TAXICAB

2410S-P28, P-30, LP1-STD. TRANS.

2771S-LP1 AUTOMATIC TRANS.

1956-1958

BBS Down-Draft Climatic® Control **Carbureters Nos. 2410S-2771S**

CARBURETER SPECIFICATIONS

For Plymouth Six Cylinder Engine 3 25 Inch Bore, 4 63 Inch Stroke

Dimensions Flange size 1½ inch S A E Throttle bore 1 11/16 inch Main venturi 1 11/32 inch I D

Vents Outside none Inside balance vent tube

Gasoline Intake Size No 44 (086 inch) drill in needle seat

Idle Tube Jet size 028 inch diameter Idle passage air bleed in body size 061 inch diameter Restriction in body size 057 inch diameter

Idle Port Upper slot type length 195 inch width 030 inch

Idle Port Opening Top of port located 140 to 144 inch above top edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw) Size 053 to 057 inch diameter

Set Idle Adjustment Screw 1 to 2 turns open For richer mixture turn screw out Idle engine between 450 500 r p m gear shift in neutral

Main Metering Jet Calibrated to flow 378 to 386 cc per minute (Do not gauge for size if in doubt replace with new part)

Main Vent Tube Side holes 6— 0354 inch diameter Bleed in top of tube 0236 inch diameter

Step Up Rod (Vaccum operated) size 020 inch diameter

Accelerating Pump Pump intake passage ball check seat size 110 to 120 inch diameter Pump discharge passage ball check seat 110 to 120 inch diameter in body Pump (discharge) jet size 0276 inch drill Bleed hole in pump plunger plate size 020 inch diameter

Choke Carter Climatic® Control set on index Choke heat suction hole in body size No 38 (1015 inch) drill
NOTE Thermostatic coil should not be removed from delayer mounting post If defective replace with complete thermostatic coil and housing assembly

Vacuum Spark Port Slot (round end) type Size 030 by 110 inch Top of port 044 to 050 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter

Spark Plug Gap .035"	Breaker Point Setting .020"	Ignition Timing Breaker Points to Open 2° B T D C At Vibration Damper	Valve Setting (Hot) Intake 010" Exhaust 010"	Float Setting (See Adjustments)	Idle Adjustment Screw Setting 1 to 2 Turns Open Idle Engine at 450 to 500 R P M In Neutral

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT This adjustment must be made with the bowl cover gasket and float pin retainer removed Hold the lip on float arm against the seated intake needle, making sure the float pin is at the bottom of its guide slots The distance from the top surface of the body casting to the top of each float should be 9/32 inch (gauge T109-239) If one float is lower than the other, equalize by bending the float arm If both floats require the same correction adjust by bending lip on float arm The floats must not rub anywhere against the inner walls of the bowl If necessary bend float arms slightly to provide clearance on all sides of floats

PUMP ADJUSTMENT Back out throttle adjusting screw and open choke valve so that throttle valve seats in bore of carbureter Install throttle connector rod in center hole of throttle lever The distance from the top of the bowl cover to the top of plunger shaft (not pump arm) should be 54/64 inch Adjust by bending throttle connector rod at lower angle (use Tool T109-213)

FAST IDLE ADJUSTMENT Remove thermostatic coil housing assembly, gasket and baffle plate With throttle adjusting screw backed out crack throttle valve and hold choke valve in fully closed position Then close throttle This will allow fast idle cam to revolve to fast idle position There should now be 016-020 inch clearance (use gauge T109 44) between throttle valve and bore of carbureter (side opposite idle port) Adjust by bending the choke connector rod at lower angle (use Tool T109-213)

CAUTION Be sure cam trip lever is all the way in piston housing with lug contacting cam

UNLOADER ADJUSTMENT This adjustment must be made after the fast idle adjustment Hold throttle valve wide open and close choke valve as far as possible without forcing There should now be 9/64 inch clearance (use gauge T109-34) between upper edge of choke valve and inner wall of air horn Adjust by bending arm on choke trip lever (use tool T109-214) When fast idle and unloader adjustments have been made assemble baffle plate coil housing gasket and thermostatic coil housing assembly on air horn Set Climatic® Control as specified making sure that hook on coil has picked up coil shaft lever

Plymouth—1956-1958—Carbureters Nos. 2410S-2771S

WHEN SERVICING, USE GASKET ASSORTMENT No 252 RE CARBURETION KIT No 1838N

PART NAMES IN CAPITAL LETTERS LISTED BELOW, INDICATE CONTENTS OF RE CARBURETION KIT

Part No.	PART NAME	
1-1376S	Body flange assembly (2410S)	
1-1378S	Body flange assembly (2771S)	
1A-90	FLANGE GASKET—FOR USE WITHOUT GOVERNOR	
2-87	Throttle valve	
3-1047S	Throttle shaft and lever assembly (2771S)	
3-1048S	Throttle shaft and lever assembly (2410S)	
6-1023S	Air horn assembly	
7-199	Choke valve	
11B-35	Rivet plug	
11B-79	Rivet plug	(6)
11B-220	HIGH SPEED PASSAGE RIVET PLUG	
11B-296	Pump jet rivet plug	
11B-303	Rivet plug	
14-446S	Choke trip lever and pin assembly	
14-502S	Choke piston lever and shaft assembly	
20-31	Needle seat gasket	
20-52	STEP UP PISTON GASKET	
20-116	Main metering jet gasket	
21-144S	Float and lever assembly	
24-23	Float lever pin	
25-82S	NEEDLE AND SEAT ASSEMBLY	
30A-44	Idle adjustment screw	
39-11	Choke and throttle valve screw	(4)
47-30	Welsh plug	
48-194	Pump jet	
53A-372	Pump arm	
61-291	Throttle lever adjusting screw spring	
61-298	Fast idle cam spring	
61-467	Idle adjustment screw spring	
61-476	Pump spring	
61-484	STEP UP PISTON SPRING	
63-57	Intake check ball retainer	
63-144	Delayer plate retainer ring	
63-169	Float lever pin retainer	

Part No	PART NAME	
63-190	Coil housing retainer	
64-163S	PUMP PLUNGER AND ROD ASSEMBLY	
75-1248	Step up rod	
100-16	Throttle adjusting screw	
101-148S	Bowl cover attaching screw and washer assembly	(2)
101-318	Pump arm screw	
101-359S	Air horn attaching screw and washer assembly	(4)
101-361	Coil housing attaching screw	(3)
101-374	Step up piston plate guide screw	
105A-13	Flange stud nut	(2)
105A-52	Dash pot lock nut (2771S)	
114-125	Dash pot lever (2771S)	
115-234	Throttle connector rod	
115-273	Choke connector rod	
116-13	Pump intake and discharge check ball	(2)
117-113	Fast idle link	
120-213S	Main metering jet assembly—2 sizes lean	
120 214S	Main metering jet assembly—1 size lean	
120-215S	MAIN METERING JET ASSEMBLY—STANDARD	
121-78	COIL HOUSING GASKET	
121-225	BODY GASKET	
121-247	BODY FLANGE GASKET	
123-76S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
136-179	Pump spring retainer washer	
145-136	MAIN VENT TUBE	
150A-13	Pin spring	
160-124S	Step up piston and plate assembly	
170P-312S	Thermostatic coil and housing assembly	
172-28	Choke connector rod retainer	
180-65	Dash pot bracket (2771S)	
181-171S	Fast idle cam assembly	
186-39	Choke baffle plate	
202-35S	Dash pot assembly (2771S)	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used.

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PLYMOUTH "V-8"

MODEL P-29

"FURY"

1956

WCFB Four-Bore Down-Draft Climatic® Control **Carbureter No. 2442S**

CARBURETER SPECIFICATIONS

For Plymouth 8 Cylinder Engine 3.81 Inch Bore, 3.31 Inch Stroke

Dimensions Flange size 1¼ inch Four Bore—4 bolt type
Primary venturi size 11/32 inch I D
Main venturi size 1 3/16 inch I D

Vents 4 combination nside and outside (1) angular inside

Gasoline Intake Size No 42 (0935 inch) drill in needle seat

Low Speed Jet Tube Jet size (035 inch) diameter By pass in body size (057 inch) diameter Economizer plug in body size No 56 (0465 inch) drill Idle bleed in body size No 46 (081 inch) drill

Idle Port Upper slot type primary length 140 inch width 030 inch Secondary length 103 inch width 030 inch

Idle Port Opening Primary 092 to 098 inch secondary 065 to 071 inch above top edge of valve with valve tightly closed

Lower Port Primary (for idle adjustment screw) size No 53 (0595 inch) drill Secondary (no idle adjustment screw) size No 57 (043 inch) drill

Set Idle Adjustment Screw 1 to 2 turns open For richer mixture turn screw out Do not idle engine below 450 to 500 R P M in neutral

Main Nozzle Installed permanently DO NOT REMOVE Anti percolating jet (4) size No 70 (028 inch) drill

Metering Rod Primary, Economy step 077 inch diameter Middle step tapers to 068 inch diameter Power step 052 inch diameter Secondary, none

Metering Rod Jet Primary Size 1015 inch diameter Secondary Size 073 inch diameter

Accelerating Pump. Discharge jet (twin) primary side only size No 74 (0225 inch) drill Intake ball check seat, size 115 to 120 inch diameter Discharge needle seat size No 50 (070 inch) drill Relief passage (vent) to fuel chamber size No 42 (0935 inch) drill

Choke Carter Climatic® Control Cross Over Type set on index Butterfly type offset choke valve primary side only Choke heat suction hole restriction in piston housing size No 40 (098 inch) drill

Vacuum Spark Port Horizontal slot (round end) 045 x 110 inch Top of port 022 to 032 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter

Spark Plug Gap .035"	Breaker Point Setting .017"	Ignition Timing Breaker Points to Open 4° B T C. At Vibrati n Damper	Valve Setting (Hot) Intake .010" Exhaust .018"	Float Setting Primary 7/32 Inch (Use Gauge T109-283) Secondary 9/32 Inch (Use Gauge T109-284)	Idle Adjustment Screw Setting 1 to 2 Turns Open Idle Engine at 450 to 500 R P.M In Neutral

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT Two separate float adjustments must be made—lateral and vertical **LATERAL ADJUSTMENT**· With bowl cover assembly inverted bowl cover gasket removed and float resting on seated needle place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting Side of floats should just clear the vertical uprights of float gauge Adjustment should be made by bending arms of floats **VERTICAL ADJUSTMENT** With float gauge in same position floats should just clear the horizontal portion of gauge Vertical distance between top of float and machined surface of casting must be 7/32" (gauge T109 283) for primary floats and 9/32" (gauge T109 284) for secondary floats Adjust by bending float arms

FLOAT DROP ADJUSTMENT With bowl cover held in upright position and measuring from center of floats, the distance be tween top of floats and bowl cover should be 23/32" for pri mary floats and 25/32" for secondary floats Adjust by bend ing stop tabs on float bracket

PUMP ADJUSTMENT: Install pump connector link in outer hole (long stroke) of pump arm, with ends extending toward countershaft arm Back out throttle lever set screw until throttle valves seat in bores of carbureter Hold straight edge across top of dust cover boss at pump arm The flat on top of pump arm should be parallel to straight edge Adjust by bending throttle connector rod (early) at upper angle (late) at lower angle (Use tool T109 213)

METERING ROD ADJUSTMENT Metering rod adjustment is important and must be made after completing the pump ad justment No metering rod gauges are necessary Procedure is as follows 1 Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw 2 With metering rods in place, press down on vacumeter link until metering rods bottom in carbureter body casting 3 Holding rods in downward position and throt tle valves seated revolve metering rod arm unt l finger on arm contacts lip of vacumeter link Hold in place and carefully tighten clamp screw

BOWL VAPOR VENT ADJUSTMENT This adjustment should be made after completing pump and metering rod adjustments Install dust cover and dust cover gasket Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter There should be 1/16 inch (gauge T109 197) be tween lower edge of bowl vapor vent valve and dust cover To adjust remove dust cover and bend vapor vent arm

FAST IDLE ADJUSTMENT (a) Loosen choke lever clamp screw on choke shaft Insert 020" feeler gauge (T109 29) between lip of fast idle cam and boss of flange casting Hold choke valve tightly closed and take slack out of linkage by pressing lever towards closed position—hold in place and tighten clamp screw (b) With choke valve tightly closed tighten fast idle adjusting screw until there is 012" (gauge T109 200) opening between throttle valve and bore of carbureter (side opposite idle port) Be sure fast idle adjusting screw is on high step of cam while making this adjustment

FAST IDLE ON CAR 1350 to 1400 R P M

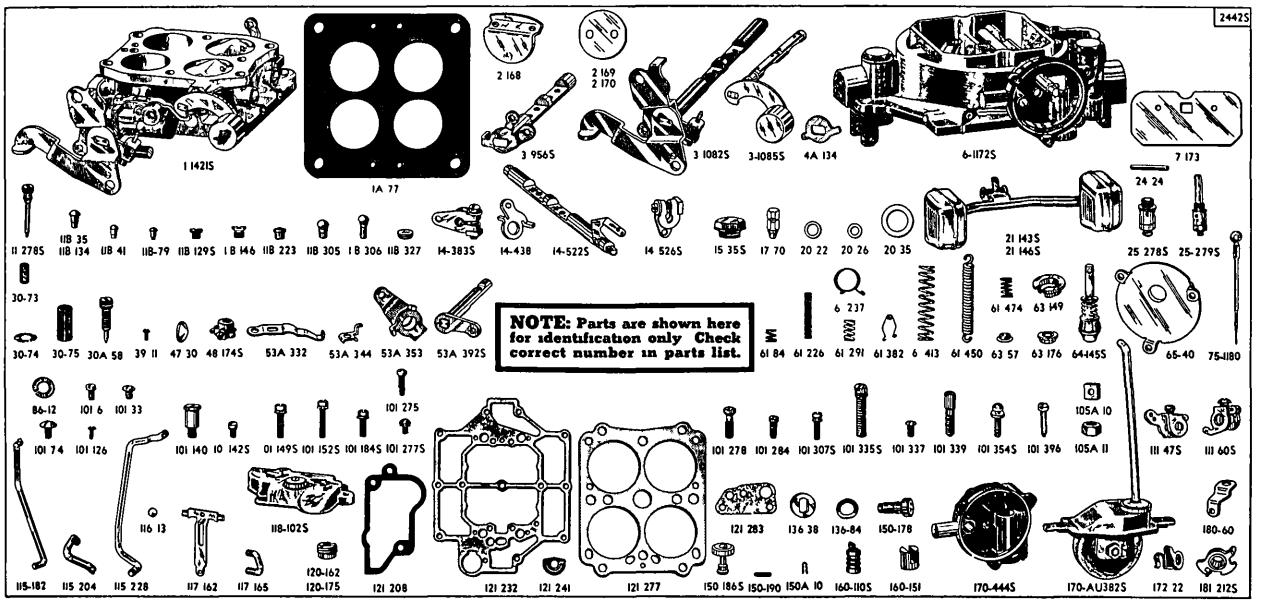
UNLOADER ADJUSTMENT With throttle wide open there should be 11/64" clearance between upper edge of choke valve and inner wall of air horn (gauge T109 166) Adjust by bending unloader lip on throttle shaft lever (use bending tool T109 41)

SECONDARY THROTTLE LEVER ADJUSTMENT The stop lug on both primary and secondary throttle levers should contact boss on flange at the same time To adjust bend secondary throttle operating rod at angle (use bending tool T109-213)

AUXILIARY THROTTLE LOCK-OUT ADJUSTMENT This ad justment should be made after completing fast idle adjustment 1 With choke valve closed edge of hook on lockout arm should contact auxiliary throttle lever making maximum contact of locking step on lever 2 Open choke valve Auxiliary throttle valve should become unlocked a few degrees before the choke reaches wide open position Adjust by bending lock out arm

CHOKE ADJUSTMENT (CROSS OVER TYPE) See Form 3657 1 Loosen mounting post lock nut and turn mounting post with screw driver until index mark on disk is positioned as listed on carbureter specification page Hold in this position with screw driver and tighten lock nut **NOTE**· Screw driver may be held in vise so that one hand may be used to support housing while tightening nut 2 After adjustment is completed and coil hous ing and rod assembly and carbureter is installed on engine lift cover disk and open and close choke valve manually to see if connector rod clears sides of hole in housing cover If rod does not clear hole in housing cover without binding replace with a new unit since connector rod cannot be bent without affecting calibration

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Plymouth "V-8"—1956—Carbureter No. 2442S

WHEN SERVICING USE GASKET ASSORTMENT No 288

Part No.	PART NAME	
1-1421S	—Body flange assembly	
1A-77	Flange gasket	
2-168	Auxiliary throttle valve	(2)
2-169	Secondary throttle valve	(2)
2-170	Primary throttle valve	(2)
3-956S	Secondary throttle shaft and operating lever assembly	
3-1082S	—Primary throttle shaft and lever assembly	
3-1085S	—Auxiliary throttle shaft lever and weight assembly	
4A-134	Primary throttle shaft dog	
6-1172S	—Air horn assembly (Sup by 6 1205S)	
6-1205S	—Air horn assembly	
7-173	Choke valve	
11-278S	Low speed jet assembly	(4)
11B-35	Rivet plug	(6)
11B-41	Rivet plug	
11B-79	Rivet plug	(4)
11B-129S	Pump discharge passage plug assembly	
11B-134	Rivet plug	
11B-146	Level sight plug	(2)
11B-223	Nozzle passage and idle port rivet plug	(8)
11B-305	Rivet plug	(2)
11B-306	Rivet plug	
11B-327	Secondary throttle shaft rivet plug	
14-383S	Choke lever and screw assembly	
14-438	Cam trip lever	
14-522S	Choke piston lever link and shaft assembly	
14-526S	Choke lever assembly	
15-35S	Strainer nut assembly	(2)
17-70	Pump check needle	
20-22	Needle seat gasket	(2)
20-26	Relief valve gasket	
20-35	Bowl strainer gasket	(2)
21-143S	Primary float and lever assembly	

Part No	PART NAME	
21-146S	Secondary float and lever assembly	
24-24	Float lever pin	(2)
25-278S	Primary needle and seat assembly	
25-279S	Secondary needle and seat assembly	
30-73	Primary needle seat strainer	
30-74	Secondary fuel inlet strainer	
30-75	Bowl strainer	
30A-58	Idle adjustment screw	(2)
39-11	Choke and throttle valve attaching screw	(6)
47-30	Welsh plug	
48 174S	Pump jet and housing assembly	
53A-332	Lockout arm	
53A-344	Vent arm	
53A 353	Primary operating lever	
53A-392S	Pump operating lever and countershaft assembly	
61-84	Idle adjustment screw spring	(2)
61-226	Vacuum piston spring	
61-237	Fast idle cam spring	
61 291	Throttle lever adjusting screw spring	
61-382	Metering rod spring	
61-413	Upper pump spring	
61-450	Secondary throttle return spring	
61-474	Bowl vent spring	
63-57	Intake check ball retainer	
63-149	Bowl vent spring retainer	
63 176	Pump spring retainer	
64-145S	Pump plunger and rod assembly	
65-40	Piston housing cover plate	
75-1180	Metering rod—standard	(2)
75-1210	—Metering rod—1 size rich	(2)
86-12	Flange stud lock washer	(4)
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	

Part No.	PART NAME
101-74	Throttle shaft screw
101-126	Auxiliary throttle valve attaching screw (4)
101-140	Fast idle cam screw
101-142S	Piston housing cover plate attaching screw and washer assembly (3)
101-149S	Body flange attaching screw and washer assembly (4)
101-152S	Air horn attaching screw and washer assembly
101-184S	Dust cover attaching screw and washer assembly (2)
101-275	Piston housing attaching screw
101-277S	Vent arm attaching screw and washer assembly
101-278	Pump jet housing attaching screw
101-284	Piston housing attaching screw (Sup. by 101-363) (2)
101-307S	Air horn and bracket attaching screw and washer assembly (8)
101-335S	Air horn attaching screw and washer assembly (7)
101-337	Secondary throttle valve attaching screw (4)
101-339	Throttle lever adjusting screw
101-354S	Choke lever clamp screw assembly (2)
101-363	Piston housing attaching screw (2)
101-396	Fast idle adjustment screw
105A-10	Choke lever clamp screw nut (2)
105A-11	Flange stud nut (4)
111-47S	Pump arm and screw assembly
111-60S	Metering rod arm and screw assembly
115-182	Choke connector rod
115-204	Throttle operating rod
115-228	Throttle connector rod
116-13	Pump intake check ball
117-162	Vacumeter piston link
117-165	Pump connector link
118-102S	Dust cover assembly
120-162	Primary metering rod jet (2)
120-175	Secondary metering rod jet (2)
121-208	Dust cover gasket
121-232	Air horn gasket
121-241	Pump jet housing gasket
121-277	Body flange gasket
121-283	Piston housing gasket
136-38	Throttle shaft washer
136-84	Spring washer
150-178	Auxiliary valve lockout arm pin
150-186S	Pin and valve cap assembly
150-190	Choke piston pin
150A-10	Pin spring (5)
160-110S	Vacuum piston and pin assembly
160-129	Choke piston
160-151	Choke piston (Sup. by 160-129)
170-444S	—Piston housing and plug assembly
170AU-382S	Thermostatic coil housing and rod assembly
172-22	Throttle connector rod retainer
180-60	Lever return spring bracket
181-212S	Fast idle cam assembly

—Parts so marked are new and listed for the first time.

NOTE: **Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.**

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PLYMOUTH – 1956

CITY TRAFFIC

MODEL "P-28"

With Throttle Restrictors

BBS Down-Draft Climatic® Control **Carbureter No. 2403S**

CARBURETER SPECIFICATIONS

For Plymouth Six Cylinder Engine: 3.25 Inch Bore, 4.63 Inch Stroke

Dimensions: Flange size 1½ inch S A E Throttle bore 1-11/16 inch Main venturi, 1 11/32 inch I D

Float Setting: See adjustments

Vents: Outside, none Inside, balance vent tube

Gasoline Intake: Size No 44 (.086 inch) drill in needle seat

Idle Tube: Jet size 028 inch diameter Idle passage air bleed in body size 061 inch diameter Restriction in body size 057 inch diameter

Idle Port: Upper, slot type, length 195 inch width 030 inch

Idle Port Opening: Top of port located 140 to 144 inch above top edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw): Size 053 to 057 inch diameter

Set Idle Adjustment Screw: ½ to 1¾ turns open For richer mixture turn screw out Idle engine between 450 500 r p m gear shift lever in neutral

Main Metering Jet: Calibrated to flow 382 cc per minute (Do not gauge for size, if in doubt replace with new part)

Main Vent Tube: Side holes 6—.0354 inch diameter Bleed in top of tube .0236 inch diameter

Step-Up Rod: (Vacuum operated) size 021 inch

Accelerating Pump: Pump intake passage, ball check seat, size 110 to 120 inch diameter Pump discharge passage, ball check seat, 110 to 120 inch diameter in body Pump (discharge) jet, size 0276 inch drill Bleed hole in pump plunger plate size 020 inch diameter

Pump Adjustment: See adjustments

Choke: Carter Climatic® Control set on index Choke heat suction hole, in body, size No 38 (.1015 inch) drill NOTE Thermostatic coil should not be removed from delayer mounting post If defective replace with complete thermostatic coil and housing assembly

Vacuum Spark Port: Slot (round end) type Size .030 by 110 inch Top of port .044 to .050 inch above top edge of valve with valve tightly closed

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Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .020"	Ignition Timing Breaker Points to Open 2° B.T.D.C. At Vibration Damper	Valve Setting (Hot) Intake .010" Exhaust .010"	Float Setting (See Adjustments)	Idle Adjustment Screw Setting ½ to 1¾ Turns Open Idle Engine at 450 to 500 R.P.M. In Neutral

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT This adjustment must be made with the bowl cover gasket and float pin retainer removed Hold the lip on float arm against the seated intake needle making sure the float pin is at the bottom of its guide slots The distance from the top surface of the body casting to the top of each float should be 9/32 inch (gauge T109-239) If one float is lower than the other equalize by bending the float arm If both floats require the same correction adjust by bending lip on float arm The floats must not rub anywhere against the inner walls of the bowl If necessary bend float arms slightly to provide clearance on all sides of floats

PUMP ADJUSTMENT Back out throttle adjusting screw and open choke valve so that throttle valve seats in bore of carbureter Install throttle connector rod in center hole of throttle lever The distance from the top of the bowl cover to the top of plunger shaft (not pump arm) should be 54/64 inch Adjust by bending throttle connector rod at lower angle (use Tool T109-213)

FAST IDLE ADJUSTMENT Remove thermostatic coil housing assembly gasket and baffle plate With throttle adjusting screw backed out crack throttle valve and hold choke valve in fully closed position Then close throttle This will allow fast idle cam to revolve to fast idle position There should now be 016 020 inch clearance (use gauge T109 44) between throttle valve and bore of carbureter (side opposite idle port) Adjust by bending the choke connector rod at lower angle (use Tool T109 213)

UNLOADER ADJUSTMENT This adjustment must be made after the fast idle adjustment Hold throttle valve wide open and close choke valve as far as possible without forcing There should now be 9/64 inch clearance (use gauge T109-34) between upper edge of choke valve and inner wall of air horn Adjust by bending arm on choke trip lever (use tool T109 214) When fast idle and unloader adjustments have been made assemble baffle plate coil housing gasket and themrostatic coil housing assembly on air horn Set Climatic® Control as specified making sure that hook on coil has picked up coil shaft lever

Plymouth — 1956 — Carbureter No. 2403S

WHEN SERVICING, USE GASKET ASSORTMENT No 252, REPAIR PACKAGE No. 1838

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1400S	—Body flange assembly	
1A-90	FLANGE GASKET—FOR USE WITHOUT GOVERNOR	
2-87	Throttle valve	
3-1048S	—Throttle shaft and lever assembly	
6-1023S	Air horn assembly	
7-199	Choke valve	
11B-35	Rivet plug	
11B-79	Rivet plug	(6)
11B-220	HIGH SPEED PASSAGE RIVET PLUG	
11B-296	PUMP JET RIVET PLUG	
11B-303	Rivet plug	
14-446S	Choke trip lever and pin assembly	
14-502S	Choke piston lever and shaft assembly	
20-31	Needle seat gasket	
20-52	STEP UP PISTON GASKET	
20-116	Main metering jet gasket	
21-144S	Float and lever assembly	
24-23	Float lever pin	
25-82S	NEEDLE AND SEAT ASSEMBLY	
30A-44	Idle adjustment screw	
39-11	Choke valve screw	(2)
47-30	Welsh plug	
48-194	PUMP JET	
53A-372	Pump arm	
61-291	Throttle lever adjusting screw spring	
61-298	Fast idle cam spring	
61-467	Idle adjustment screw spring	
61-476	Pump spring	
61-484	STEP UP PISTON SPRING	
63-57	INTAKE CHECK BALL RETAINER	
63-144	Delayer plate retainer ring	
63-169	FLOAT LEVER PIN RETAINER	
63-190	Coil housing retainer	
64-163S	PUMP PLUNGER AND ROD ASSEMBLY	
75-1207	Step up rod	
86-57	Throttle restrictor lock washer	
100-16	Throttle adjusting screw	
101-148S	Bowl cover attaching screw and washer assembly	(2)
101-286	Throttle restrictor screw	(2)
101-318	Pump arm screw	
101-359S	Air horn attaching screw and washer assembly	(4)
101-361	Coil housing attaching screw	(3)
101-374	Step up piston plate guide screw	
105A-13	Flange stud nut	(2)
105A-45	Throttle restrictor nut	(4)
115-234	Throttle connector rod	
115-273	—Choke connector rod	
116-13	PUMP INTAKE AND DISCHARGE CHECK BALL	(2)
117-113	Fast idle link	
120-213S	Main metering jet assembly—2 sizes lean	
120-214S	Main metering jet assembly—1 size lean	
120-215S	MAIN METERING JET ASSEMBLY—STANDARD	
121-78	COIL HOUSING GASKET	
121-225	BODY GASKET	
121-247	BODY FLANGE GASKET	
123-76S	—IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
136-179	PUMP SPRING RETAINER WASHER	
145-136	MAIN VENT TUBE	
150A-13	PIN SPRING	
160-124S	STEP UP PISTON AND PLATE ASSEMBLY	
170P312S	Thermostatic coil and housing assembly	
172-28	Choke connector rod retainer	
181-164	Throttle restrictor	(2)
181-171S	Fast idle cam assembly	
186-39	Choke baffle plate	

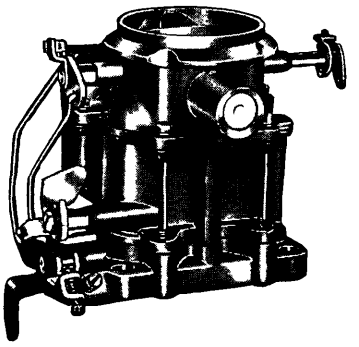
—Parts so marked are new and listed for the first time

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

2407S
Standard Transmission

2408S
Overdrive Transmission

2409S-2409SA
Power Flite Transmission



PLYMOUTH "V-8" MODEL P-29 1956

(Use 2512SB to replace 2407S 2409S SA)
Use 2512SB and 192 36U to replace 2408S

BBD Dual Down-Draft Climatic® Control **Carbs. Nos. 2407S-2408S-2409S-2409SA**

CARBURETER SPECIFICATIONS

For Plymouth 8 Cylinder Engine 3 75 Inch Bore 3 13 Inch Stroke

Dimensions Flange size 1¼ inch dual 4 bolt type Throttle bore 1 7/16 inch I D Primary venturi ⅜ inch I D Main venturi 1 3/16 inch I D

Float Level See adjustments

Vent Inside balance vent tube to bowl in air horn above choke valve

Gasoline Intake Size No 38 (1015 inch) drill hole in needle seat

Idle Tube Jet size No 65 (035 inch) drill Idle bleed (in venturi cluster screw) size (2407S 2408S) 0629 inch (2409S SA) 0669 inch diameter Idle restriction (in venturi cluster screw) size 0472 inch diameter

Idle Port Upper slot type length 189 inch width 030 inch

Idle Port Opening 144 to 148 inch above upper edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw) Size 053 to 057 inch diameter

Set Idle Adjustment Screw ½ to 1½ turns open For richer mixture turn screw out With gear shift lever in neutral position idle engine between 450 and 500 RPM

Main Nozzle Nozzle is installed permanently DO NOT RE MOVE

Main Vent Tube Side holes 8—size 0354 inch diameter Main vent in top of tube size 0256 inch diameter

Step Up Rod (Vacuum operated) (2407S 2408S) 018 inch (2409S SA) 020 inch diameter

Metering Jet Calibrated to flow 316 to 324 cc per minute (Do not gauge for size if in doubt replace with new part)

Accelerating Pump Pump discharge jets (2—in venturi cluster) size 0275 inch diameter Intake ball check seat size 130 to 140 inch diameter Discharge ball check seat size 110 to 120 inch diameter

Pump Adjustments See adjustments

Choke Carter Climatic® Control Cross Over Choke Type set at index Butterfly type offset valve Choke heat suction hole in air horn size No 44 (086 inch) drill

Vacuum Spark Port Horizontal round end type (early prod) 030 by 110 inch (late prod) 045 by 110 inch Top of port to be (early prod) 035 to 045 inch (late prod) 025 to 035 inch above upper edge of valve with valve closed tight

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter

Spark Plug Gap .035"	Breaker Point Setting .017"	Ignition Timing Breaker Points to Open 4° B T C At Vibration Damper	Valve Setting (Hot) Intake .008" Exhaust .018"	Float Setting See Adjustments	Idle Adjustment Screw Setting ½ t 1½ Turns Open Idle Engine at 450 to 500 R P M In Neutral

CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3656

Float Level ¼" (Gauge T109 282) between top of each float and top surface of body casting To adjust bend lip on float arm

Pump 1 1/32" from the top of the bowl cover to the top of the plunger shaft Install throttle connector rod in center hole (medium stroke) of throttle lever and inner hole of pump arm To adjust bend throttle connector rod

Fast Idle Cam Clearance With choke valve closed and lip on inner choke shaft lever contacting lug on outer lever there should be 020" (Gauge T109 29) between lip of fast idle cam and boss on casting To adjust bend lip on inner choke shaft lever Optional adjustment (late production) align index mark with adjusting screw

Fast Idle Throttle Valve Clearance 015" (Gauge T109 44) between lower edge of valve and bore with adjusting screw on high step of cam

Fast Idle on Car 1350 to 1400 R P M

Unloader 3/16" (Gauge T109 28) between top edge of choke valve and inner wall of air horn with throttle valves wide open To adjust bend unloader arm on throttle lever

Dash Pot (Slow Closing Throttle) Close throttle valves and bottom plunger shaft with 1/16" gauge between shaft and operating lever To adjust loosen lock nut and turn dash pot unit in or out

Overdrive Kickdown Switch With throttle valves wide open there should be 1/64" to 3/64" between kickdown lever and switch stem guide To adjust loosen lock nuts and adjust switch

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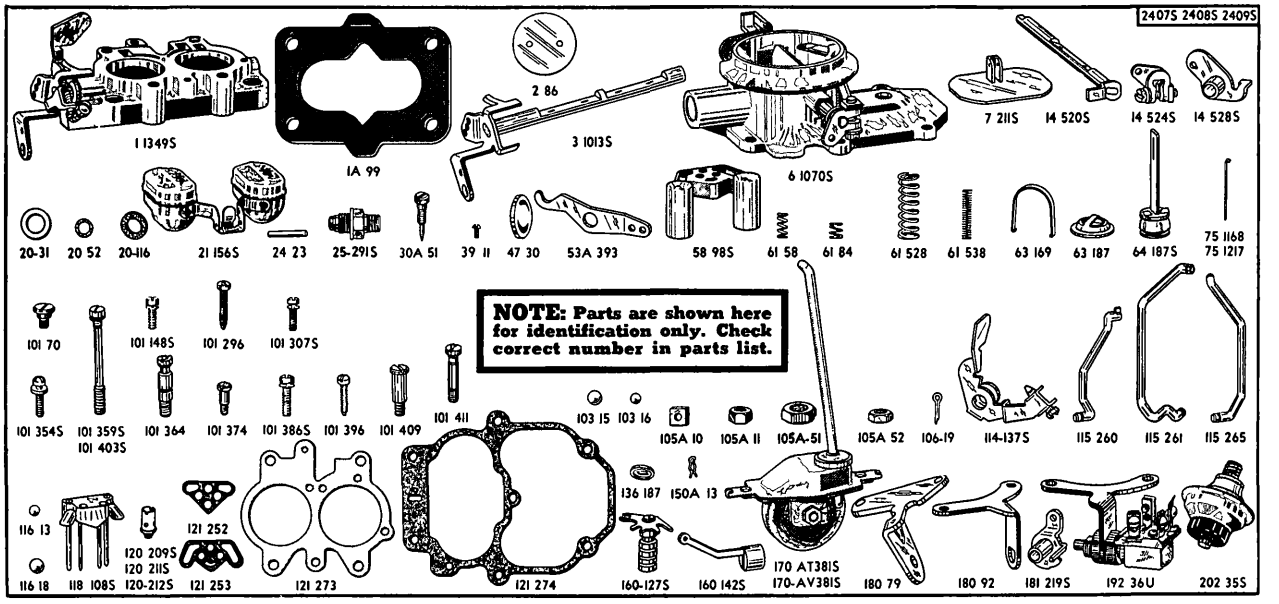
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Choke Adjustment (Cross Over Type) See Form 3657. 1 Loosen mounting post lock nut and turn mounting post with screw driver until index mark on disk is positioned as listed under carbureter specifications Hold in this position with screw driver and tighten lock nut

Note Screw driver may be held in vise so that one hand may be used to support housing while tightening nut

2 After adjustment is completed and coil housing and rod assembly and carbureter is installed on engine lift cover disk and open and close choke valve manually to see if connector rod clears sides of hole in housing cover If rod does not clear hole in housing cover without binding replace with a new unit since connector rod cannot be bent without effecting calibration



Plymouth "V-8"—1956—Carbureters Nos. 2407S-2408S-2409S-2409SA

WHEN SERVICING, USE GASKET ASSORTMENT No 278, REPAIR PACKAGE No. 1825A

PART NAMES IN CAPITAL LETTERS LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-1349S	Body flange assembly	
1A-99	FLANGE GASKET	
2-86	Throttle valve	(2)
3-1013S	Throttle shaft and lever assembly	
6-1070S	Air horn assembly	
7-211S	Choke valve and bracket assembly	
14-520S	Choke lever and shaft assembly	
14-524S	Choke lever assembly	
14-528S	Choke lever and collar assembly	
20-31	Needle seat gasket	
20-52	STEP UP PISTON GASKET	
20 116	Main metering jet gasket	(2)
21-156S	Float and lever assembly	
24-23	Float lever pin	
25-291S	NEEDLE AND SEAT ASSEMBLY	
30A-51	Idle adjustment screw	(2)
39-11	Choke and throttle valve attaching screw	(6)
47-30	Welsh plug	
53A-393	Pump arm	
58-98S	Venturi cluster and nozzle assembly	
61-58	Throttle adjusting screw spring	
61-84	Idle adjustment screw spring	(2)
61-528	PUMP SPRING	
61 538	STEP UP PISTON SPRING	
63-169	FLOAT LEVER PIN RETAINER	
63-187	INTAKE CHECK BALL RETAINER	
64-187S	PUMP PLUNGER AND ROD ASSEMBLY	
75-1168	Step up rod (2407S 2408S)	(2)
75-1217	Step up rod (2409S SA)	(2)
101-70	Pump arm screw	
101-148S	Air horn attaching screw and washer assembly (2407S 2409SA (4) (2408S (3) (2409S (2)	-
101-296	Throttle adjusting screw	
101-307S	Air horn attaching screw and washer assembly (2408S (1) (2409S (2)	
101-354S	Choke lever clamp screw and washer assembly	
101-359S	Body attaching screw and washer assembly (2407S 2409S SA)	(2)
101-364	Venturi cluster screw (2407S 2408S)	(2)
101-374	Step up piston plate screw	
101-386S	Body flange attaching screw and washer assembly	(2)

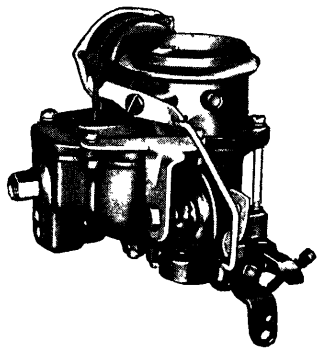
Part No.	PART NAME	
101-396	Fast idle adjusting screw	
101-403S	Body attaching screw and washer assembly (2408S)	(2)
101-409	Fast idle cam attaching screw	
101-411	Venturi cluster screw (2409S SA)	(2)
103-14	Lead shot	
103-15	Lead shot	(2)
103-16	Lead shot	(2)
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
105A-51	Kickdown switch attaching nut (2408S)	(2)
105A-52	Dash pot lock nut (2409S)	
106-19	Cotter pin	
114-137S	Dash pot and kickdown lever assembly	
115-260	Choke connector rod	
115-261	Throttle connector rod (2409S SA)	
115 265	Throttle connector rod (2407S 2408S)	
116-13	PUMP DISCHARGE CHECK BALL	
116-18	PUMP INTAKE CHECK BALL	
118 108S	VENTURI COVER AND TUBE ASSEMBLY	
120-209S	Main metering jet assembly—1 size lean	(2)
120 211S	Main metering jet assembly—2 sizes lean	(2)
120-212S	MAIN METERING JET ASSEMBLY	(2)
121-252	VENTURI HOUSING GASKET	
121-253	VENTURI COVER GASKET	
121-273	BODY FLANGE GASKET	
121-274	BODY GASKET	
121-313	Air cleaner gasket	
136-187	Pump spring retainer washer	
150A-13	PIN SPRING	(3)
160-127S	STEP UP PISTON AND PLATE ASSEMBLY	
160-142S	Choke piston and link assembly	
170AT381S	Thermostatic coil housing and rod assembly (2409S SA)	
170AV381S	Thermostatic coil housing and rod assembly (2407S 2408S)	
180-79	Dash pot bracket (2409S)	
180-92	Kickdown switch bracket (2408S)	
181-219S	Fast idle cam assembly	
192-36U	Unitized package (2408S)	-
202-35S	Dash pot assembly (2409S)	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

2422S
Standard Transmission

2423S
Overdrive Transmission

2424S
Power Flite Transmission



PLYMOUTH "V-8" MODEL P-29 1956

Use 2274SA with 156-29 to replace 2422S
Use 2274SA with 156-29 and 192-34U to replace 2423S
Use 2274SA with 156-29 and 202-83U to replace 2424S

BBD Dual Down-Draft Climatic® Control **Carbureters Nos. 2422S-2423S-2424S**

CARBURETER SPECIFICATIONS

For Plymouth 8 Cylinder Engine· 3.63 Inch Bore, 3.256 Inch Stroke

Dimensions: Flange size 1¼ inch dual 4 bolt type
Throttle bore, 1-7/16 inch I D
Primary venturi, ⅜ inch I D
Main venturi, 1-3/16 inch I D

Vent: Inside, balance vent tube to bowl, in air horn above choke valve

Gasoline Intake: Size No 38 (.1015 inch) drill hole in needle seat

Idle Tube: Jet size No 65 (.035 inch) drill
Idle bleed (in venturi cluster screw), size 059 inch diameter
Idle restriction (in venturi cluster screw), size 0472 inch diameter

Idle Port: Upper, slot type length, 189 inch; width, .030 inch

Idle Port Opening: 148 to 152 inch above upper edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw): Size 053 to 057 inch diameter

Set Idle Adjustment Screw: ½ to 1½ turns open For richer mixture, turn screw out With gear shift lever in neutral position idle engine between 450 and 500 RPM

Main Nozzle Nozzle is installed permanently DO NOT REMOVE.

Main Vent Tube: Side holes 8—size 0354 inch diameter Main vent in top of tube, size 0256 inch diameter

Step-Up Rod: (Vacuum Operated) 018 inch diameter

Metering Jet· Calibrated to flow 316 to 324 cc per minute (Do not gauge for size, if in doubt replace with new part)

Accelerating Pump: Pump discharge jets (2—In venturi cluster) size 0275 inch diameter
Intake ball check seat size 130 to 140 inch diameter
Discharge ball check seat size 110 to 120 inch diameter

Choke: Carter Climatic® Control set at index Butterfly type, offset valve Choke heat suction hole in body, size No 38 (.1015 inch) drill

NOTE Thermostatic coil should not be removed from delayer mounting post If defective replace with complete thermostatic coil and housing assembly

Vacuum Spark Port: Horizontal, round end type, 030 by 110 inch Top of port to be 035 to 045 inch above upper edge of valve with valve closed tight

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open·	Float Setting	Idle Adjustment Screw Setting
.035"	.017"	4° B. T. C. At Vibration Damper	7/32 Inch (Use Gauge T109-239)	½ to 1½ Turns Open Idle engine at 450 to 500 R.P.M. In Neutral

NOTE: These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: This adjustment must be made with the bowl cover gasket and float pin retainer removed. Hold the lip on float arm against the seated intake needle, making sure the float pin is at the bottom of its guide slots. The distance from the top surface of the body casting to the top of each float should be 1/4 inch (gauge T109-282). If one float is lower than the other, equalize by bending the float arm. If both floats require the same correction, adjust by bending lip on float arm. The floats must not rub anywhere against the inner walls of the bowl. If necessary, bend float arms slightly to provide clearance on all sides of floats.

PUMP ADJUSTMENT: Back out throttle adjustment screw and open choke valve so that throttle valves seat in bores of carbureter. Install throttle connector rod in outer hole (medium stroke) of throttle lever and inner hole of pump arm. The distance from the top of the bowl cover to the top of plunger shaft (not pump arm) should be 1 inch. Adjust by bending pump connector rod (2422S-2423S) at lower angle; (2424S) at upper angle (use tool T109-213).

FAST IDLE ADJUSTMENT: Remove thermostatic coil housing, gasket and baffle plate. With throttle adjusting screw backed out, crack throttle valve and hold choke valve in fully closed position. Then close throttle. This will allow fast idle cam to revolve to fast idle position. There should now be .015"-.019" clearance (use gauge T109-44) between throttle valve and bore of carbureter (side opposite idle port). Adjust by bending the choke connector rod at lower angle (use tool T109-213).

CAUTION: Be sure cam trip lever is all the way in piston housing with lug contacting cam.

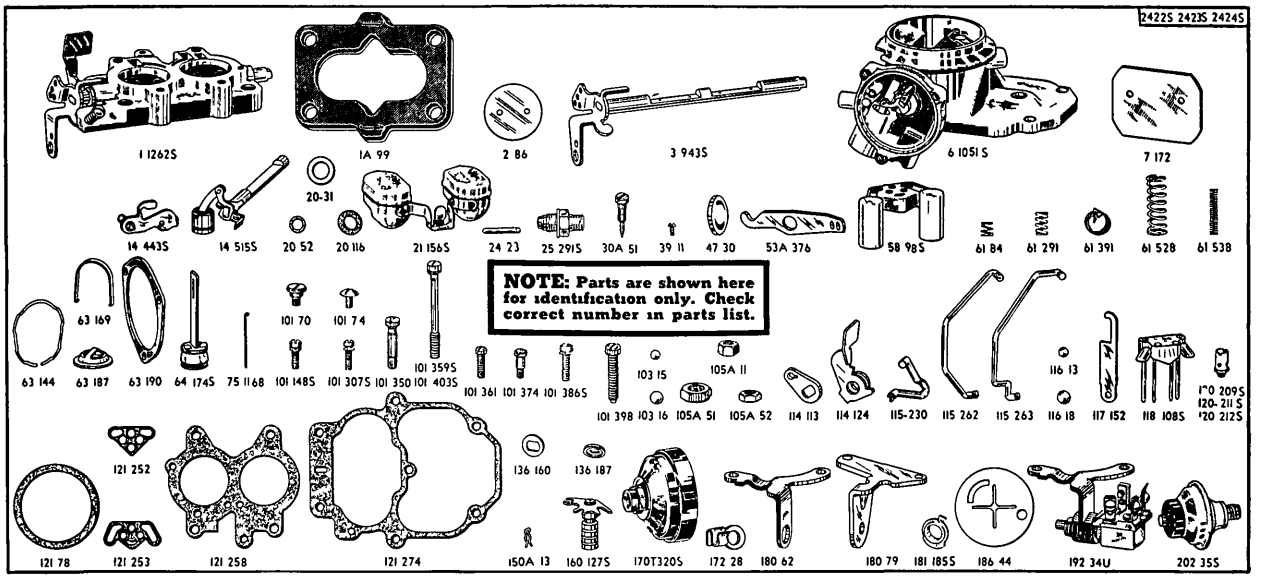
UNLOADER ADJUSTMENT: This adjustment must be made after the fast idle adjustment. Hold throttle valve wide open and close choke valve as far as possible without forcing. There should now be 1/4 inch clearance (use gauge T109-31) between upper edge of choke valve and inner wall of air horn. Adjust by bending arm on choke trip lever (use tool T109-214). When fast idle and unloader adjustments have been made, assemble baffle plate, coil housing gasket and thermostatic coil housing assembly on air horn. Set Climatic® Control at index, making sure that hook on coil has picked up coil shaft lever.

DASH POT (SLOW CLOSING THROTTLE) ADJUSTMENT: The purpose of this unit is to prevent the car from stalling when the throttle is released rapidly. Maximum action is obtained by loosening lock nut and adjusting the dash pot unit so that the plunger shaft can be bottomed with a 1/16 inch gauge placed between shaft and operating lever with throttle valve tightly closed. Then tighten lock nut.

OVERDRIVE KICKDOWN SWITCH ADJUSTMENT: With throttle valves in wide open position adjust hex nuts on switch to have 1/64 inch to 3/64 inch clearance between kickdown lever and switch stem guide.

NOTE: If necessary bend kickdown lever to contact switch stem.

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Plymouth "V8"—1956—Carbureters Nos. 2422S-2423S-2424S

WHEN SERVICING, USE GASKET ASSORTMENT No 265, REPAIR PACKAGE No. 1795 (WITH 156-29)

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1262S	Body flange assembly	
1A-99	FLANGE GASKET	
2-86	Throttle valve	(2)
3-943S	Throttle shaft and lever assembly	
6-1051S	Air horn assembly	
7-172	Choke valve	
14-443S	Choke trip lever and pin assembly	
14-515S	Choke piston lever link and shaft assembly	
20-31	Needle seat gasket	
20-52	STEP UP PISTON GASKET	
20-116	Main metering jet gasket	(2)
21-156S	Float and lever assembly	
24-23	Float lever pin	
25-235S	NEEDLE AND SEAT ASSEMBLY (Used in repair package)	
25-291S	Needle and seat assembly	
30A-51	Idle adjustment screw	(2)
39-11	Choke and throttle valve attaching screw	(6)
47-30	Welsh plug	
53A-376	Pump arm	
58-98S	Venturi cluster and nozzle assembly	
61-84	Idle adjustment screw spring	(2)
61-291	Throttle adjusting screw spring	
61-391	Fast idle cam spring	
61-528	PUMP SPRING	
61-538	STEP UP PISTON SPRING	
63-144	Delayer plate retainer ring	
63-169	FLOAT LEVER PIN RETAINER	
63-187	INTAKE CHECK BALL RETAINER	
63-190	Thermostatic coil housing retainer	
64-174S	PUMP PLUNGER AND ROD ASSEMBLY	
75-1168	STEP-UP ROD	(2)

Part No.	PART NAME	
101-70	Pump arm screw	
101-74	Throttle shaft arm attaching screw	
101-148S	Air horn attaching screw and washer assembly (2422S (4) (2423S (3) (2424S (2)	
101-307S	Air horn attaching screw and washer assembly (2423S (1) (2424S (2)	
101-350	Venturi cluster screw	(2)
101-359S	Body attaching screw and washer assembly (2422S 2424S (2)	
101-361	Coil housing attaching screw	(3)
101-374	Step up piston plate guide screw	
101-386S	Body flange attaching screw and washer assembly	(2)
101-398	Throttle adjusting screw	
101-403S	Body attaching screw and washer assembly (2423S)	(2)
103-14	Lead shot	
103-15	Lead shot	(2)
103-16	Lead shot	(2)
105A-11	Flange stud nut	(4)
105A-51	Kickdown switch bracket attaching nut (2423S)	(2)
105A-52	Dash pot lock nut (2424S)	
114-113	Throttle shaft arm	
114-124	Dash pot and kickdown switch operating lever (2423S 2424S)	
115-230	Choke connector rod	
115-262	Throttle connector rod (2422S 2423S)	
115-263	Throttle connector rod (2424S)	
116-13	DISCHARGE CHECK BALL	
116-18	INTAKE CHECK BALL	
117-152	Fast idle link	
118-108S	VENTURI COVER AND TUBE ASSEMBLY	
120-209S	Main metering jet assembly—1 size lean	(2)
120-211S	Main metering jet assembly—2 sizes lean	(2)

Part No.	PART NAME	
120-212S	MAIN METERING JET ASSEMBLY—STANDARD	(2)
121-78	COIL HOUSING GASKET	
121-252	VENTURI HOUSING GASKET	
121-253	VENTURI COVER GASKET	
121-258	BODY FLANGE GASKET	
121-274	BODY GASKET	
136-160	Throttle shaft washer	
136-187	Pump spring retainer washer	
150A-13	PIN SPRING	(2)
160-127S	STEP UP PISTON AND PLATE ASSEMBLY	

Part No.	PART NAME
170T-320S	Thermostatic coil and housing assembly
172-28	Choke connector rod retainer
180-62	Kickdown switch bracket (2423S)
180-79	Dash pot bracket (2424S)
181-185S	Fast idle cam assembly
186-44	Choke baffle plate
192-34U	Kickdown switch and bracket assembly (2423S)
202-35S	Dash-pot assembly (2424S)
202-83U	Unitized package (Dash-pot) (2424S) Consists of 1—105A-52 1—180 79 and 1—202-35S

NOTE· Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

CARBURETER
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2293S
Standard Transmission

2294S
Overdrive Transmission

2295S
Power Flite Transmission

2380S



PLYMOUTH MODEL "P-28" 1956

Use 2380S to replace 2293S

Use 2380S and 192-33U to replace 2294S

Use 2380S and 202-80U to replace 2295S

BBS Down-Draft Climatic® Control **Carbureters Nos. 2293S-2294S-2295S-2380S**

CARBURETER SPECIFICATIONS

For Plymouth Six Cylinder Engine 3 25 Inch Bore, 4 63 Inch Stroke

Dimensions Flange size 1½ inch S A E Throttle bore 1 11/16 inch Main venturi 1 11/32 inch I D

Float Setting See adjustments

Vents Outside none Inside balance vent tube

Gasoline Intake Size No 44 (086 inch) drill in needle seat

Idle Tube Jet size 0315 inch diameter Idle passage air bleed in body size 061 inch diameter Restriction in body size 057 inch diameter

Idle Port Upper slot type length 195 inch width 030 inch

Idle Port Opening Top of port located 140 to 144 inch above top edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw) Size 053 to 057 inch diameter

Set Idle Adjustment Screw ½ to 1¾ turns open For richer mixture turn screw out Idle engine between 450 500 r p m gear shift lever in neutral

Main Metering Jet Calibrated to flow 406 cc per minute (Do not gauge for size if in doubt replace with new part)

Main Vent Tube Side holes 6—0354 inch diameter Bleed in top of tube 0236 inch diameter

Step-Up Rod (Vacuum operated) (75 943) size 024 inch, (75 1225) size 022 inch diameter

Accelerating Pump Pump intake passage ball check seat size 110 to 120 inch diameter Pump discharge passage ball check seat 110 to 120 inch diameter in body Pump (discharge) jet size 0276 inch drill Bleed hole in pump plunger plate size 020 inch diameter

Pump Adjustment See adjustments

Choke Carter Climatic® Control set on index Choke heat suction hole in body size No 38 (1015 inch) drill NOTE Thermostatic coil should not be removed from delayer mounting post If defective replace with complete thermostatic coil and housing assembly

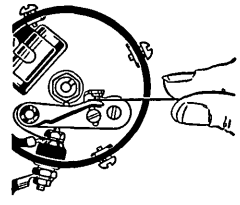
Vacuum Spark Port Slot (round end) type Size 030 by 110 inch Top of port 044 to 050 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate! Always Use Feeler Gauges!

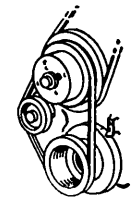
CAUTION Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter



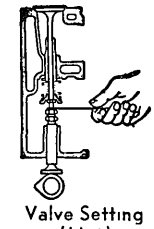
Spark Plug Gap .035"



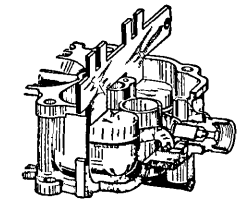
Breaker Point Setting 020"



Ignition Timing Breaker Points to Open 2° B. T. C.



Valve Setting (Hot) Intake 010" Exhaust .010"



Float Setting (See Adjustments)

Idle Adjustment Screw Setting ½ to 1¾ Turns Open Idle engine at 450 to 500 R P M in neutral

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CARBURETER ADJUSTMENTS

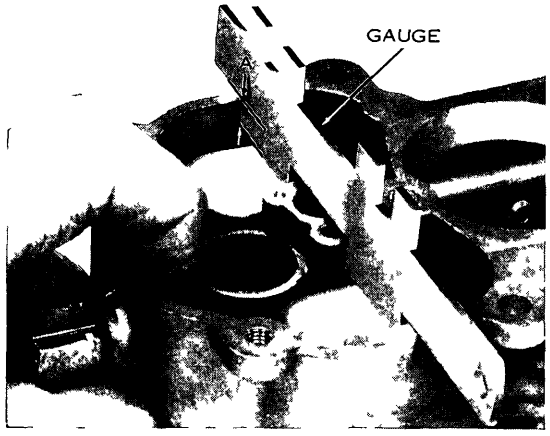


Figure 1
Float Adjustment

FLOAT ADJUSTMENT (Fig. 1)

This adjustment must be made with the bowl cover gasket and float pin retainer removed Hold the lip on float arm against the seated intake needle making sure the float pin is at the bottom of its guide slots The distance (A) from the top surface of the body casting to the top of each float should be 7/32 inch (gauge T109 239) If one float is lower than the other equalize by bending the float arm If both floats require the same correction adjust by bend ing lip on float arm The floats must rot rub anywhere against the inner walls of the bowl If necessary bend float arms slightly to provide clearance on all sides of floats

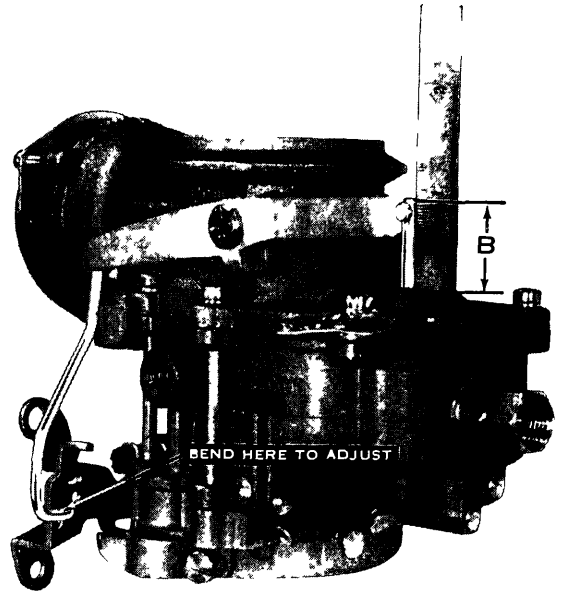


Figure 2
Pump Adjustment

PUMP ADJUSTMENT (Fig 2)

Back out throttle adjust ng screw and open choke valve so that throttle valve seats in bore of carbureter Install throttle connector rod in center hole of throttle lever The distance (B) trom the top of the bowl cover to the top of plunger shaft (not pump arm) should be 54/64 inch Adjust by bending throttle connector rod at lower angle (use Tool T109 213)

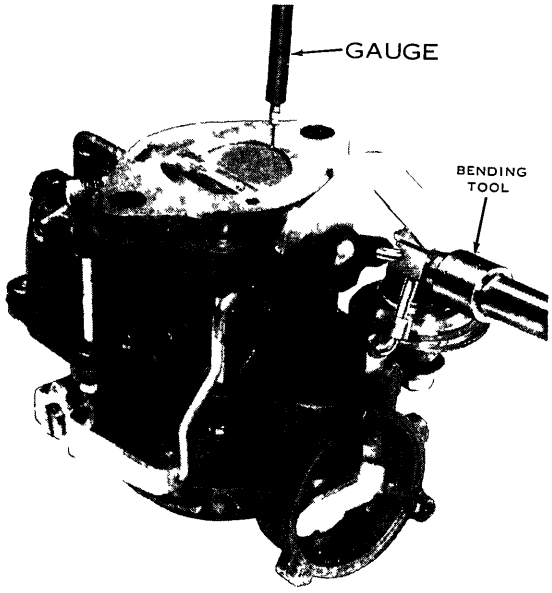


Figure 3
Fast Idle Adjustment

FAST IDLE ADJUSTMENT (Fig 3)

Remove thermostatic coil housing assembly gasket and baffle plate With throttle adjusting screw backed out crack throttle valve and hold choke valve in fully closed position Then close throttle This will allow fast idle cam to revolve to fast idle position There should now be 016 020 incn clearance (use gauge T109 44) between throttle valve and bore of carbureter (side opposite idle port) Adjust by bending the choke connector rod at lower angle (use Tool T109 213)

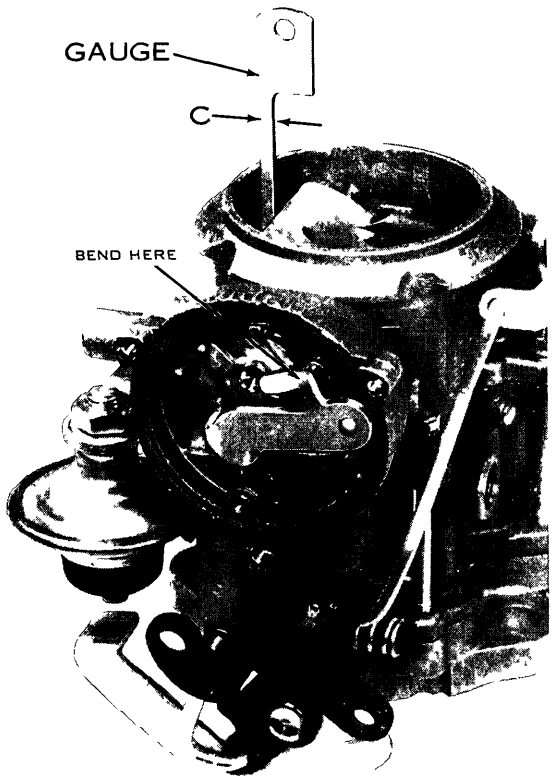


Figure 4
Unloader Adjustment

UNLOADER ADJUSTMENT (Fig. 4):
This adjustment must be made after the fast idle adjustment. Hold throttle valve wide open and close choke valve as far as possible without forcing. There should now be 9/64 inch clearance (C) (use gauge T109-34) between upper edge of choke valve and inner wall of air horn. Adjust by bending arm on choke trip lever (use tool T109-214). When fast idle and unloader adjustments have been made, assemble baffle plate, coil housing gasket and thermostatic coil housing assembly on air horn. Set Climatic® Control as specified making sure that hook on coil has picked up coil shaft lever

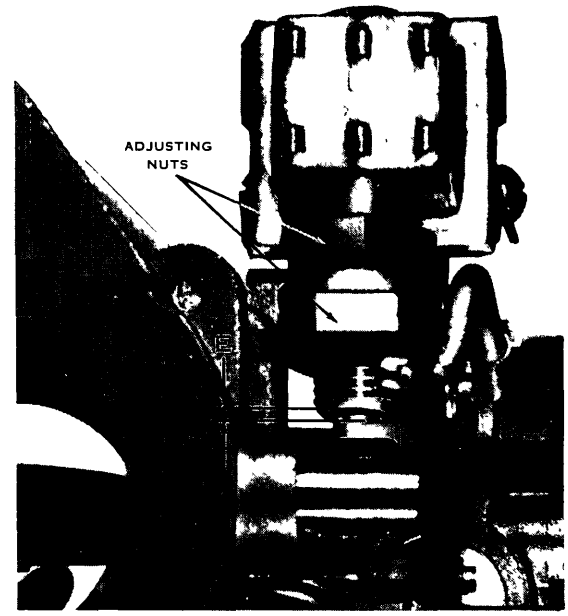


Figure 5
Overdrive Kickdown Switch Adjustment

OVERDRIVE KICKDOWN SWITCH ADJUSTMENT (Fig. 5):
With throttle valve in wide open position adjust hex nuts on switch to have 1/64 inch to 3/64 inch clearance (E) between kickdown lever and switch stem guide.

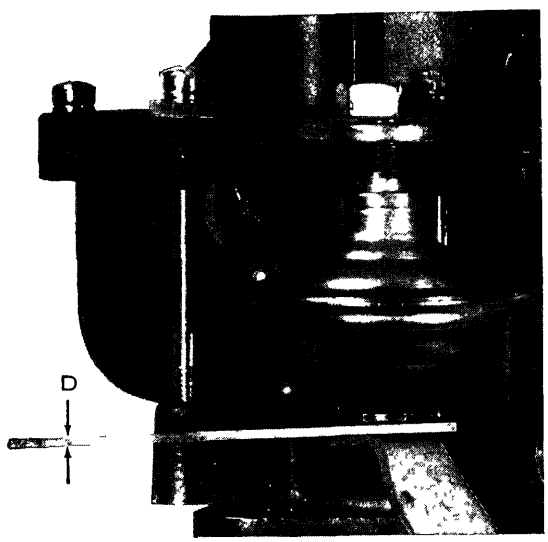
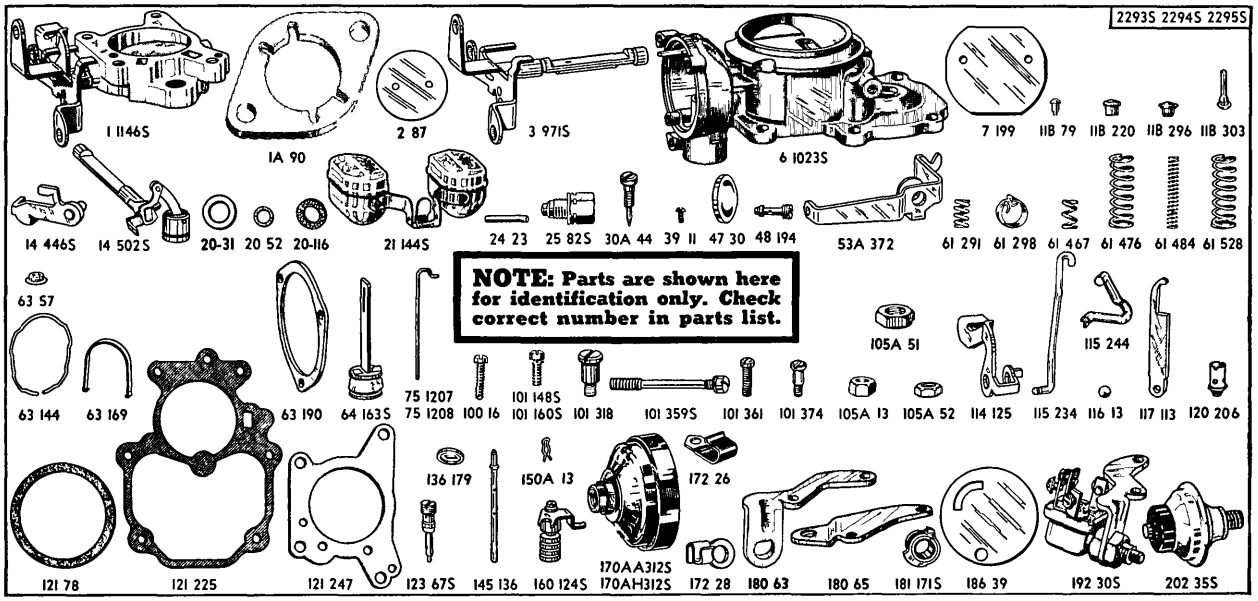


Figure 6
Dashpot Adjustment

DASHPOT (SLOW CLOSING THROTTLE) ADJUSTMENT (Fig. 6):

The purpose of the dashpot is to prevent the car from stalling when the throttle is released rapidly. Maximum dashpot action is obtained by loosening lock nut and adjusting the dashpot unit so that the dashpot plunger shaft can be moved inward approximately 3/32 inch (D) with the throttle valve tightly closed. Then tighten lock nut.



Plymouth—1956—Carbureters Nos. 2293S-2294S-2295S-2380S

WHEN SERVICING, USE GASKET ASSORTMENT No 252 REPAIR PACKAGE No 1817

PART NAMES IN CAPITAL LETTERS LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-1146S	Body flange assembly (2293S 2294S 2295S) (Sup by 1 1378S and 115 273)	
1-1378S	—★Body flange assembly	
1A-90	FLANGE GASKET—FOR USE WITHOUT GOVERNOR	
2-87	Throttle valve	
3-971S	Throttle shaft and lever assembly (2293S 2294S 2295S) (Sup by 3 1047S and 115 273)	
3-1047S	—★Throttle shaft and lever assembly	
6-1023S	—Air horn assembly	
7-199	Choke valve	
11B-35	Rivet plug	
11B-79	Rivet plug	(6)
11B-220	HIGH SPEED PASSAGE RIVET PLUG	
11B-296	PUMP JET RIVET PLUG	
11B-303	Rivet plug	
14-446S	Choke trip lever and pin assembly	
14-502S	Choke piston lever and shaft assembly	
20-31	Needle seat gasket	
20-52	STEP UP PISTON GASKET	
20-116	Main metering jet gasket	
21-144S	Float and lever assembly	
24-23	Float lever pin	
25-82S	NEEDLE AND SEAT ASSEMBLY	
30A-44	Idle adjustment screw	
39-11	Choke and throttle valve screw	(4)
47-30	Welsh plug	
48-194	PUMP JET	
53A-372	Pump arm	
61-291	Throttle lever adjusting screw spring	
61-298	Fast idle cam spring	
61-467	Idle adjustment screw spring	
61-476	Pump spring (2293S 2294S 2380S)	
61-484	STEP UP PISTON SPRING	
61-528	Pump spring (2295S)	
63-57	INTAKE CHECK BALL RETAINER	
63-144	Delayer plate retainer ring	
63-169	FLOAT LEVER PIN RETAINER	
63-190	Coil housing retainer	
64-163S	PUMP PLUNGER AND ROD ASSEMBLY	
75-943	Step up rod (2295S)	
75-1225	—Step up rod (2293S 2294S 2380S)	
100-16	Throttle adjusting screw	
101-148S	Bowl cover attaching screw and washer assembly (2293S 2295S 2380S)	(2)
101-160S	Bowl cover attaching screw and washer assembly (2294S)	(2)
101-318	Pump arm screw	
101-359S	Air horn attaching screw and washer assembly	(4)
101-361	Coil housing attaching screw	(3)
101-374	Step up piston plate guide screw	
105A-13	Flange stud nut	(2)
105A-51	*Kickdown switch to bracket attaching nut (2294S)	(2)
105A-52	†Dash pot lock nut (2295S)	
114-125	Dash pot lever (2295S 2380S)	
115-234	Throttle connector rod	
115-244	Choke connector rod (2293S 2294S 2295S) (Use with 1 1146S)	
115-273	Choke connector rod (Use with 1 1378S)	
116-13	PUMP INTAKE AND DISCHARGE CHECK BALL	(2)
117-113	Fast idle link	
120-206S	MAIN METERING JET ASSEMBLY—STANDARD	
120-214S	Main metering jet assembly—2 sizes lean	
120-215S	Main metering jet assembly—1 size lean	
121-78	COIL HOUSING GASKET	
121-225	BODY GASKET	
121-247	BODY FLANGE GASKET	
123-74S	—IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
136-179	PUMP SPRING RETAINER WASHER	
145-136	—MAIN VENT TUBE	
150A-13	PIN SPRING	
156-29	Fitting (2380S)	
160-124S	STEP UP PISTON AND PLATE ASSEMBLY	
170N312S	Thermostatic coil and housing assembly (2295S)	
170P312S	Thermostatic coil and housing assembly (2293S 2294S 2380S)	
172-28	Choke connector rod retainer	
180-63	*Kickdown switch bracket (2294S)	
180-65	†Dash pot bracket (2295S)	
181-171S	Fast idle cam assembly	
186-39	Choke baffle plate	
192-30S	*Kickdown switch assembly (complete) (2294S)	
192-33U	Unitized package (Kickdown Switch) (2380S) (Consists of 1—192 30S and 1—172 26)	
202-35S	†Dash pot assembly (2295S)	
202-80U	Unitized package (Dash pot) (2380S) (Consists of 1—202 35S 1—105A 52 and 1—180 65)	

—Parts so marked are new and listed for the first time

★These parts have folded over lever where fastened to throttle shaft

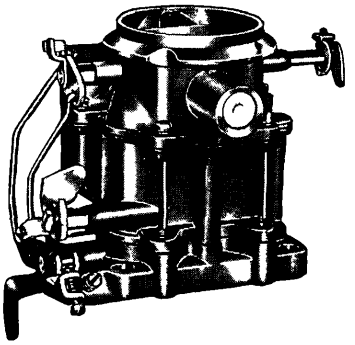
*Part of 192 33U †Part of 202 80U

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

2299S
Standard Transmission

2300S
Overdrive Transmission

2301S
Power Flite Transmission



PLYMOUTH "V-8" MODEL P-29 1956

Use 2407S with Ceramic Fuel Filter and 156-19 Fitting to replace 2299S
Use 2407S with 192-36U, Ceramic Fuel Filter and 156-19 Fitting to replace 2300S
Use 2409S with Ceramic Fuel Filter and 156-19 Fitting to replace 2301S

BBD Dual Down-Draft Climatic® Control **Carbureters Nos. 2299S-2300S-2301S**

CARBURETER SPECIFICATIONS

For Plymouth 8 Cylinder Engine: 3.75 Inch Bore, 3.13 Inch Stroke

Dimensions: Flange size, 1¼ inch dual, 4 bolt type. Throttle bore, 1-7/16 inch I D Primary venturi, ⅜ inch I. D. Main venturi, 1-3/16 inch I D.
Float Level: See adjustments
Vent: Inside, balance vent tube to bowl, in air horn above choke valve
Gasoline Intake: Size No. 38 (.1015 inch) drill hole in needle seat
Idle Tube: Jet, size No 65 (035 inch) drill Idle bleed (in venturi cluster screw) size (2299S-2300S) 0629 inch, (2301S) 0669 inch diameter Idle restriction (in venturi cluster screw), size 0472 inch diameter.
Idle Port: Upper, slot type, length, 189 inch; width, 030 inch
Idle Port Opening: 144 to .148 inch above upper edge of valve with valve tightly closed
Lower Port (For Idle Adjustment Screw): Size 053 to 057 inch diameter
Set Idle Adjustment Screw: ½ to 1½ turns open For richer mixture turn screw out With gear shift lever in neutral position idle engine between 450 and 500 RPM
Main Nozzle: Nozzle is installed permanently DO NOT REMOVE
Main Vent Tube: Side holes 8—size 0354 inch diameter Main vent in top of tube, size .0256 inch diameter
Step-Up Rod: (Vacuum operated) (2299S-2300S) .018 inch (2301S) 020 inch diameter.
Metering Jet: Calibrated to flow 316 to 324 cc per minute. (Do not gauge for size if in doubt, replace with new part)
Accelerating Pump: Pump discharge jets (2—in venturi cluster), size 0275 inch diameter Intake ball check seat, size .130 to 140 inch diameter Discharge ball check seat, size .110 to 120 inch diameter.
Pump Adjustment: See adjustments
Choke: Carter Climatic® Control Cross Over Choke Type, set at index Butterfly type, offset valve Choke heat suction hole, in air horn, size No 44 (086 inch) drill
Vacuum Spark Port: Horizontal, round end type, 030 by 110 inch Top of port to be 035 to 045 inch above upper edge of valve with valve closed tight

Motor Tune-Up—Be Accurate!

CAUTION: **Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.**

Spark Plug Gap .035"	Breaker Point Setting .017"	Ignition Timing Breaker Points to Open: 4° B. T. C. At Vibration Damper	Valve Setting (Hot) Intake .008" Exhaust .018"	Float Setting See Adjustments	Idle Adjustment Screw Setting ½ t 1½ Turns Open Idle Engine at 450 to 500 R.P.M.

CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3656

Float Level: ¼" (Gauge T109 282) between top of each float and top surface of body casting To adjust bend lip on float arm

Pump: 1-1/32" from the top of the bowl cover to the top of the plunger shaft Install throttle connector rod in center hole (medium stroke) of throttle lever and inner hole of pump arm To adjust bend throttle connector rod

Fast Idle Cam Clearance: With choke valve closed and lip on inner choke shaft lever contacting lug on outer lever there should be 020" (Gauge T109-29) between lip of fast idle cam and boss on casting Optional adjustment (late production) align index mark with adjusting screw To adjust bend lip on inner choke shaft lever
Fast Idle Throttle Valve Clearance: 015" (Gauge T109-44) between lower edge of valve and bore with adjusting screw on high step of cam.
Fast Idle on Car: 1350 to 1400 R P.M.
Unloader: 3/16" (Gauge T109-28) between top edge of choke valve and inner wall of air horn with throttle valves wide open To adjust bend unloader arm on throttle lever
Dash Pot (Slow Closing Throttle): Close throttle valves and bottom plunger shaft with 1/16" gauge between shaft and operating lever To adjust loosen lock nut and turn dash pot unit in or out
Overdrive Kickdown Switch: With throttle valves wide open there should be 1/64" to 3/64" between kickdown lever and switch stem guide To adjust loosen lock nuts and adjust switch.

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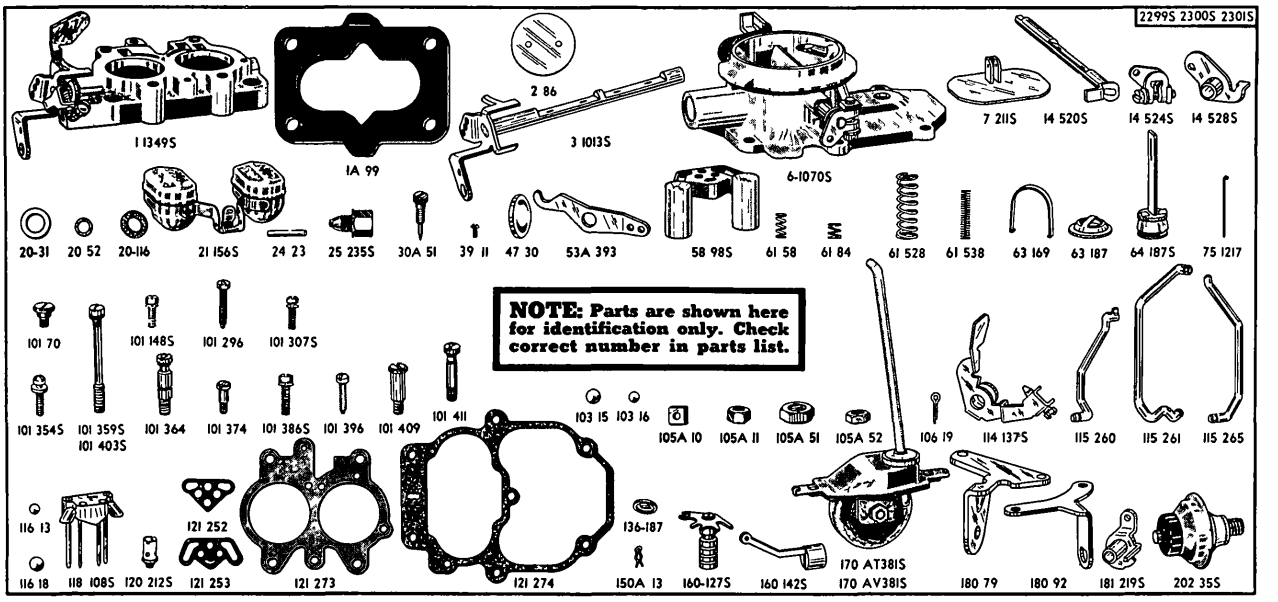
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Choke Adjustment (Cross Over Type) See Form 3657 1 Loosen mounting post lock nut and turn mounting post with screw driver until index mark on disk is positioned as listed under carbureter specifications Hold in this position with screw driver and tighten lock nut

Note Screw driver may be held in vise so that one hand may be used to support housing while tightening nut

2 After adjustment is completed and coil housing and rod assembly and carbureter is installed on engine lift cover disk and open and close choke valve manually to see if connector rod clears sides of hole in housing cover If rod does not clear hole in housing cover without binding replace with a new unit since connector rod cannot be bent without effecting calibration



Plymouth "V-8"—1956—Carbureters Nos. 2299S-2300S-2301S

WHEN SERVICING, USE GASKET ASSORTMENT No 278, REPAIR PACKAGE No 1825A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1349S	—Body flange assembly	
1A-99	FLANGE GASKET	
2-86	Throttle valve	(2)
3-1013S	—Throttle shaft and lever assembly	
6-1070S	—Air horn assembly	
7-211S	—Choke valve and bracket assembly	
14-520S	—Choke lever and shaft assembly	
14-524S	—Choke lever assembly	
14-528S	—Choke lever and collar assembly	
20-31	Needle seat gasket	
20-52	STEP UP PISTON GASKET	
20-116	Main metering jet gasket	(2)
21-156S	Float and lever assembly	
24-23	Float lever pin	
25-235S	Needle and seat assembly	
25-291S	NEEDLE AND SEAT ASSEMBLY (Used in repair package)	
30A-51	Idle adjustment screw	(2)
39-11	Choke and throttle valve attaching screw	(6)
47-30	Welsh plug	
53A-393	—Pump arm	
58-98S	Venturi cluster and nozzle assembly	
61-58	Throttle adjusting screw spring	
61-84	Idle adjustment screw spring	(2)
61-528	PUMP SPRING	
61-538	STEP UP PISTON SPRING	
63-169	FLOAT LEVER PIN RETAINER	
63-187	INTAKE CHECK BALL RETAINER	
64-187S	—PUMP PLUNGER AND ROD ASSEMBLY	
75-1168	Step up rod (2299S 2300S)	(2)
75-1217	—Step up rod (2301S)	(2)
101-70	Pump arm screw	
101-148S	Air horn attaching screw and washer assembly (2299S (4) (2300S (3) (2301S (2)	
101-296	Throttle adjusting screw	
101-307S	Air horn attaching screw and washer assembly (2300S (1) (2301S (2)	
101-354S	Choke lever clamp screw and washer assembly	
101-359S	Body attaching screw and washer assembly (2299S 2301S)	(2)
101-364	Venturi cluster screw (2299S 2300S)	(2)
101-374	Step up piston plate screw	

Part No.	PART NAME	
101-386S	Body flange attaching screw and washer assembly	(2)
101-396	Fast idle adjusting screw	
101-403S	Body attaching screw and washer assembly (2300S)	(2)
101-409	—Fast idle cam attaching screw	
101-411	—Venturi cluster screw (2301S)	(2)
103 14	Lead shot	
103-15	Lead shot	(2)
103-16	Lead shot	(2)
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
105A-51	Kickdown switch attaching nut (2300S)	(2)
105A-52	Dash pot lock nut (2301S)	
106-19	—Cotter pin	
114-137S	—Dash pot and kickdown lever assembly	
115-260	—Choke connector rod	
115-261	—Throttle connector rod (2301S)	
115-265	—Throttle connector rod (2299S 2300S)	
116-13	PUMP DISCHARGE CHECK BALL	
116-18	PUMP INTAKE CHECK BALL	
118-108S	VENTURI COVER AND TUBE ASSEMBLY	
120-209S	Main metering jet assembly—1 size lean	(2)
120-211S	Main metering jet assembly—2 sizes lean	(2)
120-212S	MAIN METERING JET ASSEMBLY	(2)
121-252	VENTURI HOUSING GASKET	
121-253	VENTURI COVER GASKET	
121-273	—BODY FLANGE GASKET	
121-274	—BODY GASKET	
136-187	Pump spring retainer washer	
150A-13	PIN SPRING	(3)
160-127S	STEP UP PISTON AND PLATE ASSEMBLY	
160-142S	—Choke piston and link assembly	
170AT381S	—Thermostatic coil housing and rod assembly (2301S)	
170AV381S	—Thermostatic coil housing and rod assembly (2299S 2300S)	
180-79	Dash pot bracket (2301S)	
180-92	—Kickdown switch bracket (2300S)	
181-219S	—Fast idle cam assembly	
192-35S	Kickdown switch and bracket assembly (2300S) (Sup by 192 36U)	
192-36U	—Unitized package (2300S)	
202-35S	Dash pot assembly (2301S)	

—Parts so marked are new and listed for the first time

NOTE Figures in parentheses indicate number f pieces used in one carbureter. Where no figure is shown only one is used

CARTER MODEL BBD CARBURETER FOR PLYMOUTH
(SERVICE ADJUSTMENT PROCEDURE)

NOTE: The parts and specification pages referred to are catalog pages. These pages can be obtained from Carter Carburetor Corporation, Catalog Department, St. Louis (7), Missouri. Specify the carburetor number found on the brass identification tag, when requesting specification pages.

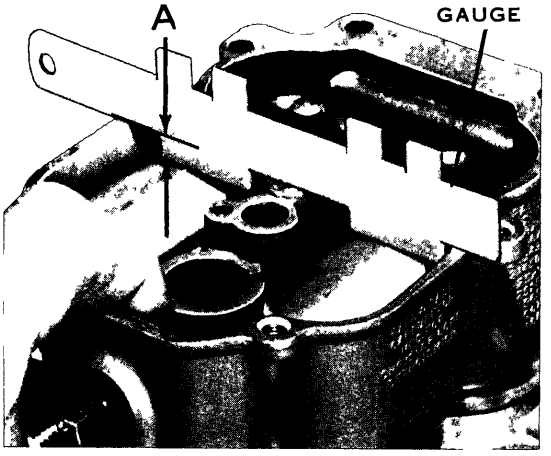


Figure 1
Float Adjustment

FLOAT ADJUSTMENT (Fig. 1):

This adjustment must be made with the bowl cover gasket and float pin retainer removed. Hold the lip on float arm against the seated intake needle, making sure the float pin is at the bottom of its guide slots. The distance (A) from the top surface of the body casting to the top of each float should be as listed on carbureter specification page. If one float is lower than the other, equalize by bending the float arm. If both floats require the same correction, adjust by bending lip on float arm. The floats must not rub anywhere against the inner walls of the bowl. If necessary, bend float arms slightly to provide clearance on all sides of floats.

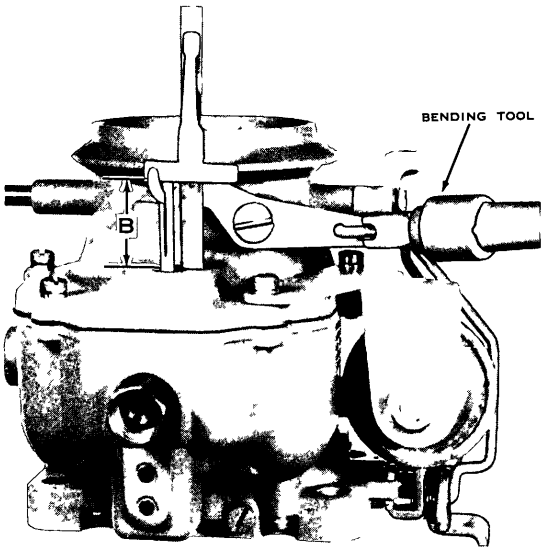


Figure 2
Pump Adjustment

PUMP ADJUSTMENT (Fig. 2):

1. Back out throttle adjustment screw and open choke valve so that throttle valves seat in bores of carbureter.
2. Install throttle connector rod in the holes in the throttle lever and pump arm specified on carbureter specification page.
3. The distance from the top of the bowl cover to the top of the plunger shaft should be as specified on carbureter specification page.
4. Adjust by bending pump connector rod. (Use bending tool T109-213.)

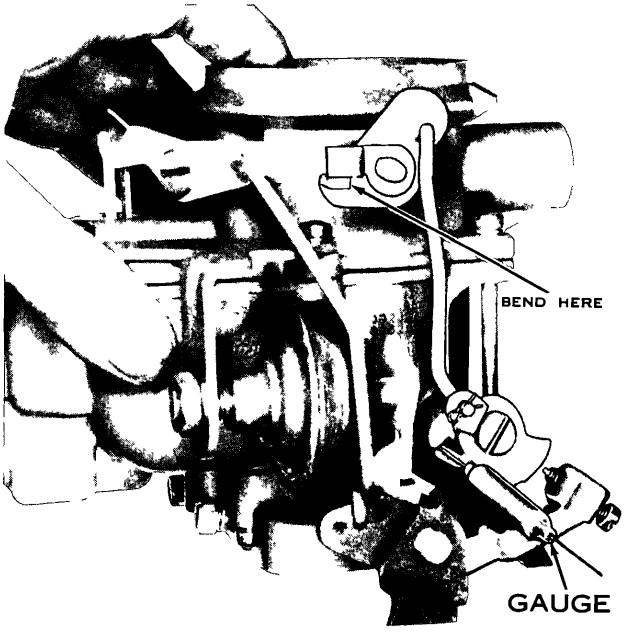


Figure 3
Fast Idle Adjustment

FAST IDLE CAM CLEARANCE ADJUSTMENT (Fig. 3):

1. Hold choke valve tightly closed.
2. With lip on inner choke shaft lever contacting lug on outer lever, there should be the clearance listed on carbureter specification page between lip of fast idle cam and boss on casting.
3. Adjust by bending lip on inner choke shaft lever. (Use bending tool T109-22.)

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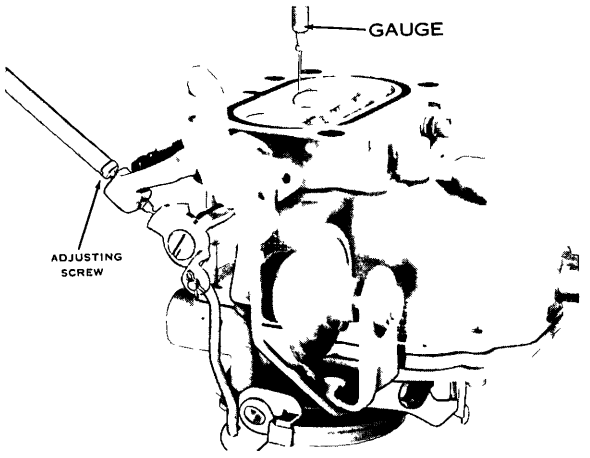


Figure 4
Fast Idle Adjustment

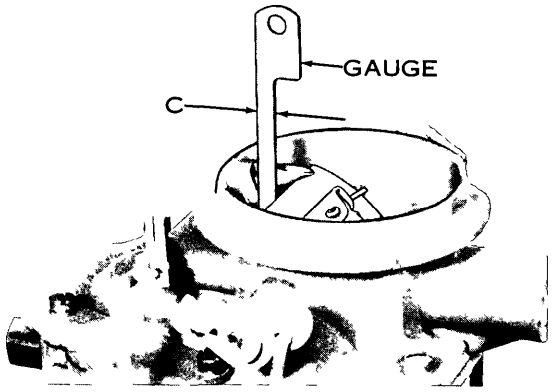


Figure 5
Unloader Adjustment

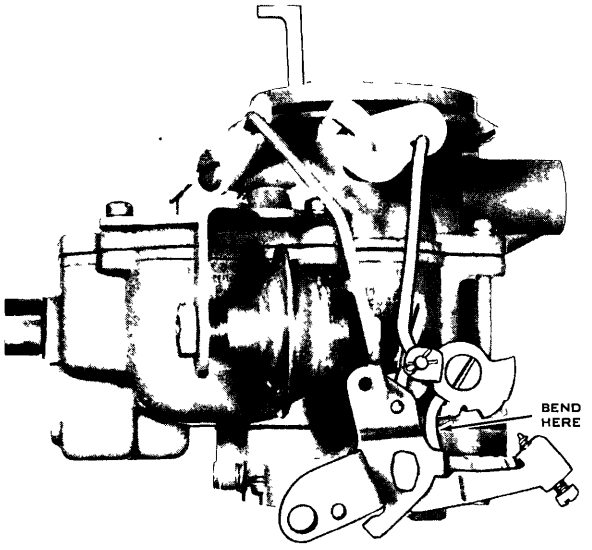


Figure 5A
Unloader Adjustment

UNLOADER ADJUSTMENT (Figs. 5 & 5A):

1. Hold throttle valves wide open.
2. Close choke valve as far as possible without forcing.
3. Clearance between top edge of choke valve and inner wall of air horn should be as listed on carbureter specification page.
4. Adjust by bending choke unloader arm on throttle lever. (Use bending tool T109-213.)

FAST IDLE THROTTLE VALVE CLEARANCE ADJUSTMENT (Fig. 4):

1. Be sure choke valve is closed.
2. Adjust fast idle adjusting screw against high step of cam until th cl arance between throttle valve (side opposite port) and bore is as listed on carbureter specification page.

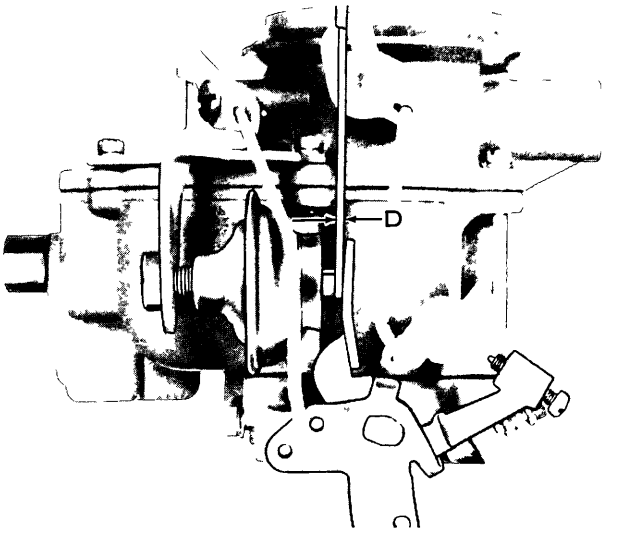


Figure 6
Dash Pot Adjustment

DASH POT (SLOW CLOSING THROTTLE) ADJUSTMENT (Fig. 6):

The purpose of this unit is to prevent the car from stalling when the throttle is released rapidly. Maximum action is obtained by loosening lock nut and adjusting the dash pot unit so that the plunger shaft can be bottomed with a 1/16 inch gauge placed between shaft and operating lever (D) with throttle valves tightly closed.

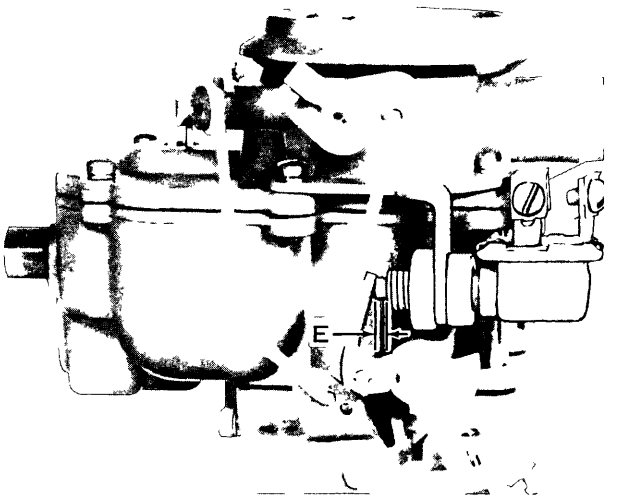


Figure 7
Overdrive Kickdown Switch Adjustment

OVERDRIVE KICKDOWN SWITCH ADJUSTMENT (Fig. 7):

With throttle valves in wide open position, adjust hex nuts on switch to have 1/64 inch to 3/64 inch clearanc (E) betwe n kickdown lever and switch stem guide.

Form 3657A

CARTER CARBURETOR
DIVISION OF ACF INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

File Under Plymouth
November, 1955
Revised October, 1956

CARTER CLIMATIC® CONTROL CROSS OVER CHOKE TYPE
(SERVICE INFORMATION AND ADJUSTMENT PROCEDURE)

NOTE: Coil housing and rod assembly may be cleaned in carbureter parts cleaner without disassembling. After cleaning rinse in solvent and blow out inside of housing with compressed air. After rinsing make sure housing revolves freely on mounting post. If disassembly is necessary for thorough cleaning, follow steps under "reassembly" to be sure coil is installed properly.

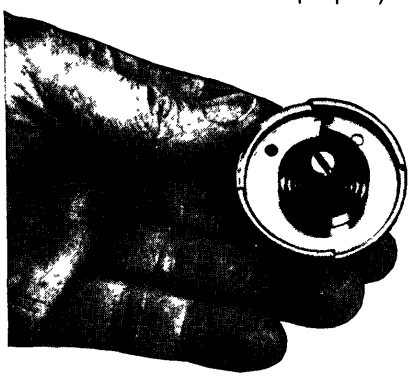


Figure A

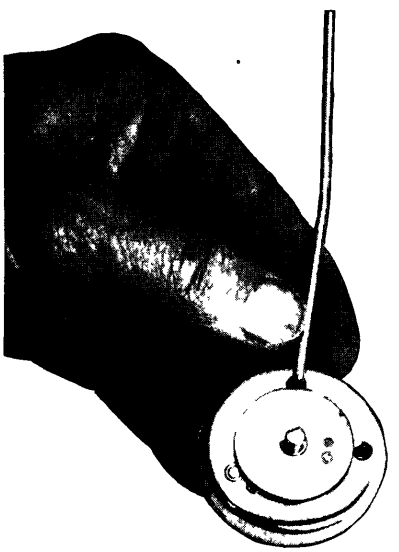


Figure B

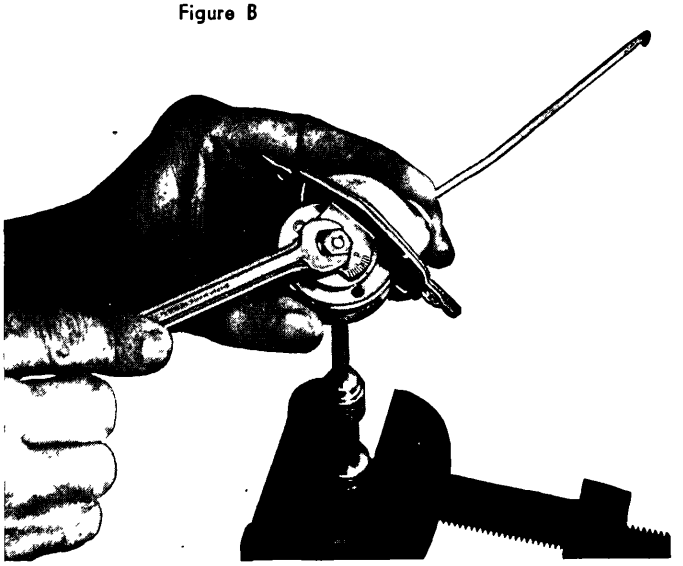


Figure C

TWO PIECE CLOSED HOUSING

REASSEMBLY:

1. Place coil mounting post in either half of coil housing.
2. Insert thermostatic coil on mounting post with hook facing clockwise. (See Fig. A.)
3. Assemble second half of housing and secure on mounting post with washer and hair pin. Be sure holes in both housings are in alignment.
4. Install connector rod with hair pin end extending through either hole toward split end of mounting post. Secure with washer and hair pin. (Eye of hair pin extending outward.)
5. Place index disk on mounting post with flat on disk aligning with flat on post and turn disk and post counter-clockwise until hook on coil engages connector rod. Index mark on disk should be just to the right (approximately 2 o'clock position) of connector rod when holding housing with rod pointing to 12 o'clock position. (See Fig. B.) If incorrectly installed turn index disk over.
6. Assemble housing cover to mounting post and install lock washer and nut.
7. Install cover disk on connector rod.

ADJUSTMENT:

1. Loosen mounting post lock nut and turn mounting post with screw driver until index mark on disk is positioned as listed on carbureter specification page. Hold in this position with screw driver and tighten lock nut. (See Fig. C.)

   NOTE: Screw driver may be held in vise so that one hand may be used to support housing while tightening nut.
2. After adjustment is completed and coil housing and rod assembly and carbureter is installed on engine lift cover disk and open and close choke valve manually to see if connector rod clears sides of hole in housing cover. If rod does not clear hole in housing cover without binding replace with a new unit since connector rod cannot be bent without effecting calibration.

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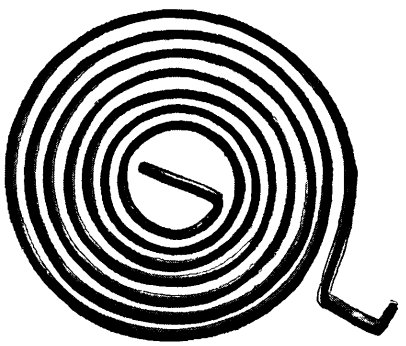
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ONE PIECE OPEN HOUSING

REASSEMBLY:

1. Place housing with circular edge downward and center web at 3 o'clock position. (See Fig. D.)
2. Insert thermostatic coil into housing with hook on coil in 4 o'clock position and pointing toward web of housing.
3. Insert mounting post through housing and coil with index mark toward hook on coil. (See Fig. E.)
4. Secure mounting post to housing with washer and pin spring.
5. Install cover disk on connector rod.
6. Install connector rod through housing cover into housing toward split end of mounting post. Secure with washer and pin spring. (Eye of pin spring extending outward.)
7. Assemble housing cover to mounting post with lock washer and nut. Rotate mounting post counterclockwise until hook on coil picks up connector rod and tighten nut.
8. Check positive spring action by pushing connector rod downward through housing cover.



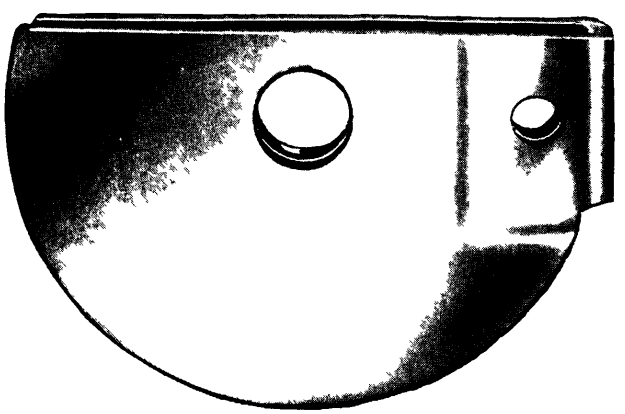


Figure D

ADJUSTMENT:

Same as two piece housing. (See Fig. C.)

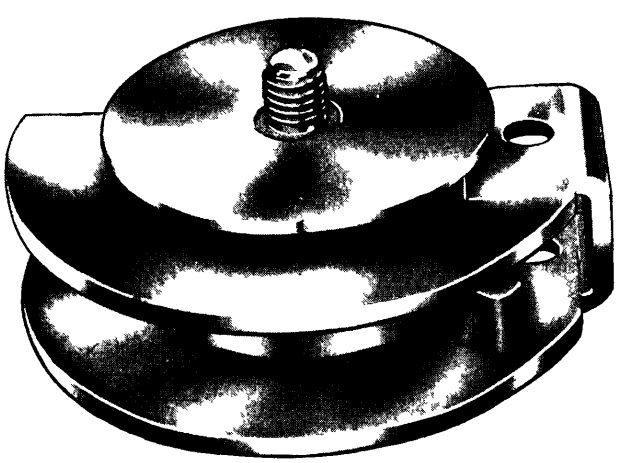


Figure E

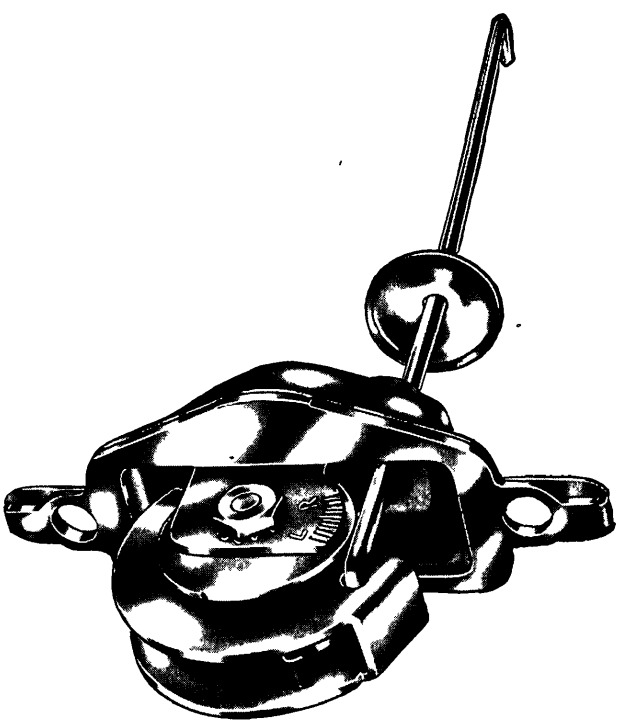


Figure F

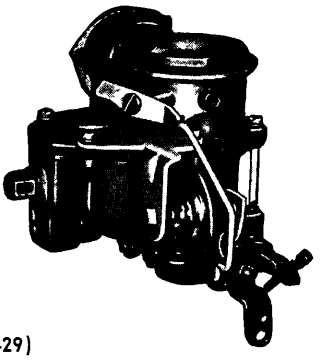
2259S-2259SA-2259SB
Standard Transmission

2260S-2260SA-2260SB
Overdrive Transmission

2261S-2261SA-2261SB
Power Flite Transmission

2274S-2274SA

(Also Used on Export DeSoto Models SP-27, SP-29)



PLYMOUTH "V-8" MODELS P-27, P-29 1955-1956

Use 2274SA to replace 2259S-SA SB

Use 2274SA and 192-34U to replace 2260S-SA SB

Use 2274SA and 202-83U to replace 2261S-SA-SB

BBD Dual Down-Draft Climatic® Control **Carbureters Nos. 2259S-2259SA-2259SB-2260S-2260SA-2260SB-2261S-2261SA-2261SB-2274S-2274SA**

CARBURETER SPECIFICATIONS

For Plymouth 8 Cylinder Engine 3 563 Inch Bore 3 25 Inch Stroke (P-27)
For Plymouth 8 Cylinder Engine 3 63 Inch Bore 3 256 Inch Stroke (P-29)

Dimensions Flange size 1¼ inch dual 4 bolt type
Throttle bore 1 7/16 inch I D
Primary venturi ⅜ inch I D
Main venturi 1 3/16 inch I D

Float Level See adjustments

Vent Inside balance vent tube to bowl in a r horn above choke valve

Gasoline Intake Size No 38 (1015 inch) drill hole in needle seat

Idle Tube Jet size No 65 (035 inch) drill
Idle bleed (in venturi cluster screw), size (101 350—059) (101-364 101 401—0629) (101 404—0649) inch diameter
Idle restriction (in ventur cluster screw) size (101 350 101 364—0472) (101 401 101 404—0551) nch diameter

Idle Port Upper slot type length 189 inch width 030 inch

Idle Port Opening 148 to 152 inch above upper edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw) Size 053 to 057 inch diameter

Set Idle Adjustment Screw ¼ to 1¼ turns open For richer mixture turn screw out With gear shift lever in neutral position idle engine between 450 and 500 RPM

Main Nozzle Nozzle is installed permanently DO NOT REMOVE

Main Vent Tube Side holes 8—size 0354 inch diameter Main vent in top of tube size 0256 inch diameter

Step-Up Rod (Vacuum Operated) (75 1168—018) (75 1182—019) inch diameter

Metering Jet Calibrated to flow (120 213S—336 to 344) (120 212S—316 to 324) cc per minute (Do not gauge for size if in doubt replace with new part)

Accelerating Pump Pump discharge jets (2—In venturi cluster) size 0275 inch diameter
Intake ball check seat size 130 to 140 inch diameter
Discharge ball check seat size 110 to 120 inch diameter

Pump Adjustment See adjustments

Choke Carter Climatic® Control set at index Butterfly type offset valve Choke heat suction hole in body size No 38 (1015 inch) drill

NOTE Thermostatic coil should not be removed from delayer mounting post If defective replace with complete thermostatic coil and housing assembly

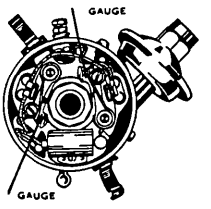
Vacuum Spark Port Horizontal round end type 030 by 110 inch Top of port to be 035 to 045 inch above upper edge of valve with valve closed tight

Motor Tune-Up—Be Accurate!

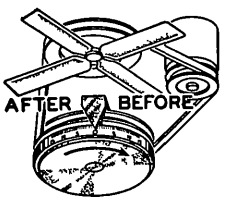
CAUTION **Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter**



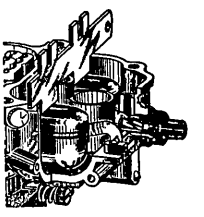
Spark Plug Gap 035'



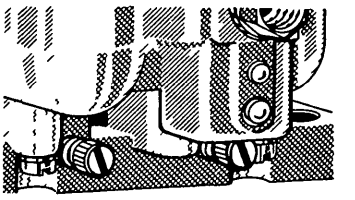
Breaker Point Setting 017"



Ignition Timing Breaker Points to Open 4° B T D C



Float Setting (See Adjustments)



Idle Adjustment Screw Setting ¼ to 1¼ Turns Open

NOTE **These cars equipped with Hydraulic Valve Lifters NO ADJUSTMENT**

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: This adjustment must be made with the bowl cover gasket and float pin retainer removed. Hold the lip on float arm against the seated intake needle, making sure the float pin is at the bottom of its guide slots. The distance from the top surface of the body casting to the top of each float should be 1/4 inch (gauge T109-282). If one float is lower than the other, equalize by bending the float arm. If both floats require the same correction, adjust by bending lip on float arm. The floats must not rub anywhere against the inner walls of the bowl. If neccessary, bend float arms slightly to provide clearance on all sides of floats.

PUMP ADJUSTMENT: Back out throttle adjustment screw and open choke valve so that throttle valves seat in bores of carbureter. Install throttle connector rod in outer hole (medium stroke) of throttle lever and inner hole of pump arm. The distance from the top of the bowl cover to the top of plunger shaft (not pump arm) should be 1 inch. Adjust by bending pump connector rod (2259S-SA-SB-2260S-SA-SB) at lower angle; (2261S-SA-SB-2274S-SA) at upper angle (use tool T109-213).

FAST IDLE ADJUSTMENT: Remove thermostatic coil housing, gasket and baffle plate. With throttle adjusting screw backed out, crack throttle valve and hold choke valve in fully closed position. Then close throttle. This will allow fast idle cam to revolve to fast idle position. There should now be .015"-.019" clearance (use gauge T109-44) between throttle valve and bore of carbureter (side opposite idle port). Adjust by bending the choke connector rod at lower angle (use tool T109-213).

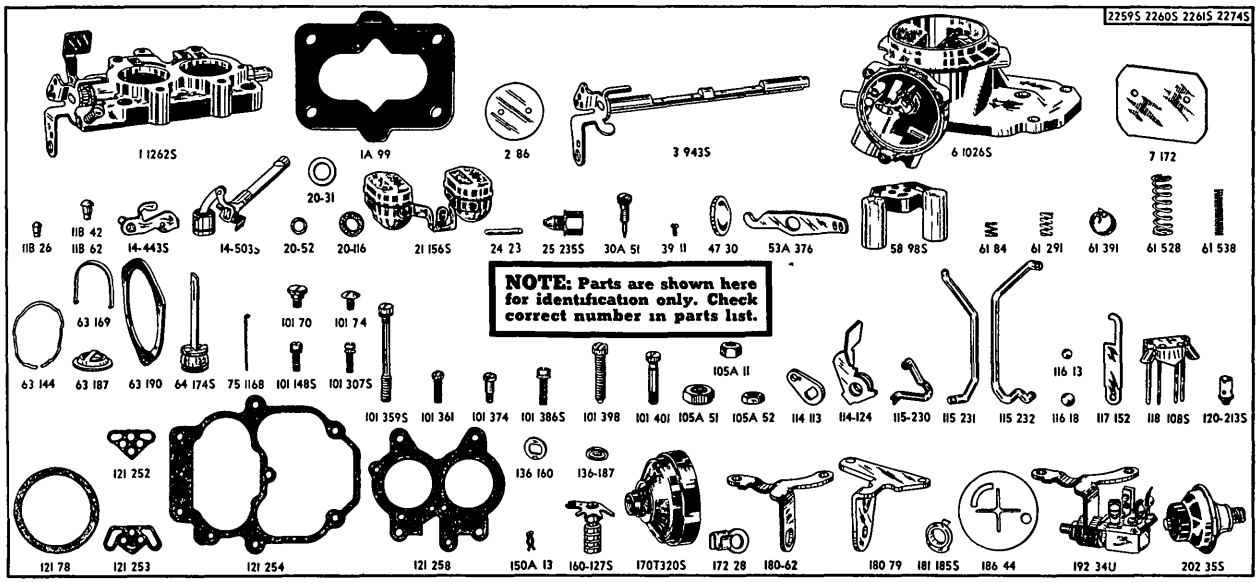
UNLOADER ADJUSTMENT: This adjustment must be made after the fast idle adjustment. Hold throttle valve wide open and close choke valve as far as possible without forcing. There should now be 1/4 inch clearance (use gauge T109-31) between upper edge of choke valve and inner wall of air horn. Adjust by bending arm on choke trip lever (use tool T109-214). When fast idle and unloader adjustments have been made, assemble baffle plate, coil housing gasket and thermostatic coil housing assembly on air horn. Set Climatic® Control at index, making sure that hook on coil has picked up coil shaft lever.

DASH POT (SLOW CLOSING THROTTLE) ADJUSTMENT: The purpose of this unit is to prevent the car from stalling when the throttle is released rapidly. Maximum action is obtained by loosening lock nut and adjusting the dash pot unit so that the plunger shaft can be bottomed with a 1/16 inch gauge placed between shaft and operating lever with throttle valves tightly closed. Then tighten lock nut.

OVERDRIVE KICKDOWN SWITCH ADJUSTMENT: With throttle valves in wide open position adjust hex nuts on switch to have 1/64 inch to 3/64 inch clearance between kickdown lever and switch stem guide.

NOTE: If necessary bend kickdown lever to contact switch stem.

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Plymouth "V8"—1955-1956—Carbs. Nos. 2259S-SA-SB; 2260S-SA-SB; 2261S-SA SB; 2274S-SA

WHEN SERVICING, USE GASKET ASSORTMENT No 265 REPAIR PACKAGE No. 1795

PART NAMES IN CAPITAL LETTERS LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1262S	Body flange assembly	
1A 99	FLANGE GASKET	
2-86	Throttle valve	(2)
3-943S	Throttle shaft and lever assembly	
6-1026S	Air horn assembly (2259S 2260S 2261S 2274S) (Sup by 6 1051S)	
6-1051S	Air horn assembly	
7-172	Choke valve	
11B-26	Rivet plug (early production)	(2)
11B-42	Rivet plug (early production)	
11B 62	Rivet plug (early production)	
14 443S	Choke trip lever and pin assembly	
14 503S	Choke piston lever link and shaft assembly (2259S 2260S 2261S 2274S) (Sup by 14 515S)	
14-515S	Choke piston lever link and shaft assembly	
20-31	Needle seat gasket	
20 52	STEP UP PISTON GASKET	
20-116	Main metering jet gasket	(2)
21-156S	Float and lever assembly	
24-23	Float lever pin	
25 235S	NEEDLE AND SEAT ASSEMBLY	
30A 51	Idle adjustment screw	(2)
39 11	Choke and throttle valve attaching screw	(6)
47-30	Welsh plug	
53A 376	Pump arm	
58-98S	Venturi cluster and nozzle assembly	
61 84	Idle adjustment screw spring	(2)
61-291	Throttle adjusting screw spring	
61 391	Fast idle cam spring	
61 528	PUMP SPRING	
61 538	STEP UP PISTON SPRING	
63 144	Delayer plate retainer ring	
63 169	FLOAT LEVER PIN RETAINER	
63-187	INTAKE CHECK BALL RETAINER	
63 190	Thermostatic coil housing retainer	
64 174S	PUMP PLUNGER AND ROD ASSEMBLY	
75 1168	★STEP UP ROD	(2)
75-1182	Step up rod (2259SA 2260SA 2261SA 2274S) (Sup by 75 1168)	(2)
101-70	Pump arm screw	
101-74	Throttle shaft arm attaching screw	
101-148S	Air horn attaching screw and washer assembly (2259S SA SB (4) (2260S SA SB (3) (2261S SA SB 2274S SA (2)	
101-307S	Air horn attaching screw and washer assembly (2260S SA SB (1) (2261S SA SB 2274S SA (2)	
101 350	Venturi cluster screw	(2)
101-359S	Body attaching screw and washer assembly (2259S SA SB 2261S SA SB 2274S SA)	(2)
101 361	Coil housing attaching screw	(3)
101 364	★Venturi cluster screw (2259SB 2260SB 2261SB 2274SA) (Sup by 101 350) (Used in 195 62U only)	(2)
101 374	Step up piston plate guide screw	
101-386S	Body flange attaching screw and washer assembly	(2)
101 398	Throttle adjusting screw	
101-401	Venturi cluster screw (2259S 2260S 2261S 2274S) (Sup by 101 404)	
101-403S	Body attaching screw and washer assembly (2260S SA SB)	(2)
101-404	Venturi cluster screw (2259S SA 2260S SA 2261S SA 2274S) (Sup by 101 364)	(2)
103-14	Lead shot	
103-15	Lead shot (late production)	(2)
103-16	Lead shot (late production)	(2)
105A-11	Flange stud nut	(4)
105A-51	*Kickdown switch bracket attaching nut (2260S SA SB)	(2)
105A-52	†Dash pot lock nut (2261S SA SB)	
114-113	Throttle shaft arm	
114-124	Dash pot and kickdown switch operating lever (2260S SA SB 2261S SA SB)	
115-230	Choke connector rod	
115-231	Throttle connector rod (2259S SA 2260S SA) (Sup by 115 262)	
115 232	Throttle connector rod (2261S SA 2274S) (Sup by 115 263)	

Part No.	PART NAME
115-262	Throttle connector rod (2259S-SA-SB 2260S-SA-SB)
115-263	Throttle connector rod (2261S SA SB 2274S SA)
116-13	DISCHARGE CHECK BALL
116-18	INTAKE CHECK BALL
117-152	Fast idle link
118 108S	VENTURI COVER AND TUBE ASSEMBLY
120-209S	Main metering jet assembly—1 size lean (2)
120-211S	Main metering jet assembly—2 sizes lean (2)
120-212S	★MAIN METERING JET ASSEMBLY—STANDARD (2)
120-213S	Main metering jet assembly (Standard) (Sup by 120 212S) (2)
121-78	COIL HOUSING GASKET
121-252	★VENTURI HOUSING GASKET
121 253	★VENTURI COVER GASKET
121-254	Body gasket (Sup by 121 274)
121-258	BODY FLANGE GASKET
121-274	★BODY GASKET
121-313	Air cleaner gasket

Part No.	PART NAME
136-160	Throttle shaft washer
136-187	Pump spring retainer washer
150A-13	PIN SPRING (2)
160-127S	STEP UP PISTON AND PLATE ASSEMBLY
170T320S	Thermostatic coil and housing assembly
172-28	Choke connector rod retainer
180-62	*Kickdown switch bracket (2260S SA SB)
180-79	†Dash pot bracket (2261S SA SB)
181-185S	Fast idle cam assembly
186-44	Choke baffle plate
192-34U	*Kickdown switch and bracket assembly (2260S SA SB)
195-62U	Unitized package (Consists of 2—75 1168 2—101 364 1—107 48 2—120 212S 1—121 252 1—121 253 and 1—121 274)
202-35S	†Dash pot assembly (2261S SA SB)
202-83U	Unitized package (Dash pot) (2274S SA) (Consists of 1—105A 52 1—180 79 and 1—202 35S)

*Also used on 2274S when used on cars with Overdrive Transmission

†Part of 202 83U

★Part of 195-62U.

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

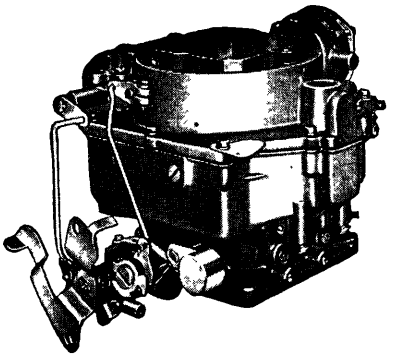
CARBURETER

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CARTER CARBURETOR CORPORATION, ST. LOUIS, MO., U. S. A.

All Transmissions



PLYMOUTH "V-8"
MODEL P-27
1955

WCFB Four-Bore Down-Draft Climatic® Control **Carbureter No. 2253S**

CARBURETER SPECIFICATIONS

For Plymouth 8 Cylinder Engine: 3.563 Inch Bore, 3.25 Inch Stroke

Dimensions: Flange size, 1 1/8 inch Four Bore—4 bolt type. Primary venturi size, 11/32 inch I. D. Main venturi size, 1-1/16 inch I. D.

Float Level: See adjustments.

Vents: Combination inside and outside (6).

Gasoline Intake: Size No. 42 (.0935 inch) drill; in needle seat.

Low Speed Jet Tube: Jet, primary and secondary, size (.0293 inch) diameter. By-pass, in body, size primary No. 52 (.0635 inch) drill, secondary (.057 inch) diameter. Economizer, in body, size (.0453 inch) diameter. Idle bleed, in body, size primary (.059 inch) diameter, secondary No. 44 (.086) drill.

Idle Port: Upper, slot type, primary, length .175 inch; width .030 inch. Secondary, length .103 inch; width .030 inch.

Idle Port Opening: Primary .116 to .122 inch, secondary .059 to .065 inch above top edge of valve with valve tightly closed.

Lower Port: Primary (for idle adjustment screw), size No. 55 (.052 inch) drill.

Secondary (no idle adjustment screw), size No. 57 (.043 inch) drill.

Set Idle Adjustment Screw: 1/2 to 1 1/2 turns open. For richer mixture turn screw out. Do not idle engine below 450 R.P.M. in neutral.

Main Nozzle: Installed permanently. DO NOT REMOVE. Anti percolating jet (4) size No. 70 (.028 inch) drill.

Metering Rod: Primary: Economy step .076 inch diameter. Middle step tapers to .066 inch diameter. Power step .048 inch diameter. Secondary: none.

Metering Rod Jet: Primary: Size .0935 inch diameter. Secondary: Size .057 inch diameter.

Metering Rod Setting: See adjustments.

Accelerating Pump: Discharge jet (twin) primary side only, size No. 74 (.0225 inch) drill. Intake ball check seat, size .115 to .120 inch diameter. Discharge needle seat, size No. 50 (.070 inch) drill. Relief passage (vent) to fuel chamber, size No. 42 (.0935 inch) drill. Discharge relief plug, size No. 74 (.022 inch) drill.

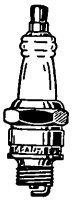
Pump Adjustment: See adjustments.

Choke: Carter Climatic® Control, set on index. Butterfly type offset choke valve, primary side only. Choke heat suction hole, restriction in piston housing, size No. 42 (.0935 inch) drill.

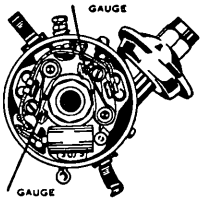
Vacuum Spark Port: Horizontal slot (round end) .045 x .110 inch. Top of port .035 to .045 inch above top edge of valve with valve tightly closed.

Motor Tune-Up—Be Accurate! Always Use Feeler Gauges!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



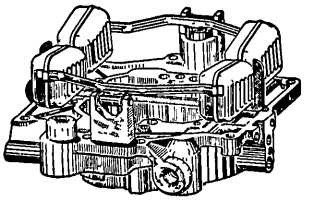
Spark Plug Gap .035"



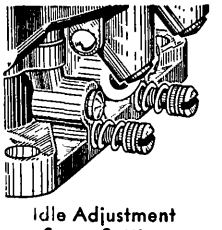
Breaker Point Setting .017"



Ignition Timing Breaker Points to Open: 4° B. T. D. C.



Float Setting See Adjustments



Idle Adjustment Screw Setting 1/2 to 1 1/2 Turns Open

NOTE: These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT (Fig. 1):

Two separate float adjustments must be made—lateral and vertical

LATERAL ADJUSTMENT With bowl cover assembly inverted, bowl cover gasket removed and float resting on seated needle place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting Side of floats should just clear the vertical uprights of float gauge (A) Adjustment should be made by bending arms of floats

VERTICAL ADJUSTMENT With float gauge in same position floats should just clear the horizontal portion of gauge Vertical distance (B) between top of float and machined surface of casting must be 1/8" (gauge T109 232) for primary floats; and 3/16" (gauge T109-222) for secondary floats Adjust by bending float arms.

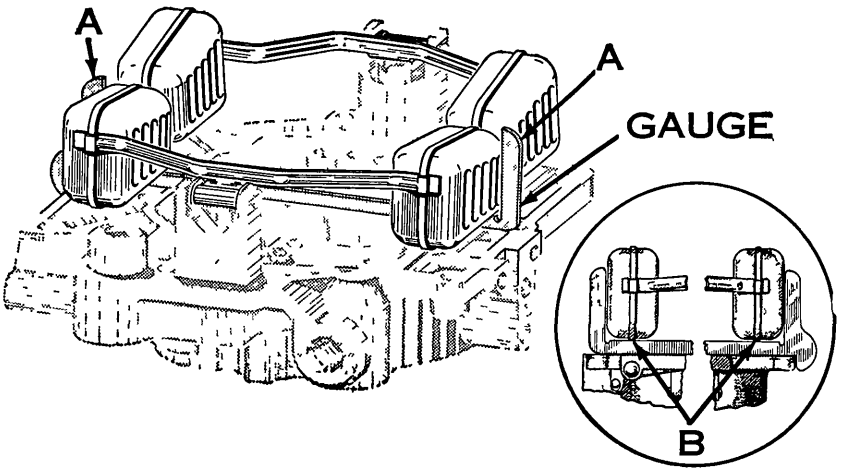


Figure 1
Float Adjustment

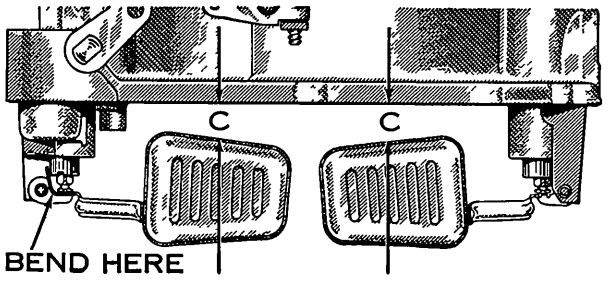


Figure 2
Float Drop Adjustment

FLOAT DROP ADJUSTMENT (Fig. 2):

With bowl cover held in upright position and measuring from center of floats the distance (C) between top of floats and bowl cover should be 5/8" for primary floats and 11/16" for secondary floats Adjust by bending stop tabs on float bracket.

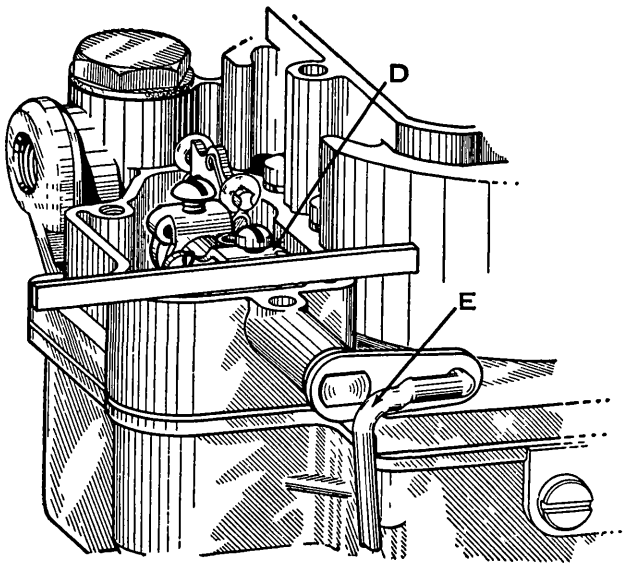


Figure 3
Pump Adjustment

PUMP ADJUSTMENT (Fig. 3):

Install pump connector link in outer hole (long stroke) of pump arm, with ends extending toward countershaft arm Back out throttle lever set screw until throttle valves seat in bores of carbureter. Hold straight edge across top of dust cover boss at pump arm The flat on top of pump arm (D) should be parallel to straight edge Adjust by bending throttle connector rod at upper angle (E) (Use tool T109 213.)

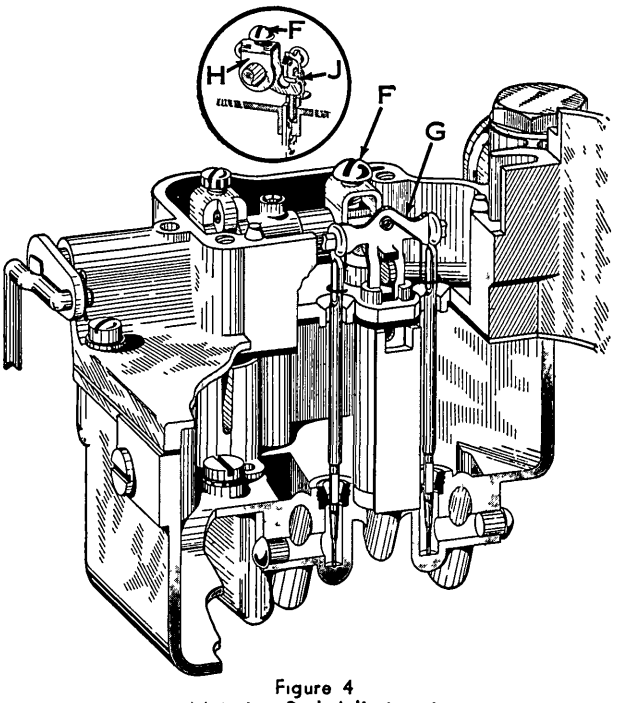
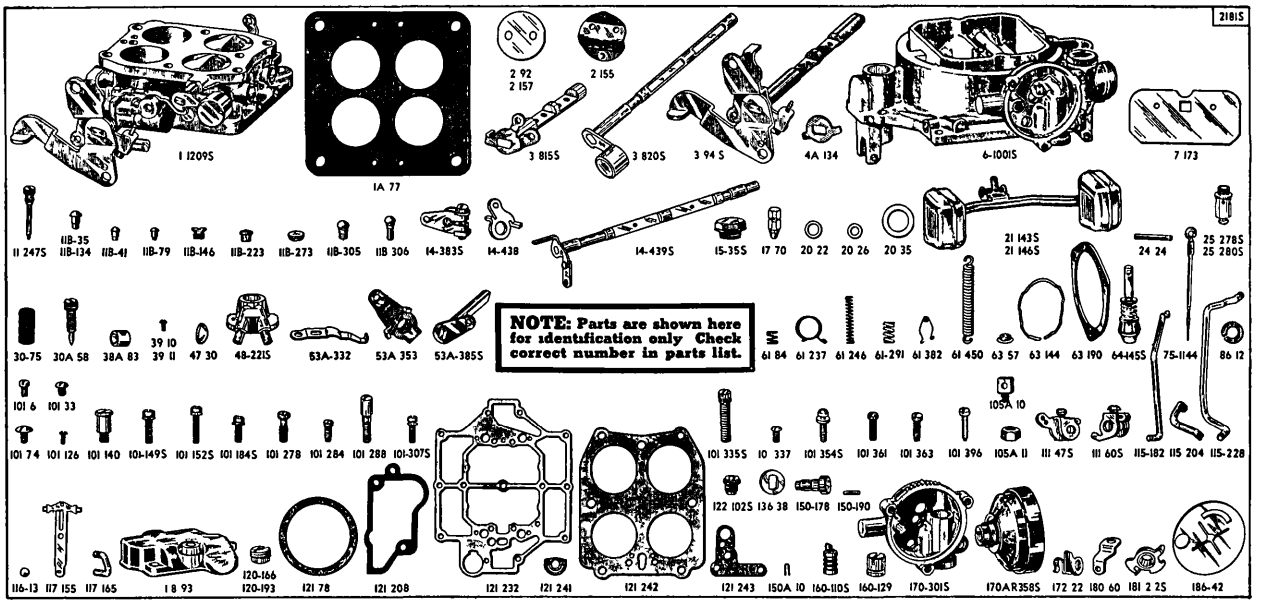


Figure 4
Metering Rod Adjustment

METERING ROD ADJUSTMENT (Fig. 4):

Metering rod adjustment is important and must be made after completing the pump adjustment No metering rod gauges are necessary Procedure is as follows 1 Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw (F) 2 With metering rods in place press down on vacumeter link (G) until metering rods bottom in carbureter body casting 3 Holding rods in downward position and throttle valves seated, revolve metering rod arm (H) until finger on arm contacts lip of vacumeter link (J). Hold in place and carefully tighten clamp screw (F).



Plymouth "V8"—1955—Carbureter No. 2253S

WHEN SERVICING, USE GASKET ASSORTMENT No 234, REPAIR PACKAGE No 1806
PART NAMES IN CAPITAL LETTERS LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-1268S	Body flange assembly	
1A 77	FLANGE GASKET	
2 92	Primary throttle valve	(2)
2 155	Auxiliary throttle valve	(2)
2 157	Secondary throttle valve	(2)
3 815S	Secondary throttle shaft and operating lever assembly	
3 820S	Auxiliary throttle shaft lever and weight assembly	
3-941S	Primary throttle shaft and lever assembly	
4A-134	Primary throttle shaft dog	
6-1001S	Air horn assembly	
7 173	Choke valve	
11 247S	LOW SPEED JET ASSEMBLY	(4)
11B 35	Rivet plug	(6)
11B 41	Rivet plug	(2)
11B 79	Rivet plug	(4)
11B 129S	Pump discharge passage plug assembly (Sup by 122 102S)	
11B 134	Rivet plug	
11B-146	Level sight plug	(2)
11B 223	Nozzle passage and idle port rivet plug	(8)
11B 273	Secondary throttle shaft rivet plug	
11B 305	Rivet plug	
11B 306	Rivet plug	(2)
14 383S	Choke lever and screw assembly	
14 438	Cam trip lever	
14-439S	Choke piston lever link and shaft assembly	
15 35S	Strainer nut assembly	
17-70	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	(2)
20-26	Relief valve gasket	
20-35	BOWL STRAINER GASKET	
21-143S	Primary float and lever assembly	
21-146S	Secondary float and lever assembly	
24-24	Float lever pin	(2)

Part No	PART NAME	
25-278S	SECONDARY NEEDLE AND SEAT ASSEMBLY	
25 280S	PRIMARY NEEDLE AND SEAT ASSEMBLY	
30-75	BOWL STRAINER	
30A 58	Idle adjustment screw	(2)
38A 83	Countershaft bushing	
39 10	Primary throttle valve attaching screw	(4)
39 11	Choke valve attaching screw	(2)
47 30	Expansion welsh plug	
48 174S	Pump jet and housing assembly	
53A 332	Lockout arm	
53A 353	Primary operating lever	
53A-385S	Pump operating lever and countershaft assembly	
61 84	Idle adjustment screw spring	(2)
61 205	VACUUM PISTON SPRING	
61 237	Fast idle cam spring	
61 246	Vacuum piston spring (Sup by 61 205)	
61 291	Throttle lever adjusting screw spring	
61 382	METERING ROD SPRING	
61-413	Upper pump spring	
61 450	SECONDARY THROTTLE RETURN SPRING	
63 57	INTAKE CHECK BALL RETAINER	
63 144	Delayer plate retainer ring	
63 176	Pump spring retainer	
63 190	Coil housing retainer	
64 145S	PUMP PLUNGER AND ROD ASSEMBLY	
75-1160	METERING ROD—STANDARD	(2)
75-1180	Metering rod—1 size lean	
75-1181	Metering rod—2 sizes lean	
75-1224U	Unitized package (Consists of 2—75 1180 and 1—122 102S	
86 12	Flange stud lock washer	
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	

Part N .	PART NAME	
101-126	Auxiliary throttl valve attaching screw	(4)
101-140	Fast idle cam screw	
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-278	Pump jet housing attaching screw	
101-284	Piston housing attaching screw	(2)
101-288	Throttle lever adjusting screw (Sup by 101 339)	
101-307S	Air horn and bracket attaching screw and washer assembly	(8)
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-339	Throttle lever adjusting screw	
101-354S	Choke lever clamp screw assembly	
101-361	Coil housing attaching screw	(3)
101-363	Piston housing attaching screw	
101-396	Fast idle adjustment screw	
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
115-182	Choke connector rod	
115 204	Throttle operating rod	
115 228	THROTTLE CONNECTOR ROD	

Part No	PART NAME	
116 13	PUMP INTAKE CHECK BALL	
117-155	Vacumeter piston link	
117-165	Pump connector link	
118 93	Dust cover	
120 166	PRIMARY METERING ROD JET	(2)
120-193	SECONDARY METERING JET	(2)
121 78	COIL HOUSING GASKET	
121 208	DUST COVER GASKET	
121 232	AIR HORN GASKET	
121-241	PUMP JET HOUSING GASKET	
121-242	BODY FLANGE GASKET	
121-243	PISTON HOUSING GASKET	
122-102S	Pump relief plug assembly	
136-38	Throttle shaft washer	
150-178	Auxiliary valve lockout arm pin	
150-190	Choke piston pin	
150A-10	PIN SPRING	(4)
160-110S	Vacuum piston and pin assembly	
160-129	Choke piston	
170-301S	Piston housing and plug assembly	
170AC358S	Thermostatic coil and housing assembly	
172 22	Throttle connector rod retainer	
180 60	Lever return spring bracket	
181-212S	Fast idle cam assembly	
186-42	Choke baffle plate	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.

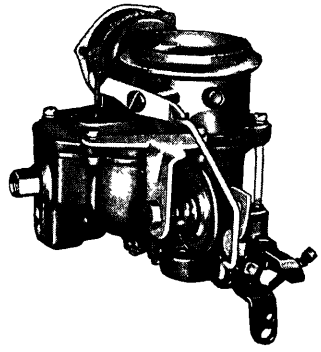
CARBURETER
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2141S
Standard Transmission

2154S
Overdrive Transmission

2155S
Power Flite Transmission

2262S



PLYMOUTH "V-8" MODEL P-27 1955

Use 2262S to replace 2141S

Use 2262S and 192 34U to replace 2154S

Use 2262S and 202-83U to replace 2155S

BBD Dual Down-Draft Climatic® Control **Carbureters**

Nos. 2141S-2154S-2155S-2262S

CARBURETER SPECIFICATIONS

For Plymouth 8 Cylinder Engine 3.44 Inch Bore, 3.25 Inch Stroke

Dimensions Flange size 1¼ inch dual 4 bolt type
Throttle bore 1 5/16 inch I D
Primary venturi ⅜ inch I D
Main venturi 1 1/16 inch I D

Float Level See adjustments

Vent Inside balance vent tube to bowl in air horn above choke valve

Gasoline Intake Size No 38 (1015 inch) drill hole in needle seat

Idle Tube Jet size No 65 (035 nch1 dr II
Idle bleed (in venturi cluster screw) size 063 inch drill
Idle restriction (in venturi cluster screw) size 0472 inch drill

Idle Port Upper slot type length 192 inch width 030 inch

Idle Port Opening 133 to 137 inch above upper edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw) Size 053 to 057 inch diameter

Set Idle Adjustment Screw ½ to 1½ turns open For richer mixture turn screw out With gear shift lever in neutral position idle engine between 450 and 500 RPM

Main Nozzle Nozzle s installed permanently DO NOT REMOVE

Main Vent Tube Side holes 8—0354 inch diameter Bleed in top of tube size 0256 inch drill

Step Up Rod (Vacuum operated) 022 inch diameter

Metering Jet Calibrated to flow 287 to 293 cc per minute (Do not gauge for size if in doubt replace with new part)

Accelerating Pump Pump discharge jet (2—In venturi cluster) size 0275 inch drill
Intake ball check seat size 135 to 140 inch diameter
Discharge ball check seat size 115 to 120 inch diameter

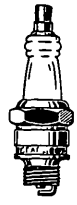
Pump Adjustment See adjustments

Choke Carter Climatic® Control set at index Butterfly type offset valve Choke heat suction hole in body size No 38 (1015 inch) drill NOTE Thermostatic coil should not be removed from delayer mounting post If defective replace with complete thermostatic coil and housing assembly

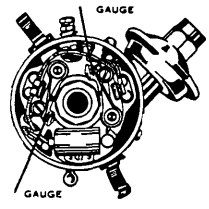
Vacuum Spark Port Horizontal round end type 030 by 110 inch Top of port to be 030 to 040 inch above upper edge of valve with valve closed tight

Motor Tune-Up—Be Accurate!

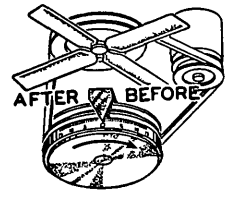
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



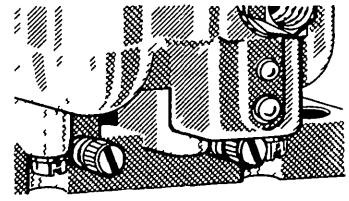
Spark Plug Gap 035"



Breaker Point Setting 017"



Ignition Timing Breaker Points to Open 4° B T D C



Idle Adjustment Screw Setting ½ to 1½ Turns Open

NOTE These cars equipped with Hydraulic Valve Lifters NO ADJUSTMENT

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CARBURETER
TRADE MARK REG U S PAT OFF
MARCA REGISTRADA

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CARBURETER ADJUSTMENTS

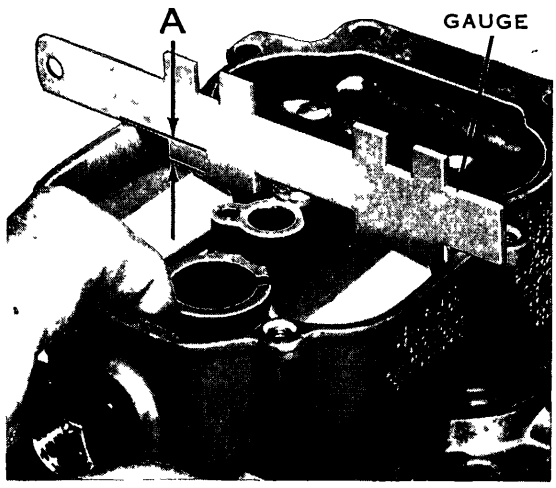


Figure 1
Float Adjustment

FLOAT ADJUSTMENT (Fig. 1):

This adjustment must be made with the bowl cover gasket and float pin retainer removed. Hold the lip on float arm against the seated intake needle, making sure the float pin is at the bottom ot its guide slots. The distance (A) from the top surface of the body casting to the top of each float should be 7/32 inch (gauge T109-239). If one float is lower than the other, equalize by bending the float arm If both floats require the same correction, adjust by bending lip on float arm. The floats must not rub anywhere against the inner walls of the bowl. If necessary, bend float arms slightly to provide clearance on all sides of floats.

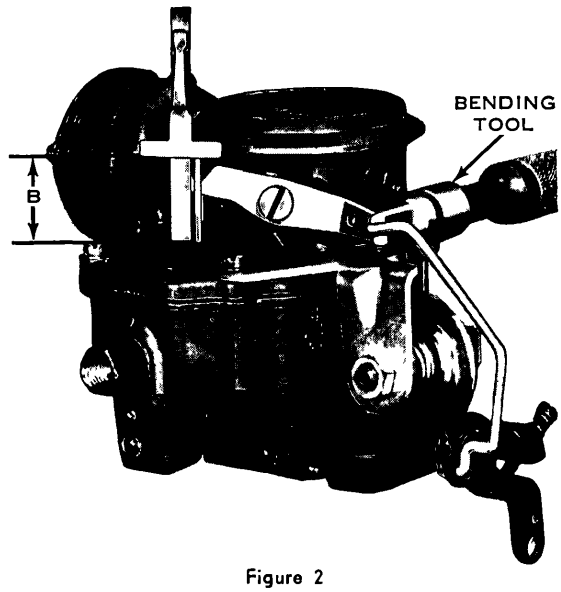


Figure 2
Pump Adjustment

PUMP ADJUSTMENT (Fig. 2):

Back out throttle adjustment screw and open choke valve so that throttle valves seat in bores of carbureter. Install throttle connector rod in outer hole (medium stroke) of throttle lever and outer hole of pump arm. The distance (B) from the top of the bowl cover to the top of plunger shaft (not pump arm) should be 58/64 inch. Adjust by bending throttle connector rod (2155S-2262S) at upper angle, (2141S-2154S) at lower angle (use tool T109-213).

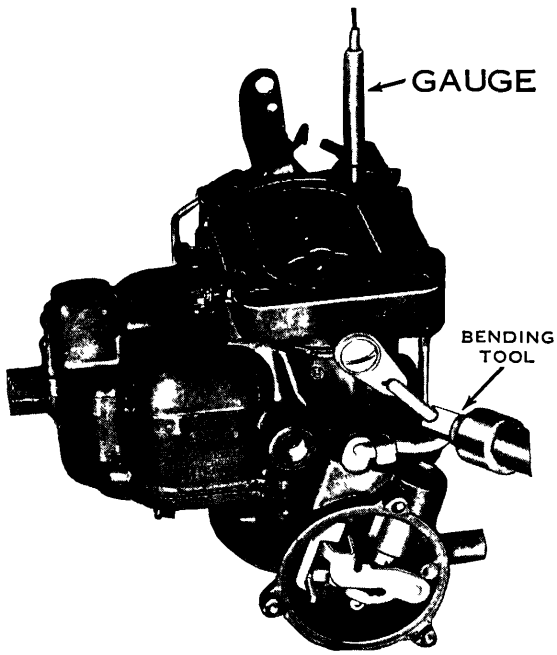


Figure 3
Fast Idle Adjustment

FAST IDLE ADJUSTMENT (Fig. 3):

Remove thermostatic coil housing assembly, gasket and baffle plate. With throttle adjusting screw backed out, crack throttle valve and hold choke valve in fully closed position. Then close throttle. This will allow fast idle cam to revolve to fast idle position. There should now be .009"-.013" clearance (use gauge T109-200) between throttle valve and bore of carbureter (side opposite idle port). Adjust by bending the choke connector rod at lower angle (use tool T109-213).

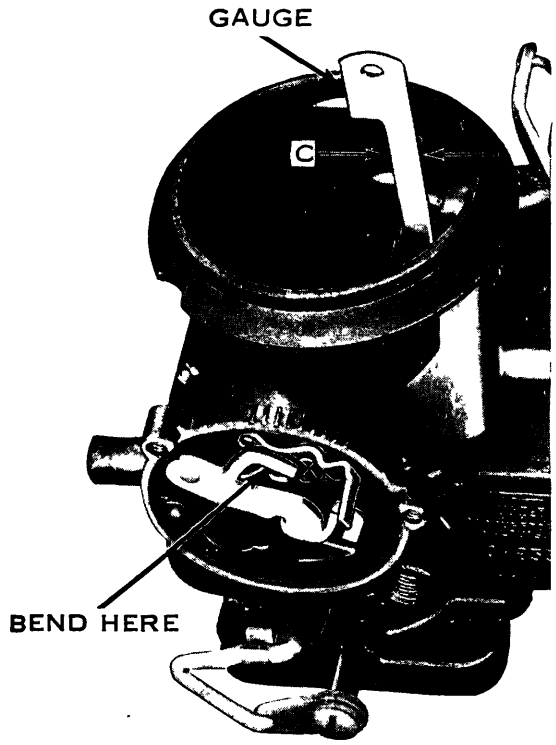


Figure 4
Unloader Adjustment

UNLOADER ADJUSTMENT (Fig. 4):

This adjustment must be made after the fast idle adjustment. Hold throttle valve wide open and close choke valve as far as possible without forcing. There should now be 1/4 inch clearance (C) (use gauge T109-31) between upper edge of choke valve and inner wall of air horn. Adjust by bending arm on choke trip lever (use Tool T109-214). When fast idle and unloader adjustments have been made, assemble baffle plate, coil housing gasket and thermostatic coil housing assembly on air horn. Set Climatic® Control at "Index", making sure that hook on coil has picked up coil shaft lever.

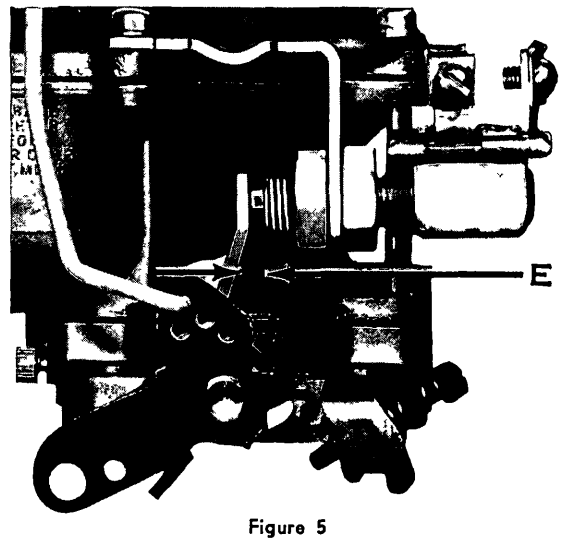


Figure 5
Overdrive Kickdown Switch Adjustment

OVERDRIVE KICKDOWN SWITCH ADJUSTMENT (Fig. 5):

With throttle valves in wide open position adjust hex nuts on switch to have 1/64 inch to 3/64 inch clearance (E) between kickdown lever and switch stem guide.

NOTE: If necessary bend kickdown lever to contact switch stem as shown.

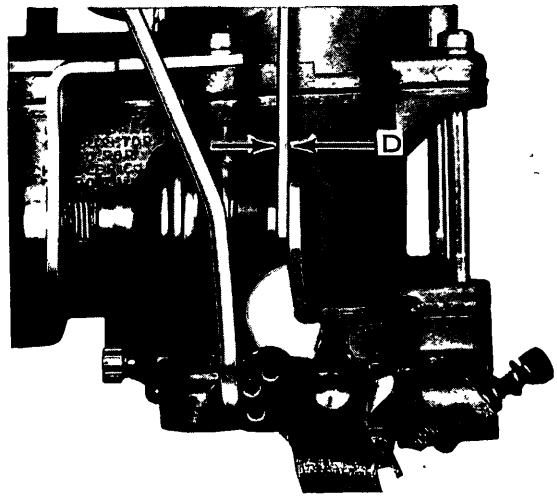
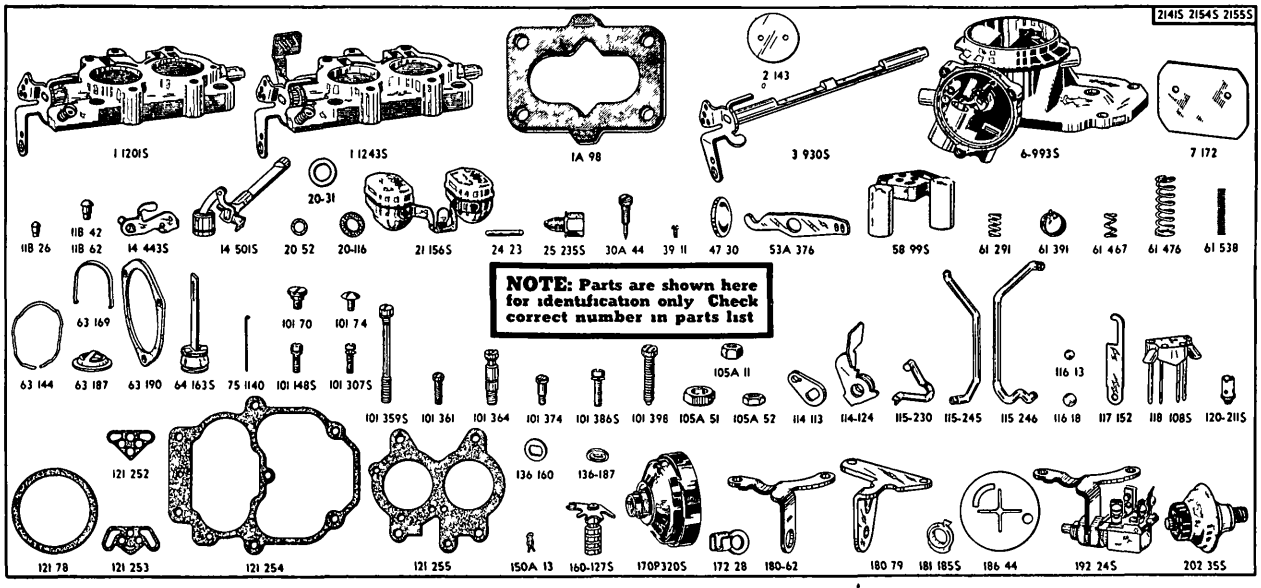


Figure 6
Dashp t Adjustment

DASH POT (SLOW CLOSING THROTTLE) ADJUSTMENT (Fig. 6):

The purpose of this unit is to prevent the car from stalling when the throttle is released rapidly. Maximum action is obtained by loosening lock nut and adjusting the dash-pot unit so that the plunger shaft can be bottomed with a 1/16 inch gauge placed between shaft and operating lever (D) with throttle valves tightly closed. Then tighten lock nut.



Plymouth "V8"—1955—Carbureters Nos. 2141S-2154S-2155S-2262S

WHEN SERVICING USE GASKET ASSORTMENT No 255, REPAIR PACKAGE No 1779
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1201S	Body flange assembly (2141S) (Sup by 1 1263S)	
1-1243S	Body flange assembly (2154S 2155S) (Sup by 1 1263S)	
1-1263S	Body flange assembly	
1A-98	FLANGE GASKET	
2-143	Throttle valve	(2)
3-930S	Throttle shaft and lever assembly	
6-993S	Air horn assembly (Sup by 6 1095S)	
6-1095S	Air horn assembly	
7-172	Choke valve	
11B-26	Rivet plug (early production)	(2)
11B-42	Rivet plug (early production)	
11B-62	Rivet plug (early production)	
14-443S	Choke trip lever and pin assembly	
14-501S	Choke piston lever link and shaft assembly	
20-31	Needle seat gasket	
20-52	STEP UP PISTON GASKET	
20-116	Main metering jet gasket	(2)
21-156S	Float and lever assembly	
24-23	Float lever pin	
25-235S	NEEDLE AND SEAT ASSEMBLY	
30A-44	Idle adjustment screw	(2)
39-11	Choke and throttle valve attaching screw	(6)
47-30	Welsh plug	
53A-376	Pump arm	
58-99S	Venturi cluster and nozzle assembly	
61-291	Throttle lever adjusting screw spring	
61 391	Fast idle cam spring	
61-426	Throttle adjusting screw spring (Sup by 61 291)	
61-467	Idle adjustment screw spring	(2)
61-476	PUMP SPRING	
61-538	STEP UP PISTON SPRING	
63 144	Delayer plate retainer ring	
63-169	FLOAT LEVER PIN RETAINER	
63-187	INTAKE CHECK BALL RETAINER	
63-190	Thermostatic coil housing retainer	
64-174S	Pump plunger and rod assembly (Sup by 64 182S)	
64-182S	PUMP PLUNGER AND ROD ASSEMBLY	
75 1140	STEP UP ROD	(2)
101-70	Pump arm screw	
101-74	Throttle shaft arm attaching screw	
101-148S	Air horn attaching screw and washer assembly (2141S (4) (2154S (3) (2155S 2262S (2)	
101-307S	Air horn attaching screw and washer assembly (2154S (1) (2155S 2262S (2)	
101 359S	Body attaching screw and washer assembly (2141S 2155S 2262S)	(2)
101-361	Coil housing attaching screw	(3)
101-364	Venturi cluster screw	(2)
101-374	Step up piston plate guide screw	
101-386S	Body flange attaching screw and washer assembly	(2)
101-387	Throttle adjusting screw (Sup by 101 398)	
101-398	Throttle lever adjusting screw	
101-403S	Body attaching screw and washer assy (2155S)	(2)
103-14	Lead shot	
103-15	Lead shot (late production)	(2)
103-16	Lead shot (late production)	(2)
105A-11	Flange stud nut	(4)
105A-51	*Kickdown switch bracket attaching nut (2154S)	(2)
105A-52	†Dash pot lock nut (2155S)	
114-113	Throttle shaft arm	
114-124	Kickdown switch and dash pot operating lever (2154S 2155S)	
115-230	Choke connector rod	
115-245	Throttle connector rod (2141S 2154S)	
115-246	Throttle connector rod (2155S 2262S) (Sup by 115 263)	
115-263	Throttle connector rod (2155S 2262S)	
116 13	DISCHARGE CHECK BALL	
116-18	Intake check ball	
117-152	Fast idle link	
118-108S	VENTURI COVER AND TUBE ASSEMBLY	
120-209S	Main metering jet assembly—standard (Sup by 120 211S)	(2)
120-210S	Main metering jet assembly—1 size lean	(2)
120-211S	MAIN METERING JET ASSEMBLY—STANDARD	(2)
120-216S	Main metering jet assembly—2 sizes lean	(2)
121-78	COIL HOUSING GASKET	
121-252	VENTURI HOUSING GASKET	
121-253	VENTURI COVER GASKET	
121-254	Body gasket (Sup by 121 274)	
121-255	BODY FLANGE GASKET	
121-274	BODY GASKET	
136 160	Throttle shaft washer	
136-187	Pump spring retainer washer	
150A-13	PIN SPRING	(2)
160-127S	STEP UP PISTON AND PLATE ASSEMBLY	
170P320S	Thermostatic coil and housing assembly (2141S 2154S 2155S) (Sup by 170T 320S)	
170T-320S	Thermostatic coil and housing assembly (2262S)	
172-28	Choke connector rod retainer	
180 62	*Kickdown switch bracket (2154S)	
180 79	†Dash pot bracket (2155S)	
181-185S	Fast idle cam assembly	
186-44	Choke baffle plate	
192-24S	Kickdown switch and bracket assembly (2154S) (Sup by 192 34U)	
192 34U	*Unitized package (2154S)	
202 35S	†Dash pot assembly (2155S)	
202 83U	Unitized package (Dash pot) (2262S) (consists of 1—105A 52 1—180 79 and 1—202 35S)	

*Also used on 2262S when used on cars With Overdrive Transmission
†Part of 202 83U

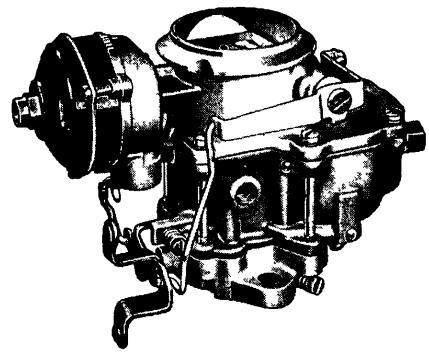
NOTE **Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used**

2062S-SA
Standard Transmission
With Overdrive

2063S-SA
Standard Transmission

2116S-SA
Hy-Drive & Power Flite

2249S



PLYMOUTH MODELS "P-25", "P-26" 1954-1955

Use 2380S to replace 2063S 2063SA-2249S

Use 2380S and 192-33U to replace 2062S-2062SA

Use 2380S and 202-80U to replace 2116S-2116SA

BBS Down-Draft Climatic® Control **Carbureters Nos.**

2062S-2062SA-2063S-2063SA-2116S-2116SA-2249S

CARBURETER SPECIFICATIONS

For Plymouth Six Cylinder Engine 3¼ Inch Bore 4⅝ Inch Stroke

Dimensions Flange size 1½ inch S A E
Throttle bore 1 11/16 inch
Main venturi 1 11/32 inch I D

Float Setting See adjustments

Vents Outside none Inside balance vent tube

Gasoline Intake Size No 44 (086 inch) drill in needle seat

Idle Tube Jet size 0354 inch diameter Idle passage air bleed in body size 061 inch drill Restriction in body size 057 inch diameter

Idle Port Upper slot type length 195 inch width 030 inch

Idle Port Opening Top of port located 140 to 144 inch above top edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw) Size 053 to 057 inch diameter

Set Idle Adjustment Screw ½ to 1½ turns open For richer mixture turn screw out Idle engine between 450 500 r p m gear shift lever in neutral

Main Metering Jet Calibrated to flow 453 cc per minute (Do not gauge for size if in doubt replace with new part)

Main Vent Tube Side holes 6—0354 inch diameter Bleed in top of tube 0315 inch diameter REMOVE WITH T109 195 INSTALL NEW VENT TUBE WITH T109 272 OR T109 151

Step Up Rod (Vacuum operated) (75 999) size 029 inch (75 998) size 027 inch diameter

Accelerating Pump Pump intake passage ball check seat size 110 to 120 inch diameter

Pump discharge passage ball check seat 110 to 120 inch diameter in body
Pump (discharge) jet size 0276 inch drill
Bleed hole in pump plunger size 020 inch diameter

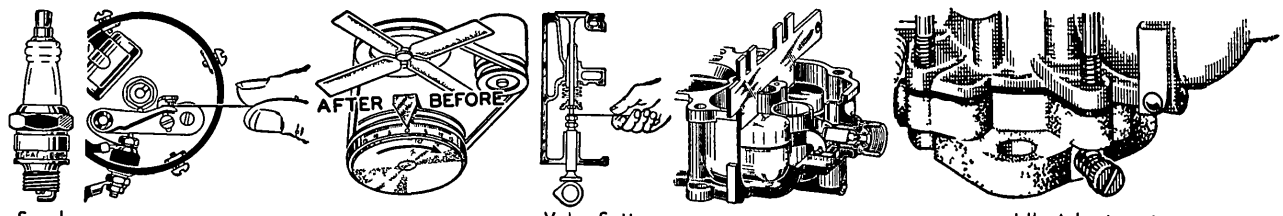
Pump Adjustment See adjustments

Choke Carter Climatic® Control set on index Choke heat suction hole in body size No 38 (1015 inch) drill NOTE Thermostatic coil should not be removed from delayer mounting post If defective replace with complete thermostatic coil and housing assembly

Vacuum Spark Port Slot (round end) type Size 030 by 110 inch Top of port 044 to 050 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



Spark Plug Gap 035"

Breaker Point Setting 020"

Ignition Timing Breaker Points to Open 2° B T D C

Valve Setting (Hot) Intake 010" Exhaust 010"

Float Setting (See Adjustments)

Idle Adjustment Screw Setting ½ to 1½ Turns Open

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CARBURETER ADJUSTMENTS

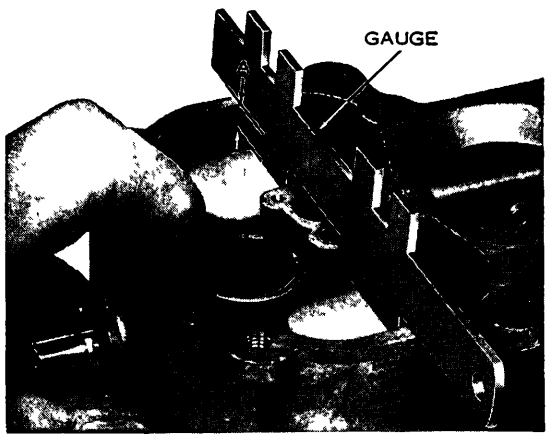


Figure 1
Float Adjustment

FLOAT ADJUSTMENT (Fig. 1):

This adjustment must be made with the bowl cover gasket and float pin retainer removed. Hold the lip on float arm against the seated intake needle, making sure the float pin is at the bottom of its guide slots. The distance (A) from the top surface of the body casting to the top of each float should be 7/32 inch (gauge T109-239). If one float is lower than the other, equalize by bending the float arm. If both floats require the same correction, adjust by bending lip on float arm. The floats must not rub anywhere against the inner walls of the bowl. If necessary, bend float arms slightly to provide clearance on all sides of floats

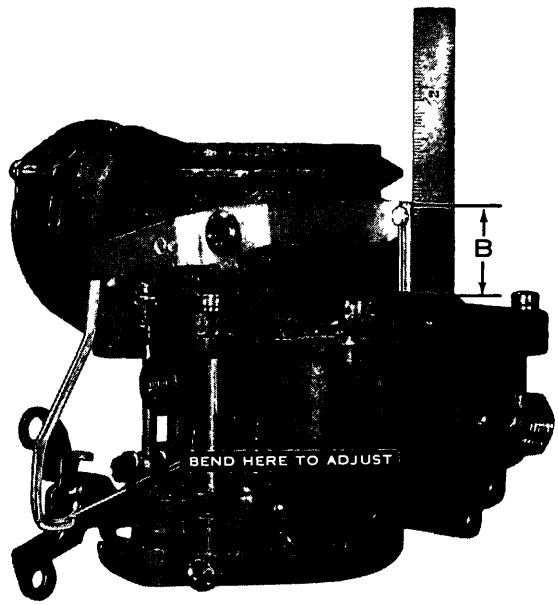


Figure 2
Pump Adjustment

PUMP ADJUSTMENT (Fig. 2):

Back out throttle adjusting screw and open choke valve so that throttle valve seats in bore of carbureter. Install throttle connector rod in center hole of throttle lever. The distance (B) from the top of the bowl cover to the top of plunger shaft (not pump arm) should be 54/64 inch. Adjust by bending throttle connector rod at lower angle (use Tool T109-213).

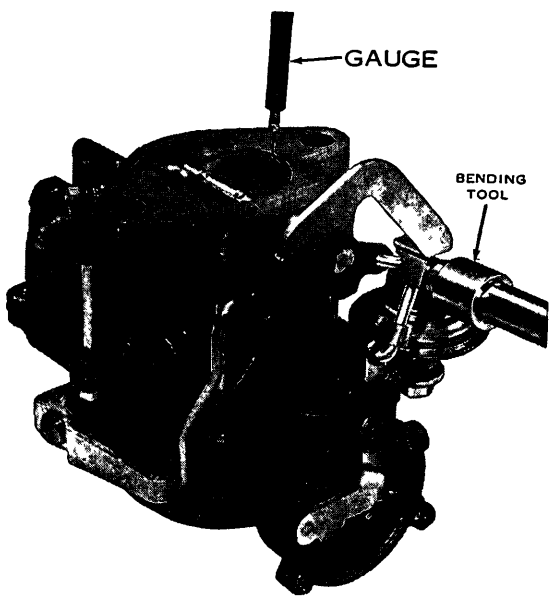


Figure 3
Fast Idle Adjustment

FAST IDLE ADJUSTMENT (Fig. 3):

Remove thermostatic coil housing assembly, gasket and baffle plate. With throttle adjusting screw backed out, crack throttle valve and hold choke valve in fully closed position Then close throttle. This will allow fast idle cam to revolve to fast idle position. There should now be .022-.026 inch clearance (use gauge T109-29) between throttle valve and bore of carbureter (side opposite idle port). Adjust by bending the choke connector rod at lower angle (use tool T109-213).

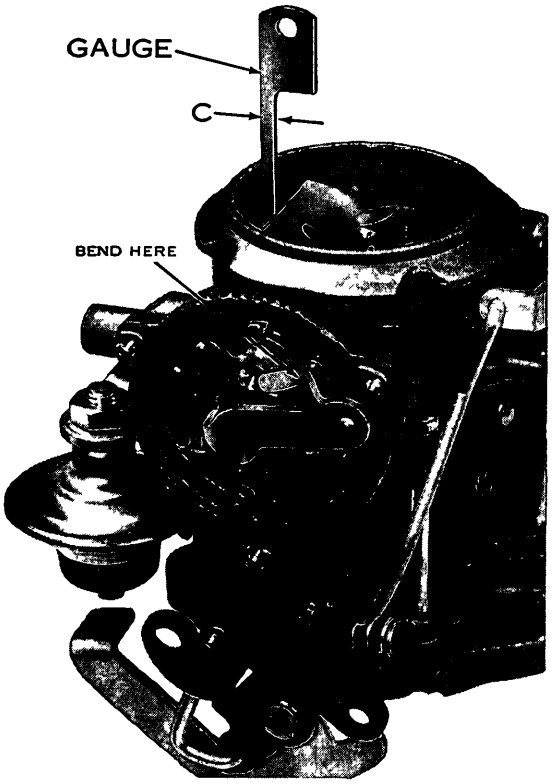


Figure 4
Unloader Adjustment

UNLOADER ADJUSTMENT (Fig. 4):

This adjustment must be made after the fast idle adjustment. Hold throttle valve wide open and close choke valve as far as possible without forcing. There should now be 9/64 inch clearance (C) (use gauge T109-34) between upper edge of choke valve and inner wall of air horn. Adjust by bending arm on choke trip lever (use tool T109-214). When fast idle and unloader adjustments have been made, assemble baffle plate, coil housing gasket and thermostatic coil housing assembly on air horn. Set Climatic® Control as specified making sure that hook on coil has picked up coil shaft lever.

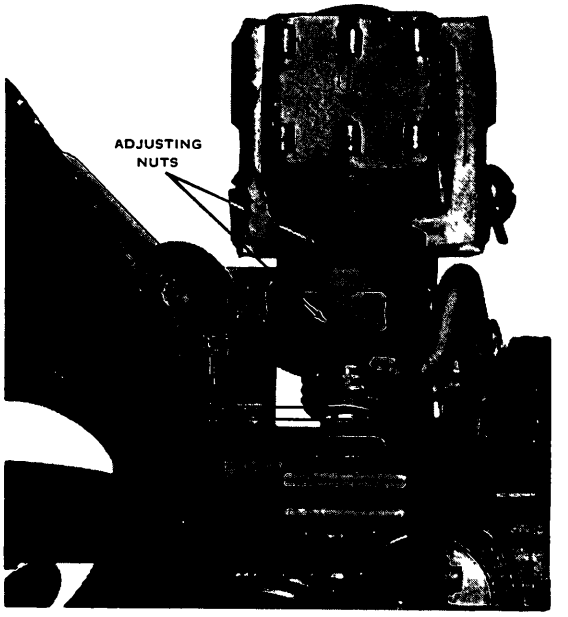


Figure 5
Overdrive Kickdown Switch Adjustment

OVERDRIVE KICKDOWN SWITCH ADJUSTMENT (Fig 5):

With throttle valve in wide open position adjust hex nuts on switch to have 1/64 inch to 3/64 inch clearance (E) between kickdown lever and switch stem guide.

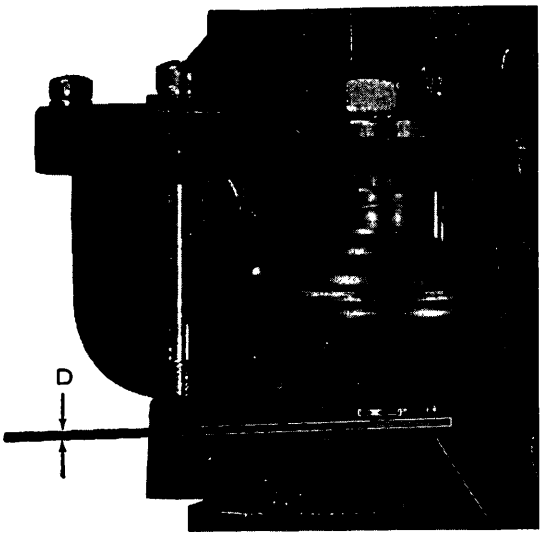
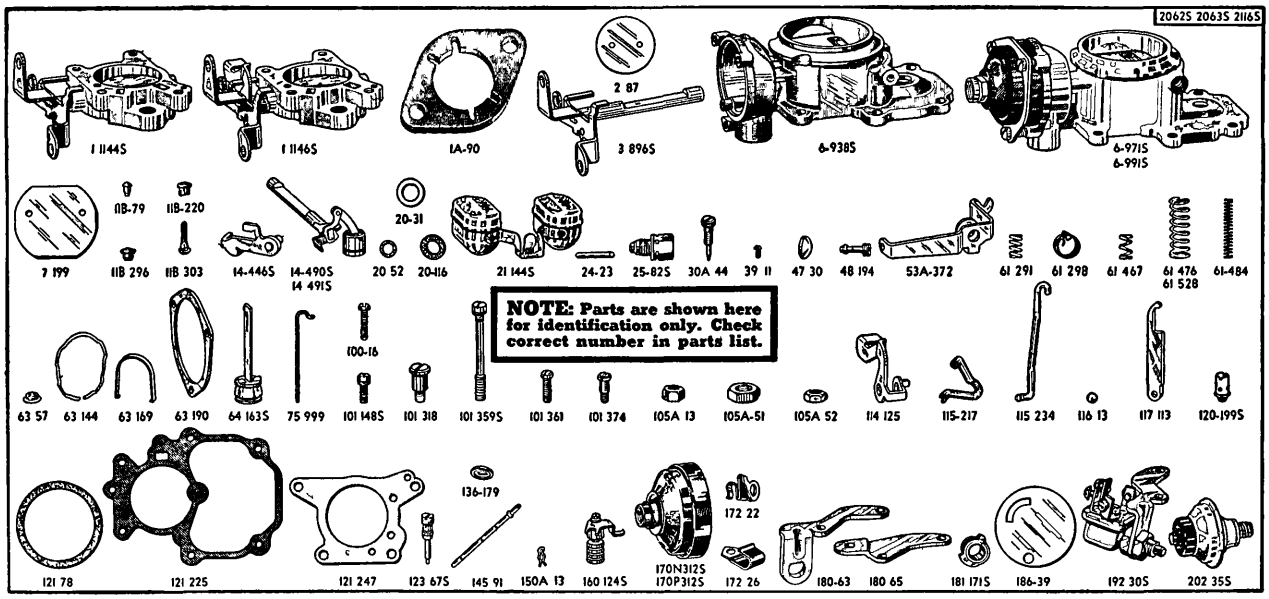


Figure 6
Dashpot Adjustment

DASHPOT (SLOW CLOSING THROTTLE) ADJUSTMENT (Fig. 6):

The purpose of the dashpot is to prevent the car from stalling when the throttle is released rapidly. Maximum dashpot action is obtained by loosening lock nut and adjusting the dashpot unit so that the dashpot plunger shaft can be moved inward approximately 3/32 inch (D) with the throttle valve tightly closed. Then tighten lock nut.



Plymouth—1954-55—Carbureters Nos. 2062S-2062SA-2063S-2063SA-2116S-2116SA-2249S

WHEN SERVICING, USE GASKET ASSORTMENT No. 252, REPAIR PACKAGE No 1766

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME
1-1144S	Body flange assembly (2062S SA 2063S SA) (Sup by 1 1146S)
1-1146S	Body flange assembly
1A-90	FLANGE GASKET—FOR USE WITHOUT GOVERNOR
2-87	Throttle valve
3-896S	Throttle shaft and lever assembly (2062S 2063S 2116S) (Sup by 3 971S)
3-971S	Throttle shaft and lever assembly
6-938S	Air horn assembly
6-971S	Air horn and Climatic® control assembly (2062S SA 2063S SA 2249S)
6-991S	Air horn and Climatic® control assembly (2116S SA)
7-199	Choke valve
11B-79	Rivet plug (6)
11B-220	HIGH SPEED PASSAGE RIVET PLUG
11B-296	PUMP JET RIVET PLUG
11B-303	Rivet plug
14-446S	Choke trip lever and pin assembly
14-490S	Choke piston lever and shaft assembly (2062S SA 2063S SA 2249S)
14-491S	Choke piston lever and shaft assembly (2116S SA)
20-31	Needle seat gasket
20-52	STEP UP PISTON GASKET
20-116	Main metering jet gasket
21-144S	Float and lever assembly
24-23	Float lever pin
25-82S	NEEDLE AND SEAT ASSEMBLY
30A-44	Idle adjustment screw
39-11	Choke and throttle valve screw (4)
47-30	Welsh plug
48-194	PUMP JET
53A-372	Pump arm
61-291	Throttle lever adjusting screw spring
61-298	Fast idle cam spring
61-467	Idle adjustment screw spring
61-476	Pump spring (2062S SA 2063S SA 2249S)
61-484	STEP UP PISTON SPRING
61-528	Pump spring (2116S SA)
63-57	INTAKE CHECK BALL RETAINER
63-144	Delayer plate retainer ring
63-169	FLOAT LEVER PIN RETAINER
63-190	Coil housing retainer
64-163S	PUMP PLUNGER AND ROD ASSEMBLY
75-998	Step up rod (2062S SA 2063S SA 2249S)
75 999	Step up rod (2116S SA) (Sup by 75 998 on 2062S 2063S)
100-16	Throttle adjusting screw
101-148S	Bowl cover attaching screw and washer assembly (2063S SA 2116S SA 2249S) (2)
101-160S	Bowl cover attaching screw and washer assembly (2062S SA) (2)
101-318	Pump arm screw
101-359S	Air horn attaching screw and washer assembly (4)
101-361	Coil housing attaching screw (3)
101-374	Step up piston plate guide screw
105A-13	Flange stud nut (2)
105A-51	*Kickdown switch to bracket attaching nut (2062S SA) (2)
105A-52	†Dash pot lock nut (2116S SA)
114-125	Dash pot lever (2116S SA 2249S)
115-217	Choke connector rod (2062S 2063S 2116S) (Sup by 115 244)
115-234	Throttle connector rod
115-244	★Choke connector rod
116-13	PUMP INTAKE AND DISCHARGE CHECK BALL (2)
117-113	Fast idle link
120-199S	MAIN METERING JET ASSEMBLY—STANDARD
120-205S	Main metering jet assembly—1 size lean
120-206S	Main metering jet assembly—2 sizes lean
121-78	COIL HOUSING GASKET
121-225	BODY GASKET
121-247	BODY FLANGE GASKET
121-310	Air cleaner gasket
123-67S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY
136-179	PUMP SPRING RETAINER WASHER
145-91	MAIN VENT TUBE
150A-13	PIN SPRING
160-124S	STEP UP PISTON AND PLATE ASSEMBLY
170N312S	Thermostatic coil and housing assembly (2116S SA)
170P312S	Thermostatic coil and housing assembly (2062S SA 2063S SA 2249S)
172-22	Choke connector rod retainer (Use with 115 217) (2062S 2063S 2116S)
172-26	*Cable clip (2062S SA)
172-28	Choke connector rod retainer (Use with 115 244)
180-63	*Kickdown switch bracket (2062S SA)
180-65	†Dash pot bracket (2116S SA)
181-171S	Fast idle cam assembly
186-39	Choke baffle plate
192 30S	*Kickdown switch assembly (complete) (2062S SA)
192-33U	Unitized package (Kickdown Switch) (2249S) (Consists of 1—192 30S 1—172 26)
195-67U	Unitized package (2063S SA Taxicab use only) (Consists of 1—75 1125 1—120 215S 1—121 225 and 1—123 65S)
202-35S	†Dash pot assembly (2116S SA)
202-80U	Unitized package (Dash Pot) (2249S) (Consists of 1—202 35S 1—105A 52 1—180 65)

★When using 115 244 choke connector rod 172 28 retainer must be used

*Part of 192 33U

†Part of 202 80U

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

PLYMOUTH

CITY TRAFFIC MODELS "P-25", "P-26" 1954-1955

(2215S can be used in place of 2203S)

BBS Down-Draft Climatic® Control **Carbureters Nos. 2203S-2215S**

CARBURETER SPECIFICATIONS

For Plymouth Six Cylinder Engine: 3¼ Inch Bore, 4⅜ Inch Stroke

For Plymouth Six Cylinder Engine: 3¼ Inch Bore, 4⅝ Inch Stroke

Dimensions Flange size 1½ inch S A E
Throttle bore, 1-9/16 inch.
Main venturi, 1¼ inch I D

Float Setting: See adjustments
Vents: Outside, none Inside, balance vent tube.

Gasoline Intake: Size No 44 (.086 inch) drill in needle seat

Idle Tube: Jet, size .0315 inch diameter Idle passage air bleed in body, size .0571 inch drill Restriction in body size .057 inch diameter.

Idle Port: Upper slot type, length .149 inch; width, .030 inch

Idle Port Opening: Top of port located .110 to .114 inch above top edge of valve, with valve tightly closed

Lower Port (For Idle Adjustment Screw): Size, .053 to .057 inch diameter

Set Idle Adjustment Screw: ½ to 1½ turns open For richer mixture turn screw out Idle engine between 450-500 r p m gear shift lever in neutral

Main Metering Jet: Calibrated to flow 322 cc per minute (Do not gauge for size, if in doubt, replace with new part.)

Main Vent Tube: Side holes, 6—.0354 inch diameter Bleed in top of tube .0315 inch diameter TO REMOVE USE T109-195 INSTALL NEW VENT TUBE WITH T109 272, OR T109-151 MAY BE USED BY GRINDING OUTSIDE DIAMETER DOWN TO FIT MAIN VENT TUBE PASSAGE IN BODY

Step-Up Rod: (Vacuum operated) .018 inch diameter.

Accelerating Pump: Pump intake passage, ball check seat, size .115 to .120 inch diameter.

Pump discharge passage, restriction (under ball check), size .115 to .120 inch diameter in body
Pump (discharge) jet size .0276 inch drill
(2215S) Bleed hole in pump plunger, size .020 inch diameter

Pump Adjustment: See adjustments

Choke Carter Climatic® control, set on index Butterfly type offset valve Choke heat suction hole, in body, size No. 38 (.1015 inch) drill **Note:** Thermostatic coil should not be removed from delayer mounting post. If defective replace with complete thermostatic coil and housing assembly.

Vacuum Spark Port: Slot (round end) type Size .030 by .110 inch Top of port, .044 to .050 inch above top edge of valve, with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION **Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.**

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open.	Valve Setting (Hot)	Float Setting	Idle Adjustment Screw Setting
.035"	.020"	2° B.T.D.C. At Vibration Damper	Intake .010" Exhaust .010"	(See Adjustments)	½ to 1½ Turns Open

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT This adjustment must be made with the bowl cover gasket and float pin retainer removed Hold the lip on float arm against the seated intake needle, making sure the float pin is at the bottom of its guide slots The distance from the top surface of the body casting to the top of each float should be 7/32 inch (gauge T109 239) If one float is lower than the other, equalize by bending the float arm If both floats require the same correction adjust by bending lip on float arm The floats must not rub anywhere against the inner walls of the bowl If necessary, bend float arms slightly to provide clearance on all sides of floats

PUMP ADJUSTMENT Back out throttle adjusting screw and open choke valve so that throttle valve seats in bore of carbureter Install throttle connector rod in upper hole (short stroke) of throttle lever The distance from the top of the bowl cover to the top of plunger shaft (not pump arm) should be 51/64 inch Adjust by bending pump connector rod at lower angle (use Tool T109-213)

FAST IDLE ADJUSTMENT Remove thermostatic coil housing assembly, gasket and baffle plate With throttle adjusting screw backed out crack throttle valve and hold choke valve in fully closed position Then close throttle This will allow fast idle cam to revolve to fast idle position There should now be 019 inch 023 inch clearance (use gauge T109-189) between throttle valve and bore of carbureter (side opposite idle port) Adjust by bending the choke connector rod at lower angle (use tool T109-213)

UNLOADER ADJUSTMENT This adjustment must be made after the fast idle adjustment Hold throttle valve wide open and close choke valve as far as possible without forcing There should now be 9/64 inch clearance (use gauge T109-34) between upper edge of choke valve and inner wall of air horn Adjust by bending arm on choke trip lever (use tool T109 214) When fast idle and unloader adjustments have been made, assemble baffle plate, coil housing gasket and thermostatic coil housing assembly on air horn Set Climatic® Control as specified making sure that hook on coil has picked up coil shaft lever

Plymouth—1954-1955—Carbureters Nos. 2203S-2215S

WHEN SERVICING, USE GASKET ASSORTMENT No 247A

Part No.	PART NAME	
1-1205S	Body flange assembly (2203S)	
1-1226S	Body flange assembly (2215S)	
1A 80	Flange gasket—for use without governor (2203S) (Sup by 1A 94)	
1A-94	Flange gasket	
2 100	Throttle valve	
3 785S	Throttle shaft and lever assembly (2203S)	
3-959S	Throttle shaft and lever assembly (2215S)	
6 836S	Air horn and Climatic® control assembly	
6-938S	Air horn assembly	
7 176	Choke valve	
11B-79	Rivet plug	(6)
11B-220	High speed passage rivet plug	
11B-296	Pump jet rivet plug	
11B-303	Rivet plug	
14-444S	Choke piston lever and shaft assembly	
14-446S	Choke trip lever and pin assembly	
20 31	Needle seat gasket	
20-52	Step up piston gasket	
20 116	Main metering jet gasket	
21 144S	Float and lever assembly	
24 23	Float lever pin	
25 82S	Needle and seat assembly	
30A-44	Idle adjustment screw	
39-11	Choke and throttle valve attaching screw	(2)
47 30	Welsh plug	
48-194	Pump jet	
53A-343	Pump arm (2203S)	
53A-372	Pump arm (2215S)	
61-291	Throttle lever adjusting screw spring	
61-298	Fast idle cam spring	
61-467	Idle adjustment screw spring	
61-476	Pump spring	
61-484	Step up piston spring	
63-57	Intake check ball retainer	
63-144	Delayer plate retainer ring	
63-169	Float lever pin retainer	
63-190	Thermostatic coil housing retainer	
64-161S	Pump plunger and rod assembly (2203S)	
64-163S	Pump plunger and rod assembly (2215S)	
75-1125	Step up rod	
86-57	Throttle restrictor lock washer	(4)
100-16	Throttle adjusting screw	
101-148S	Bowl cover attaching screw and washer assembly	(2)
101-286	Throttle restrictor screw	(2)
101-318	Pump arm screw	
101-359S	Air horn attaching screw and washer assembly	(4)
101-361	Thermostatic coil housing attaching screw	(3)
101-374	Step up piston plate guide screw	
105A-13	Flange stud nut	
105A-45	Throttle restrictor nut	(4)
115-195	Choke connector rod (2203S)	
115-196	Throttle connector rod (2203S)	
115 234	Throttle connector rod (2215S)	
115-244	Choke connector rod (2215S)	
116-13	Pump intake and discharge check ball	(2)
117-113	Fast idle link	
120-182S	Main metering jet assembly—standard	
120-183S	Main metering jet assembly—1 size lean	
120-211S	Main metering jet assembly—2 sizes lean	
121-78	Coil housing gasket	
121-225	Body gasket	
121-226	Body flange gasket	
123-65S	Idle orifice tube and plug assembly	
136-161	Pump spring retainer washer (2203S)	
136-179	Pump spring retainer washer (2215S)	
145-91	Main vent tube	
150-174	Pump arm pin	
150A-13	Pin spring	(2)
160-124S	Step up piston and plate assembly	
170AH312S	Thermostatic coil and housing assembly	
172-22	Choke connector rod retainer (2203S)	
172-28	Choke connector rod retainer (2215S)	
181-163	Throttle restrictor	(2)
181-171S	Fast idle cam assembly	
186-39	Choke baffle plate	

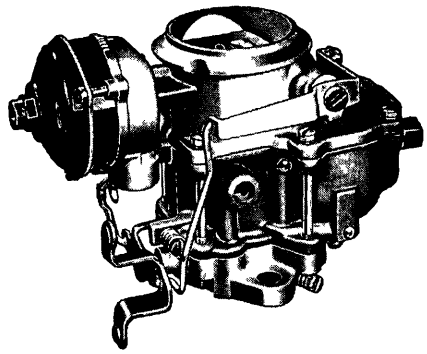
NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

920S-920SA
Standard Transmission

993S-993SA
Standard Transmission
With Overdrive

994S-994SA
Hy-Drive and Power Flite

2248S



PLYMOUTH MODEL "P-25" 1954

Use 2248S to replace 920S SA

Use 2248S and 192-33U to replace 993S SA

Use 2248S and 202-80U to replace 994S-SA

BBS DOWN-DRAFT CLIMATIC® CONTROL **CARBURETERS**
Nos. 920S-920SA-993S-993SA-994S-994SA-2248S

CARBURETER SPECIFICATIONS

For Plymouth Six Cylinder Engine 3¼ Inch Bore 4⅜ Inch Stroke

Dimensions Flange size 1½ inch S A E
Throttle bore 1 9/16 inch
Main venturi 1¼ inch I D

Float Setting See adjustments

Vents Outside none Inside balance vent tube

Gasoline Intake Size No 44 (086 inch) drill in needle seat

Idle Tube Jet size (920S early prod) 0315 inch (920S SA late prod 993S SA 994S SA 2248S) 0354 inch diameter
Idle passage air bleed in body size 0571 inch drill
Restriction in body size 057 inch diameter

Idle Port Upper slot type length 149 inch width 030 inch

Idle Port Opening Top of port located 110 to 114 inch above top edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw) Size 053 to 057 inch diameter

Set Idle Adjustment Screw ½ to 1½ turns open For richer mixture turn screw out Idle engine between 450 500 r p m gear shift lever in neutral

Main Metering Jet Calibrated to flow 390 cc per minute (Do not gauge for size if in doubt replace with new part)

Main Vent Tube Side holes 6—0354 inch diameter Bleed in top of tube 0315 inch diameter
REMOVE WITH T109 195 INSTALL NEW VENT TUBE WITH T109 272 OR T109 151 MAY BE USED BY GRINDING OUT SIDE DIAMETER DOWN TO FIT MAIN VENT TUBE PASSAGE IN BODY

Step Up Rod (Vacuum operated) 027 inch diameter Length (end of wire to inside of angle) 1 3/32 inches

Accelerating Pump Pump intake passage ball check seat size 115 to 120 inch diameter
Pump discharge passage restriction (under ball check) size 115 to 120 inch diameter in body
Pump (discharge) jet size 0276 inch drill
Bleed hole in bottom of plunger size 020 inch diameter (920S 993S 994S)

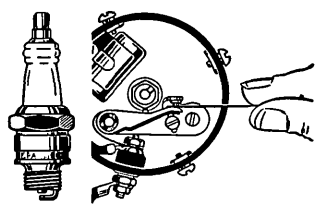
Pump Adjustment See adjustments

Choke Carter Climatic® control set on index Butterfly type offset valve Choke heat suction hole in body size No 38 (1015 inch) drill **Note** Thermostatic coil should not be removed from delayer mounting post If defective replace with complete thermostatic coil and housing assembly

Vacuum Spark Port Slot (round end) type Size 030 by 110 inch Top of port 044 to 050 inch above top edge of valve with valve tightly closed

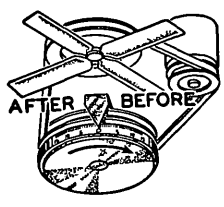
Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter

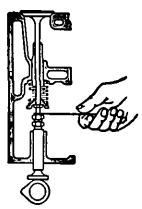


Spark Plug Gap 035"

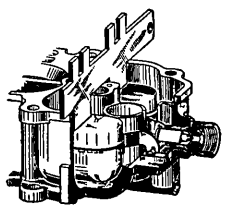
Breaker Point Setting 020"



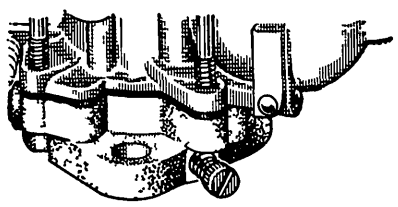
Ignition Timing Breaker Points to Open 2° B T D C



Valve Setting (Hot)
Intake 010"
Exhaust 010"



Float Setting (See Adjustments)



Idle Adjustment Screw Setting ½ to 1½ Turns Open

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CARBURETER ADJUSTMENTS

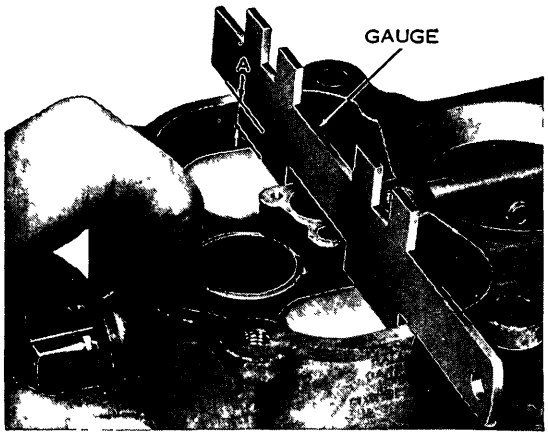


Figure 1
Float Adjustment

FLOAT ADJUSTMENT (Fig. 1):

This adjustment must be made with the bowl cover gasket and float pin retainer removed. Hold the lip on float arm against the seated intake needle, making sure the float pin is at the bottom of its guide slots. The distance (A) from the top surface of the body casting to the top of each float should be 7/32 inch (gauge T109-239). If one float is lower than the other, equalize by bending the float arm. If both floats require the same correction, adjust by bending lip on float arm. The floats must not rub anywhere against the inner walls of the bowl. If necessary, bend float arms slightly to provide clearance on all sides of floats.

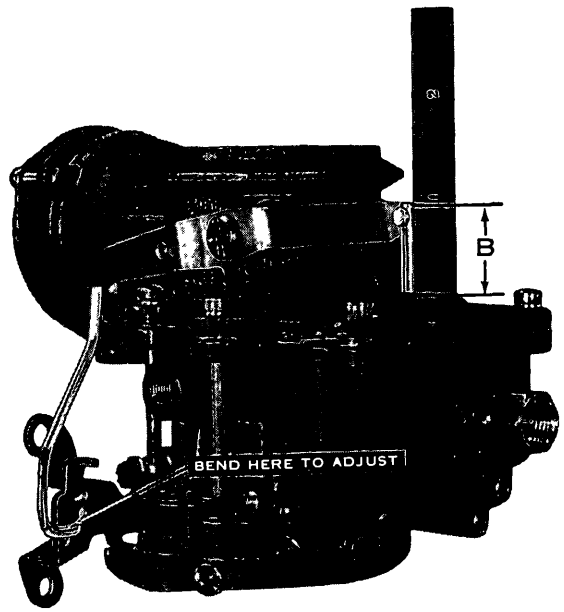


Figure 2
Pump Adjustment

PUMP ADJUSTMENT (Fig. 2):

Back out throttle adjusting screw and open choke valve so that throttle valve seats in bore of carbureter. Install pump connector rod in center hole of throttle lever. The distance (B) from the top of the bowl cover to the top of plunger shaft (not pump arm) should be (920S-993S-994S) 54/64 inch, (920SA-993SA-994SA-2248S) 59/64 inch. Adjust by bending pump connector rod at lower angle (use Tool T109-213).

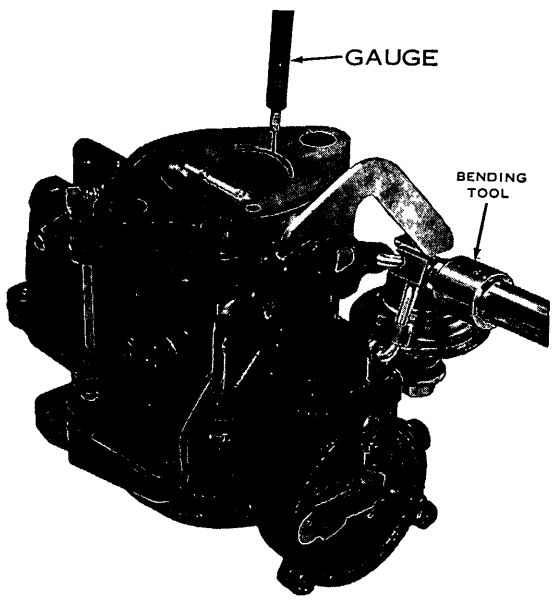


Figure 3
Fast Idle Adjustment

FAST IDLE ADJUSTMENT (Fig. 3):

Remove thermostatic coil housing assembly, gasket and baffle plate. With throttle adjusting screw backed out, crack throttle valve and hold choke valve in fully closed position. Then close throttle. This will allow fast idle cam to revolve to fast idle position. There should now be .019 inch - .023 inch clearance (use gauge T109-29) between throttle valve and bore of carbureter (side opposite idle port). Adjust by bending the choke connector rod at lower angle (use tool T109-213).

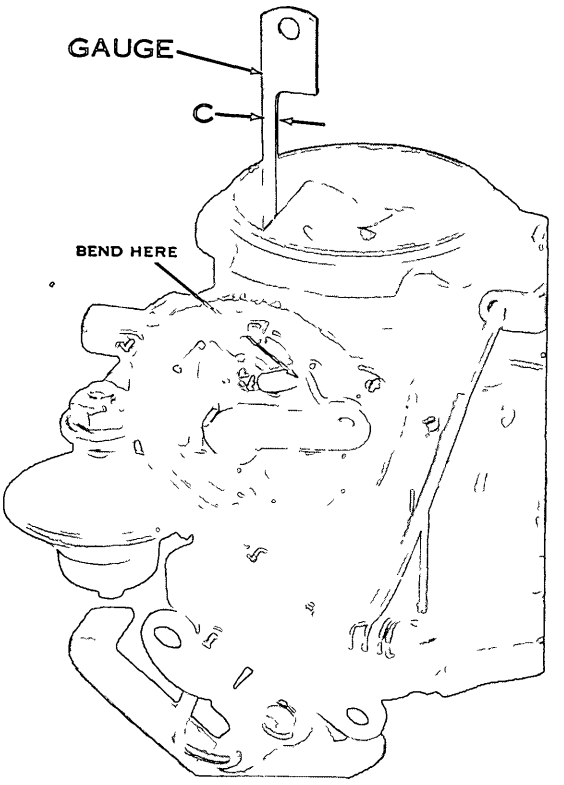


Figure 4
Unloader Adjustment

UNLOADER ADJUSTMENT (Fig. 4):
This adjustment must be made after the fast idle adjustment. Hold throttle valve wide open and close choke valve as far as possible without forcing. There should now be 9/64 inch clearance (C) (use gauge T109-34) between upper edge of choke valve and inner wall of air horn. Adjust by bending arm on choke trip lever (use tool T109-214). When fast idle and unloader adjustments have been made, assemble baffle plate, coil housing gasket and thermostatic coil housing assembly on air horn. Set Climatic® Control at "Index" making sure that hook on coil has picked up coil shaft lever.

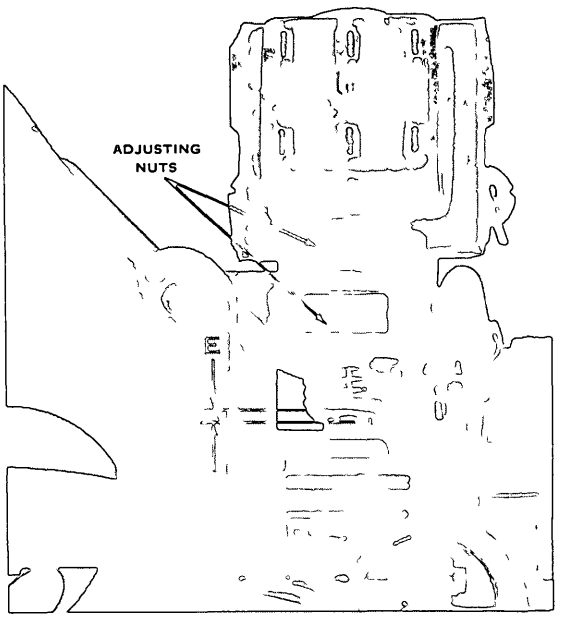


Figure 5
Overdrive Kickdown Switch Adjustment

OVERDRIVE KICKDOWN SWITCH ADJUSTMENT (Fig. 5):
With throttle valve in wide open position adjust hex nuts on switch to have 1/64 inch to 3/64 inch clearance (E) between kickdown lever and switch stem guide.

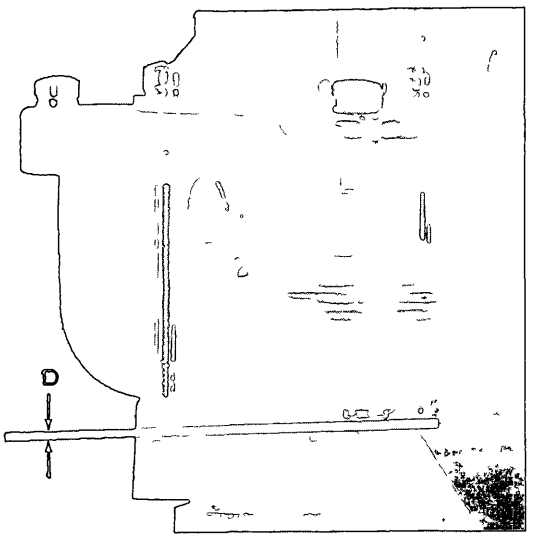


Figure 6
Dashpot Adjustment

DASHPOT (SLOW CLOSING THROTTLE) ADJUSTMENT (Fig. 6):
The purpose of the dashpot is to prevent the car from stalling when the throttle is released rapidly. Maximum dashpot action is obtained by loosening lock nut and adjusting the dashpot unit so that the dashpot plunger shaft can be moved inward approximately 3/32 inch (D) with the throttle valve tightly closed. Then tighten lock nut.

Plymouth—1954—Carbureters Nos. 920S-920SA-993S-993SA-994S-994SA-2248S

WHEN SERVICING, USE GASKET ASSORTMENT No. 247A; REPAIR PACKAGE No. 1753A (920S-993S-994S)

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME
1-980S	Body flange assembly (920S SA)
1-1112S	Body flange assembly (993S SA)
1-1114S	Body flange assembly (994S SA 2248S)
1A-80	Flange gasket (Sup by 1A 94)
1A-94	FLANGE GASKET
2-100	Throttle valve
3 785S	Throttle shaft and lever assembly (920S SA)
3-879S	Throttle shaft and lever assembly (993S SA 994S SA 2248S)
6 836S	Air horn and Climatic® control assembly
6-938S	Air horn assembly
7-176	Choke valve
11B-79	Rivet plug (6)
11B-220	HIGH SPEED PASSAGE RIVET PLUG
11B-296	PUMP JET RIVET PLUG
11B-303	Rivet plug
14-444S	Choke piston lever and shaft assembly
14-446S	Choke trip lever and pin assembly
20-31	Needle seat gasket
20-52	STEP UP PISTON GASKET
20-116	Step up jet gasket
21-144S	Float and lever assembly
24-23	Float lever pin
25-82S	NEEDLE AND SEAT ASSEMBLY
30A-44	Idle adjustment screw
39-11	Choke and throttle valve attaching screw (4)
47-30	Welsh plug
48-194	PUMP JET
53A-343	Pump arm (920S 993S 994S) (Use with 64 161S)
53A-372	Pump arm (920SA 993SA 994SA 2248S) (Use with 64 163S)
61-84	Idle adjustment screw spring (920S) (Sup by 61 467)
61-291	Throttle lever adjusting screw spring
61-298	Fast idle cam spring
61-467	Idle adjustment screw spring
61-476	PUMP SPRING
61-484	STEP UP PISTON SPRING
63-57	INTAKE CHECK BALL RETAINER
63-144	Delayer plate retainer ring
63-164	Thermostatic coil housing retainer (Use with 170AF181S)
63-169	FLOAT LEVER PIN RETAINER
63-190	Thermostatic coil housing retainer (Use with 170AH312S)
64 148S	Pump plunger and rod assembly (920S) (Sup by 64 161S)
64 161S	PUMP PLUNGER AND ROD ASSEMBLY (Round shaft) (920S 993S 994S)
64-163S	Pump plunger and rod assembly (Flat shaft) (920SA 993SA 994SA 2248S)
75 997	Step up rod (Sup by 75 998) (920S 993S 994S)
75 998	STEP UP ROD
100 16	Throttle adjusting screw
101-136	Thermostatic coil housing attaching screw (Use with 170AF181S) (3)
101 148S	Bowl cover attaching screw and washer ass y (2)
101-318	Pump arm screw
101-346	Step up piston plate guide screw (920S) (Sup by 101 374)
101-359S	Body attaching screw and washer assembly (4)
101-361	Thermostatic coil housing attaching screw (3) (Use with 170AH312S)
101-374	Step up piston plate guide screw
105A-13	Flange stud nut (2)
105A 51	★Kickdown switch bracket attaching nut (993S SA)
105A-52	†Dash pot lock nut (994S SA)
114-119	Dash pot lever (994S SA 2248S)
115-195	Choke connector rod (920S SA)
115-196	THROTTLE CONNECTOR ROD
115-203	Choke connector rod (993S SA 994S SA 2248S)
116-13	PUMP INTAKE AND DISCHARGE CHECK BALL (2)
117-113	Fast idle link
120-198S	Main metering jet assembly—Standard (Sup by 120 200S) (920S 993S 994S)
120-200S	MAIN METERING JET ASSEMBLY—STANDARD
120-201S	Main metering jet assembly—1 size lean
120-204S	Main metering jet assembly—2 sizes lean
121-78	COIL HOUSING GASKET
121-225	BODY GASKET
121-226	BODY FLANGE GASKET
123-63S	Idle orifice tube and plug assembly (920S—early prod)
123-67S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY
136-161	PUMP SPRING RETAINER (920S 993S 994S) (Use with 64 161S)
136-179	Pump spring retainer (920SA 993SA 994SA-2248S) (Use with 64 163S)
145-91	MAIN VENT TUBE
150-174	PUMP ARM PIN (920S 993S 994S) (Use with 64 161S)
150A-13	PIN SPRING (920S 993S 994S (2) 920SA-993SA 994SA 2248S (1)
160-124S	STEP UP PISTON AND PLATE ASSEMBLY
170AF181S	Thermostatic coil and housing assembly (Sup by 170AH312SU) (920S 993S 994S)
170AH312S	Thermostatic coil and housing assembly
170AH312SU	Unitized package (Consists of 1—170AH312S, 1—63 190 3—101 361 and 1—121 78)
172-22	Choke connector rod retainer (Sup by 172 28)
172-26	★Cable clip (993S SA)
172-28	CHOKE CONNECTOR ROD RETAINER
180-63	★Kickdown switch bracket (993S SA)
180-65	†Dash pot bracket (994S SA)
181-171S	Fast idle cam assembly
186-39	Choke baffle plate
192-30S	★Kickdown switch assembly complete (993S SA)
192-33U	Unitized package (Kickdown Switch) (2248S) (Consists of 1—192 30S 1—172 26)
195-57U	*Unitized package (City Traffic Conversion)
202-35S	†Dash pot assembly (994S SA)
202-80U	Unitized package (Dash pot) (2248S) (Consists of 1—202 35S 1—180 65 1—105A 52)

★Part of 192 33U †Part of 202 80U

*195 57U may be used to convert a 920S to a 2203S City Traffic carbureter with throttle restrictor

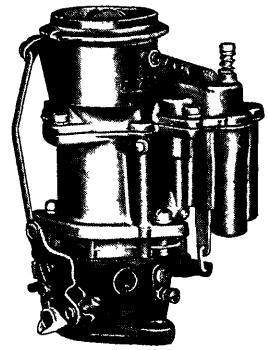
NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

CARBURETER
TRADE MARK REG U S PAT OFF
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Torque Converter

Standard Transmission

(Hy-Drive)



PLYMOUTH MODELS "P-24", "P-25" 1953-1954

B-B DOWN-DRAFT CARBURETERS—**MODELS D6P1-D6P2**

CARBURETER SPECIFICATIONS

For Plymouth Six Cylinder Engine 3¼ Inch Bore, 4⅜ Inch Stroke

Dimensions Flange size 1½ inch S A E
Throttle bore 1 9/16 inch
Main venturi 1¼ inch I D

Float Setting Top of float 5/64 inch plus or minus 1/64 inch below top surface of carbureter body casting

Vents Outside none Inside balance vent 218 inch diameter

Gasoline Intake Needle Triangular horizontal No 44 (086 inch) drill in needle seat

Idle Orifice Tube Jet size 0276 inch Idle passage air bleed (in air horn) size 065 inch Restriction in body size 0565 inch diameter

Idle Ports Upper port slot type length 149 inch width 030 inch
Top of port located 118 to 122 inch above top edge of valve
Lower port (For Idle Adjustment Screw) Size 053 to 057 inch diameter

Set Idle Adjustment Screw ½ to 1½ turns open For richer mixture turn screw out Idle engine between 450 500r p m

Main Metering Jet Calibrated to flow 256 cc per minute (Do not gauge for size If in doubt replace with new part)

Main Vent Through diffuser (air bleed inside bowl) size 0315 inch drill

Main Vent Tubes Side holes 6—0354 inch diameter

Step Up Jet No 65 drill size

Accelerating Pump Type delayed action Stroke summer setting (inner hole short stroke) Intermediate setting (center hole) Winter setting (outer hole long stroke)
Pump intake passage ball check seat size 107 to 112 inch diameter
Pump discharge passage restriction (under ball check) size 062 to 065 inch diameter in body
Pump (discharge) jet size 0276 inch drill

Pump Adjustment 22/64" plunger travel (center hole) Use gauge No T109 117S

Choke Butterfly type with poppet valve Inter connected to open throttle valve to fast idle position when choke is used

Slow Closing Throttle Dash pot with discharge (by pass) size 0197 inch drill through plunger shaft

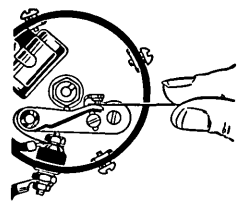
Vacuum Spark Port Slot (round end) type Size 040 by 110 inch Bottom of port 021 to 027 inch above top edge of valve

Motor Tune-Up—Be Accurate!

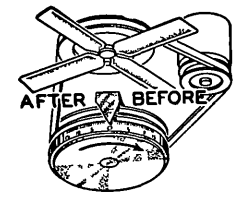
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



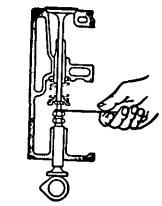
Spark Plug
Gap
035"



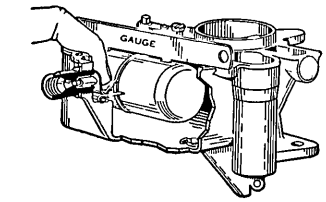
Breaker Point
Setting
020"



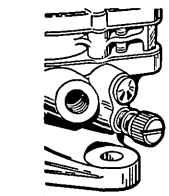
Ignition Timing
Breaker Points to Open
2° B T C



Valve Setting
(Hot)
Intake 010"
Exhaust 010"



Float Setting
5/64 Inch
(Use Gauge T109 50)



Idle Adjustment
Screw Setting
½ to 1½
Turns Open

CARBURETER ADJUSTMENTS

If carbureter loads up after considerable service check float level Wear on lip of float lever will raise float level Before adjusting float, be sure float lever pin is firmly seated Reset float level by bending lip of float lever away from needle to raise level or bend lip toward needle to lower float level Bend vertical lip of float only

If motor stalls while idling set throttle lever adjusting screw so motor runs between 450-500 r p m Then set idle adjustment screw to specifications If these adjustments do not correct the trouble remove idle orifice tube and plug assembly Clean tube and passages with compressed air

If acceleration is not satisfactory, remove pump jet and clean with compressed air However it is usually advisable to replace the pump jet, as its cost is nominal All jets must be seated gasoline tight Poor acceleration may be due to damaged or worn plunger leather in accelerating pump sediment in pump cylinder or clogged intake ball check at bottom of pump cylinder and discharge ball check in discharge passage If plunger is

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removed from cylinder use care in installing to avoid damage to plunger leather

Correct air fuel ratio is provided by a "balance tube' in the air horn The balance tube should be checked each time the carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type, size or condition of air cleaner Should the cleaner become clogged, the capacity will be reduced but the air-fuel mixture ratio will not be changed

Excessive richness above 50 miles per hour may be caused by a clogged main vent tube After removal of rivet plug beneath float bowl with tool No T109-43 main vent tube can be removed and a new tube inserted with tool No T109-195 Care must be exercised in inserting new tube which must seat tightly Use new rivet to complete the installation

Pump Adjustment Remove air horn assembly, back out throttle adjustment screw and be sure pump operating link is in center hole of throttle shaft arm Place universal pump travel gauge T109-117S on edge of bowl cover so that lip of gauge extends over top of plunger shaft Turn knurled nut of gauge until lip contacts top of plunger shaft with throttle valve seated Take reading indicated on gauge Repeat with throttle valve wide open and plunger pushed to bottom of cylinder The difference in reading obtained should be "22' (22/64") plunger travel

Adjust by bending horizontal portion of pump lifter link

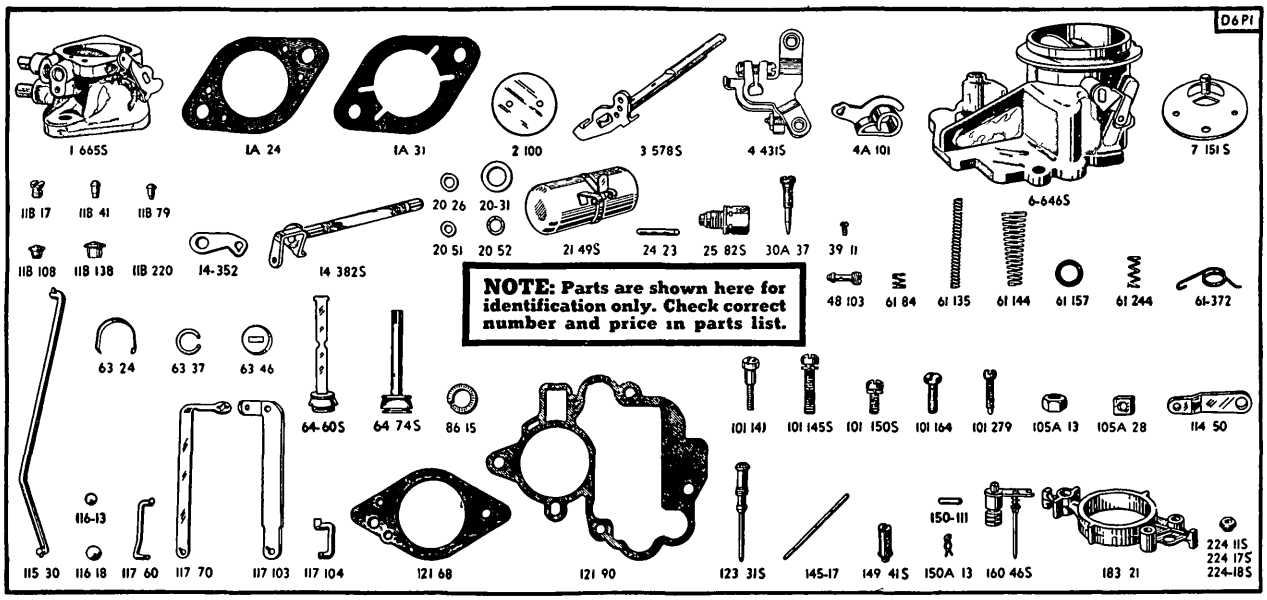
Pump stroke adjustable for high or low temperatures Set to longest stroke for cold weather, shorter stroke for hot weather driving

Dash-Pot Adjustment Engines operating in connection with fluid couplings frequently tend to stall during rapid deceleration unless the throttle closes slowly Slow throttle movement is necessary only during the last part of the closing The dash-pot or decelerating pump acts as a snubber to the throttle allowing fast movement to almost closed position, then slow closing from that point to the idle position

When the throttle is released, the throttle valve closes rapidly until throttle shaft arm contacts the dash-pot pick-up arm Then the dash-pot plunger must be pushed to the bottom of the cylinder before the throttle can close A ball check located in the lower end of the plunger shaft seals the larger upper opening and the gasoline must leave the cylinder through the small metered hole in lower part of the shaft

This reduces the rate at which plunger can be forced to the bottom of the cylinder making the last part of the throttle closing very slow **The adjusting screw (in top of bowl cover) should be opened 5 turns for D6P1 or 4½ turns for D6P2 from closed position** for average conditions Under extreme driving conditions greater openings may be necessary, although extreme dash-pot action will affect gear changes, and not enough action will allow engine to stall

Be sure plunger leather is soft and pliable and effects a good seal against the cylinder wall



Plymouth Carbureters Nos. D6P1-D6P2—1953-1954

WHEN SERVICING, USE GASKET ASSORTMENT No 215, REPAIR PACKAGE No. 1526A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1 665S	Body flange assembly (D6P1) (Sup by 1-1007S)	
1-1007S	Body flange assembly	
1A-24	Flange gasket—for use with governor (D6P1) (Sup by 1A-45)	
1A-31	Flange gasket—for use without governor (D6P1) (Sup by 1A-46)	
1A-45	Flange gasket—for use with governor	
1A-46	FLANGE GASKET—FOR USE WITHOUT GOVERNOR	
2-100	Throttle valve	
3-578S	Throttle shaft and arm assembly	
4-431S	Throttle lever assembly	
4A-101	Fast idle cam	
6-646S	Air horn assembly	
7-151S	Choke valve assembly	
11B-17	Pump discharge passage plug	
11B 41	Rivet plug	
11B-79	Rivet plug	(2)
11B-108	IDLE PORT RIVET PLUG	
11B-138	PUMP JET RIVET PLUG	
11B-220	HIGH SPEED PASSAGE PLUG	
14-352	Choke lever (loose)	
14-382S	Choke lever and shaft assembly	
20-26	Main metering jet gasket	
20-31	Needle seat gasket	
20-51	Step-up jet gasket	
20-52	STEP-UP PISTON GASKET	
21-49S	Float and lever assembly	
24-23	FLOAT LEVER PIN	
25-82S	NEEDLE AND SEAT ASSEMBLY	
30A-37	Idle adjustment screw	
39-11	VALVE ATTACHING SCREW	(4)
48-103	PUMP JET	
61-84	Idle adjustment screw spring	
61-135	STEP-UP PISTON SPRING	
61-144	PUMP SPRING	
61-244	Dash-pot adjustment screw spring	
61-372	Dash-pot arm spring	
63-24	FLOAT LEVER PIN RETAINER	
63-37	PUMP CYLINDER BALL RETAINER	

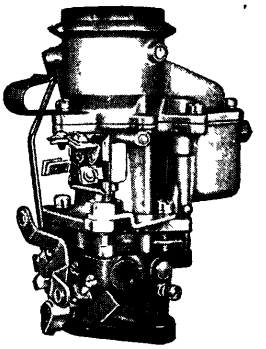
Part No.	PART NAME	
63-46	Pump spring retainer	
64-60S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49-120)	
64-74S	Dash-pot plunger and rod assembly	
86-10	Dash-pot lifter link attaching screw lock washer (D6P2)	
86-15	Flange stud lock washer	(2)
101-32	Dash-pot lifter link attaching screw (D6P2)	
101-141	Dash-pot adjustment screw	
101-145S	Body flange attaching screw and washer assembly	
101-150S	Air horn attaching screw and washer assembly	(4)
101-164	Throttle lever clamp screw	
101-279	Throttle adjusting screw	
105A-13	Flange nut	(2)
105A-28	Clamp nut	
114 50	Dash-pot pick up arm (D6P1)	
114-81	Dash-pot pick up arm (D6P2)	
115-30	FAST IDLE ROD	
116-13	PUMP INTAKE CHECK BALL	
116-18	PUMP DISCHARGE CHECK BALL	
117-60	PUMP LINK	
117-70	PUMP LIFTER	
117-103	Dash-pot lifter link (D6P1)	
117-104	Dash-pot link (D6P1)	
117-144	Dash-pot lifter link (D6P2)	
121-68	Body flange gasket (D6P1) (Sup by 121-159)	(2)
121-90	BODY GASKET	
121-159	BODY FLANGE GASKET	(2)
123-31S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
145-17	MAIN VENT TUBE	
149 41S	STEP-UP JET ASSEMBLY	
150-111	Dash pot pin	
150A-13	PIN SPRING	(2)
160-46S	STEP-UP PISTON, PLATE AND ROD ASSEMBLY	
183 21	Insulator (D6P1) (Sup by 183-63)	
183 63	Insulator	
224-11S	MAIN METERING JET ASSEMBLY—STANDARD	
224 17S	Main metering jet assembly—1 size lean	
224-18S	Main metering jet assembly—2 sizes lean	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

PLYMOUTH D6U1
December, 1952
Revised July, 1957

(Standard Clutch, Standard Transmission with Overdrive)



PLYMOUTH
MODELS "P-24", "P-25"
1953-1954

Use D6H2 and 195-63U to replace D6U1

BB DOWN-DRAFT CARBURETER—**MODEL D6U1**

CARBURETER SPECIFICATIONS

For Plymouth Six Cylinder Engine: 3¼ Inch Bore, 4⅜ Inch Stroke

Dimensions: Flange size, 1½ inch S. A. E.
Throttle bore, 1-9/16 inch.
Main venturi, 1¼ inch I. D.

Float Setting: See adjustments.

Vents: Outside, none. Inside, balance vent tube.

Gasoline Intake: Size No. 44 (.086 inch) drill in needle seat.

Idle Orifice Tube: Jet, size .0276 inch.
Idle passage air bleed (in air horn), size .065 inch.
Restriction in body, size .056 to .057 inch diameter.

Idle Port: Upper port, slot type, length .149 inch; width, .030 inch.

Idle Port Opening: Top of port located .118 to .122 inch above top edge of valve, with valve tightly closed.

Lower Port (For Idle Adjustment Screw): Size, .053 to .057 inch diameter.

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture turn screw out. Idle engine between 450-500 r.p.m.

Main Metering Jet: Calibrated to flow 287 cc per minute. (Do not gauge for size. If in doubt, replace with new part.)

Main Vent: Through diffuser (air bleed inside bowl) size .0315 inch drill.

Main Vent Tube: Side holes, 6—.0354 inch diameter.

Step-Up Jet: Size .0295 inch diameter.

Accelerating Pump: Pump intake passage, ball check seat, size .115 to .120 inch diameter.
Pump discharge passage, restriction (under ball check), size .062 to .065 inch diameter in body.
Pump (discharge) jet, size .0276 inch drill.

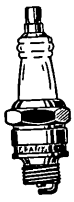
Pump Adjustment: See adjustments.

Choke: Butterfly type, with poppet valve. Inter-connected to open throttle valve to fast idle position when choke is used.

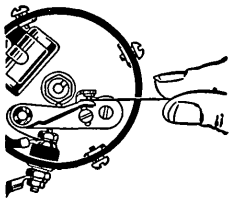
Vacuum Spark Port: Slot (round end) type. Size .040 by .110 inch. Bottom of port, .021 to .027 inch above top edge of valve, with valve tightly closed.

Motor Tune-Up—Be Accurate!

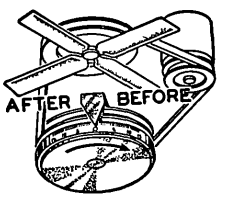
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



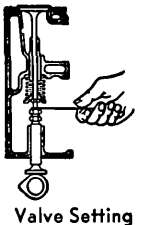
Spark Plug Gap .035"



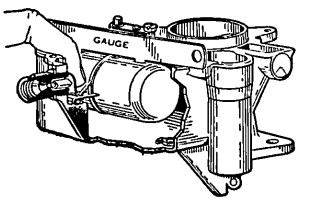
Breaker Point Setting .020"



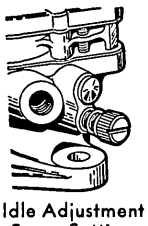
Ignition Timing Breaker Points to Open: 2° B. T. C.



Valve Setting (Hot) Intake .010" Exhaust .010"



Float Setting 5/64 Inch (Use Gauge T109-50)



Idle Adjustment Screw Setting ½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: This adjustment must be made with the bowl cover gasket and float pin retainer removed. Hold the lip on float arm against the seated intake needle, making sure the float pin is at the bottom of its guide slots. The distance from the top surface of the body casting to the top of the float should be 5/64 inch (gauge T109-50). To adjust bend lip on float arm.

PUMP ADJUSTMENT: Remove air horn assembly, back out throttle adjustment screw and be sure pump operating link is in center hole of throttle shaft arm. Place Universal pump travel gauge T109-117S on edge of bowl cover so that lip of gauge extends over top of plunger shaft. With throttle valve seated turn knurled nut of gauge until lip contacts top of plunger shaft. Take reading indicated on gauge. Repeat with throttle valve wide open and plunger pushed to bottom of cylinder. The difference in reading obtained should be "22" (22/64") plunger travel. Adjust by bending horizontal portion of pump lifter link.

Pump stroke adjustable for high or low temperatures. Set to longest stroke for cold weather, shorter stroke for hot weather driving.

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OVERDRIVE KICKDOWN SWITCH ADJUSTMENT: With throttle valve in wide open position, adjust hex nuts on switch to have 1/64 inch to 3/64 inch clearance between kickdown lever and switch stem guide

EXCESSIVE RICHNESS above 50 miles per hour may be caused by a clogged main vent tube After removal of rivet plug beneath float bowl with tool No T109-210 main vent tube can be removed and a new tube inserted with tool No T109-195 Care must be exercised in inserting new tube which must seat tightly Use new rivet to complete the installation

MAXIMUM ECONOMY and performance are secured only when breaker points, spark plugs, valves and motor timing are set to manufacturer's specifications After motor is properly tuned the following should also be done to insure satisfactory performance and economy

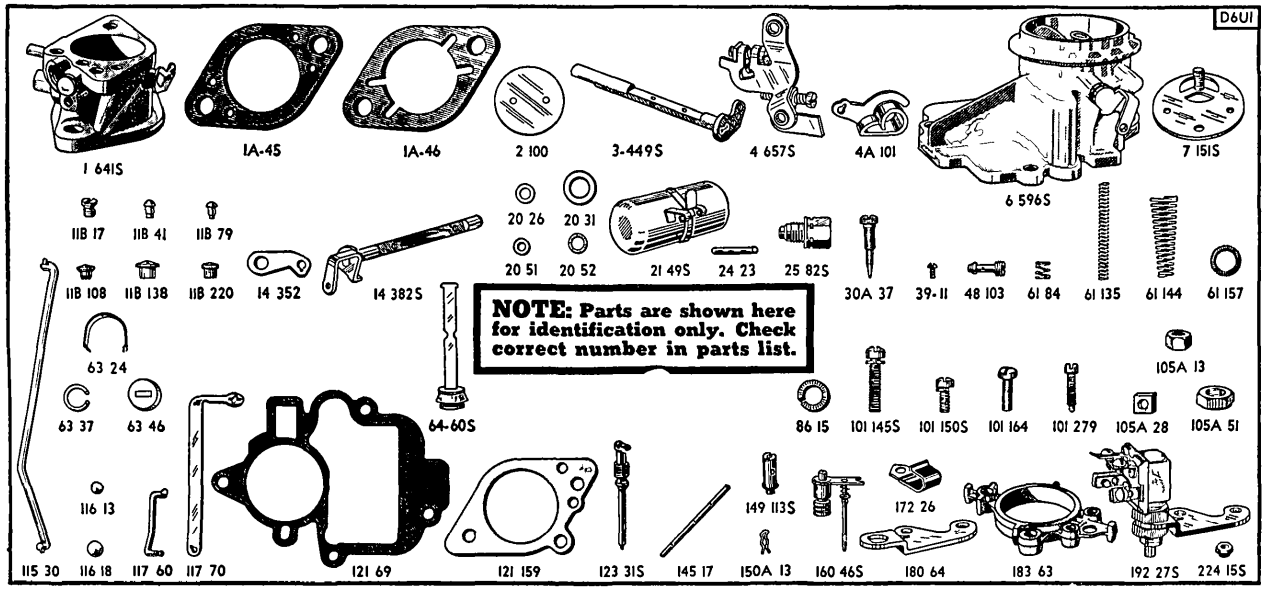
(a) Float level must be set as above

(b) Step-up rod in step-up jet must seat and move freely When reassembling, jet must be screwed in tight against seat

(c) Step-up piston in body casting should not bind and must be free of dirt

(d) Main metering jet can be replaced with leaner than standard metering jets, for altitude

CAUTION: Do not attempt to gauge metering jets with drills These jets have been flow-tested to insure correct fuel flow



Plymouth—1953-1954—Carbureter D6U1

WHEN SERVICING, USE GASKET ASSORTMENT No 203, REPAIR PACKAGE No 1513A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

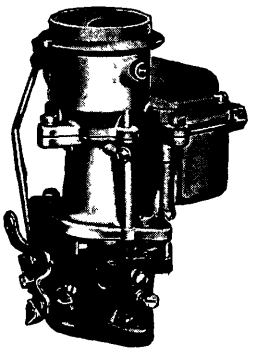
Part No	PART NAME	
1-641S	Body flange assembly	
1A-45	Flange gasket—for use with governor	
1A-46	FLANGE GASKET—FOR USE WITHOUT GOVERNOR	
2-100	Throttle valve	
3-449S	Throttle shaft and arm assembly	
4-657S	Throttle lever assembly	
4A-101	Fast idle cam	
6-596S	Air horn assembly	
7-151S	Choke valve assembly	
11B-17	Pump check plug	
11B-41	Rivet plug	
11B-79	Rivet plug	(2)
11B-108	IDLE PORT RIVET PLUG	
11B-138	PUMP JET RIVET PLUG	
11B-220	HIGH SPEED PASSAGE PLUG	
14-352	Choke lever—loose	
14-382S	Choke lever and shaft assembly	
20 26	Gasket	
20 31	Needle seat gasket	
20-51	Step up jet gasket	
20-52	STEP UP PISTON GASKET	
21-49S	Float and lever assembly	
24-23	Float lever pin	
25 82S	NEEDLE AND SEAT ASSEMBLY	
30A-37	Idle adjustment screw	
39-11	Valve attaching screw	(4)
48-103	PUMP JET	
61-84	Idle adjustment screw spring	
61-135	STEP UP PISTON SPRING	
61-144	PUMP SPRING (CONICAL)	
61-157	Plunger spring	
63-24	FLOAT LEVER PIN RETAINER	
63-37	PUMP INTAKE CHECK BALL RETAINER	

Part No.	PART NAME	
63 46	Pump spring retainer	
64 60S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49 120)	
86-15	Flange stud lock washer	(2)
101-145S	Body flange attaching screw a d wasner assembly	(3)
101-150S	Air horn attaching screw and washer assembly	(4)
101 164	Clamp screw	
101-279	Throttle lever adjusting screw	
105A-13	Flange nut	(2)
105A-28	Throttle lever clamp nut	
105A-51	Kickdown switch bracket attaching nut	(2)
115-30	Fast idle rod	
116-13	PUMP INTAKE CHECK BALL	
116 18	PUMP DISCHARGE CHECK BALL	
117-60	PUMP LINK	
117-70	PUMP LIFTER LINK	
121 69	BODY GASKET	
121 159	BODY FLANGE GASKET	(2)
123-31S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
145 17	MAIN VENT TUBE	
149 41S	Step up jet assembly (Sup by 149 113S)	
149 113S	STEP UP JET ASSEMBLY	
150A-13	PIN SPRING	
160 46S	STEP UP PISTON PLATE AND ROD ASSEMBLY	
172 26	Cable clip	
180-64	Kickdown switch bracket	
183-63	Insulator	
192-27S	Kickdown switch assembly—complete	
224-11S	*Main metering jet assembly—2 sizes lean	
224 12S	Main metering jet assembly—1 size lean	
224 15S	MAIN METERING JET ASSEMBLY—STANDARD	
224-17S	Main metering jet assembly—1 size lean (Sup by 224 12S)	

*224-11S used as standard main metering jet on carbureters code dated B3 and earlier

NOTE **Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used**

(Without Throttle Restrictor)



PLYMOUTH
"TAXICAB" MODELS
"P-22", "P-23" — 1952
"P-24" — 1953
"P-25" — 1954

(D6H2 can also be used)

BB DOWN-DRAFT CARBURETER **No. D6R1**

CARBURETER SPECIFICATIONS

For Plymouth Six Cylinder Engine: 3¼ Inch Bore, 4⅜ Inch Stroke

Dimensions: Flange size, 1½ inch S. A. E.
Throttle bore, 1-9/16 inch.
Main venturi, 1¼ inch I. D.

Float Setting: Top of float 5/64 inch plus or minus 1/64 inch below top surface of carbureter body casting.

Vents: Outside, none. Inside balance vent tube.

Gasoline Intake Needle: Triangular, horizontal. No. 44 (.086 inch) drill in needle seat.

Idle Orifice Tube: Jet size, .0276 inch. Idle passage air bleed (in air horn), size .065 inch. Restriction in body, size .056 to .057 inch diameter.

Idle Port: Upper port, slot type; length .149 inch; width, .030 inch. Top of port located .118 to .122 inch above top edge of valve. Lower port: (For Idle Adjustment Screw) Size, .053 to .057 inch diameter.

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture, turn screw out. Idle engine between 450-500 r.p.m.

Main Metering Jet: Calibrated to flow 287 cc per minute. (Do not gauge for size. If in doubt, replace with new part.)

Main Vent: Through diffuser (air bleed inside bowl) size .0315 inch drill.

Main Vent Tube: Side holes, 6—.0354 inch diameter.

Step-Up Jet: Size .0295 inch diameter.

Accelerating Pump: Type, delayed action. Stroke, summer setting (inner hole, short stroke). Intermediate setting (center hole). Winter setting (outer hole, long stroke).
Pump intake passage, ball check seat, size .115 to .120 inch diameter.
Pump discharge passage; restriction (under ball check), size .062 to .065 inch diameter in body.
Pump (discharge) jet, size .0276 inch drill.

Pump Adjustment: 22/64" plunger travel (center hole). Use gauge No. T109-117S.

Choke: Butterfly type, with poppet valve. Inter-connected to open throttle valve to fast idle position when choke is used.

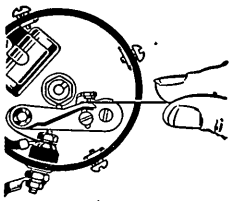
Vacuum Spark Port: Slot (round end) type. Size .040 by .110 inch. Bottom of port, .021 to .027 inch above top edge of valve.

Motor Tune-Up—Be Accurate!

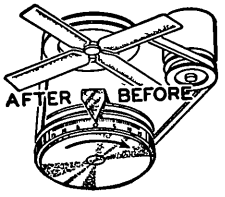
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



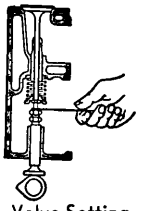
Spark Plug Gap .035"



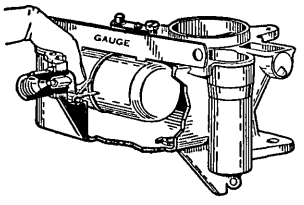
Breaker Point Setting .020"



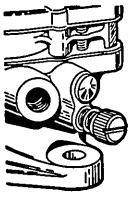
Ignition Timing Breaker Points to Open: 2° B.T.C.



Valve Setting (Hot) Intake .010" Exhaust .010"



Float Setting 5/64 Inch (Use Gauge T109-50)



Idle Adjustment Screw Setting ½ to 1½ Turns Open

CABURETER ADJUSTMENTS

If carbureter loads up after considerable service, check float level. Wear on lip of float lever will raise float level. Before adjusting float, be sure float lever pin is firmly seated. Reset float level by bending lip of float lever away from needle to raise level, or bend lip toward needle to lower float level. Bend vertical lip of float only.

If motor stalls while idling, set throttle lever adjusting screw so motor runs between 450-500 r.p.m. Then set idle adjustment screw to specifications. If these adjustments do not correct the trouble, remove idle orifice tube and plug assembly. Clean tube and passages with compressed air.

If acceleration is not satisfactory remove pump jet and clean with compressed air. However, it is usually advisable to replace the pump jet, as its cost is nominal. All jets must be seated gasoline tight. Poor acceleration may be due to damaged or worn plunger leather in accelerating pump, sediment in pump cylinder or clogged intake ball check at bottom of pump cylinder and discharge ball check in discharge passage. If plunger is removed from cylinder, use care in installing to avoid damage to plunger leather.

Correct air fuel ratio is provided by a "balance tube" in the air horn. The balance tube should be checked each time the carbureter is serviced to see that the passage is open. The

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CARBURETER
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object of a balanced carbureter is to provide a constant air fuel ratio regardless of type, size or condition of air cleaner Should the cleaner become clogged the capacity will be reduced but the air-fuel mixture ratio will not be changed

Excessive richness above 50 miles per hour may be caused by a clogged main vent tube After removal of rivet plug beneath float bowl with tool No T109-210, main vent tube can be removed and a new tube inserted with tool No T109-195 Care must be exercised in inserting new tube which must seat tightly Use new rivet to complete the installation

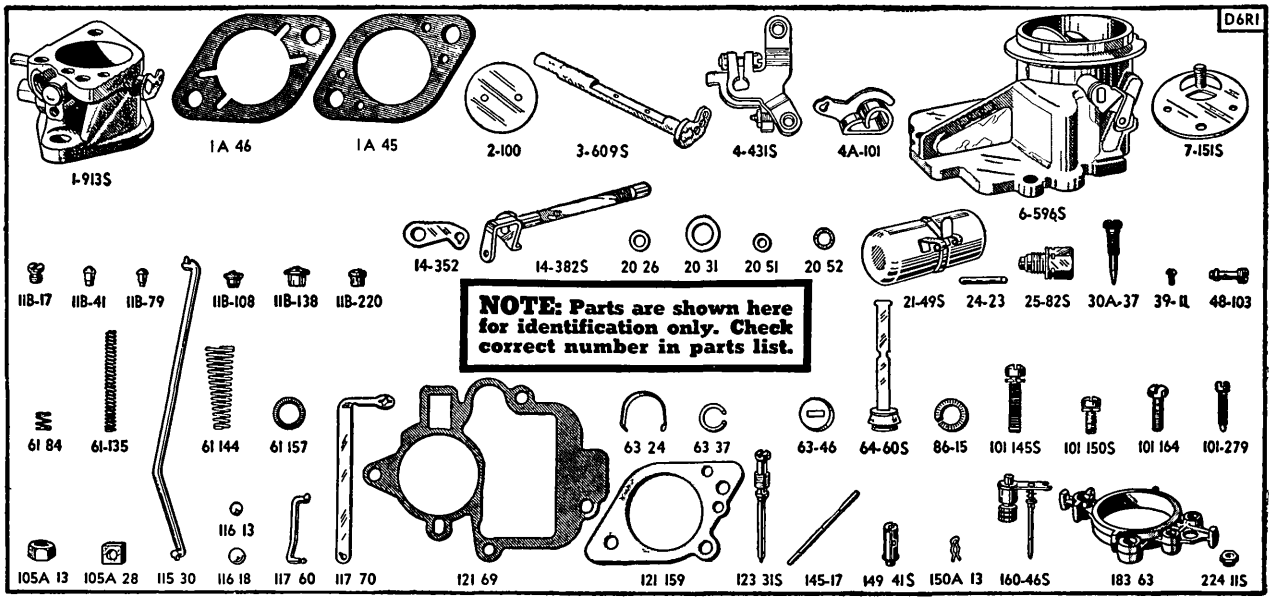
Pump Adjustment Remove air horn assembly, back out throttle adjustment screw and be sure pump operating link is in center hole of throttle shaft arm Place Universal pump travel gauge T109-117S on edge of bowl cover so that lip of gauge extends over top of plunger shaft Turn knurled nut of gauge until lip contacts top of plunger shaft with throttle valve seated Take reading indicated on gauge Repeat with throttle valve wide open and plunger pushed to bottom of cylinder The difference in reading obtained should be "22" (22/64") plunger travel

Adjust by bending horizontal portion of pump lifter link Pump stroke adjustable for high or low temperatures Set to longest stroke for cold weather, shorter stroke for hot weather driving

Maximum economy and performance are secured only when breaker points, spark plugs valves and motor timing are set to manufacturer s specifications After motor is properly tuned the following should also be done to insure satisfactory performance and economy

(a) Float level must be set as above
(b) Step-up rod in step-up jet must seat and move freely When reassembling jet must be screwed in tight against seat
(c) Step-up piston in body casting should not bind and must be free of dirt
(d) Main metering jet can be replaced with leaner than standard metering jets, for altitude

CAUTION· Do not attempt to gauge metering jets with drills These jets have been flow-tested, to insure correct fuel flow



Plymouth—1952-1954—Carbureter No. D6R1

WHEN SERVICING, USE GASKET ASSORTMENT No 203, REPAIR PACKAGE No 1513A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-913S	Body flange assembly	
1A-45	Flange gasket—for use with governor	
1A-46	FLANGE GASKET—FOR USE WITHOUT GOVERNOR	
2-100	Throttle valve	
3-609S	Throttle shaft and arm assembly	
4-431S	Throttle lever assembly	
4A-101	Fast idle cam	
6-596S	Air horn assembly	
7-151S	Choke valve assembly	
11B-17	Pump check plug	
11B-41	Rivet plug	
11B-79	Rivet plug	(2)
11B-108	IDLE PORT RIVET PLUG	
11B-138	PUMP JET RIVET PLUG	
11B-220	HIGH SPEED PASSAGE PLUG	
14-352	Choke lever—loose	
14-382S	Choke lever and shaft assembly	
20-26	Gasket	
20-31	Needle seat gasket	
20-51	Step up jet gasket	
20-52	STEP UP PISTON GASKET	
21-49S	Float and lever assembly	
24-23	Float lever pin	
25-82S	NEEDLE AND SEAT ASSEMBLY	
30A-37	Idle adjustment screw	
39-11	Valve attaching screw	(4)
48-103	PUMP JET	
61-84	Idle adjustment screw spring	
61-135	STEP UP PISTON SPRING	
61-144	PUMP SPRING (CONICAL)	
61-157	Plunger spring	

Part No	PART NAME	
63-24	FLOAT LEVER PIN RETAINER	
63-37	PUMP INTAKE CHECK BALL	
63-46	Pump spring retainer	
64-60S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49-120)	
86-15	Flange stud lock washer	(2)
101-145S	Body flange attaching screw and washer assembly	(3)
101-150S	Air horn attaching screw and washer assembly	(4)
101-164	Clamp screw	
101-279	Throttle adjusting screw	
105A-13	Flange nut	(2)
105A-28	Clamp nut	
115-30	Fast idle rod	
116-13	PUMP INTAKE CHECK BALL	
116-18	PUMP DISCHARGE CHECK BALL	
117-60	PUMP LINK	
117-70	PUMP LIFTER LINK	
121-69	BODY GASKET	
121-159	BODY FLANGE GASKET	(2)
123-31S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
145-17	MAIN VENT TUBE	
149-41S	Step up jet assembly (Sup by 149 113S)	
149-113S	STEP UP JET ASSEMBLY	
150A-13	PIN SPRING	
160-46S	STEP UP PISTON PLATE AND ROD ASSEMBLY	
183-63	Insulator	
224-11S	*Main metering jet assembly—2 sizes lean	
224-12S	Main metering jet assembly—1 size lean	
224-15S	MAIN METERING JET ASSEMBLY—STANDARD	
224 17S	Main metering jet assembly—1 size lean (Sup by 224 12S)	

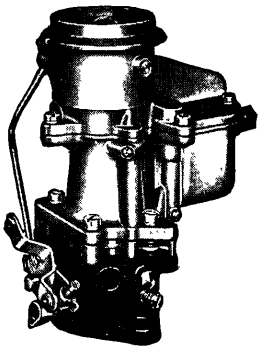
*224-11S used as standard main metering jet on carbureters code dated B3 and earlier

NOTE· Figures in parentheses indicate number of pieces used in carbureter. When no figure is shown, only one is used

CARBURETERS

D6N1-D6N2

(With Throttle Restrictor)



Cut shows D6N2 Carbureter

PLYMOUTH "CITY TRAFFIC"
"P-17", "P-18"—1949
"P-19", "P-20"—1950
"P-22", "P-23"—1951-52
"P-24"—1953
"P-25"—1954

B-B DOWN-DRAFT CARBURETERS—**MODELS D6N1-D6N2**

CARBURETER SPECIFICATIONS

For Plymouth Six Cylinder Engine: 3¼ Inch Bore, 4⅜ Inch Stroke

Dimensions: Flange size, 1½ inch S. A. E. Throttle bore, 1-9/16 inch (39.69 mm). Main venturi, 1¼ inch (31.75 mm) I. D.

Float Setting: Top of float 5/64 inch (1.98 mm) plus or minus 1/64 inch (.397 mm) below top surface of carbureter body casting.

Vents: Outside, none. Inside balance vent .218 inch (5.54 mm) diameter.

Gasoline Intake Needle: Triangular, horizontal. (Early production) No. 44 (2.18 mm) drill. (Late production) No. 48 (1.93 mm) drill.

Idle Orifice Tube: Jet size, .0276 inch (.70 mm). Idle passage air bleed (in air horn), size .065 inch (1.65 mm). Restriction in body, size .054 to .055 inch (1.37 to 1.39 mm) diameter.

Idle Ports: Upper port, slot type; length .149 inch (3.789 mm); width, .030 inch (.76 mm). Top of port located .118 to .122 inch (2.997 to 3.099 mm) above top edge of valve. Lower port, (for idle adjustment screw) size, .053 to .057 inch (1.35 to 1.45 mm) diameter.

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture, turn screw out. Idle engine between 450-500 r.p.m.

Main Metering Jet: Calibrated to flow 256 cc per minute. (Do not gauge for size. If in doubt, replace with new part.)

Main Vent: Through diffuser (air bleed inside bowl) size .0315 inch (.80 mm) drill.

Main Vent Tube: Side holes, 6—.0354 inch diameter.

Step-Up Jet: No. 71 (.66 mm) drill size.

Accelerating Pump: Type, delayed action. Stroke, summer setting (inner hole, short stroke). Intermediate setting (center hole). Winter setting (outer hole, long stroke). Pump intake passage, ball check seat, size .107 to .112 inch (2.72 to 2.845 mm) diameter. Pump discharge passage; restriction (under ball check), size .062 to .065 inch (1.58 to 1.65 mm) diameter in body. Pump (discharge) jet, size .0276 inch (.70 mm) drill.

Pump Adjustment: 22/64 inch (8.731 mm) plunger travel (center hole). Use gauge No. T109-117S.

Choke: Butterfly type, with poppet valve. Inter-connected to open throttle valve to fast idle position when choke is used.

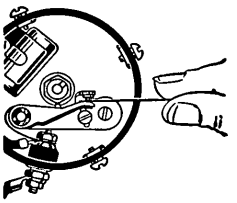
Vacuum Spark Port: Slot (round end) type. Size .040 by .110 inch (1.016 to 2.794 mm). Bottom of port, .021 to .027 inch (.533 to .686 mm) above top edge of valve.

Motor Tune-Up—Be Accurate! Always Use Feeler Gauges!

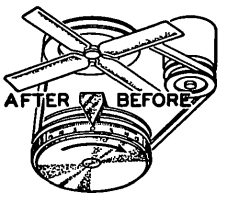
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



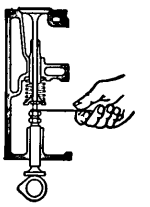
Spark Plug Gap .035"



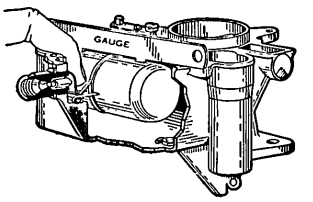
Breaker Point Setting .020"



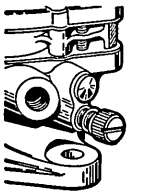
Ignition Timing Breaker Points to Open 2° B.T.C.



Valve Setting (Hot) Intake .010" Exhaust .010"



Float Setting (Use Gauge) 5/64 Inch



Idle Adjustment Screw Setting ½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

The ignition timing should be advanced to 2° B.T.D.C. with most standard grade fuels. If too much detonation is encountered with a given fuel, the timing may be retarded sufficiently so that a very slight ping is audible when accelerating from 10 to 30 m.p.h. with wide open throttle.

If carbureter loads up after considerable service, check float level. Wear on lip of float lever will raise float level. Before adjusting float, be sure float lever pin is firmly seated. Reset float level by bending lip of float lever away from needle to raise level, or bend lip toward needle to lower float level. Bend vertical lip of float only.

If motor stalls while idling, set throttle lever adjusting screw so motor runs between 450-500 r.p.m. Then set idle adjustment screw to specifications. If these adjustments do not correct the trouble, remove idle orifice tube and plug assembly. Clean tube and passages with compressed air.

Correct air fuel ratio is provided by a "balance tube" in the air horn. The balance tube should be checked each time the

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CARBURETER
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carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type, size or condition of air cleaner Should the cleaner become clogged the capacity will be reduced but the air fuel mixture ratio will not be changed

Pump Adjustment Remove air horn assembly, back out throttle adjustment screw and be sure pump operating link is in center hole of throttle shaft arm Place Universal pump travel gauge T109-117S on edge of bowl cover so that lip of gauge extends over top of plunger shaft Turn knurled nut of gauge until lip contacts top of plunger shaft with throttle valve seated Take reading indicated on gauge Repeat with throttle valve wide open and plunger pushed to bottom of cylinder The difference in reading obtained should be "22' (22/64") plunger travel

Adjust by bending horizontal portion of pump lifter link Pump stroke adjustable for high or low temperatures Set to longest stroke for cold weather, shorter stroke for hot weather driving

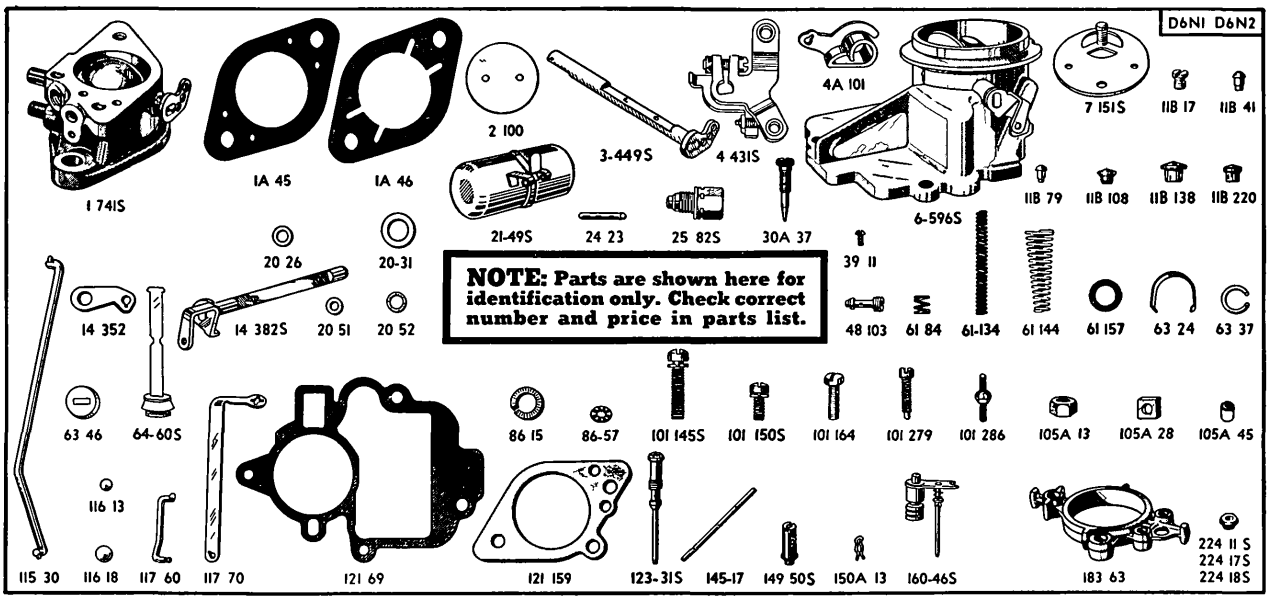
Maximum economy and performance are secured only when breaker points spark plugs, valves and motor timing are set to manufacturer s specifications After motor is properly tuned the following should also be done to insure satisfactory performance and economy

(a) Float level must be set as above

(b) Step-up rod in step-up jet must seat and move freely When reassembling, jet must be screwed in tight against seat

(c) Step-up piston in body casting should not bind and must be free of dirt

CAUTION Do not attempt to gauge metering jets with drills These jets have been flow-tested, to insure correct fuel flow



Plymouth Carbureters Nos. D6N1-D6N2—1949-1954

WHEN SERVICING, USE GASKET ASSORTMENT No 136 (D6N1), No 203 (D6N2); REPAIR PACKAGE No 1543

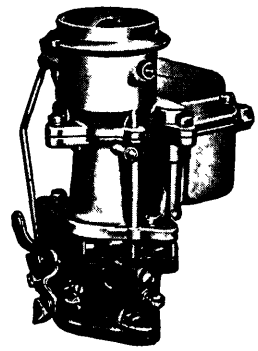
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-656S	Body flange assembly (Sup by 1 741S)	
1-741S	Body flange assembly	
1A-45	Flange gasket, for use with governor	
1A 46	FLANGE GASKET FOR USE WITHOUT GOVERNOR	
2-100	Throttle valve	
3-449S	Throttle shaft and arm assembly (Sup by 3 609S)	
3-609S	Throttle shaft and arm assembly	
4-431S	Throttle lever assembly	
4A-101	Fast idle cam	
6-596S	Air horn assembly	
7-151S	Choke valve assembly	
11B-17	Pump check plug	
11B-41	Rivet plug	
11B-79	Rivet plug	(2)
11B-108	IDLE PORT RIVET PLUG	
11B-138	PUMP JET RIVET PLUG	
11B-220	HIGH SPEED PASSAGE PLUG	
14-352	Choke lever loose	
14-382S	Choke lever and shaft assembly	
20-26	Main metering jet gasket	
20-31	Needle seat gasket	
20-51	Step up jet gasket	
20-52	STEP UP PISTON GASKET	
21-49S	Float and lever assembly (Sup by 21-123S)	
21-123S	Float and lever assembly	
24-23	Float lever pin	
25-77S	Needle and seat assembly	
25 82S	Needle and seat assembly (Sup by 25 77S)	
30A-37	Idle adjustment screw	
39-11	Choke valve attaching screw	(2)
48-103	PUMP JET	
61-84	Idle adjustment screw spring	
61-134	STEP UP PISTON SPRING	
61-144	PUMP SPRING (CONICAL)	
61-157	Plunger spring	
63-24	FLOAT LEVER PIN RETAINER	
63-37	PUMP INTAKE CHECK BALL RETAINER	
63-46	Pump spring retainer	
64-60S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49 120)	
86-15	Flange stud lock washer	(2)
86-57	THROTTLE RESTRICTOR LOCK WASHER	(4)
101-145S	Body flange attaching screw and washer assy	(3)
101-150S	Air horn attaching screw and washer assy	(4)
101-164	Clamp screw	
101-279	Throttle lever adjusting screw	
101-286	THROTTLE RESTRICTOR SCREW	(2)
105A-13	Flange nut	(2)
105A-28	Clamp nut	
105A-45	THROTTLE RESTRICTOR NUT	(4)
115-30	Fast idle rod	
116-13	PUMP INTAKE CHECK BALL	
116-18	PUMP DISCHARGE CHECK BALL	
117-60	PUMP LINK	
117-70	PUMP LIFTER	
121-68	Body flange gasket (Sup by 121 159)	(2)
121-69	BODY GASKET	
121-159	BODY FLANGE GASKET	
123-31S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
145-17	MAIN VENT TUBE	
149-50S	STEP UP JET ASSEMBLY	
150A-13	PIN SPRING	
160-46S	STEP UP PISTON PLATE AND ROD ASSEMBLY	
183-21	Insulator (Sup by 183 63)	
183-63	Insulator	
224-11S	MAIN METERING JET ASSEMBLY STANDARD	
224-17S	Main metering jet assembly 1 size lean	
224-18S	Main metering jet assembly 2 sizes lean	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

MODELS
"P-17", "P-18" — 1949
"P-19", "P-20" — 1950
"P-22", "P-23" — 1951-52
"P-24" 1953, "P-25" 1954

Standard Clutch and Transmission



PLYMOUTH 1949-1954

B-B DOWN-DRAFT CARBURETERS—**MODELS D6H1-D6H2**

CARBURETER SPECIFICATIONS

For Plymouth Six Cylinder Engine: 3¼ Inch Bore, 4⅜ Inch Stroke

Dimensions: Flange size, 1½ inch S. A. E.
Throttle bore, 1-9/16 inch (39.69 mm).
Main venturi, 1¼ inch (31.75 mm) I. D.

Float Setting: Top of float 5/64 inch (1.98 mm) plus or minus 1/64 inch (.397 mm) below top surface of carbureter body casting.

Vents: Outside, none. Inside balance vent .218 inch (5.54 mm) diameter.

Gasoline Intake Needle: Triangular, horizontal. No. 44 (2.18 mm) drill in needle seat.

Idle Orifice Tube: Jet size, .0276 inch (.70 mm). Idle passage air bleed (in air horn), size .065 inch (1.65 mm). Restriction in body, size, .054 to .055 inch (1.37 to 1.39 mm) diameter (D6H1-D6H2 early production); .056 to 0.57 inch (1.42 to 1.44 mm) diameter D6H2 late production).

Idle Ports: Upper port, slot type; length .149 inch (3.789 mm); width, .030 inch (.76 mm).
Top of port located .118 to .122 inch (2.997 to 3.099 mm) above top edge of valve.
Lower port: (For Idle Adjustment Screw) Size, .053 to .057 inch (1.35 to 1.45 mm) diameter.

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture, turn screw out. Idle engine between 450-500 r.p.m.

Main Metering Jet: Calibrated to flow 287 cc per minute. (Do not gauge for size. If in doubt, replace with new part.)

Main Vent: Through diffuser (air bleed inside bowl) size .0315 inch (.80 mm) drill.

Main Vent Tube: Side holes, 6—.0354 inch diameter.

Step-Up Jet: Size .0295 inch diameter.

Accelerating Pump: Type delayed action. Stroke, summer setting (inner hole, short stroke). Intermediate setting (center hole). Winter setting (outer hole, long stroke).
Pump intake passage, ball check seat, size .115 to .120 inch (2.93 to 3.05 mm) diameter.
Pump discharge passage; restriction (under ball check), size .062 to .065 inch (1.58 to 1.65 mm) diameter in body.
Pump (discharge) jet, size .0276 inch (.70 mm) drill.

Pump Adjustment: 22/64" (8.731 mm) plunger travel (center hole). Use gauge No. T109-117S.

Choke: Butterfly type, with poppet valve. Inter-connected to open throttle valve to fast idle position when choke is used.

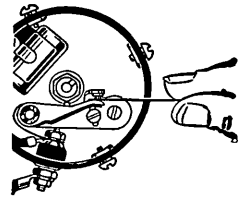
Vacuum Spark Port: Slot (round end) type. Size .040 by .110 inch (1.016 to 2.794 mm). Bottom of port, .021 to .027 inch (.533 to .686 mm) above top edge of valve.

Motor Tune-Up—Be Accurate!

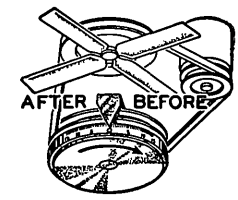
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



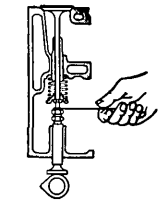
Spark Plug Gap .035"



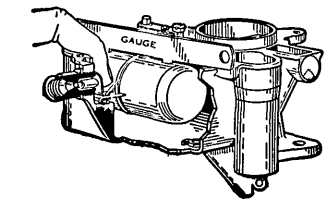
Breaker Point Setting .020"



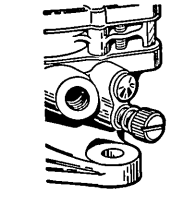
Ignition Timing Breaker Points to Open 2° B.T.C.



Valve Setting (Hot) Intake .010" Exhaust .010"



Float-Setting (Use Gauge) 5/64 Inch



Idle Adjustment Screw Setting ½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

If carbureter loads up after considerable service, check float level. Wear on lip of float lever will raise float level. Before adjusting float, be sure float lever pin is firmly seated. Reset float level by bending lip of float lever away from needle to raise level, or bend lip toward needle to lower float level. Bend vertical lip of float only.

If motor stalls while idling, set throttle lever adjusting screw so motor runs between 450-500 r.p.m. Then set idle adjustment screw to specifications. If these adjustments do not correct the trouble, remove idle orifice tube and plug assembly. Clean tube and passages with compressed air.

If acceleration is not satisfactory remove pump jet and clean with compressed air. However, it is usually advisable to replace the pump jet, as its cost is nominal. All jets must be seated gasoline tight. Poor acceleration may be due to damaged or worn plunger leather in accelerating pump, sediment in pump cylinder or clogged intake ball check at bottom of pump cylinder and discharge ball check in discharge passage. If plunger is removed from cylinder, use care in installing to avoid damage to plunger leather.

Correct air fuel ratio is provided by a "balance tube" in the air horn. The balance tube should be checked each time the

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carbureter is serviced to see that the passage is open. The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type, size or condition of air cleaner. Should the cleaner become clogged, the capacity will be reduced but the air-fuel mixture ratio will not be changed.

Excessive richness above 50 miles per hour may be caused by a clogged main vent tube. After removal of rivet plug beneath float bowl with tool No. T109-43, main vent tube can be removed and a new tube inserted with tool No. T109-195. Care must be exercised in inserting new tube which must seat tightly. Use new rivet to complete the installation.

Pump Adjustment: Remove air horn assembly, back out throttle adjustment screw and be sure pump operating link is in center hole of throttle shaft arm. Place Universal pump travel gauge T109-117S on edge of bowl cover so that lip of gauge extends over top of plunger shaft. Turn knurled nut of gauge until lip contacts top of plunger shaft with throttle valve seated. Take reading indicated on gauge. Repeat with throttle valve wide open and plunger pushed to bottom of cylinder. The difference in reading obtained should be "22" (22/64") plunger travel.

Adjust by bending horizontal portion of pump lifter link. Pump stroke adjustable for high or low temperatures. Set to longest stroke for cold weather, shorter stroke for hot weather driving.

Maximum economy and performance are secured only when breaker points, spark plugs, valves and motor timing are set to manufacturer's specifications. After motor is properly tuned the following should also be done to insure satisfactory performance and economy:

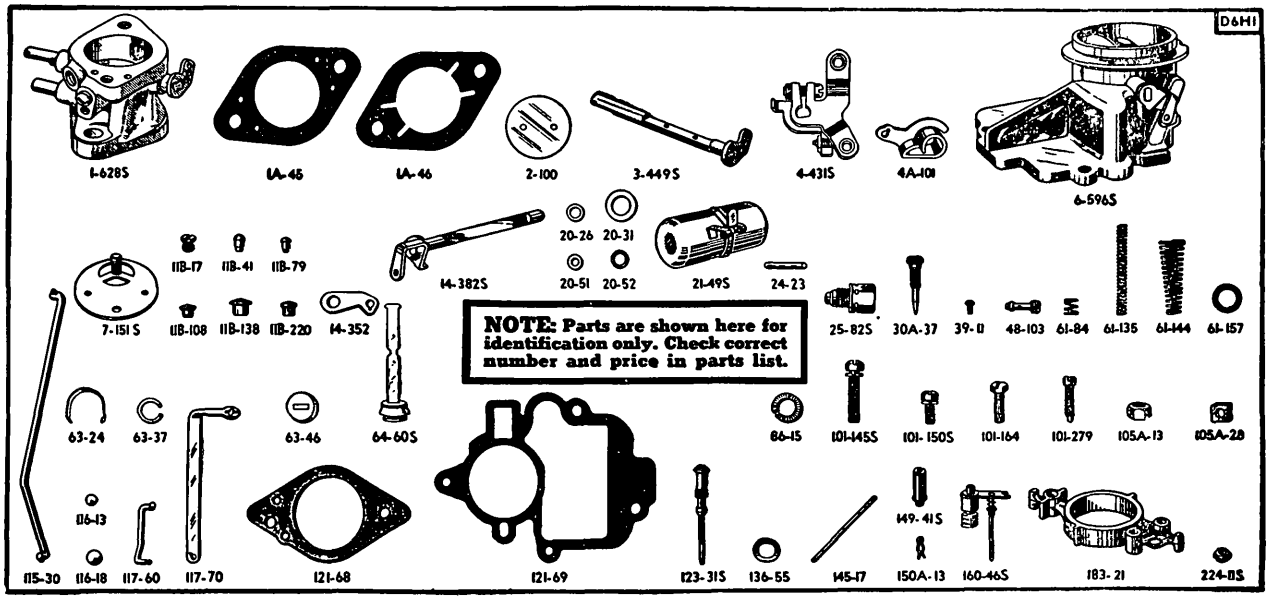
(a) Float level must be set as above.

(b) Step-up rod in step-up jet must seat and move freely. When reassembling, jet must be screwed in tight against seat.

(c) Step-up piston in body casting should not bind and must be free of dirt.

(d) Main metering jet can be replaced with leaner than standard metering jets, for altitude.

CAUTION: Do not attempt to gauge metering jets with drills. These jets have been flow-tested, to insure correct fuel flow.



Plymouth Carbureters Nos. D6H1-D6H2—1949-1954

WHEN SERVICING, USE GASKET ASSORTMENT No. 136 (D6H1), No. 203 (D6H2); REPAIR PKG. No. 1513A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME
1-628S	Body flange assembly (Sup. by 1-641S)
1-641S	Body flange assembly
1A-45	Flange gasket—for use with governor
1A-46	FLANGE GASKET—FOR USE WITHOUT GOVERNOR
2-100	Throttle valve
3-449S	Throttle shaft and arm assembly
4-431S	Throttle lever assembly
4A-101	Fast idle cam
6-596S	Air horn assembly
7-151S	Choke valve assembly
11B-17	Pump check plug
11B-41	Rivet plug
11B-79	Rivet plug (2)
11B-108	IDLE PORT RIVET PLUG
11B-138	PUMP JET RIVET PLUG
11B-220	HIGH SPEED PASSAGE PLUG
14-352	Choke lever—loose
14-382S	Choke lever and shaft assembly
20-26	Gasket
20-31	Needle seat gasket
20-51	Step-up jet gasket
20-52	STEP-UP PISTON GASKET
21-49S	Float and lever assembly
24-23	Float lever pin
25-82S	NEEDLE AND SEAT ASSEMBLY
30A-37	Idle adjustment screw
39-11	Valve attaching screw (4)
48-103	PUMP JET
61-84	Idle adjustment screw spring
61-135	STEP-UP PISTON SPRING
61-144	PUMP SPRING (CONICAL)
61-157	Plunger spring
63-24	FLOAT LEVER PIN RETAINER
63-37	PUMP INTAKE CHECK BALL RETAINER
63-46	Pump spring retainer
64-60S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No. 49-120)
86-15	Flange stud lock washer (2)
101-145S	Body flange attaching screw and washer assy. (2)
101-150S	Air horn attaching screw and washer assy. (4)
101-163	Throttle adjusting screw (Sup. by 101-279)
101-164	Clamp screw
101-279	Throttle lever adjusting screw
105A-13	Flange nut (2)
105A-28	Clamp nut
115-30	Fast idle rod
116-13	PUMP INTAKE CHECK BALL
116-18	PUMP DISCHARGE CHECK BALL
117-60	PUMP LINK
117-70	PUMP LIFTER
121-68	Body flange gasket (Sup. by 121-159)
121-69	BODY GASKET
121-159	BODY FLANGE GASKET (2)
121-310	Air cleaner gasket
123-31S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY
145-17	MAIN VENT TUBE
149-41S	Step-up jet assembly (Sup. by 149-113S)
149-113S	STEP-UP JET ASSEMBLY
150A-13	PIN SPRING
160-46S	STEP-UP PISTON, PLATE AND ROD ASSEMBLY
183-21	Insulator (Sup. by 183-63)
183-63	Insulator
195-45U	*Conversion package
195-50U	★Conversion package
224-11S	†Main metering jet assembly (2 sizes lean)
224-12S	Main metering jet assembly (1 size lean)
224-15S	MAIN METERING JET ASSEMBLY (STANDARD)
224-17S	Main metering jet assembly (1 size lean) (Sup. by 224-12S)

*195-45U may be used to convert a D6H1 to a D6N1 "City Traffic" carbureter with throttle restrictor.

★195-50U may be used to convert a D6H2 to a D6N2 "City Traffic" carbureter with throttle restrictor.

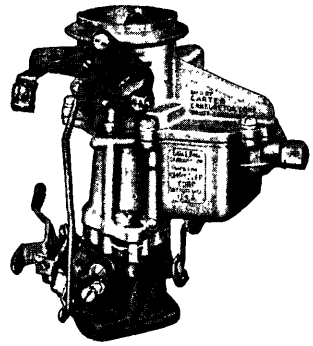
†224-11S used as standard main metering jet on carbureter code dated B3 and earlier.

NOTE: Figures in parentheses indicate number f pieces used in ne carbureter. Where n figure is shown, nly ne is used.

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

PLYMOUTH D6G1
October, 1941
Revised December, 1953

MOTOR SERIAL NUMBER
P-14—1001 and higher
P-15—1001 and higher



PLYMOUTH MODELS "P-14"-1942 "P-15"-1946-1948

B-B DOWN-DRAFT CARBURETER—**MODEL D6G1**

CARBURETER SPECIFICATIONS

For Plymouth Six Cylinder Engine: 3 1/4 Inch Bore, 4 3/8 Inch Stroke

Dimensions: Flange size, 1 1/2 inch S. A. E.
Throttle bore, 1-9/16 inch (39.69 mm).
Main venturi, 1 1/4 inch (31.75 mm) I. D.

Float Setting: Top of float 5/64 inch (1.98 mm) plus or minus 1/64 inch (.397 mm) below top of surface of carbureter body casting.

Vents: Outside, none. Inside balance vent .218 inch (5.54 mm) diameter.

Gasoline Intake Needle: Triangular, horizontal. No. 44 (2.18 mm) drill in needle seat.

Idle Orifice Tube: Jet size, .0295 inch (.75 mm). Idle passage air bleed (in body), size .067 inch (1.70 mm). Idle restriction in body, size .054 to .055 inch (1.37 to 1.39 mm) diameter.

Idle Ports: Upper port, keyhole type: length .160 inch (4.06 mm); width, .030 inch (.76 mm); .045 inch (1.14 mm) diameter hole at top.
Top of port located .118 to .122 inch (3.00 to 3.10 mm) above top edge of valve (early production); .128 to .132 inch (3.251 to 3.353 mm) above top edge of valve (late production).
Lower port: (For Idle Adjustment Screw) Size, .053 to .057 inch (1.35 to 1.45 mm) diameter.

Set Idle Adjustment Screw: 1/2 to 1 1/4 turns open. For richer mixture, turn screw out. Do not idle engine below 300 r.p.m. or 6 miles per hour.

Main Metering Jet: Calibrated to flow 254 to 258 cc per minute. (Do not gauge for size. If in doubt, replace with new part.)

Main Vent: Through diffuser (air bleed inside bowl) size .0315 inch (.80 mm) drill.

Main Vent Tube: Side holes, 6—.0354 inch diameter.

Step-Up Jet: No. 63 (.94 mm) drill size.

Accelerating Pump: Type, delayed action. Stroke, summer setting (inner hole, short stroke). Intermediate setting (center hole). Winter setting (outer hole, long stroke).
Pump intake passage, ball check seat, size .115 to .120 inch (2.93 to 3.05 mm) diameter.
Pump discharge passage; restriction (under ball check), size .062 to .065 inch (1.58 to 1.65 mm) diameter in body.
Pump (discharge) jet, size .0276 inch (.70 mm) drill.

Pump Adjustment: 22/64" (8.73 mm) plunger travel (center hole). Use gauge No. T109-117S.

Choke: Butterfly type, with poppet valve. Inter-connected to open throttle valve to fast idle position when choke is used.

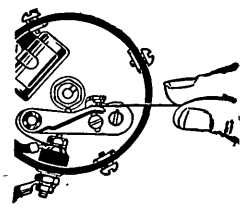
Vacuum Spark Port: Slot (round end) type. Size .040 by .110 (1.016 to 2.794 mm). Bottom of port .003 to .009 inch (.076 to .229 mm) and .019 to .025 inch (.482 to .635 mm) (early production), .021 to .027 inch (.533 to .688 mm) (late production) above top edge of valve.

Motor Tune-Up—Be Accurate!

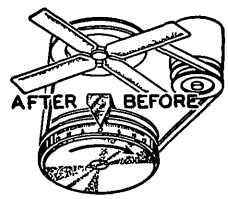
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



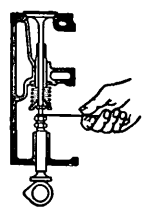
Spark Plug Gap .030"



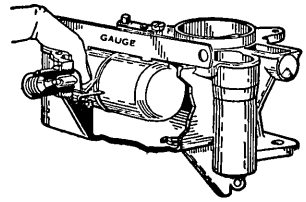
Breaker Point Setting .020"



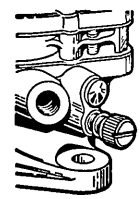
Ignition Timing Breaker Points to Open: 3° B. T. D. C.



Valve Setting (Hot) Intake .008" Exhaust .010"



Float Setting (Use Gauge) 5/64 Inch



Idle Adjustment Screw Setting 1/2 to 1 1/4 Turns Open

CARBURETER ADJUSTMENTS

If carbureter loads up after considerable service, check float level. Wear on lip of float lever will raise float level. Before adjusting float, be sure float lever pin is firmly seated. Reset float level by bending lip of float lever away from needle to raise level, or bend lip toward needle to lower float level. Bend vertical lip of float only.

If motor stalls while idling, set throttle lever adjusting screw so motor runs approximately 300 r. p. m. Then set idle adjustment screw to specifications. If these adjustments do not correct the trouble, remove idle orifice tube and plug assembly. Clean tube and passage with compressed air.

If acceleration is not satisfactory remove pump jet and clean with compressed air. However, it is usually advisable to replace the pump jet, as its cost is nominal. All jets must be seated gasoline tight. Poor acceleration may be due to damaged or worn plunger leather in accelerating pump, sediment in pump cylinder or clogged intake ball check at bottom of pump cylinder and discharge ball check in discharge passage. If plunger is removed from cylinder, use care in installing to avoid damage to plunger leather.

Correct air fuel ratio is provided by a "balance tube" in the air horn. The balance tube should be checked each time the carbureter is serviced to see that the passage is open. The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type, size or condition of air cleaner. Should the cleaner become clogged, the capacity will be reduced but the air-fuel mixture ratio will not be changed.

Excessive richness above 50 miles per hour may be caused by a clogged main vent tube. After removal of rivet plug beneath float bowl with tool No. T109-43, main vent tube can be removed

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and a new tube inserted with tool No T109-195 Care must be exercised in inserting new tube which must seat tightly Use new rivet to complete the installation

Pump adjustment Remove air horn assembly, back out throttle adjustment screw and be sure pump operating link is in center hole of throttle shaft arm Place Universal pump travel gauge T109-117S on edge of bowl cover so that lip of gauge extends over top of plunger shaft Turn knurled nut of gauge until lip contacts top of plunger shaft with throttle valve seated Take reading indicated on gauge Repeat with throttle valve wide open and plunger pushed to bottom of cylinder The difference in reading obtained should be "22" (22/64" plunger travel)

Adjust by bending horizontal portion of pump lifter link

Pump stroke adjustable for high or low temperatures Set to longest stroke for cold weather, shorter stroke for hot weather driving

Maximum economy and performance are secured only when breaker points, spark plugs, valves and motor timing are set to manufacturer's specifications After motor is properly tuned, the following should also be done to insure satisfactory performance and economy

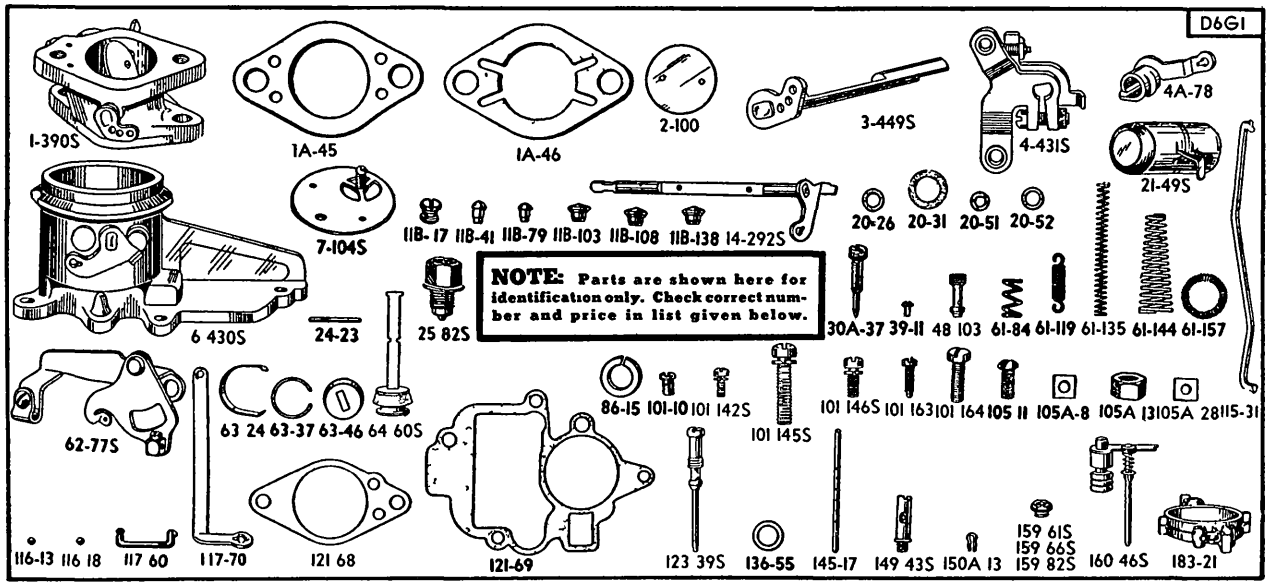
(a) Float level must be set as above

(b) Step-up rod in step-up jet must seat and move freely When reassembling, jet must be screwed in tight against seat

(c) Step-up piston in body casting should not bind and must be free of dirt

(d) Main metering jet can be replaced with leaner than standard metering jets, for altitude

Caution Do not attempt to gauge metering jets with drills These jets have been flow-tested, to insure correct fuel flow



Plymouth Carbureter No. D6G1—1942-1948

WHEN SERVICING, USE GASKET ASSORTMENT No. 136, REPAIR PACKAGE No. 1323C

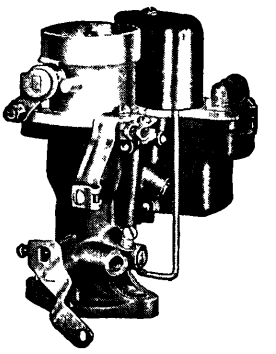
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-390S	Body flange assembly	
1A-45	★Flange gasket—for use with governor	
1A-46	FLANGE GASKET—FOR USE WITHOUT GOVERNOR	
2-100	Throttle valve	
3-449S	Throttle shaft and arm assembly	
4-431S	Throttle lever assembly	
4A-78	Fast idle cam	
6-430S	Air horn assembly (Sup by 6 563S)	
6-563S	Air horn assembly	
7-104S	Choke valve assembly (Sup by 7 151S)	
7-151S	Choke valve assembly	
11B-17	Pump check plug	
11B-41	Rivet plug	
11B-79	Rivet plug	(2)
11B-103	Main vent tube rivet plug (Sup by 11B 220)	
11B-108	IDLE PORT RIVET PLUG	
11B-138	PUMP JET RIVET PLUG	
11B-220	MAIN VENT TUBE RIVET PLUG	
14-292S	Choke control lever and shaft assembly	
20-26	Main metering jet gasket	
20-31	Needle seat gasket	
20 51	Step up jet gasket	
20-52	STEP UP PISTON GASKET	
21-49S	Float and lever assembly	
24-23	Float lever pin	
25-82S	NEEDLE AND SEAT ASSEMBLY	
30A-37	Idle adjustment screw	
39-11	Valve attaching screw	(4)
48-103	PUMP JET—0276" (70 mm)	
61-84	Idle adjustment screw spring	
61-119	Choke pull back spring	
61-135	STEP UP PISTON SPRING	
61-144	PUMP SPRING (CONICAL)	
61-157	Plunger spring	
62-77S	Choke tube bracket assembly	

Part No	PART NAME	
63-24	FLOAT LEVER PIN RETAINER	
63-37	PUMP CHECK RETAINER RING	
63-46	Pump spring retainer	
64-60S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49-120)	
86-15	Flange stud lock washer	(2)
101-10	Wire clamp screw	
101-142S	Choke bracket screw and washer assembly	
101-145S	Flange screw and washer assembly	(2)
101-146S	Air horn screw and washer assembly (Sup by 101-150S)	
101-150S	Bowl cover attaching screw and washer assembly	(4)
101-163	Throttle adjusting screw (Sup by 101 279)	
101-164	Throttle lever clamp screw	
101-279	Throttle lever adjusting screw	
105-11	Choke tube clamp screw	
105A-8	Choke tube clamp nut	
105A-13	Flange stud nut	(2)
105A-28	Throttle lever clamp nut	
115-31	Fast idle rod	
116-13	PUMP CYLINDER BALL	
116-18	PUMP CHECK BALL	
117-60	PUMP LINK	
117-70	PUMP LIFTER LINK	
121-68	BODY FLANGE GASKET	(2)
121-69	BODY GASKET	
123-39S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY 0295" (75 mm)	
145-17	MAIN VENT TUBE	
149-43S	STEP UP JET ASSEMBLY No 63 (94 mm) drill	
150A-13	PIN SPRING	
159-61S	MAIN METERING JET ASSEMBLY—STANDARD	
159-66S	Main metering jet assembly—1 size lean	
159-82S	Main metering jet assembly—2 sizes lean	
160-46S	STEP UP PISTON PLATE AND ROD ASSEMBLY	
183-21	Insulator	

★This gasket to be installed between carbureter and governor when governor is installed Original flange gasket to remain between governor and manifold

NOTE Figures in parentheses indicate number of pieces used in carbureter Where no figure is shown, only one is used



PLYMOUTH MODEL "P-15" 1947

(LIMITED PRODUCTION)

Casting No. 421 on face of flange

W-1 DOWN-DRAFT **CARBURETER No. 574S**

CARBURETER SPECIFICATIONS

For Plymouth Six Cylinder Engine· 3¼ Inch Bore, 4⅜ Inch Stroke

Dimensions: Flange size 1¼ inch S A E
Primary venturi, 11/32 inch I. D
Secondary venturi, 11/16 inch I D.
Main venturi, 1¼ inch I D

Float Level: Distance from float (at free end) to float chamber cover, when needle is seated to be ½ inch plus or minus 1/64 inch

Vents: Outside none Inside balance vent tube above choke valve 13/64 inch I. D.

Gasoline Intake: Square vertical needle Size No 48 drill hole in needle seat.

Low Speed Jet Tube: Vertical jet size, 039 inch diameter.
By-pass in body, size No. 51 drill
Economizer jet, size 0545 to 0555 inch diameter

Idle Ports: Upper port diameter, No 44 drill
Lower port diameter, No 54 drill

Idle Port Opening: Top of lower port 044 to 048 inch above top edge of valve, with valve closed tight

Idle Screw Seat: Size No 52 drill

Set Idle Adjustment Screw 1¼ to 2¼ turns open For richer mixture turn screw out Do not attempt to idle engine below 350 r p m

Outer Nozzle. In primary venturi angle 30° Discharge size 125 inch diameter

Inner Nozzle· (Seats in outer nozzle) 120 inch I D

Nozzle Retainer Plug· Jet size No 31 drill

Metering Rod: Economy step 067 inch diameter Second step tapers to 062 inch diameter Third step tapers to 060 inch diameter Power step 046 inch diameter Length 3⅜ inches

Metering Rod Jet· Size 093 inch diameter

Metering Rod Setting· Use gauge part No T109 25 (2 795 inches)

Accelerating Pump Low pressure type with non adjustable stroke
Discharge jet size No 72 drill
Intake disk check plug size No 62 drill
Discharge disk check plug size No 40 drill

Choke Manual—Butterfly type offset valve

Throttle Valve. Opens to within 0° to 3° from perpendicular

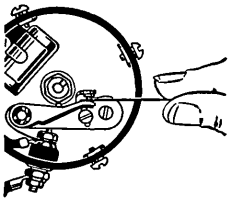
Vacuum Spark Port: Slot type. size, .041 to 125. Bottom of port 000 to 004 above top of valve

Motor Tune-Up—Be Accurate!

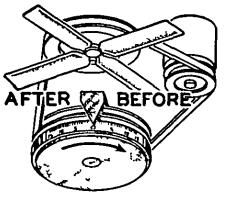
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter



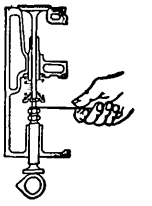
Spark Plug Gap .030"



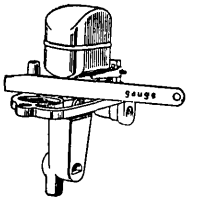
Breaker Point Setting .020"



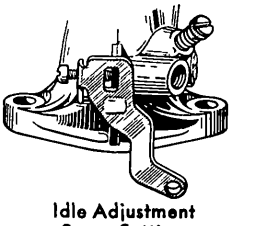
Ignition Timing Breaker Points to Open 3° B. T. D C.



Valve Setting Intake 008" Exhaust 010"



Float Setting (Use Gauge) ½ Inch



Idle Adjustment Screw Setting 1¼ t 2¼ Turns Open

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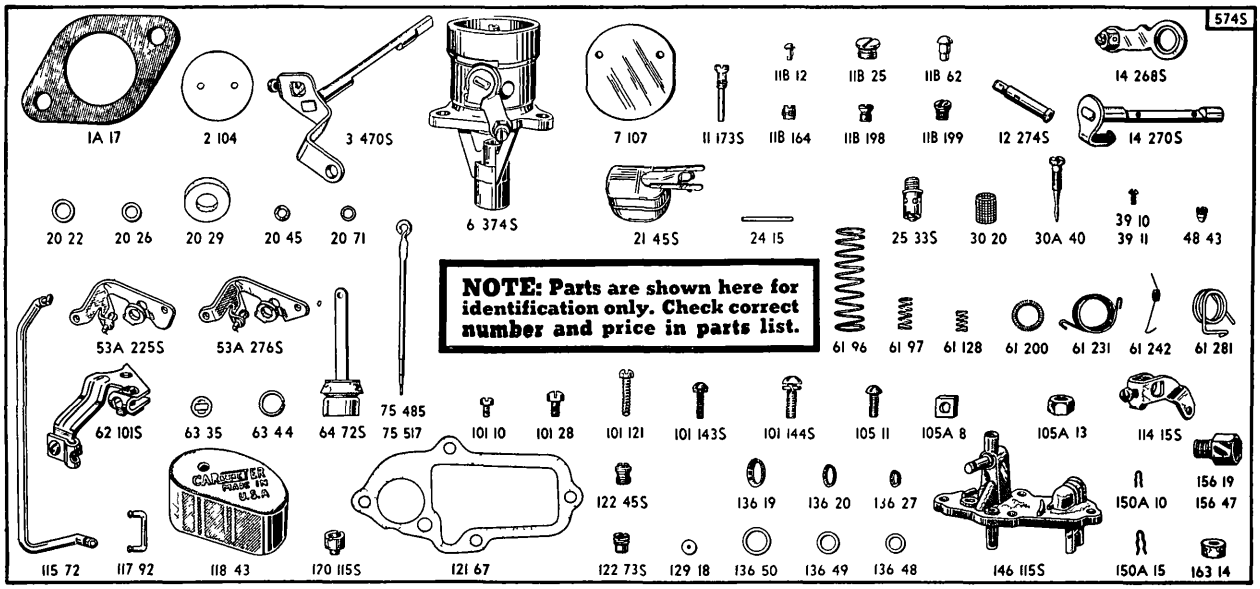
CARBURETER ADJUSTMENTS

If carbureter loads up after considerable service, float level should be checked Wear on lip of float lever will raise float level Float level may be reset by bending lip of float lever down to raise float level or bending lever up to lower float level Only a very slight bend is needed

If motor stalls while idling, reset idle adjustment screw and throttle lever adjusting screw If these adjustments do not correct the trouble, remove low speed jet tube and clean thoroughly with compressed air Examine and see that tube seats gasoline-tight in body casting, top and bottom If not, replace with a new tube of identical specifications NEVER CHANGE A LOW SPEED JET TUBE FROM ONE CARBURETER TO ANOTHER

Increased resistance on foot throttle indicates a clogged pump jet. Pump jet should be removed and cleaned with compressed air, which, in many cases, will remove the dirt or lint However, it is usually advisable to replace the pump jet, as its cost is nominal All jets and ball checks must be seated gasoline-tight

Poor acceleration may be due to damaged or worn plunger leather in accelerating pump, corrosion in pump cylinder, loose or cracked cylinder, cracked plunger cup or bent pump arm (parts which may be replaced at small cost) If plunger is removed from cylinder, always use loading tool in reassembling to avoid damage to plunger leather



Plymouth—1947— Carbureter 574S

WHEN SERVICING, USE GASKET ASSORTMENT No 138A, REPAIR PACKAGE No ‡1089D

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1A-17	FLANGE GASKET	
2 104	Throttle valve	
3-470S	Throttle shaft and lever assembly	
6-374S	Air horn assembly	
7-107	Choke valve	
11-190S	Low speed jet assembly	
11B-12	Rivet plug	(7)
11B-25	Disk check passage plug	
11B-62	Rivet plug	
11B-164	Nozzle plug	
11B-198	Pump jet passage plug	
11B-199	Idle hole passage plug	
12-274S	NOZZLE ASSEMBLY	
14-268S	Choke assembly	
14-270S	Choke shaft and lever assembly	
20-22	Idle hole passage plug gasket	
20-26	Metering rod jet gasket	
20 29	PUMP CYLINDER GASKET—UPPER	
20-45	NOZZLE GASKET	
20-71	AIR HORN GASKET	
21-45S	Float and lever assembly	
24-15	Float lever pin	
25-33S	NEEDLE AND SEAT ASSEMBLY	
30-20	STRAINER GAUZE	
30A-40	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	Throttle valve attaching screw	(2)
48-43	PUMP JET 72 DRILL	
53A 225S	Pump lever assembly (Service)	
53A-276S	Pump lever assembly	
61-96	Pump spring	
61-97	Adjusting screw lock spring	
61-128	Connector rod spring (Use with 115 72)	
61-200	Plunger spring	
61-231	Choke valve spring	
61-242	Metering rod spring	
61-281	Pump connector link spring	
62-101S	Tube clamp assembly	
63-35	Spring retainer (Use with 115 72)	

Part No.	PART NAME	
63-44	Retainer ring	
64-72S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49 129)	
75-485	METERING ROD—STANDARD—067" 067" to 062"-062" to 060" 046"	
75-517	Metering rod—1 size lean—068" 068" to 065"-065" to 064"-049"	
101-10	Wire clamp screw	
101-28	Throttle shaft arm clamp screw	
101-121	Throttle lever adjusting screw	
101-143S	Dust cover attaching screw and washer assembly	
101-144S	Air horn or bowl cover attaching screw and washer assembly	(7)
105-11	Tube clamp screw	(2)
105A-8	Tube clamp nut	(2)
105A-13	Flange nut	(2)
114-15S	THROTTLE SHAFT ARM AND SCREW ASSEMBLY	
115-72	Throttle connector rod (Sup by 115 149)	
115-149	THROTTLE CONNECTOR ROD	
117-92	★Connector link	
118-43	Dust cover	
120-115S	METERING ROD JET ASSEMBLY—093" DR	
121-67	BOWL COVER GASKET	
122-45S	INTAKE DISK CHECK ASSEMBLY	
122-47S	DISCHARGE DISK CHECK ASSEMBLY	
122-73S	Discharge disk check assembly (Sup by 122 47S)	
129-18	METERING ROD DISK	
136 19	†PLUG WASHER (CONICAL) 136-50 (FLAT)	
136-20	†PLUG WASHER (CONICAL) 136-49 (FLAT)	(2)
136-27	†PLUG WASHER (CONICAL) 136-48 (FLAT)	(2)
146-115S	Bowl cover and countershaft assembly	
150A-10	PIN SPRING	(3)
150A-15	PIN SPRING	
156-19	Gas line fitting (brass) optional	
156-47	Gas line fitting (steel)	
163-14	FELT PACKING	
172 21	THROTTLE CONNECTOR ROD RETAINER (Use with 115 149)	

†The use of flat or conical plug washers should be determined by shape of seat in casting

★117 92 available for service (not used in production)

‡Replace 11-173S with 11 190S when servicing 574S on Plymouth

NOTE: Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only ne is used.

PONTIAC
1959
2819S HYDRAMATIC
2820S SYNCROMESH

AFB Four-Bore Down-Draft Climatic® Control Carbureters Nos. 2819S-2820S

CARBURETER SPECIFICATIONS

For Pontiac 8 Cylinder

Dimensions: Flange four bore—4 bolt type
Throttle bore primary, 1-7/16 inch, secondary, 1-11/16 inch I D Primary venturi size, primary side, 7/16 inch; secondary side 11/32 inch I D
Main venturi size, primary side, 1-3/16 inch, secondary side, 1 9/16 inch I D

Vents: Inside (4) in air horn, Outside (5) in air horn, (4) in body

Low Speed Circuit: (Primary side only) jet, size No 68 (031 inch) drill By pass size (2819S) No 53 (0595 inch), (2820S) No 56 (0465 inch) drill Economizer, size (2819S) No 54 (055 inch), (2820S) (049 inch) drill Idle bleed, size (049 inch) drill Idle port (2819S) slot type, length 171 inch, width 030 inch (2820S) keyhole type 171 inch, width 030 inch

Idle Port Opening: 115 to 121 inch above top edge of valve with valve tightly closed

Set Idle Adjustment Screw: 1/2 to 2 turns open. For richer mixture turn screw out Do not idle engine below 480-500 R. P M—Hydramatic Transmission in Drive Range, 550 R P M Std Trans For cars with Air Conditioning idle engine between 500 and 520 R P M Air Conditioner unit off, Transmission in Drive Range

Main Nozzle: Installed permanently DO NOT REMOVE Anti-percolator bleed, primary, size No 64 (036 inch) drill Secondary (drilled hole in venturi assembly) size No 68 (031 inch) drill Auxiliary nozzle well bleed, secondary side only (drilled hole in venturi assembly) size No 57 (043 inch) drill.

Main Vent Tube: (In venturi assembly) Side holes, primary side, 6—size No 68 (031 inch) 4—size No 55 (052 inch) 1—in bottom of tube size No 50 (070 inch) drill Secondary side 3—size No 70 (028 inch) drill

Secondary Initial Discharge: (In venturi assembly, secondary side only) air bleed, size No 69 (02925 inch) drill Discharge port, size No 55 (052 inch) drill

Accelerating Pump: Discharge jet (twin) primary side only, size No 70 (028 inch) drill Intake ball check seat (screw plug), install from inside of bowl size 115 to 120 inch Discharge needle seat size No 50 (070 inch) drill

Choke: Carter Climatic® Control set 1 point rich Butterfly—offset choke valve, primary side only Choke heat suction hole, restriction in body size No 45 (082 inch) drill

Vacuum Spark Port: None—Spark passage open to manifold vacuum.

Motor Tune-Up — Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open:	Float Setting	Idle Adjustment Screw Setting Turns Open

NOTE: These cars are equipped with Hydraulic Valve Lifters — NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

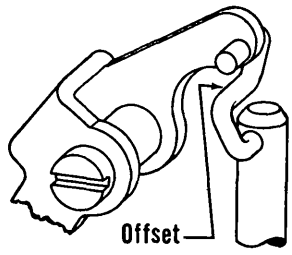
Adjustments Illustrated on Service Adjustment Procedure Form 3695

FLOAT ALIGNMENT: Side of floats parallel to edge of casting. Minimum clearance between lever and air horn lugs without binding. To adjust, bend float lever.

FLOAT LEVEL: (2819S) 21/64 inch (Gauge T109-294); (2820S) 9/32 inch (Gauge T109-126) plus or minus 1/64 inch between top of floats (at outer end) and air horn gasket. NOTE: Gauge should be in line with center of indentation on side of float. To adjust, bend float lever.

FLOAT DROP: 23/32 inch plus or minus 1/16 inch between top of floats (at outer end) and air horn gasket. To adjust, bend stop tabs on float brackets.

PUMP: 33/64 inch plus or minus 1/64 from the top of the bowl cover to the top of the plunger shaft. (Pump connector link installed with offset toward pump lever.) To adjust, bend throttle connector rod.



CHOKE PISTON LEVER ADJUSTMENT: .010 inch (Gauge T109-200) plus or minus .005 between choke lever and stop in piston housing with choke valve closed. To adjust, bend choke connector rod. NOTE: Choke valve should be held closed by applying pressure to piston lever in piston housing.

FAST IDLE LINKAGE ADJUSTMENT: With choke valve tightly closed, and trip lever and cam arm in alignment, align center of fast idle screw with index mark on cam. To adjust, bend fast idle connector rod.

FAST IDLE THROTTLE VALVE CLEARANCE: .026 inch (Gauge T109-189) plus or minus .005 inch between lower edge of valve and bore with adjusting screw on index mark of cam.

FAST IDLE ON CAR: 2200 R. P. M. hot engine with fast idle screw on index mark of cam.

UNLOADER: 1/8 inch (Gauge T109-36) plus or minus 1/64 inch between upper edge of choke valve and inner wall of air horn. To adjust, bend unloader lip on throttle lever.

SECONDARY THROTTLE LEVER ADJUSTMENT: 1. Primary and secondary throttle valves must reach wide open position at the same time. To adjust, bend secondary operating rod. NOTE: At full throttle position secondary throttle valves will be a few degrees from wide open and primary valves will be a few degrees past wide open. 2. With primary and secondary throttle valves tightly closed, there should be .010 inch to .030 inch (Gauge T109-29) between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on secondary lever.

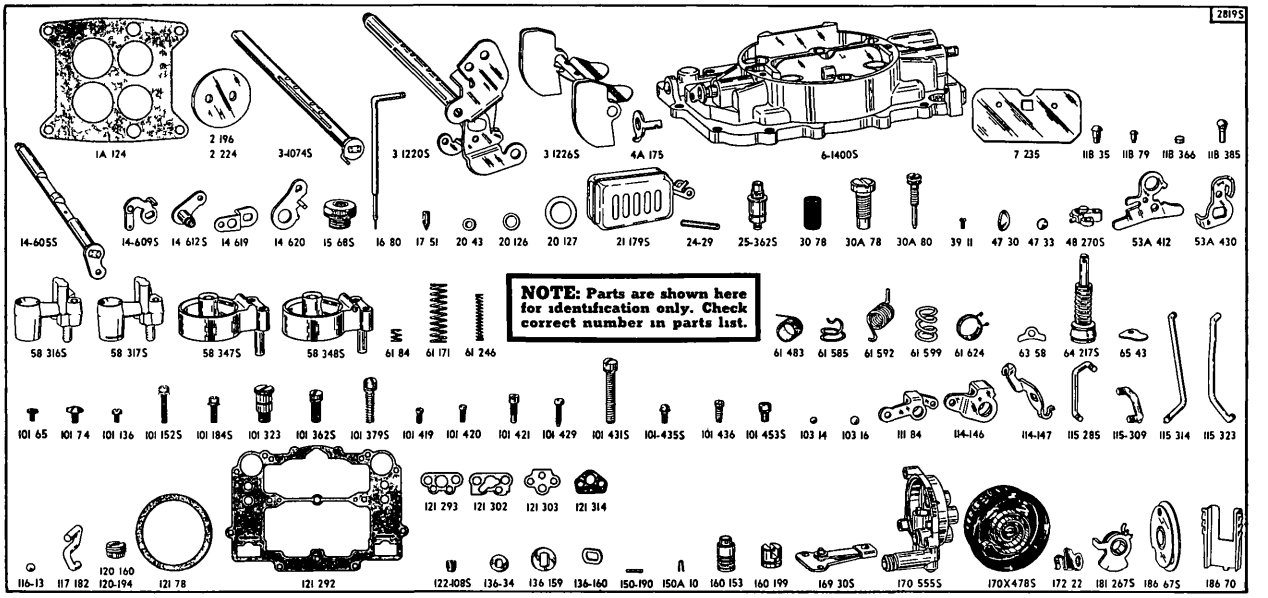
SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: Crack throttle valves and manually open and close the choke valve. Tang on secondary throttle lever should freely engage in notch of lock-out dog. To adjust, bend tang on secondary throttle lever. NOTE: With carburetor level, auxiliary valves must close from wide open position of their own weight.

IDLE SPEED AND MIXTURE ADJUSTMENT (NORMAL ENGINE TEMP.): In making the idle adjustment on the engine, the air adjustment screw is used to adjust idle speed in a similar manner as the throttle speed screw used previously. Turning the air adjustment screw outward increases engine speed, but also leans the mixture supplied to the manifold which must be compensated for by adjustment of the idle mixture adjusting screws.

TOOLS REQUIRED FOR SERVICING CARBURETERS

T109-29	.020" - .030" Wire gauge	T109-189	.026" Wire gauge
T109-36	1/8" Unloader gauge	T109-200	.010" Wire gauge
T109-41	Bending tool	T109-213	Bending tool
T109-126	9/32" Float gauge (2820S)	T109-294	21/64" Float gauge (2819S)

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Pontiac — 1959 — Carbureters Nos. 2819S-2820S

WHEN SERVICING, USE GASKET ASSORTMENT No. 293; RE-CARBURETION KIT No. 1972N (2819S)

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF RE-CARBURETION KIT

Part No.	PART NAME	
1A-124	FLANGE GASKET	
2-195	Primary throttle valve (2820S)	
2-196	Secondary throttle valve	(2)
2-224	—Primary throttle valve (2819S)	(2)
3-1074S	Secondary throttle shaft and lever assembly	
3-1220S	—Primary throttle shaft and lever assembly	
3-1226S	—Auxiliary throttle shaft, valve and weight assembly	
4A-175	Primary throttle shaft dog	
6-1400S	—Air horn assembly	
7-235	—Choke valve	
11B-35	Rivet plug	
11B-79	Rivet plug	(2)
11B-366	Lead plug	(4)
11B-385	Fuel passage and idle port rivet plug	(3)
14-605S	Choke lever and shaft assembly	
14-609S	Choke piston lever, link and pin assembly	
14-612S	Choke shaft and lever assembly (piston housing)	
14-619	—Choke shaft lever	
14-620	—Cam trip lever	
15-68S	—Fuel inlet fitting assembly	
16-80	—STEP UP ROD 067" x 058" (STANDARD) (2819S)	(2)
16-93	—Step up rod 065" x 058"—1 size lean (2820S)	(2)
16-101	—Step up rod 063" x 055"—Standard (2820S)	(2)
16-103	—Step up rod 068" x 060"—1 size lean (2819S)	(2)
16-105U	—Step up rod and jet unit (Consists of (2) 16 104 and (2) 120-177)—2 sizes lean (2819S)	
16-108U	—Step up rod and jet unit (Consists of (2) 16 107 and (2) 120 177)—2 sizes lean (2820S)	

Part No.	PART NAME	
17-51	Pump discharge check needle	
20-43	Piston housing gasket	
20-126	Needle seat gasket	(2)
20-127	Fuel inlet fitting gasket	
21-179S	Float and lever assembly	(2)
24-29	Float lever pin	(2)
25-362S	—NEEDLE AND SEAT ASSEMBLY (.098")	(2)
30-78	Fuel inlet strainer	
30A-78	Idle air adjustment screw	
30A-80	Idle adjustment screw	(2)
39-11	Choke valve attaching screw	(2)
47-30	Piston housing welsh plug	
47-33	Venturi welsh plug	(4)
48-270S	Pump jet and housing assembly	
53A-412	Lockout dog	
53A-430	Secondary throttle operating lever	
58-316S	—Primary venturi assembly (choke side) (2819S)	
58-317S	—Primary venturi assembly (pump side) (2819S)	
58-347S	—Secondary venturi assembly (choke side)	
58-348S	—Secondary venturi assembly (pump side)	
58-387S	—Primary venturi assembly (choke side) (2820S)	
58-388S	—Primary venturi assembly (pump side) (2820S)	
61-84	Idle and fast idle cam adjustment screw spring	(3)
61-171	Pump spring (lower)	
61-246	VACUUM PISTON SPRING	(2)
61-483	Secondary throttle return spring	
61-585	Step up rod retaining spring	(2)
61-592	Throttle flex spring	

Part No.	PART NAME	
61-599	Idle air adjustment screw spring	
61-624	—Fast idle cam spring	
63-58	Coil housing retainer	(3)
64-217S	PUMP PLUNGER, ROD AND SPRING ASSEMBLY	
65-43	Step up piston cover plate	(2)
101-65	Choke shaft lever attaching screw	(2)
101-74	Throttle shaft lever attaching screw	(2)
101-136	Coil housing attaching screw	(3)
101-152S	Air horn attaching screw and washer assembly	
101-184S	Pump jet housing attaching screw and washer assembly	(2)
101-323	Fast idle cam attaching screw	
101-362S	Air horn attaching screw and washer assembly	(8)
101-379S	Venturi attaching screw and washer assembly	(8)
101-419	Secondary throttle valve attaching screw	(4)
101-420	Primary throttle valve attaching screw	(4)
101-421	Pump arm attaching screw	
101-429	Fast idle adjustment screw	
101-431S	Air horn attaching screw and washer assembly	
101-435S	Step-up piston cover plate attaching screw washer assembly	
101-436	Piston housing attaching screw	(3)
101-453S	Thermostatic valve attaching screw and washer assembly (2819S)	
103-14	Lead shot (.180")	
103-16	Lead shot (.200")	
111-84	Pump arm	
114-146	Primary throttle shaft arm (outer)	
114-147	Primary throttle shaft arm (inner)	
115-285	Choke connector rod	
115-309	Throttle operating rod	

Part No.	PART NAME	
115-314	—Fast idle connector rod	
115-323	—Throttle connector rod	
116-13	Pump intake check ball	
117-182	—Pump connector link	
120-160	PRIMARY METERING JET (.096")	(2)
120-194	Secondary metering jet (.0785")	(2)
121-78	COIL HOUSING GASKET	
121-292	AIR HORN GASKET	
121-293	SECONDARY VENTURI CLUSTER GASKET	(2)
121-302	PRIMARY VENTURI CLUSTER GASKET	(2)
121-303	PUMP JET HOUSING GASKET	
121-314	Thermostatic valve gasket	
122-108S	—Pump intake ball check assembly	
136-34	Choke piston lever retaining washer	
136-159	Primary throttle shaft washer	
136-160	Secondary throttle shaft washer	
150-190	Choke piston pin	
150A-10	Pin spring	(6)
160-153	Step-up piston	(2)
160-199	—Choke piston	
169-30S	Thermostatic valve assembly (2819S) (Use 169-38S)	
169-38S	—Thermostatic valve assembly (2819S) (Use 169 40S)	
169-40S	—Thermostatic valve assembly (2819S)	
170-555S	Piston housing and plug assembly	
170X-478S	Thermostatic coil and housing assembly	
172-22	Throttle connector rod retainer	
181-267S	—Fast idle cam assembly	
186-67S	Choke baffle plate assembly	
186-70	Fuel bowl baffle	(2)

—Parts so marked are new and listed for the first time

NOTE: **Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.**

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CARTER CARBURETOR

DIVISION OF ACF INDUSTRIES
INCORPORATED
ST. LOUIS 7, MO., U.S.A.

GENERAL BULLETIN

CARBURETER CONTRACT ACCOUNTS
FACTORY, P.I. AND P.C.T. GRADUATES

BULLETIN NO. 19 Pontiac

DATE March 18, 1958

SUBJECT: 1958 Pontiac AFB-2767S (4 Bore)
Carbureter - Step-Up Rod Change

A new step-up rod part 16-72 will be used in production of AFB-2767S carbureters code dated "C8" (March 1958) or later.

This change was made to provide a slightly richer part throttle mixture to eliminate surge complaints at light load road speeds up to 60 MPH. Two step-up rods are required for each carbureter. The rods may be changed with the carbureter on the engine by removing the two small cover plates and attaching screws located on top of the air horn.

The 16-72 (.066X.055) step-up rod replaces part 16-60 (.0675X.055) for the standard calibration. Part 16-60 will be used for the one size lean calibration.

An initial shipment of part 16-72 will be made to Carter Central Distributors. Carter warranty is not involved.

V. F. Thompson

V. F. Thompson, Manager
Distribution Sales

RJM:dg

cc: Personnel and Extra Copies - Canada and U.S.A.

IMPORTANT: THIS BULLETIN CONTAINS INFORMATION OF VALUE TO YOU AND WAS PREPARED AT CONSIDERABLE EXPENSE TO BE OF SERVICE TO YOU. FAILURE TO USE THIS INFORMATION MAY COST YOU MONEY. WE SUGGEST THAT YOU ISSUE COPIES OF IT TO THOSE OF YOUR STAFF INTERESTED, SO THAT THEY CAN BE FILED IN REGULAR CARTER SALES AND SERVICE MANUAL.

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PONTIAC V-8--1958

2767S-SA HYDRAMATIC

2768S-SA STANDARD

(Optional Equipment)

"CHIEFTAIN," "SUPER CHIEF"

"STAR CHIEF," "BONNEVILLE"

AFB Four-Bore Down-Draft Climatic® Control Carbureters Nos. 2767S-SA, 2768S-SA

CARBURETER SPECIFICATIONS

For Pontiac 8 Cylinder 370 Cu. In Engine

Dimensions Flange four bore—4 bolt type
Throttle bore primary 1-7/16 inch secondary 1-11/16 inch I D
Primary venturi size primary side 7/16 inch secondary side 11/32 inch I D
Main venturi size primary side 1 3/16 inch secondary side 1 9/16 inch I D

Vents Inside (4) in air horn Outside (5) in air horn (4) in body

Low Speed Circuit (Primary side only) jet size (2767S SA) No 66 (.033 inch) (2768S SA) No 63 (.037 inch) drill By pass size (2767S SA) No 56 (.0465 inch) (2768S SA) (.049 inch) drill Economizer size (.049 inch) diameter Idle bleed size (2767S SA) No 55 (.052 inch) (2768S SA) (.049 inch) drill Idle port slot type length .180 inch width .030 inch

Idle Port Opening .120 to .126 inch above top edge of valve with valve tightly closed

Set Idle Adjustment Screw 1/2 to 2 turns open For richer mixture turn screw out Do not idle engine below 480 500 R P M —Hydramatic Transmission in Drive Range 550 R P M Std Trans For cars with Air Conditioning idle engine between 500 and 520 R P M Air Conditioner unit off Transmission in Drive Range

Main Nozzle Installed permanently DO NOT REMOVE Anti percolator bleed primary (tube in venturi assembly) size No 68 (.031 inch) drill Secondary, (drilled hole in venturi assembly) size No 68 (.031 inch) drill Auxiliary nozzle well bleed, secondary side only (drilled hole in venturi assembly) size No 57 (.043 inch) drill

Main Vent Tube (In venturi assembly) Side holes primary side, (2767S SA) 6—size No 60 (.040 inch) 1—in bottom of tube size No 30 (.1285 inch) (2768S SA) 6—size No 62 (.038 inch) 1—size No 65 (.035 inch) 1—in bottom of tube size No 60 (.040 inch) drill Secondary side 3—size No 70 (.028 inch) drill

Secondary Initial Discharge: (In venturi assembly secondary side only) air bleed size No 73 (.024 inch) drill Discharge port, size No 52 (.0635 inch) drill

Accelerating Pump Discharge jet (twin) primary side only size (2767S SA) No 70 (.028 inch) (2768S SA) No 68 (.031 inch) drill Intake ball check seat (screw plug) install from lower side of flange on S model carbureters from inside of bowl on SA model carbureters size 128 to 132 inch Discharge needle seat size No 50 (.070 inch) drill

Choke Carter Climatic® Control set 1 point rich Butterfly—offset choke valve primary side only Choke heat suction hole restriction in body size No 45 (.082 inch) drill

Vacuum Spark Port. Round port .059 to .061 inch diameter Top of port .003 to .013 inch above top edge of valve with valve tightly closed

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Motor Tune-Up — Be Accurate!

CAUTION Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter

Spark Plug Gap .035"	Breaker Point Setting .016"	Ignition Timing Breaker Points to Open 6° B T D C Crankshaft Pulley	Float Setting 21/64 Inch (Use Gauge T109-294)	Idle Adjustment Screw Setting 1/2 to 2 Turns Open (See Adjustments)

NOTE These cars are equipped with Hydraulic Valve Lifters — NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3695

FLOAT ALIGNMENT: Side of floats parallel to edge of casting. Minimum clearance between lever and air horn lugs without binding. To adjust, bend float lever.

FLOAT LEVEL: 21/64 inch (Gauge T109-294) between top of floats (at outer end) and air horn gasket. NOTE: Gauge should be in line with center of indentation on side of float. To adjust, bend float lever.

FLOAT DROP: 23/32 inch between top of floats (at outer end) and air horn gasket. To adjust, bend stop tabs on float brackets.

PUMP: 33/64 inch from the top of the bowl cover to the top of the plunger shaft. To adjust, bend throttle connector rod.

CHOKE PISTON LEVER ADJUSTMENT: .045 inch (Gauge T109-158) between choke lever and stop in piston housing with choke valve closed. To adjust, bend choke connector rod.

FAST IDLE LINKAGE ADJUSTMENT: With choke valve tightly closed and lug on outer choke shaft lever contacting stop on inner choke shaft lever align center of fast idle screw with index mark on cam. To adjust, bend fast idle connector rod.

FAST IDLE THROTTLE VALVE CLEARANCE: .026 inch (Gauge T109-189) between lower edge of valve and bore with adjusting screw on index mark of cam.

FAST IDLE ON CAR: 2200 R. P. M. hot engine with fast idle screw on index mark of cam.

UNLOADER: 1/8 inch (Gauge T109-36) between upper edge of choke valve and inner wall of air horn. To adjust, bend unloader lip on throttle lever.

SECONDARY THROTTLE LEVER ADJUSTMENT: 1. Primary and secondary throttle valves must reach wide open position at the same time. To adjust, bend secondary operating rod. **NOTE:** At full throttle position secondary throttle valves will be a few degrees from wide open and primary valves will be a few degrees past wide open. 2. With primary and secondary throttle valves tightly closed, there should be .010 inch to .030 inch (Gauge T109-29) between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on secondary lever.

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: Crack throttle valves and manually open and close the choke valve. Tang on secondary throttle lever should freely engage in notch of lock-out dog. To adjust, bend tang on secondary throttle lever.
NOTE: With carburetor level, auxiliary valves must close from wide open position of their own weight.

IDLE SPEED AND MIXTURE ADJUSTMENT (Normal Engine Temp.): In making the idle adjustment on the engine, the air adjustment screw is used to adjust idle speed in a similar manner as the throttle speed screw used previously. Turning the air adjustment screw outward increases engine speed, but also leans the mixture supplied to the manifold which must be compensated for by adjustment of the idle mixture adjusting screws.

TOOLS REQUIRED FOR SERVICING CARBURETERS:

T109-29	.020"-.030" Wire gauge	T109-158	.045" Wire gauge
T109-36	1/8" Unloader gauge	T109-189	.026" Wire gauge
T109-41	Bending tool	T109-213	Bending tool

T109-294 21/64" Float gauge

CARBURETER
TRADE MARK REG. U. S. PAT. OFF.
MARCA REGISTRADA

Pontiac—1958—Carbureters Nos. 2767S-SA, 2768S-SA

WHEN SERVICING, USE GASKET ASSORTMENT No. 293; RE-CARBURETION KIT No. 1946N

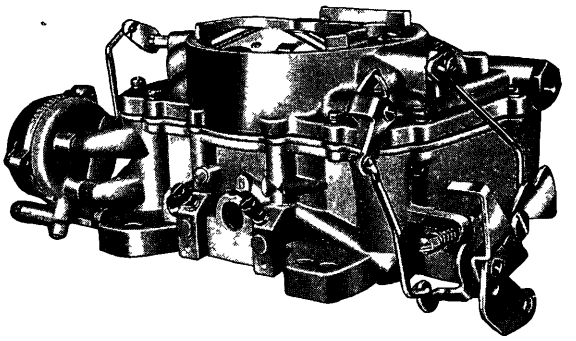
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF RE-CARBURETION KIT

Part No.	PART NAME	
1A-124	FLANGE GASKET	
2-223	Primary throttle valve	(2)
2-196	Secondary throttle valve	(2)
3-1074S	Secondary throttle shaft and lever assembly	
3-1213S	Auxiliary throttle shaft, valve and weight assembly	
3-1215S	Primary throttle shaft and lever assembly	
4A-175	Primary throttle shaft dog	
6-1372S	Air horn assembly	
7-218	Choke valve	
11B-35	Rivet plug	
11B-79	Rivet plug	(2)
11B-363	Pump intake screw plug (2767S-2768S)	
11B-366	Lead plug	(4)
11B-385	Fuel passage and idle port rivet plug	(3)
14-512	Outside choke shaft lever	
14-550	Inside choke shaft lever	
14-568S	Choke lever and shaft assembly	
14-581S	Choke piston lever, link and pin assembly (Use with 170-494S) (2767S)	
14-609S	Choke piston lever, link and pin assembly (Use with 170-555S)	
14-612S	Choke shaft and lever assembly (piston housing) (Use with 170-555S)	
15-52S	Fuel inlet fitting assembly	
16-60	STEP-UP ROD .0675" x .055" (1 size lean) (2767S-SA)	(2)
16-64	Step-up rod .069" x .058" (2 sizes lean) (2767S-SA)	(2)
16-66U	Step up rod and jet unit (Consists of 2—16-65 and 2—120-175) (3 sizes lean) (2767S-SA)	
16-71	Step-up rod .0685" x .0625" x 055" (standard) (2768S-SA)	(2)
16-72	Step-up rod .066" x 055" (standard) (2767S-SA)	(2)
17-51	Pump discharge check needle	
20-43	Piston housing gasket	
20-126	Needle seat gasket	(2)
20-127	Fuel inlet fitting gasket	
21-179S	Float and lever assembly	(2)
24-29	Float lever pin	(2)
25-324S	NEEDLE AND SEAT ASSEMBLY (.1015")	(2)
30-78	Fuel inlet strainer	
30A-78	Idle air adjustment screw	
30A-80	Idle adjustment screw	(2)
38A-116	Pump intake check ball seat (2767S-2768S)	
39-11	Choke valve attaching screw	(2)
47-30	Piston housing welsh plug	
47-33	Venturi welsh plug	(4)
47-34	Spark port welsh plug	
48-270S	Pump jet and housing assembly (2767S-SA)	
48-258S	Pump jet and housing assembly (2768S-SA)	
53A-412	Lockout dog	
53A-414	Secondary throttle operating lever	
58-196S	Secondary venturi assembly (choke side)	
58-197S	Secondary venturi assembly (pump side)	
58-296S	Primary venturi assembly (choke side) (2767S-SA)	
58-297S	Primary venturi assembly (pump side) (2767S-SA)	
58-309S	Primary venturi assembly (choke side) (2768S-SA)	
58-311S	Primary venturi assembly (pump side) (2768S-SA)	
61-84	Idle and fast idle cam adjustment screw spring	(3)
61-128	Throttle connector rod spring	
61-171	Pump spring (lower)	
61-246	VACUUM PISTON SPRING	(2)
61-483	Secondary throttle return spring	
61-585	Step-up rod retaining spring	(2)
61-592	Throttle flex spring	
61-599	Idle air adjustment screw spring	
63-35	Throttle connector rod retainer	
63-58	Coil housing retainer	(3)
64-217S	PUMP PLUNGER ROD AND SPRING ASSEMBLY (2767S SA)	
64-218S	Pump plunger, rod and spring assembly (2768S-SA)	
65-43	Step up piston cover plate	(2)
101-65	Choke shaft lever attaching screw	(2)
101-74	Throttle shaft lever attaching screw	(2)
101-136	Coil housing attaching screw	(3)
101-152S	Air horn attaching screw and washer assembly	
101-184S	Pump jet housing attaching screw and washer assembly	(2)
101-323	Fast idle cam attaching screw	
101-362S	Air horn attaching screw and washer assembly	(8)
101-379S	Secondary venturi attaching screw and washer assembly	(4)
101-419	Secondary throttle valve attaching screw	(4)
101-420	Primary throttle valve attaching screw	(4)
101-421	Pump arm attaching screw	
101-429	Fast idle adjustment screw	
101-431S	Air horn attaching screw and washer assembly	
101-435S	Step-up piston cover plate attaching screw and washer assembly	(2)
101-436	Piston housing attaching screw	(3)
101-442S	Primary venturi attaching screw and washer assembly	(4)
103-12	Lead shot (.130" dia.)	(2)
103-14	Lead shot (.180" dia.)	
103-15	Lead shot (.280" dia.)	
103-16	Lead shot (.200" dia.)	
111-84	Pump arm	
113-48S	Choke shaft and lever assembly (piston housing) (Use with 170-494S) (2767S)	
114-139	Primary throttle shaft arm (inner)	
114-146	Primary throttle shaft arm (outer)	
115-275	Fast idle connector rod	

Part No.	PART NAME	
115-285	Choke connector rod	
115-304	Throttle connector rod	
115-309	Throttle operating rod	
116-13	Pump intake check ball (2767S 2768S)	
117-174	Pump connector link	
120-160	PRIMARY METERING JET (.096") (2767S SA)	(2)
120-163	Primary metering jet (.098") (2768S SA)	(2)
120 194	Secondary metering jet (.0785") (2768S SA)	(2)
120-229	Secondary metering jet (.0748") (2767S SA)	(2)
121-78	COIL HOUSING GASKET	
121-292	AIR HORN GASKET	
121-293	SECONDARY VENTURI CLUSTER GASKET	(2)
121-302	PRIMARY VENTURI CLUSTER GASKET	(2)
121-303	PUMP JET HOUSING GASKET	
122-108S	Pump intake ball check assembly (2767SA 2768SA)	
136-34	Choke piston lever retaining washer (Use (2) with 170 494S (1) with 170 555S)	
136-37	Throttle operating rod washer	
136-159	Primary throttle shaft washer	
136-160	Secondary throttle shaft washer	
150-190	Choke piston pin	
150A-10	Pin spring	(6)
150A-21	Pin spring	
160-153	Step up piston	(2)
160-168	Choke piston	
170-494S	Piston housing and plug assembly (early prod.) (casting No. 170 491) (2767S)	
170-555S	Piston housing and plug assembly (late prod.) (casting No. 170 553)	
170N-478S	Thermostatic coil and housing assembly (2768S SA)	
170X-478S	Thermostatic coil and housing assembly (2767S SA)	
181-257S	Fast idle cam assembly	
186-67S	Choke baffle plate assembly	
186-70	Fuel bowl baffle	(2)

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

CARBURETER
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PONTIAC "V-8"
HYDRAMATIC
SUPER CHIEF "57-27"
STAR CHIEF "57-28"
1957

AFB Four-Bore Down-Draft Climatic® Control **Carbureter No. 2506S**

CARBURETER SPECIFICATIONS

For Pontiac 8 Cylinder 347 Cu. In. Engine

Dimensions: Flange four bore—4 bolt type
Throttle bore primary, 1 7/16 inch secondary 1-11/16 inch I. D.
Primary venturi size primary side 7/16 inch secondary side 11/32 inch I D
Main venturi size, primary side, 1 3/16 inch secondary side, 1 9/16 inch I D

Vents: Inside (4) in air horn, Outside (5) in air horn (4) in body

Gasoline Intake: Size No 38 (1015 inch) drill hole in needle seat

Low Speed Jet Tube: (In venturi assembly primary side only)
Jet, size No 67 (032 inch) drill
By pass size No 54 (055 inch) drill
Economizer size (049 inch) diameter
Idle bleed size No 55 (052 inch) drill

Idle Port: (Upper) slot type Primary length 180 inch, width 030 inch Secondary none

Idle Port Opening: Primary 147 to 153 inch above top edge of valve with valve tightly closed Secondary none

Set Idle Adjustment Screw: 1 to 2 turns open For richer mixture turn screw out Do not idle engine below 420 440 r p m Transmission in Drive Range For cars with Air Conditioning idle engine between 500 and 520 r p m Air Conditioner unit off Transmission in Drive Range

Main Nozzle: Installed permanently DO NOT REMOVE. Anti-peroclator bleed primary (tube in venturi assembly) size No 70 (028 inch) drill Secondary, (drilled hole in venturi assembly) size No 56 (0465 inch) drill

Secondary Initial Discharge: (In venturi assembly secondary side only)
Pick up tube size (0453 inch) diameter
Air bleed size (0275 inch) diameter
Discharge port size No 56 (0465 inch) drill

Step-Up Rod: (Vacumeter type) see parts list for size

Metering Jet: Primary, size 098 inch diameter (for step-up rod). Secondary size 073 inch diameter (no step up rod)

Accelerating Pump: Discharge jet (twin) primary side only, size No 70 (028 inch) drill Intake ball check seat (screw plug) size 115 to 120 inch diameter Discharge needle seat size No 50 (070 inch) drill

Choke: Carter Climatic® Control set on index Butterfly type —offset choke valve primary side only Choke heat suction hole restriction in body size No 45 (082 inch) drill

Vacuum Spark Port: Round port 059 to 061 inch diameter. Top of port 025 to 035 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION. Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .015"	Ignition Timing Breaker Points to Open: 6° B. T. D. C. At Vibration Damper	Float Setting 17/64 Inch (Use Gauge T109-238)	Idle Adjustment Screw Setting 1 to 2 Turns Open 430-450 R.P.M. in Dr. Range

NOTE: These cars are equipped with Hydraulic Valve Lifters—NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3695

FLOAT ALIGNMENT: Side of floats parallel to edge of casting. Minimum clearance between lever and air horn lugs without binding. To adjust, bend float lever.

FLOAT LEVEL: 17/64 inch (gauge T109-238) between top of floats (at outer end) and air horn gasket. To adjust, bend float lever.

FLOAT DROP: 3/4 inch between top of floats (at outer end) and air horn gasket. To adjust, bend stop tabs on float brackets.

PUMP: 33/64 inch from the top of the bowl cover to the top of the plunger shaft. To adjust, bend throttle connector rod.

CHOKE PISTON LEVER ADJUSTMENT: .045 inch (Gauge T109-158) between choke lever and stop in piston housing with choke valve closed. To adjust, bend choke connector rod.

CHOKE SHAFT LEVER ADJUSTMENT: .010 inch (Gauge T109-200) between lug on outer choke shaft lever and stop on inner choke shaft lever with choke valve tightly closed and fast idle cam against stop on casting. To adjust, bend fast idle connector rod.

OPTIONAL ADJUSTMENT (Late Prod.): With slight clearance between lug on fast idle cam and stop on flange casting and inner choke shaft lever contacting lug on outer choke shaft lever align index mark on cam with adjusting screw. To adjust bend fast idle connector rod.

FAST IDLE THROTTLE VALVE CLEARANCE: .030 inch (Gauge T109-29) between lower edge of valve and bore with adjusting screw on high step of cam.

FAST IDLE ON CAR: 1900 R.P.M. hot engine with fast idle screw on high step of cam.

UNLOADER: 1/8 inch (Gauge T109-36) between upper edge of choke valve and inner wall of air horn. To adjust, bend unloader lip on throttle lever.

SECONDARY THROTTLE LEVER ADJUSTMENT: 1. Primary and secondary throttle valves must reach wide open position at the same time. To adjust, bend secondary operating rod. NOTE: Secondary throttle valves will be a few degrees from wide open when primary valves are wide open. 2. With primary and secondary throttle valves tightly closed, there should be .017 inch to .022 inch (Gauge T109-29) between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on primary lever.

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: Crack throttle valves and manually open and close the choke valve. Tang on secondary throttle lever should freely engage in notch of lock-out dog. To adjust, bend tang on secondary throttle lever.

NOTE: With carbureter level, auxiliary valves must close from wide open position of their own weight.

TOOLS REQUIRED FOR SERVICING CARBURETERS:

T109-36	1/8" Unloader gauge	T109-200	.010" Wire gauge
T109-29	.030" Wire gauge	T109-238	17/64" Float gauge
T109-158	.045" Wire gauge	T109-213	Bending tool

T109-41 Bending tool

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PONTIAC

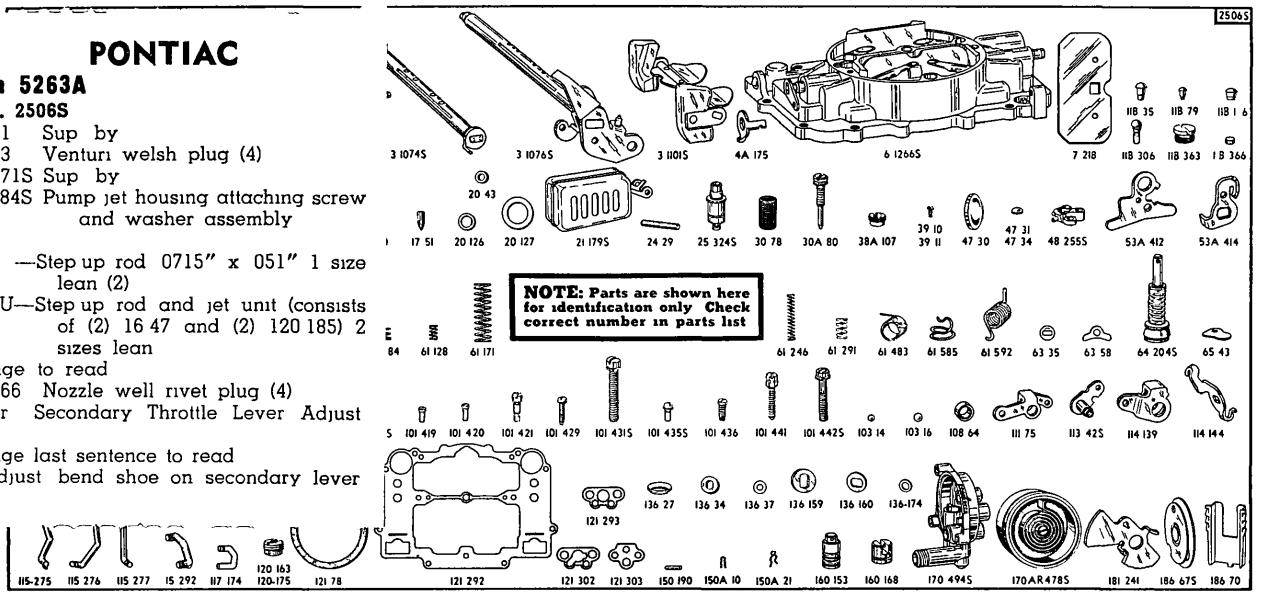
Form 5263A
Carb. 2506S

47 31 Sup by
47 33 Venturi welsh plug (4)
101 271S Sup by
101 184S Pump jet housing attaching screw and washer assembly

Add
16 46 —Step up rod 0715" x 051" 1 size lean (2)
16 48U—Step up rod and jet unit (consists of (2) 16 47 and (2) 120 185) 2 sizes lean

Change to read
11B 366 Nozzle well rivet plug (4)

Under Secondary Throttle Lever Adjustment
Change last sentence to read
To adjust bend shoe on secondary lever



Pontiac—1957—Carbureter No. 2506S

WHEN SERVICING, USE GASKET ASSORTMENT No. 293; REPAIR PACKAGE No. 1852

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1A-124	—FLANGE GASKET	
2-185	—Primary throttle valve	(2)
2-196	—Secondary throttle valve	(2)
2-198	—Auxiliary throttle valve	(2)
3-1074S	—Secondary throttle shaft and lever assembly	
3-1076S	—Primary throttle shaft and lever assembly	
3-1101S	—Auxiliary throttle shaft valve and weight assembly	
4A-175	—Primary throttle shaft dog	
6-1266S	—Air horn assembly	
7-218	—Choke valve	
11B-35	Rivet plug	
11B-79	Rivet plug	(2)
11B-176	Idle port rivet plug	(2)
11B-306	Fuel passage plug	
11B-363	PUMP INTAKE SCREW PLUG	
11B-366	Lead shot	(4)
14-512	Outside choke shaft lever	
14-550	—Inside choke shaft lever	
14-581S	—Choke piston lever link and pin assembly	
14-582S	—Choke lever and shaft assembly	
15-52S	Fuel inlet fitting assembly	
16-30	—STEP UP ROD 069" x 048"	(2)
17-51	PUMP DISCHARGE CHECK NEEDLE	
20-43	PISTON HOUSING GASKET	
20-126	Needle seat gasket	(2)
20-127	FUEL INLET FITTING GASKET	
21-179S	Float and lever assembly	(2)
24-29	Float lever pin	(2)

Part No.	PART NAME	
25-324S	—NEEDLE AND SEAT ASSEMBLY	(2)
30-78	FUEL INLET STRAINER	
30A-80	—Idle adjustment screw	(2)
38A-107	PUMP INTAKE CHECK BALL SEAT	
39-10	Auxiliary throttle valve attaching screw (early prod.)	(4)
39-11	Choke valve attaching screw	(2)
47-30	Piston housing welsh plug	
47-31	Venturi welsh plug	(4)
47-34	Spark port welsh plug	
48-255S	—Pump jet and housing assembly	
53A-412	—Lockout dog	
53A-414	—Secondary throttle operating lever	
58-164S	—Secondary venturi assembly (choke side)	
58-165S	—Secondary venturi assembly (pump side)	
58-177S	—Primary venturi assembly (choke side)	
58-178S	—Primary venturi assembly (pump side)	
61-84	Idle and fast idle cam adjustment screw spring	(3)
61-128	THROTTLE CONNECTOR ROD SPRING	
61-171	PUMP SPRING (LOWER)	
61-246	VACUUM PISTON SPRING	(2)
61-291	Throttle lever adjusting screw spring	
61-483	SECONDARY THROTTLE RETURN SPRING	
61-585	STEP UP ROD RETAINING SPRING	(2)
61-592	—Throttle flex spring	
63-35	THROTTLE CONNECTOR ROD RETAINER	
63 58	Coil housing retainer	(3)
64-204S	—PUMP PLUNGER ROD AND SPRING ASSEMBLY	

Part No	PART NAME	
65-43	Step up piston cover plate	(2)
101-65	Choke shaft lever attaching screw	(2)
101-74	Throttle shaft lever attaching screw	(2)
101-136	Coil housing attaching screw	(3)
101-140	Fast idle cam attaching screw (Sup by 101 323)	
101-152S	Air horn attaching screw and washer assembly	
101 271S	Pump jet housing attaching screw and washer assembly	(2)
101-323	Fast idle cam attaching screw	
101-362S	Air horn attaching screw and washer assembly	(8)
101-379S	Secondary venturi attaching screw and washer assembly	(4)
101-419	Secondary throttle valve attaching screw	(4)
101-420	Primary throttle valve attaching screw	(4)
101-421	Pump arm attaching screw	(4)
101-429	—Fast idle adjustment screw	
101-431S	—Air horn attaching screw and washer assembly	
101-435S	Step up piston cover plate attaching screw and washer assembly	(2)
101-436	—Piston housing attaching screw	(3)
101-441	Throttle lever adjusting screw	
101-442S	—Primary venturi attaching screw and washer assembly	(4)
103-14	Lead shot	
103-16	Lead shot	
108-64	—Fast idle cam spacer	
111-75	—Pump arm	
113-42S	—Choke shaft and lever assembly (piston housing)	
114-139	Primary throttle shaft arm (inner)	
114-144	—Primary throttle shaft arm (outer)	

Part No	PART NAME	
115-275	—Fast idle connector rod	
115-276	—THROTTLE CONNECTOR ROD	
115 277	—Choke connector rod	
115-292	—Throttle operating rod	
116-13	PUMP INTAKE CHECK BALL	
117-174	PUMP CONNECTOR LINK	
120-163	PRIMARY METERING JET	(2)
120-175	SECONDARY METERING JET	(2)
121-78	COIL HOUSING GASKET	
121-292	—AIR HORN GASKET	
121-293	—SECONDARY VENTURI CLUSTER GASKET	(2)
121-302	—PRIMARY VENTURI CLUSTER GASKET	(2)
121-303	—PUMP JET HOUSING GASKET	
136-34	Choke p ston lever retaining washer	(2)
136-37	Throttle operating rod washer	(5)
136-159	Primary throttle shaft washer	
136-160	Secondary throttle shaft washer	
136-174	Throttle lever adjusting screw washer	
150-190	Choke piston pin	
150A-10	PIN SPRING	(6)
150A-21	PIN SPRING	
160-153	Step up piston	(2)
160-168	—Choke piston	
170-494S	—Piston housing and plug assembly	
170AR-478S	—Thermostatic coil and housing assembly (Sup by 170X 478S)	
170X-478S	—Thermostatic coil and housing assembly	
181 241	—Fast idle cam	
186-67S	—Choke baffle plate assembly	
186-70	Fuel bowl baffle	(2)

—Parts so marked are new and listed for the first time

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown only one is used.

PONTIAC

Form 5263A

Carb. 2506S

108 64 Sup by

181 257S —Fast idle cam and collar assembly

181 241 Sup by

181 257S —Fast idle cam and collar assembly

Change to read

11B 366 Lead plug (early prod (4) (late prod (5)

103 14 Lead shot (early prod)

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Form 3695A
January, 1957
Revised March, 1957

CARTER CARBURETOR
DIVISION OF ACF INDUSTRIES INCORPORATED
ST LOUIS, MO., U. S. A.

CARTER MODEL AFB CARBURETER FOR PONTIAC (SERVICE ADJUSTMENT PROCEDURE)

NOTE: The parts and specification pages referred to are catalog pages. These pages can be obtained from Carter Carburetor, Catalog Department, St. Louis (7), Missouri. Specify the carbureter number found on the base of the carbureter, when requesting specification pages.

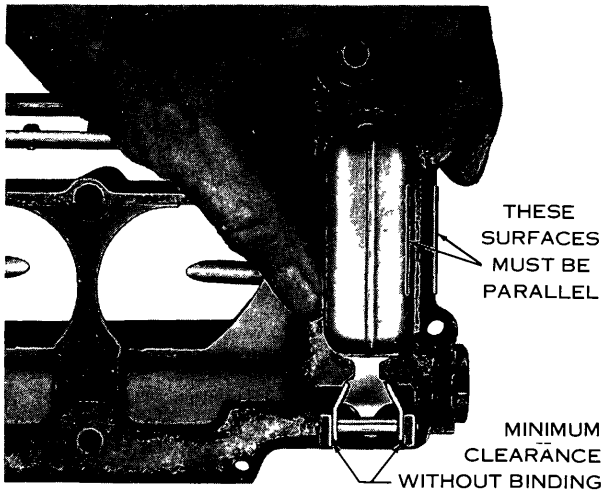


Figure 1

FLOAT ALIGNMENT ADJUSTMENT (Fig. 1):

1. Sight down the side of the float shell to determine if the side of the float is parallel to the outer edge of the air horn casting. TO ADJUST: Bend float lever by applying pressure to the end of the float shell with the fingers while supporting the float lever with the thumb.

   CAUTION: To avoid damaging the float, apply only enough pressure to bend float lever.

2. After aligning float, remove as much clearance as possible between arms of float lever and lugs on air horn by bending the float lever. Arms of float lever should be as parallel to the inner surfaces of lugs on air horn as possible.

   Floats must operate freely without excess clearance on its hinge pin.

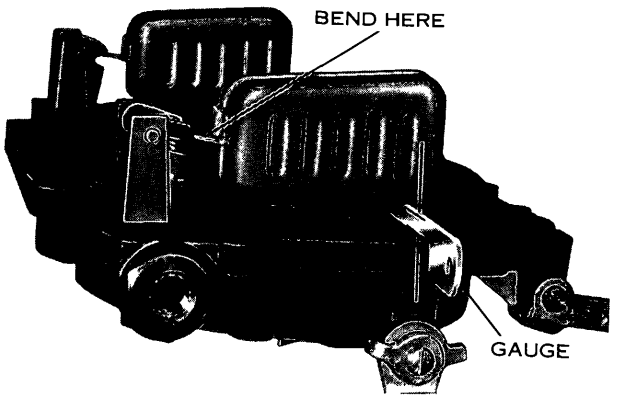


Figure 2

FLOAT LEVEL ADJUSTMENT (Fig. 2):

With air horn inverted, bowl cover gasket in place and needle seated, the clearance between top of float (at outer end) and air horn gasket should be as listed on carburetor specification page. To adjust, bend float arm. Adjust both floats. Recheck float alignment.

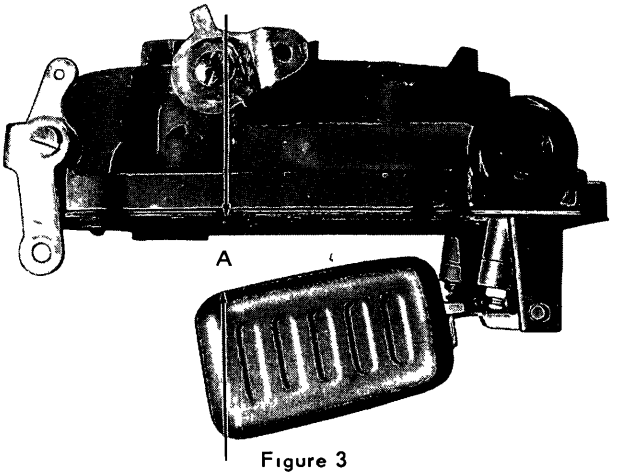


Figure 3

FLOAT DROP ADJUSTMENT (Fig. 3):

With bowl cover held in upright position and measuring from outer end of each float, the distance between top of floats and bowl cover gasket should be as listed on carbureter specification page. To adjust, bend stop tabs on float brackets.

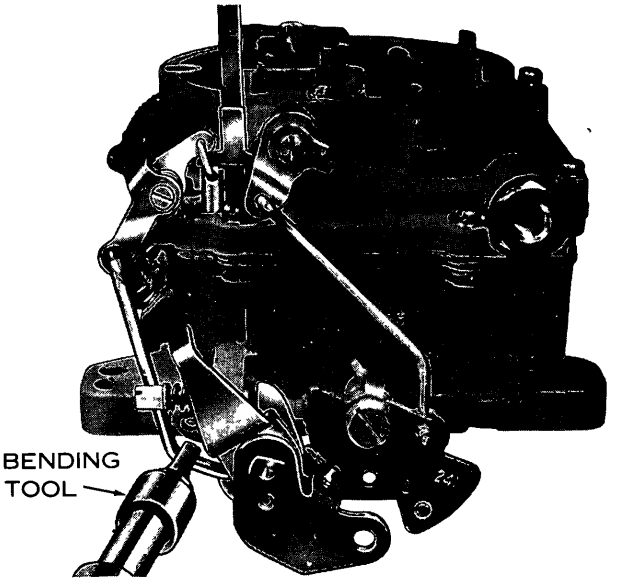


Figure 4

PUMP ADJUSTMENT (Fig. 4):

1. Back out idle speed screw until throttle valves seat in bores of carbureter. NOTE: Be sure choke is wide open so fast idle cam does not hold throttle valve open.
2. The distance from the top of the bowl cover to the top of the plunger shaft should be as listed on carburetor specification page.
3. Adjust by bending throttle connector rod at lower angle (use tool T109-213).

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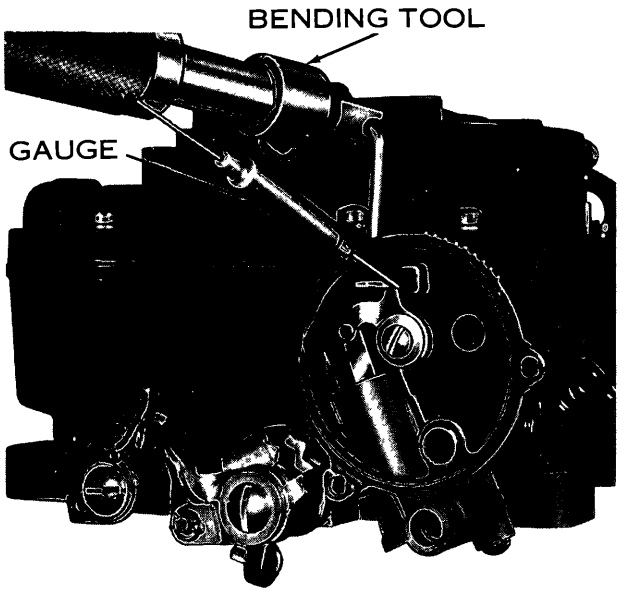


Figure 5

CHOKE PISTON LEVER ADJUSTMENT (Fig. 5):

With chok valv tightly closed, the clearance between chok lever and stop in piston housing should be as listed n carbur ter specification page. To adjust, bend chok conn ctor rod (use tool T109-213).

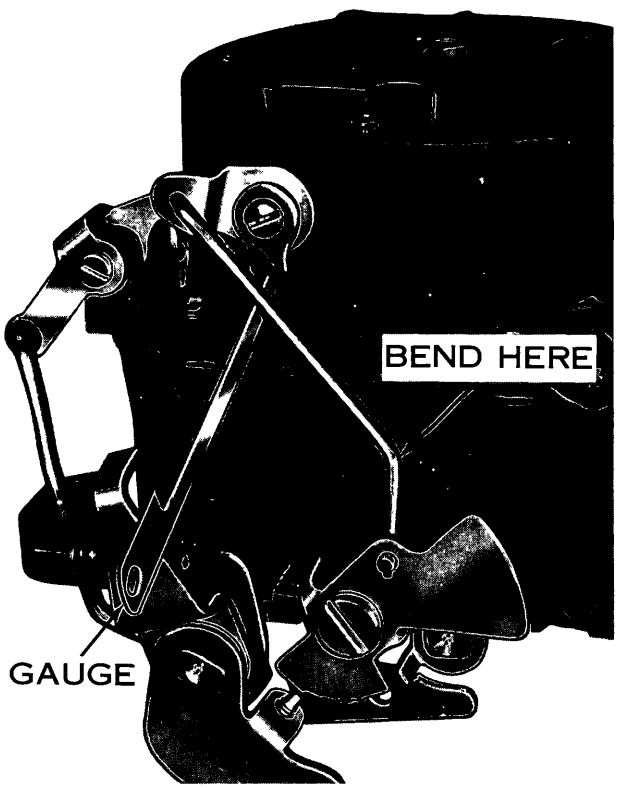


Figure 6

CHOKE SHAFT LEVER ADJUSTMENT (Fig. 6):

With choke valv tightly closed and fast idl cam against st p on casting, the clearanc b tw en lug on outer ch k shaft l ver and stop on inner chok shaft lever should b as listed on carbur ter specification pag . To adjust, b nd fast idl conn ctor r d (us t ol T109-213).

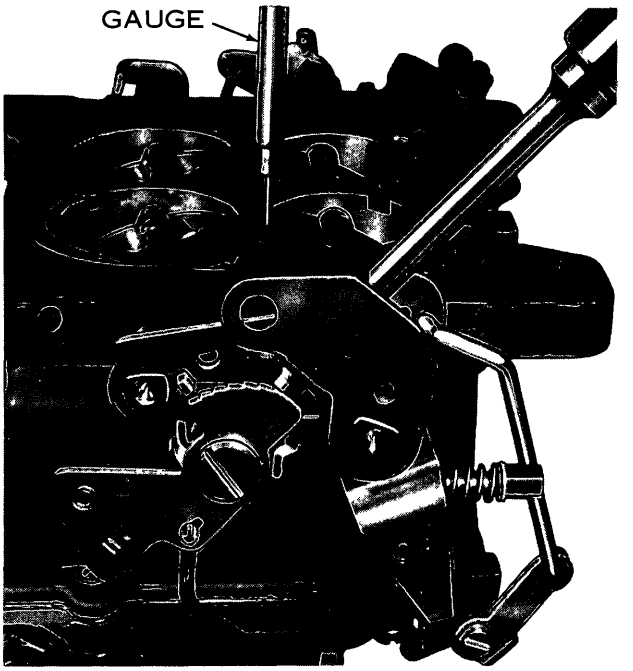


Figure 7

FAST IDLE THROTTLE VALVE CLEARANCE ADJUSTMENT (Fig. 7):

With choke valve tightly closed, tighten fast idle adjusting screw (on high step of cam) until the clearance between throttle valve and bore of carbureter, side opposite idle port, is as listed on carbureter specification page.

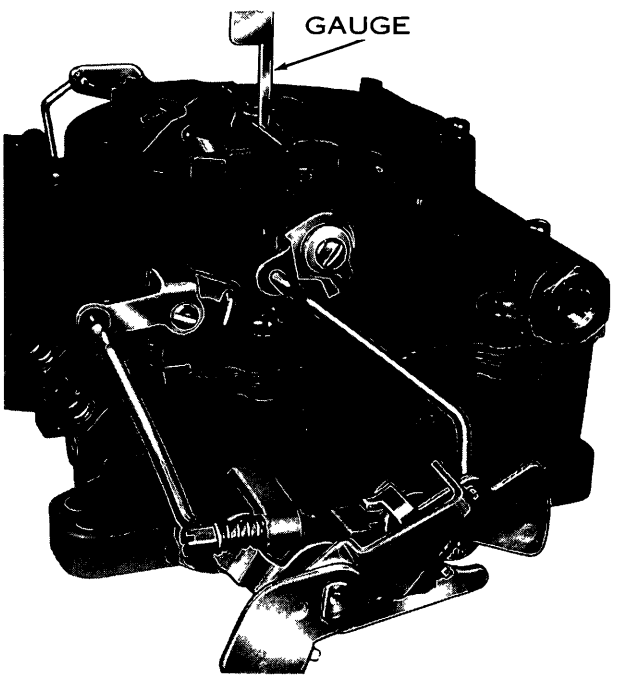


Figure 8

UNLOADER ADJUSTMENT (Fig. 8):

With throttle wide open, the clearance between upper edge of choke valve and inner wall of air horn should b as listed on carbureter specification page. To adjust, bend unloader lip on throttle shaft lever. (Use tool T109-41).

SECONDARY THROTTLE LEVER ADJUSTMENT (Fig. 9):

1. The stop lugs on both primary and secondary throttle levers should contact boss on flange at the same time. To adjust: bend secondary throttle operating rod at angle (use bending tool T109-213).
   NOTE: Secondary throttle valves will be a few degrees from vertical at wide open throttle.
2. With primary and secondary throttle valves in tightly closed position, the clearance between positive closing shoes on primary and secondary throttle levers should be as listed on carbureter specification page. To adjust, bend shoe on primary lever.

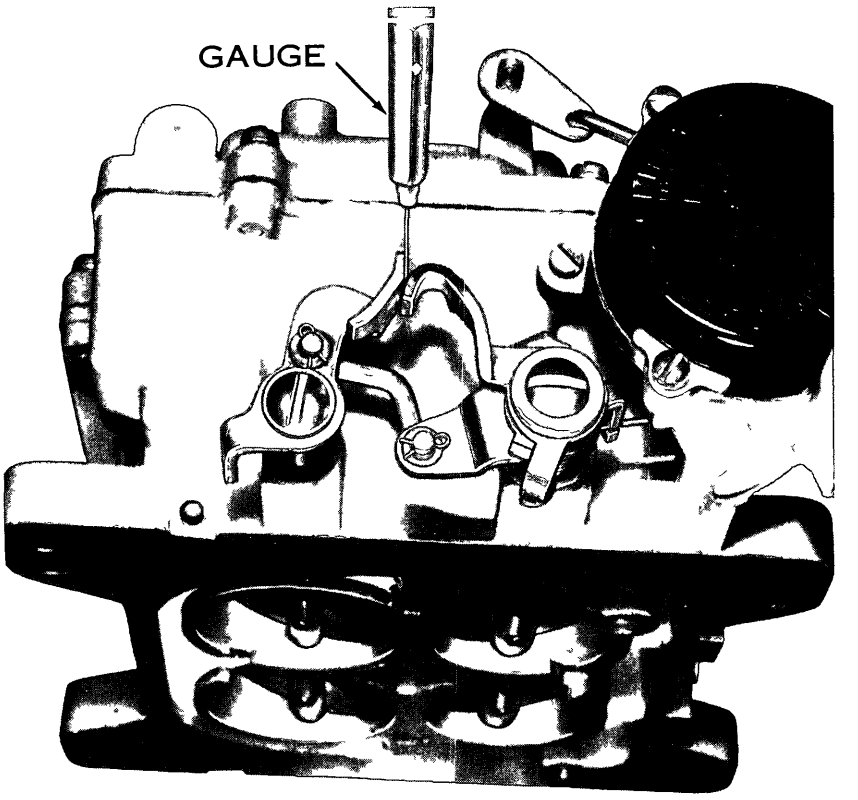
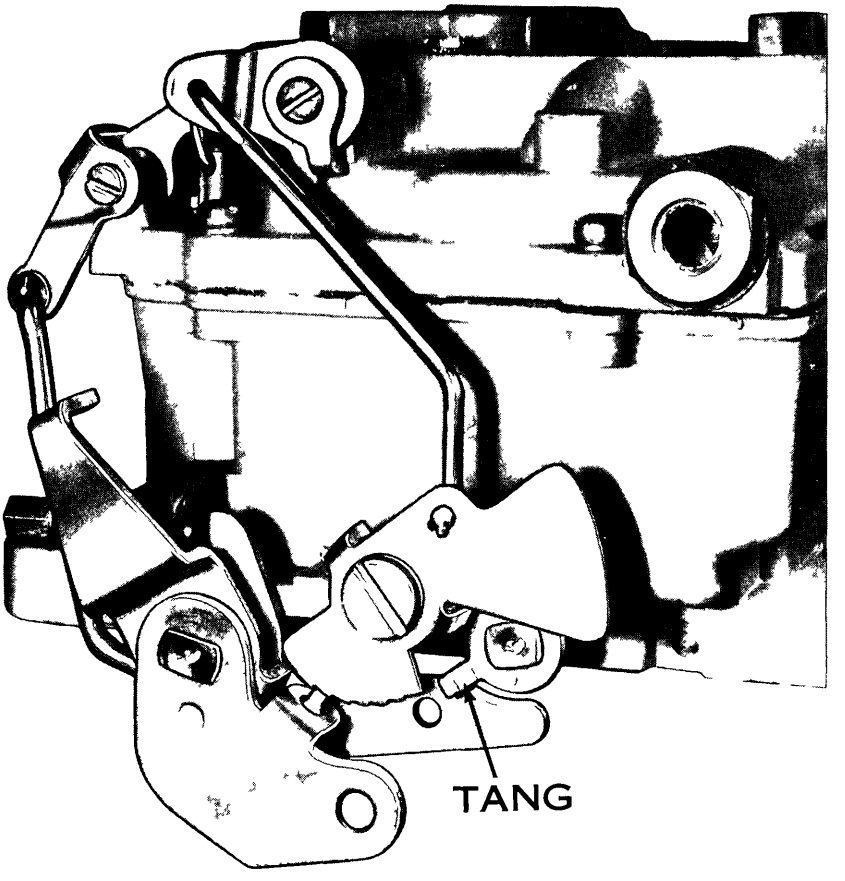


Figure 9



Figur 10

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT (Fig. 10):

Crack throttle valves and manually open and close th chok valv . Tang on secondary thr ttle lev r should freely engag in notch of lock-out dog. If nec ssary t adjust, bend tang on s c ndary thr ttl lever.

NOTE: See last pag for pertin nt service information.

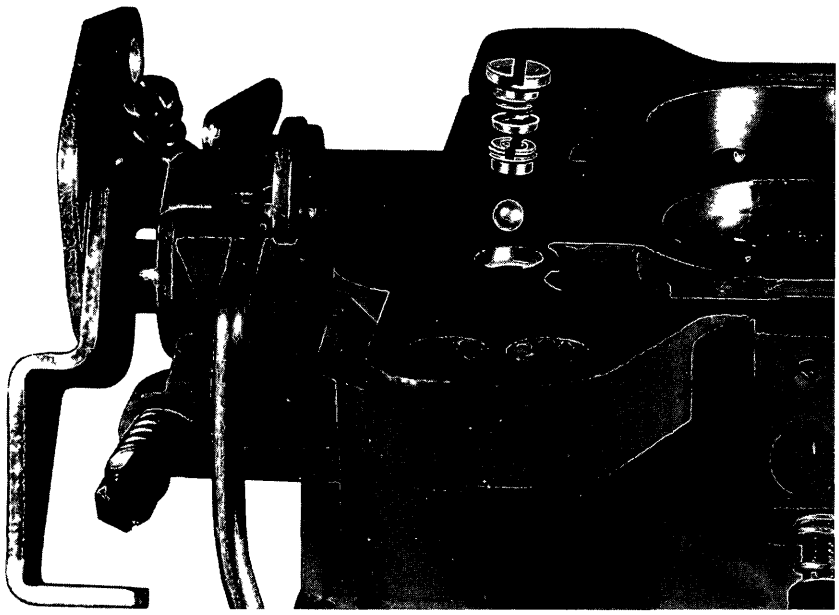


Figure 11

(Fig. 11):

Pump intake check ball, seat, washer and screw plug are removed by inverting carbureter and removing from lower side of flange.

(Fig. 12):

Ch ck to b sure that auxiliary throttle shaft weights move freely and ar fr e from dirt and gum (Fig. 12).

Flooding, stumbl on acceleration and other performance complaints are, in many instances, caused by the pr s nce of dirt, water or other foreign matter in the carbureter. To aid in diagnosing the cause of the complaint, th carbureter should be car fully r moved from the engine without draining the fuel from the b wl. The contents of the fuel bowl may th n b xamined for contamination as th carbureter is disassembled.

Ch ck th fuel in the bowl for contamination by dirt, water, gum or other for ign matter. A magnet moved through the fuel in the bowl will pick up and identify any iron oxide dust that may have caused intake needle and s at leakage.

Insp ct gasketed surfaces between body and air horn. Small nicks or burrs sh uld b smoothed down to liminate air r fuel leakage. Be especially particular when inspecting th top surfac of the inner wall of the bowl around the vacuum piston passag . A poor seal at this location may contribute to a "cutting-out" on turns complaint.

Install fuel baffles as shown (Fig. 12) to prev nt damage to floats.

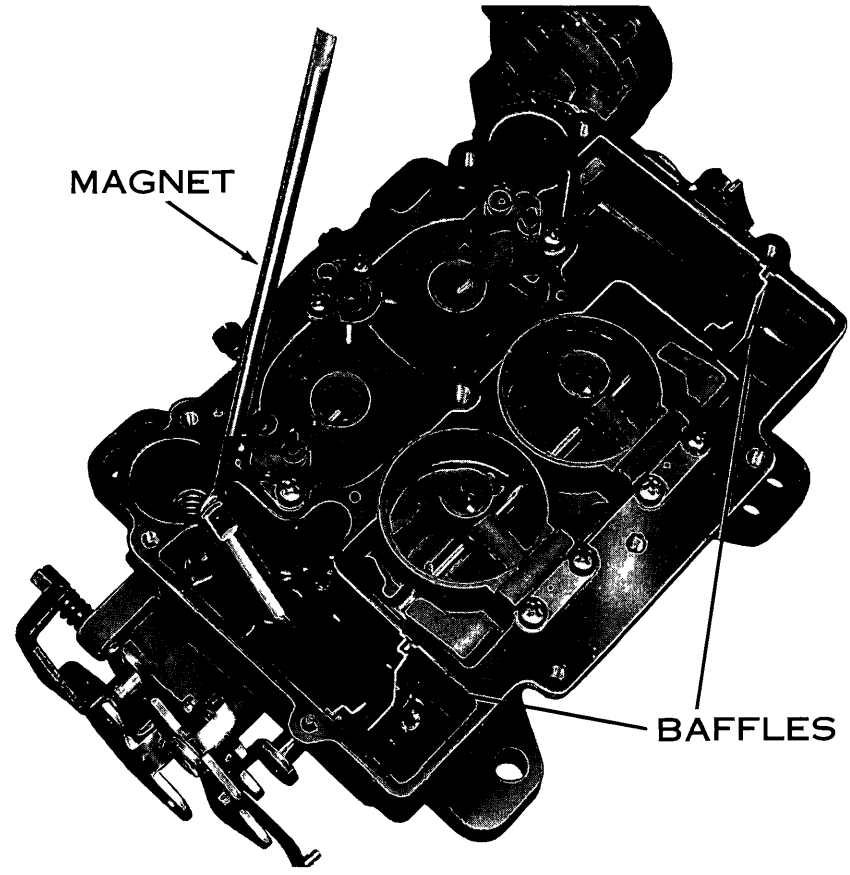


Figure 12

Fill th carbureter bowl with clean fuel befor installing on the manifold. This will help prevent dirt trapped in the fuel system from being dislodged by the fr flow of fuel as the carbureter is primed. The operation of the floats and intake needle and seats may be ch ck d und r pressure if a fu l pump is used at the bench to fill the carbur t r bowl. Op rat th throttl s v ral tim s and visually ch ck th discharg from th pump j ts.

B for installing th carbur t r, hold ch k valv op n and turn th idle spe d scr w until it just contacts th throttl lever, then 1/2 a turn more to open the throttle valves nough to k ep the engine running until th idl mixtur and final R.P.M. adjustment can be mad .

PONTIAC "V-8"

MODELS

CHIEFTAIN (860 & 870) "56-27"

STAR CHIEF "56-28"

1956

(Hydramatic Only)

WGD Dual Down-Draft Climatic® Control Carbureter No. 2359S

CARBURETER SPECIFICATIONS

For Pontiac 8 Cylinder Engine

Dimensions: Flange size 1¼ inch dual, 4 bolt type
Primary venturi 11/32 inch I. D
Secondary venturi, 21/32 inch I. D
Main venturi 1¼ inch I. D

Vents: Outside, in air horn

Gasoline Intake: Size No. 42 (.0935 inch) drill in needle seat

Low Speed Jet Tube: Jet size .031 inch diameter. By-pass, in air horn, size No. 60 (.040 inch) drill. Economizer, in air horn, size No. 63 (.037 inch) drill. Idle bleed in air horn size No. 54 (.055 inch) drill

Idle Port: Upper, slot type, length .195 inch, width .030 inch

Idle Port Opening: .144 to .150 inch above top edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw): Size No. 50 (.070 inch) drill

Set Idle Adjustment Screw: 1¼ to 2¼ turns open. For richer mixture turn screw out. Do not idle engine below 440 to 460 RPM Transmission—in Drive Range

Main Nozzle: Nozzle is installed permanently (DO NOT REMOVE) Anti-percolating well bleed in plug size No. 71 (.026 inch) drill. Bleed (between idle well and anti-percolator well) size No. 72 (.025 inch) drill

Metering Rod (Vacumeter Type): See parts list for size

Metering Rod Jet: Size .086 inch diameter

Accelerating Pump: Discharge jet (twin) size No. 74 (.0225 inch) drill. Intake check seat (in body) size .115 to .120 inch diameter also intake check ball in plunger shaft. Discharge (needle seat) size No. 50 (.070 inch) drill. Pump jet air bleed passage to outside 1/8 inch drill

Choke: Carter Climatic® Control—set on index. Butterfly type offset valve. Choke heat suction hole in air horn size No. 42 (.0935 inch) drill

Vacuum Spark Port: Round type .063 inch diameter. Top of port to be .050 to .060 inch above upper edge of valve with valve tightly closed.

Motor Tune-Up — Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .033"-.038"	Breaker Point Setting .016"	Ignition Timing Breaker Points to Open: 5° B. U. D. C. At Vibration Damper	Float Setting 15/64 Inch (Use Gauge T109-32)	Idle Adjustment Screw Setting 1¼ to 2¼ Turns Open Idle Engine at 440 to 460 R. P. M. In Drive Range

NOTE: These cars are equipped with hydraulic valve lifters.—NO ADJUSTMENT.

CARBURETER ADJUSTMENTS

Float Level: 15/64" (Gauge T109-32) between top of float (at center) and bowl cover. To adjust, bend float lever

Float Alignment: Side of float parallel to edge of casting. Minimum clearance between lever and air horn lugs without binding. To adjust, bend float lever

Pump: With pump connector link in outer hole (long stroke) flat on pump arm should parallel straight edge on dust cover boss. To adjust bend throttle connector rod. (Use bending tool T109-213)

Metering Rod: Metering rod should bottom with throttle valves seated

Fast Idle Linkage Adjustment: With choke valve tightly closed and inner choke shaft lever in contact with outer choke shaft lever center of fast idle screw must align with index mark on fast idle cam. NOTE: There should be a slight clearance between tang on fast idle cam and stop on flange casting. To adjust, bend lug on outer choke shaft lever. (Use bending tool T109-214)

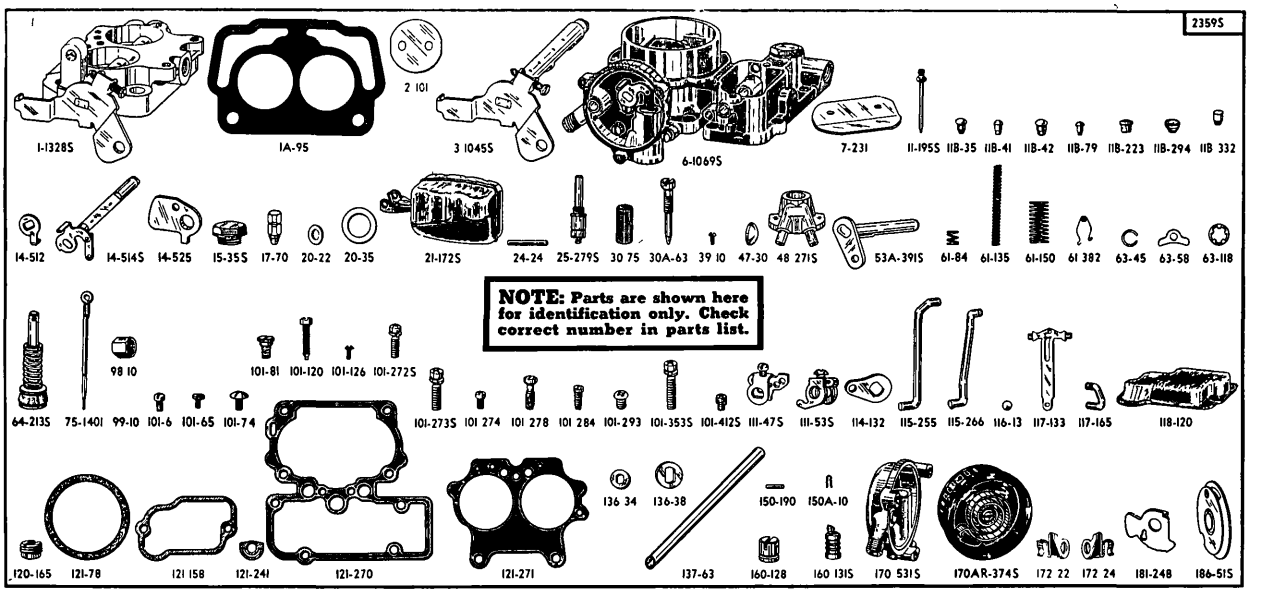
Fast Idle Throttle Valve Clearance: None

Unloader: 1/8" (Gauge T109-36) between top edge of valve and inner wall of air horn. To adjust, bend unloader arm on throttle lever. (Use bending tool T109-41)

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CARBURETER
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Pontiac 8—1956—Carbureter No. 2359S

WHEN SERVICING, USE GASKET ASSORTMENT No. 314

Part No.	PART NAME	
1-1328S	—Body flange assembly	
1A-95	Flange gasket	
2-101	Throttle valve	(2)
3-1045S	—Throttle shaft and lever assembly	
6-1069S	—Air horn assembly	
7-231	—Choke valve	
11-195S	Low speed jet assembly	(2)
11B-35	Rivet plug	(3)
11B-41	Rivet plug	(2)
11B-42	Spark port rivet plug	
11B-79	Rivet plug	(3)
11B-223	Nozzle passage rivet plug	(2)
11B-294	Idle port rivet plug	(2)
11B-332	—Rivet plug	
14-512	Choke shaft lever	
14-514S	Choke piston lever, link and shaft assembly	
14-525	Choke lever	
15-35S	Bowl nut assembly	
17-70	Pump check needle	
20-22	Needle seat gasket	
20-35	Bowl nut gasket	
21-172S	Float and lever assembly	
24-24	Float lever pin	
25-279S	Needle and seat assembly	
30-75	Bowl nut strainer	
30A-63	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
47-30	Welsh plug	
48-271S	—Pump jet housing assembly	
53A-391S	Pump operating lever and countershaft assembly	
61-84	Idle adjustment screw spring	(2)
61-135	Vacuum piston spring	
61-150	Lower pump spring	
61-382	Metering rod spring	
63-45	Pump check ball retainer ring	
63-58	Coil housing retainer	(3)
63-118	Throttle shaft retaining ring	
64-213S	—Pump plunger, rod, spring and retainer assembly	
75-1401	—Metering rod—Standard .0635"x.0545"x.043"	(2)
75-1406	—Metering rod—1 size lean .0645"x.0565"x.043"	(2)
75-1407	—Metering rod—2 sizes lean .06525"x.058"x.043"	(2)
98-10	Compression nut	
99-10	Compression cone	
101-6	Pump arm screw	

Part No.	PART NAME	
101-65	Choke lever screw	
101-74	Throttle shaft arm attaching screw	
101-81	Fast idle cam attaching screw	
101-120	Throttle lever adjustment screw	
101-126	Throttle valve attaching screw	(4)
101-272S	Air horn attaching screw and washer assembly	(8)
101-273S	Body flange attaching screw and washer assembly	(2)
101-274	Coil housing attaching screw	(3)
101-278	Pump jet housing attaching screw	
101-284	Piston housing attaching screw	(3)
101-293	Metering rod arm clamp screw	
101-353S	Body flange attaching screw and washer assembly	(2)
101-412S	Dust cover attaching screw and washer assembly	(2)
111-47S	Pump arm and screw assembly	
111-53S	Metering rod arm and screw assembly	
114-132	Throttle shaft arm	
115-255	Throttle connector rod	
115-266	Choke connector rod	
116-13	Pump intake check ball	
117-133	Vacumeter piston link	
117-165	Pump connector link	
118-120	Dust cover	
120-165	Metering rod jet	(2)
121-78	Coil housing gasket	
121-158	Dust cover gasket	
121-241	Pump jet gasket	
121-270	Air horn gasket	
121-271	Body flange gasket	
136-34	Choke shaft washer	
136-38	Throttle shaft washer	
137-63	—Choke heat tube	
150-190	Choke piston pin	
150A-10	Pin spring	(2)
160-67S	Vacuum piston and pin assembly	
160-128	Choke piston	
160-131S	Vacuum piston and pin assembly (Sup. by 160-67S)	
170-531S	—Piston housing and plug assembly	
170AR-374S	—Thermostatic coil and housing assembly	
172-22	Throttle connector rod retainer (lower)	
172-24	Throttle connector rod retainer (upper)	
181-248	—Fast idle cam	
186-51S	Choke baffle plate assembly	

—Parts soo marked are new and listed for the first time.

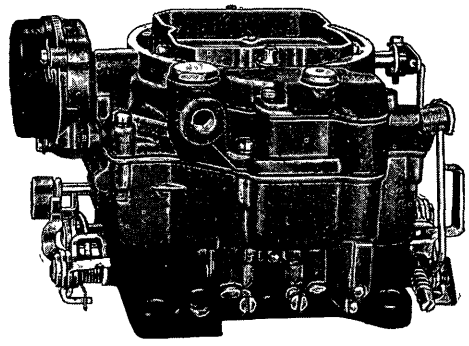
NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

CARTER CARBURETOR

DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

PONTIAC 2364S-2364SA
November, 1955
Revised April, 1956

MODELS
CHIEFTAIN
(860 & 870) "56-27"
STAR CHIEF "56-28"



PONTIAC
"V 8"
1956

WCFB Four-Bore Down-Draft Climatic® Control **Carbureters Nos. 2364S-2364SA**

CARBURETER SPECIFICATIONS

For Pontiac 8 Cylinder Engine: 3.94 Inch Bore, 3.25 Inch Stroke

Dimensions: Flange size, 1¼ inch Four Bore 4 bolt type.
Primary venturi size, 11/32 inch I. D.
Main venturi size, 1-3/16 inch I. D.

Vents: Outside, (3). Inside, (6).

Gasoline Intake: Size No. 38 (.1015 inch) drill hole in needle seat.

Low Speed Jet Tube: (Primary side only) Jet size .036 inch diameter.
By-Pass plug, in body, size No. 53 (.0595 inch) drill.
Economizer, in low speed jet assembly, size .0492 inch diameter.
Idle bleed, in body, size No. 52 (.0635 inch) drill.

Idle Port: (Upper) slot type. Primary, length .195 inch; width .030 inch. Secondary, none.

Idle Port Opening: Primary, .139 to .145 inch above top edge of valve with valve tightly closed. Secondary, none.

Lower Port: Primary (for idle adjustment screw), size No. 53 (.0595 inch) drill. Secondary, none.

Set Idle Adjustment Screw: 1¼ to 2¼ turns open. For richer mixture turn screw out. Do not idle engine below 450 to 470 R.P.M. (in neutral). For cars with air conditioning set idle at 510 to 530 R.P.M. with air conditioning off.

Main Nozzle: Installed permanently. DO NOT REMOVE. Anti-percolating jet (primary, in plug) size No. 60 (.040 inch) drill, (secondary, in body) size No. 60 (.040 inch) drill.

Metering Rod: Primary, economy step .0734 inch diameter. Middle step tapers to .049 inch diameter. Power step .042 inch diameter. Secondary, none.

Metering Rod Jet: Primary, size .0995 inch diameter (for metering rod). Secondary, size .070 inch diameter. (No metering rod.)

Accelerating Pump: Discharge jet (twin) primary side only, size No. 72 (.025 inch) drill.

Intake ball check seat, size .115 to .120 inch diameter.

Discharge needle seat, size .070 inch diameter.

Discharge relief check, size No. 55 (.052 inch) drill.

Choke: Carter Climatic® Control, set one point rich. Butterfly type—offset choke valve, primary side only. Choke heat suction hole, restriction in piston housing, size No. 40 (.098 inch) drill.

Vacuum Spark Port: .062-.064 inch diameter. Top of port .029 to .039 inch above valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

CAUTION: **Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.**

Spark Plug Gap .033"-.038"	Breaker Point Setting .016"	Ignition Timing Breaker Points to Open: 5° B. U. D. C. At Vibration Damper	Float Setting See Adjustments	Idle Adjustment Screw Setting 1¼ to 2¼ Turns Open Idle Engine at 450 to 470 R.P.M. In Neutral

NOTE: **These cars are equipped with hydraulic valve lifters.—NO ADJUSTMENT.**

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT Two separate float adjustments must be made—lateral and vertical

LATERAL ADJUSTMENT With bowl cover assembly inverted bowl cover gasket removed and float resting on seated needle place float gauge (T109 222) directly under floats with notched portion of gauge fitted over edge of casting Side of floats should just clear the vertical uprights of float gauge Adjustment should be made by bending arms of floats

VERTICAL ADJUSTMENT With float gauge in same position floats should just clear the horizontal portion of gauge Vertical distance between top of float and machined surface of casting must be 3/16 inch for both primary and secondary floats (gauge T109 222) Adjust by bending float arms

FLOAT DROP ADJUSTMENT With bowl cover held in upright position and measuring from center of float the distance between top of floats and bowl cover should be 11/16 inch for both primary and secondary floats Adjust by bending stop tabs on float brackets

PUMP ADJUSTMENT Install pump connector link in outer hole (long stroke) of pump arm with ends extending toward countershaft arm Back out throttle lever set screw until throttle valves seat in bores of carbureter Hold straight edge across top of dust cover boss at pump arm The flat on top of pump arm should be parallel to straight edge Adjust by bending throttle connector rod at lower angle (Use tool T109 213)

METERING ROD ADJUSTMENT Metering rod adjustment is important and must be made after completing the pump adjustment No metering rod gauges are necessary Procedure is as follows 1 Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw 2 With metering rods in place press down on vacumeter link until metering rods bottom in carbureter body casting 3 Holding rods in downward position and throttle valves seated revolve metering rod arm until finger on arm contacts lip of vacumeter link Hold in place and carefully tighten clamp screw

BOWL VAPOR VENT ADJUSTMENT This adjustment should be made after completing pump and metering rod adjustments Install dust cover and dust cover gasket Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter There should be 1/16 inch (gauge T109 197) between lower edge of bowl vapor vent valve and dust cover To adjust remove dust cover and bend vapor vent arm

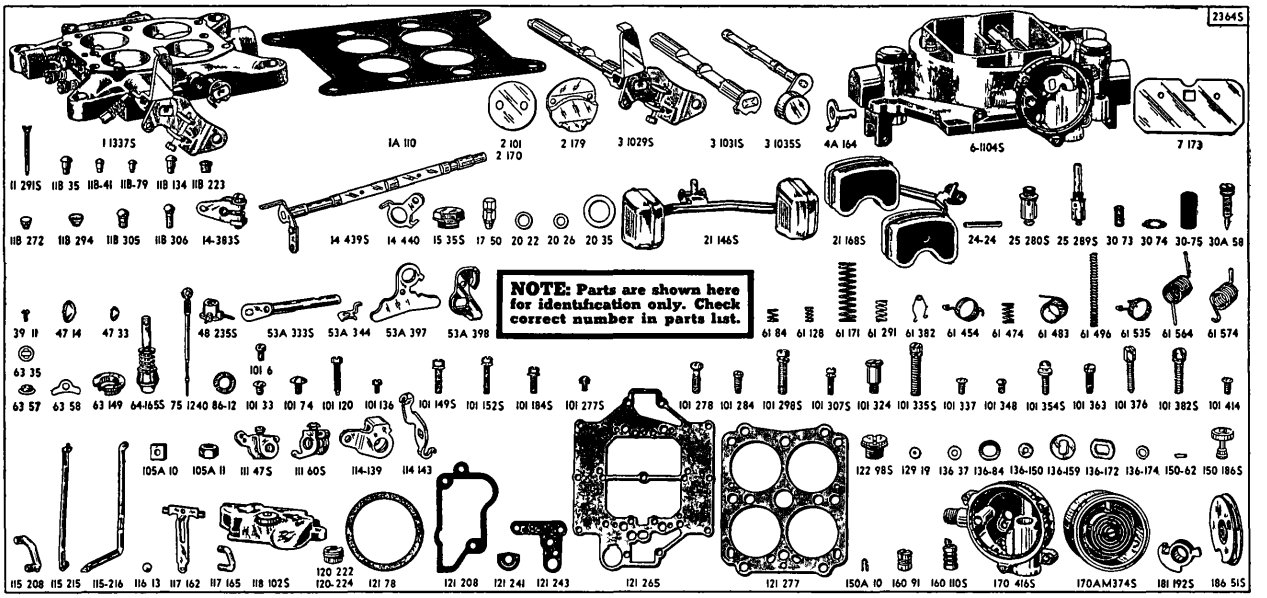
FAST IDLE ADJUSTMENT (a) Loosen choke lever clamp screw on choke shaft Insert 020 inch feeler gauge T109 29 between lip of fast idle cam and boss of flange casting Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw (b) With choke valve tightly closed tighten fast idle adjusting screw until there is 030 inch (gauge T109 29) opening between throttle valve and bore of carbureter side opposite idle port Be sure fast idle adjusting screw is on high step of cam while making this adjustment

UNLOADER ADJUSTMENT With throttle wide open there should be 1/8 inch (gauge T109 36) clearance between upper edge of choke valve and inner wall of air horn Adjust by bending unloader lip on throttle shaft lever (use bending tool T109 41)

SECONDARY THROTTLE LEVER ADJUSTMENT Primary and secondary throttle valves should reach wide open position at the same time To adjust bend throttle operating rod at upper angle (Use bending tool T109 213) With primary and secondary valves in tightly closed position there should be 017 022 inch (gauge T109 29) clearance between positive closing shoes on primary and secondary throttle levers To adjust bend shoe on primary lever

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT This adjustment should be made after completing fast idle and secondary throttle lever adjustments Crack throttle valves and manually open and close the choke valve Tang on secondary throttle lever should freely engage in notch of lock out dog If necessary to adjust bend tang on secondary throttle lever

CARBURETER
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Pontiac "V-8"—1956—Carbureters Nos. 2364S-2364SA

WHEN SERVICING, USE GASKET ASSORTMENT No. 279A; REPAIR PACKAGE No. 1821A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-1337S	—Body flange assembly	
1A-110	—FLANGE GASKET	
2-101	Primary throttle valve	(2)
2-170	Secondary throttle valve	(2)
2-179	—Auxiliary throttle valve	(2)
3-1029S	—Primary throttle shaft and lever assembly	
3-1031S	—Secondary throttle shaft and dog assembly	
3-1035S	—Auxiliary throttle shaft and weight assembly	
4A-164	—Throttle shaft dog	
6-1104S	—Air horn assembly (Casting No 6 1102) (2364S) (Sup by 6 1137S)	
6-1137S	—Air horn assembly (Casting No 6 1102) (2364S)	
6-1183S	—Air horn assembly (Casting No 6 1152) (2364SA)	
7-173	Choke valve	
11-291S	LOW SPEED JET ASSEMBLY	(2)
11B-35	Rivet plug	(4)
11B-41	Rivet plug (2364S (2) (2364SA (1)	
11B-79	Rivet plug	(4)
11B-134	Rivet passage plug	
11B-223	Nozzle passage rivet plug	(4)
11B-272	Rivet plug	(2)
11B-294	Idle port rivet plug	(2)
11B-305	Rivet plug (2364S (1) (2364SA (2)	
11B-306	Rivet plug (2364S (2) (2364SA (1)	
14-383S	Choke lever and screw assembly	
14-439S	Choke piston lever link and shaft assembly	
14-440	Cam trip lever	
15-35S	Strainer nut assembly	(2)
17-50	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	(2)
20-26	Pump relief plug gasket	
20-35	BOWL STRAINER GASKET	(2)
21-146S	Primary float and lever assembly	
21-168S	—Secondary float and lever assembly	

Part No.	PART NAME	
24-24	Float lever pin	(2)
25 280S	PRIMARY NEEDLE AND SEAT ASSEMBLY	
25 289S	SECONDARY NEEDLE AND SEAT ASSEMBLY	
30-73	PRIMARY NEEDLE SEAT STRAINER	
30-74	SECONDARY FUEL INLET STRAINER	
30-75	BOWL STRAINER	
30A 58	Idle adjustment screw	(2)
39-11	Choke valve attaching screw	(2)
47-14	Welsh plug (choke housing)	
47-33	Welsh plug (spark port)	
48-235S	Pump jet and housing assembly	
53A-333S	Pump operating lever and countershaft assembly	
53A-344	Vent arm	
53A-397	—Lockout arm	
53A-398	—Secondary operating lever	
61-84	Idle adjustment screw spring	(2)
61-128	Connector rod spring	
61-171	PUMP SPRING (LOWER)	
61-291	Throttle lever adjusting screw spring	
61-382	METERING ROD SPRING	
61-454	Fast idle cam spring	
61-474	Bowl vent spring	
61-478	VACUUM PISTON SPRING	
61-483	SECONDARY THROTTLE RETURN SPRING	
61-496	Vacuum piston spring (2364S) (Sup by 61 478)	
61-535	Lockout arm spring	
61-564	Throttle flex spring (2364S) (Sup by 61 574)	
61-574	—Throttle flex spring	
63-35	CONNECTOR ROD SPRING RETAINER	
63-57	INTAKE CHECK BALL RETAINER	
63-58	Coil housing retainer	(3)
63-149	Bowl vent spring retainer	
64-165S	PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY	

Part No	PART NAME	
75-1240	—METERING ROD—STANDARD	(2)
75-1269U	—Metering rod and jet unit—1 size lean (Consists of 2—75 1267 and 2—120 228)	
75-1270U	—Metering rod and jet unit—2 sizes lean (Consists of 2—75 1268 and 2—120 185)	
86-12	Flange stud lock washer	(4)
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	(2)
101-120	Fast idle adjustment screw	
101-136	Coil housing attaching screw	(3)
101-149S	Body flange attaching screw and washer assembly	
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-275	Piston housing attaching screw (2364SA)	
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet and housing attaching screw	
101-284	Piston housing attaching screw (2364S)	(2)
101-298S	Body flange attaching screw and washer assembly	(2)
101 307S	Air horn attaching screw and washer assembly	(8)
101-324	Fast idle cam attaching screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-348	Primary throttle valve attaching screw	(4)
101-354S	Choke lever clamp screw assembly	
101-363	Piston housing attaching screw (2364S (1) (2364SA (2)	
101-376	Throttle lever adjusting screw	
101-382S	Body flange attaching screw and washer assembly	(3)
101-414	—Auxiliary throttle valve attaching screw	(4)
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
114-139	—Throttle shaft arm (inner)	
114-140	Throttle shaft arm (outer) (2364S) (Sup by 114 143)	

Part No	PART NAME	
114-143	—Throttle shaft arm (outer)	
115-208	Throttle operating rod	
115-215	Choke connector rod	
115 216	THROTTLE CONNECTOR ROD	
116-13	PUMP INTAKE CHECK BALL	
117 162	Vacumeter piston link	
117-165	Pump connector link	
118 102S	Dust cover assembly	
120-222	—SECONDARY METERING JET	(2)
120-224	—PRIMARY METERING ROD JET	(2)
120 226	Secondary metering jet (2364S) (Sup by 120 222)	(2)
121-78	COIL HOUSING GASKET	
121-208	DUST COVER GASKET	
121-241	PUMP JET HOUSING GASKET	
121-243	PISTON HOUSING GASKET (2364S)	
121-265	AIR HORN GASKET	
121-277	—BODY FLANGE GASKET	
121-283	PISTON HOUSING GASKET (2364SA)	
122-98S	PUMP RELIEF VALVE PLUG ASSEMBLY	
129-19	Metering rod disks	(2)
136-37	Throttle connector rod and operating rod washer	(5)
136 84	Spring washer	
136-150	—Metering rod washer (lower)	
136-159	Throttle shaft washer	
136-172	Secondary throttle shaft washer	
136-174	Throttle lever adjusting screw washer	
150-62	Choke piston pin	
150-186S	Pin and valve cap assembly	
150A-10	PIN SPRING	(5)
160-91	Choke piston (2364S) (Sup by 160 138)	
160-110S	Vacuum piston and pin assembly	
160-138	Choke piston	
170-416S	—Piston housing and plug assembly (2364S)	
170-452S	—Piston housing and plug assembly (2364SA)	
170AM-374S	Thermostatic coil and housing assembly	
181-192S	Fast idle cam and spring assembly	
186-51S	Choke baffle plate assembly	

—Parts so marked are new and listed for the first time

NOTE **Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used**

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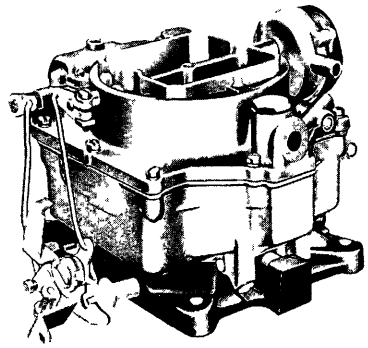
Form 5140C

CARTER CARBURETOR
DIVISION OF ACF INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

PONTIAC 2268S-2283S
January, 1955
Revised March, 1957

(2268S) HYDRAMATIC TRANSMISSION

(2283S) SYNCROMESH TRANSMISSION



PONTIAC "V-8" MODELS CHIEFTAIN "55-27" STAR CHIEF "55-28" 1955

WCFB Four-Bore Down-Draft Climatic® Control **Carbureters Nos. 2268S-2283S**

CARBURETER SPECIFICATIONS

For Pontiac 8 Cylinder Engine: 3.75 Inch Bore, 3.25 Inch Stroke

Dimensions: Flange size, 1 1/8 inch Four Bore 4 bolt type.
Primary venturi size, 11/32 inch I. D.
Main venturi (primary) size, 1-1/16 inch I. D.
Main venturi (secondary) size, (2268S) 1 inch (2283S) 15/16 inch I. D.

Float Level: See adjustments.

Vents: Outside, (5) in bowl cover, (2) in dust cover. Inside, (3) on primary side, (3) on secondary side.

Gasoline Intake: Size No. 38 (.1015 inch) drill hole in needle seat.

Low Speed Jet Tube: (Primary side only) Jet size (2268S) No. 68 (.031 inch) (2283S) No. 67 (.032 inch) drill.
By Pass, in body, size No. 53 (.0595 inch) drill.
Economizer, in low speed jet assembly, size .0492 inch diameter.
Idle bleed, in body, size No. 52 (.0635 inch) drill.

Idle Port: (Upper) slot type. Primary, length .195 inch; width .030 inch. Secondary, none.

Idle Port Opening: Primary, .139 to .145 inch above top edge of valve with valve tightly closed. Secondary, none.

Lower Port: Primary (for idle adjustment screw), size No. 53 (.0595 inch) drill. Secondary, none.

Set Idle Adjustment Screw: 3/4 to 1 3/4 turns open. For richer mixture turn screw out. Do not idle engine below 390 r.p.m. For (Hydramatic—in drive range), or 450 r.p.m. For (Syncromesh Trans.)

Main Nozzle: Installed permanently. DO NOT REMOVE. Anti-percolating jet (primary, in plug) size No. 60 (.040 inch) drill, (secondary, in body) size (2268S) No. 60 (.040 inch), (2283S) No. 56 (.0465 inch) drill.

Metering Rod: Primary, economy step (2268S) .0745 inch, (2283S) .072 inch diameter. Middle step tapers to (2268S) .068 inch, (2283S) .069 inch diameter. Power step, .059 inch diameter. Secondary, none.

Metering Rod Jet: Primary, size .0935 inch diameter (for metering rod). Secondary, size (2268S) .0492 inch, (2283S) .0512 inch diameter. (No metering rod.)

Metering Rod Setting: See adjustments.

Accelerating Pump: Discharge jet (twin) primary side only, size No. 72 (.025 inch) drill.
Intake ball check seat, size .115 to .120 inch diameter.
Discharge needle seat, size .070 inch diameter.

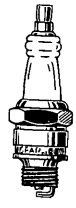
Pump Adjustment: See adjustments.

Choke: Carter Climatic® Control, set on index. Butterfly type—offset choke valve, primary side only. Choke heat suction hole, restriction in piston housing, size No. 45 (.082 inch) drill.

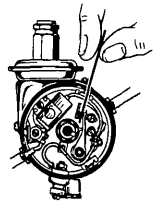
Vacuum Spark Port: .062-.064 inch diameter. Top of port .029 to .039 inch above valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

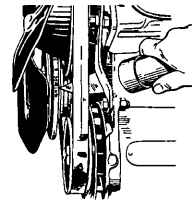
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carburet r.



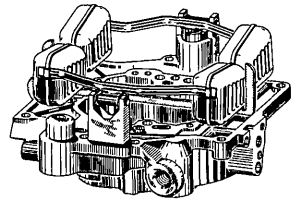
Spark Plug Gap .033"-.038"



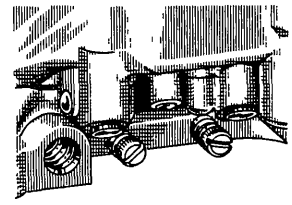
Breaker Point Setting .016"



Ignition Timing Breaker Points to Open: 5° B.T.D.C.



Float Setting See Adjustments



Idle Adjustment Screw Setting 3/4 to 1 3/4 Turns Open

NOTE: These cars equipped with Hydraulic Valve Lifters. NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

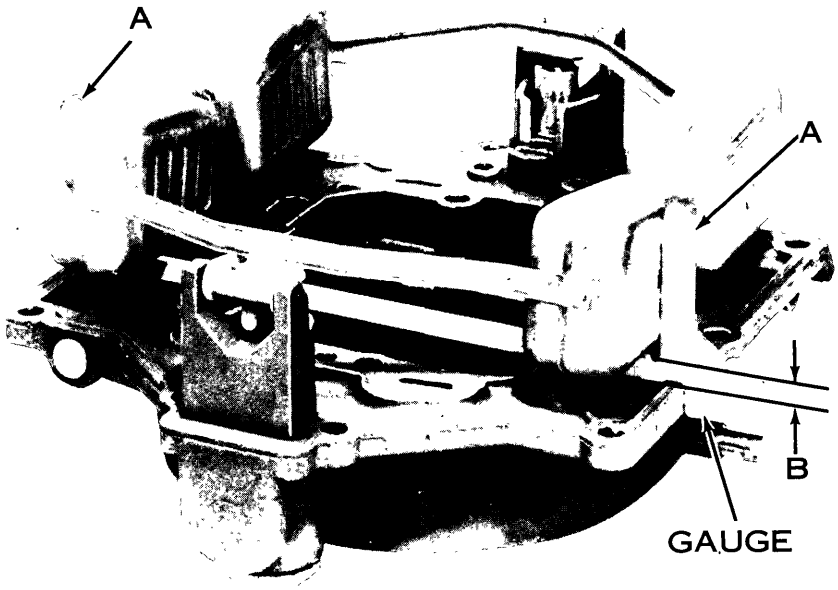


Figure 1
Float Adjustment

FLOAT ADJUSTMENT (Fig. 1):

Two separate float adjustments must be made—lateral and vertical.

LATERAL ADJUSTMENT: With bowl cover assembly inverted, bowl cover gasket removed and float resting on seated needle, place float gauge (T109-222) directly under floats with notched portion of gauge fitted over edge of casting. Side of floats should just clear the vertical uprights of float gauge (A). Adjustment should be made by bending arms of floats.

VERTICAL ADJUSTMENT: With float gauge in same position, floats should just clear the horizontal portion of gauge. Vertical distance (B) between top of float and machined surface of casting must be 3/16 inch for both primary and secondary floats (gauge T109-222). Adjust by bending float arms.

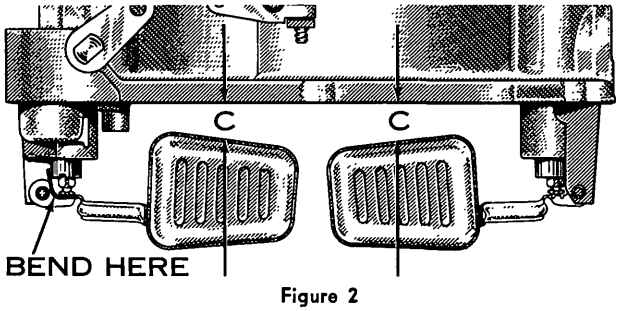


Figure 2
Float Drop Adjustment

FLOAT DROP ADJUSTMENT (Fig. 2):

With bowl cover held in upright position and measuring from center of float, the distance between top of floats (C) and bowl cover should be 11/16 inch for both primary and secondary floats. Adjust by bending stop tabs on float brackets.

PUMP ADJUSTMENT (Fig. 3):

Install pump connector link in outer hole (long stroke) of pump arm, with ends extending toward countershaft arm. Back out throttle lever set screw (D) until throttle valves seat in bores of carbureter. Hold straight edge across top of dust cover boss at pump arm. The flat on top of pump arm should be parallel to straight edge. Adjust by bending throttle connector rod at lower angle. (Use tool T109-213.)

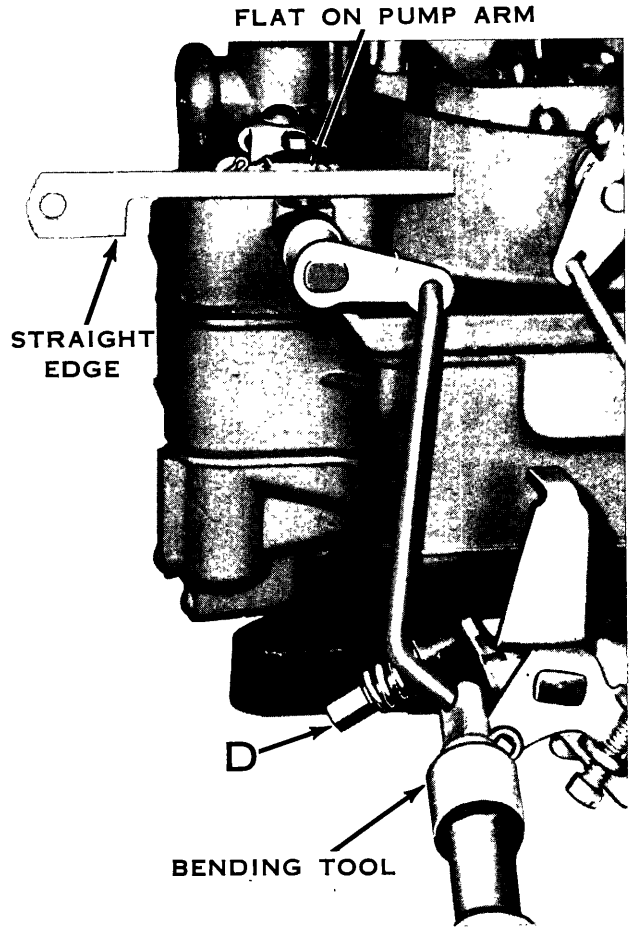


Figure 3
Pump Adjustment

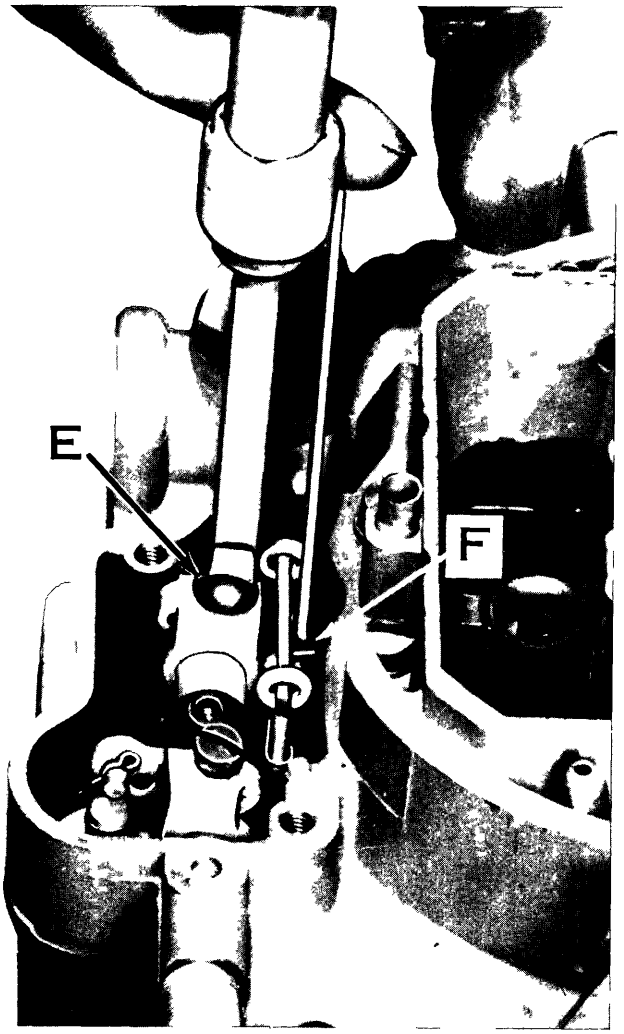


Figure 4
Metering Rod Adjustment

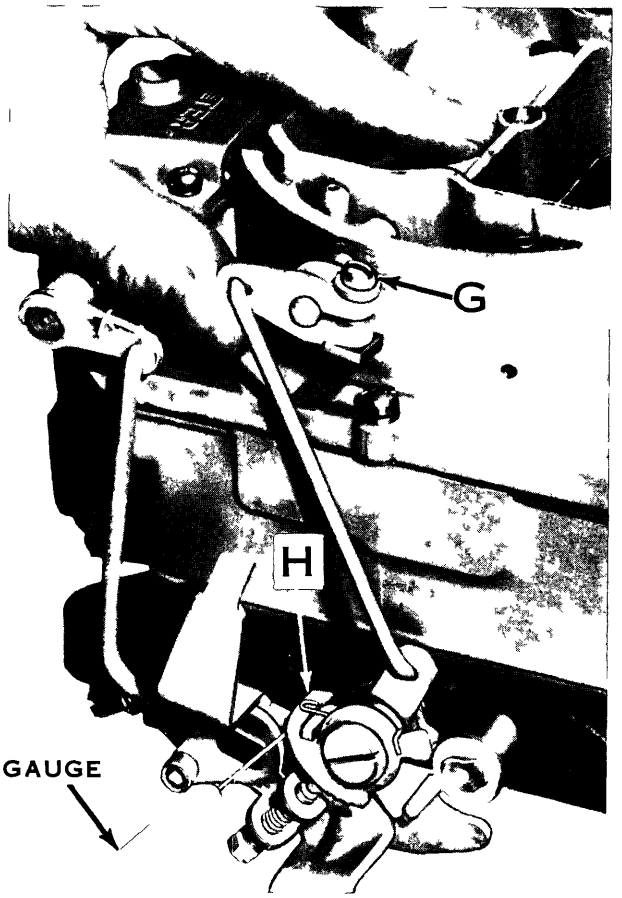


Figure 5A
Fast Idle Adjustment

METERING ROD ADJUSTMENT (Fig 4)

Metering rod adjustment is important and must be made after completing the pump adjustment No metering rod gauges are necessary Procedure is as follows 1 Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw (E) 2 With metering rods in place press down on vacumeter link until metering rods bottom in carbureter body casting 3 Holding rods in downward position and throttle valves seated revolve metering rod arm until finger on arm contacts lip of vacumeter link (F) Hold in place and care fully tighten clamp screw (E)

FAST IDLE ADJUSTMENT (Fig 5A and 5B)

(a) Loosen choke lever clamp screw (G) on choke shaft In sert 020 inch feeler gauge T109 29 between lip of fast idle cam and boss of flange casting (H) Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw (G) (b) With choke valve tightly closed tighten fast idle adjusting screw (J) until there is 018 inch (gauge T109 44) opening between throttle valve and bore of car bureter side opposite idle port Be sure fast idle adjusting screw (J) is on high step of cam while making this adjustment

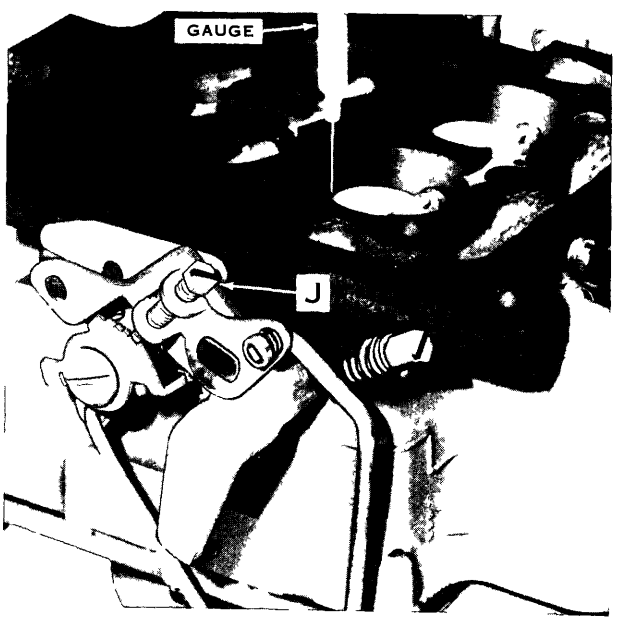


Figure 5B
Fast Idle Adjustment

Part N .	PART NAME	
101-120	Fast idle adjustment screw	
101-136	Coil housing attaching screw	(3)
101-149S	Body flange attaching screw and washer assembly	
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-278	Pump jet and housing attaching screw	
101-284	Coil housing attaching screw	(2)
101-298S	Body flange attaching screw and washer assembly	(2)
101-307S	Air horn attaching screw and washer assembly	(8)
101-324	Fast idle cam attaching screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-348	Primary throttle valve attaching screw	(4)
101-354S	Choke lever clamp screw assembly	
101-363	Coil housing attaching screw	
101-376	Throttle lever adjusting screw	
101-382S	Body flange attaching screw and washer assembly	(3)
103-14	Lead shot (late prod)	
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
114-127	Throttle shaft arm (outer)	
114-128	Throttle shaft arm (inner)	
115-208	Throttle operating rod	
115-215	Choke connector rod	
115-216	THROTTLE CONNECTOR ROD	
116-13	PUMP INTAKE CHECK BALL	
117-162	Vacumeter piston link	
117-165	Pump connector link	
118-116	Dust cover	
120-166	PRIMARY METERING ROD JET	(2)
120-181	SECONDARY METERING JET (2268S)	(2)
120-187	Secondary metering jet (2283S)	(2)
121-78	COIL HOUSING GASKET	
121-208	DUST COVER GASKET	
121-241	PUMP JET HOUSING GASKET	
121-243	PISTON HOUSING GASKET	
121-249	BODY FLANGE GASKET	
121-265	AIR HORN GASKET	
136-37	Throttle connector and operating rod washer	(5)
136-84	Spring washer	
136-159	Throttle shaft washer	
136-172	Secondary throttle shaft washer	
136-174	Throttle lever adjusting screw washer	
150-62	Choke piston pin	
150A-10	PIN SPRING	(5)
160-91	Choke piston (2283S)	
160-110S	Vacuum piston and pin assembly	
160-138	Choke piston (2268S)	
170-370S	Piston housing and plug assembly	
170AM374S	Thermostatic coil and housing assembly	
181-192S	Fast idle cam assembly	
186-51S	Choke baffle plate assembly	

NOTE **Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.**

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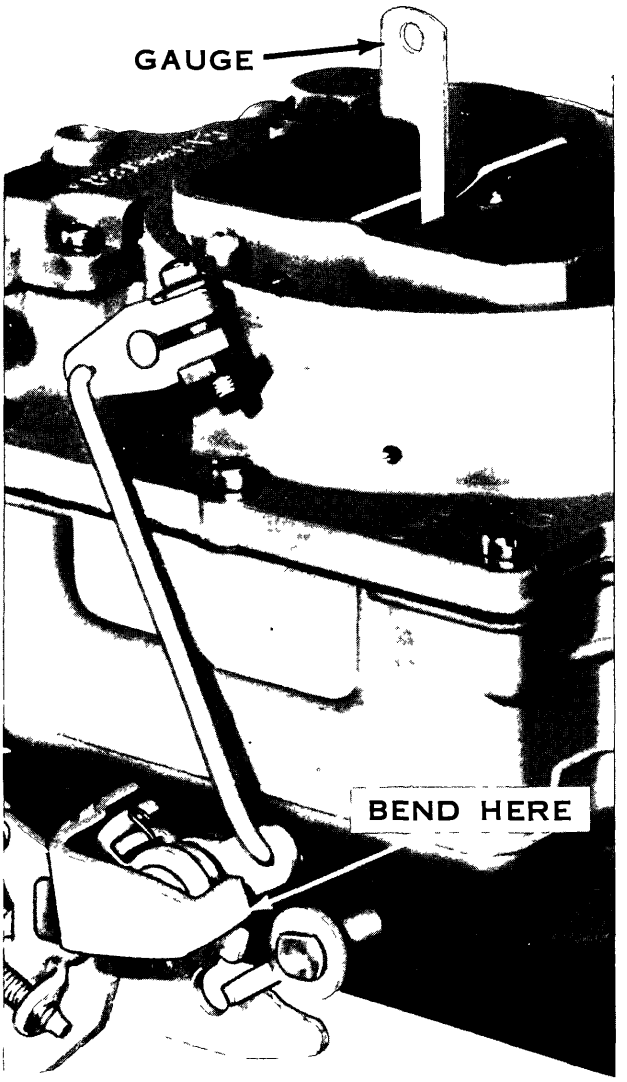


Figure 6
Unloader Adjustment

UNLOADER ADJUSTMENT (Fig. 6):
With throttle wide open there should be 1/8 inch (gauge T109-36) clearance between upper edge of choke valve and inner wall of air horn. Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41).

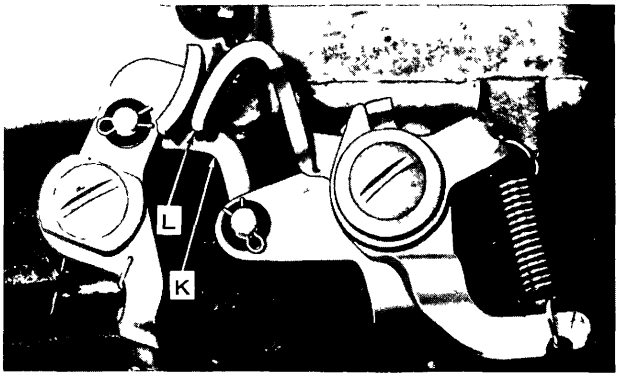


Figure 7
Secondary Throttle Lever Adjustment

SECONDARY THROTTLE LEVER ADJUSTMENT (Fig. 7):
Primary and secondary throttle valves should reach wide open position at the same time. To adjust, bend throttle operating rod at upper angle (K). (Use bending tool T109-213.) With primary and secondary valves in tightly closed position there should be .017-.022 inch (gauge T109-29) clearance between positive closing shoes on primary and secondary throttle levers. To adjust bend shoe (L) on primary lever.

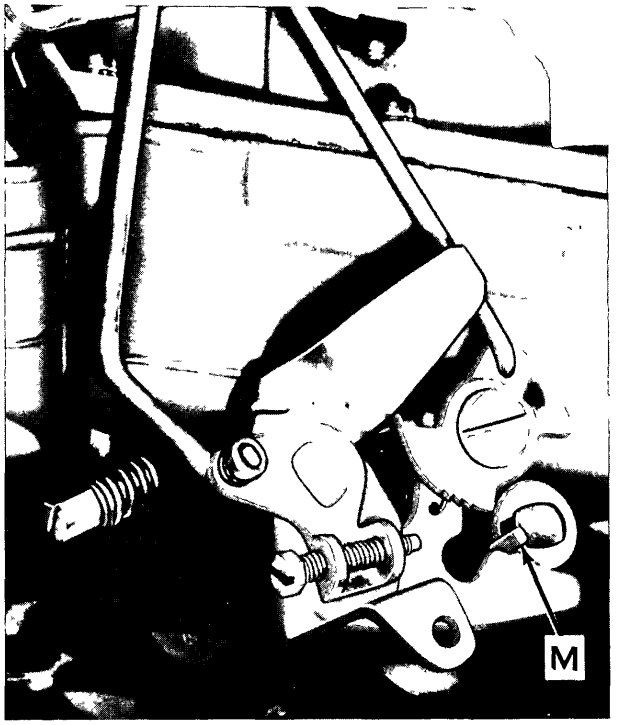
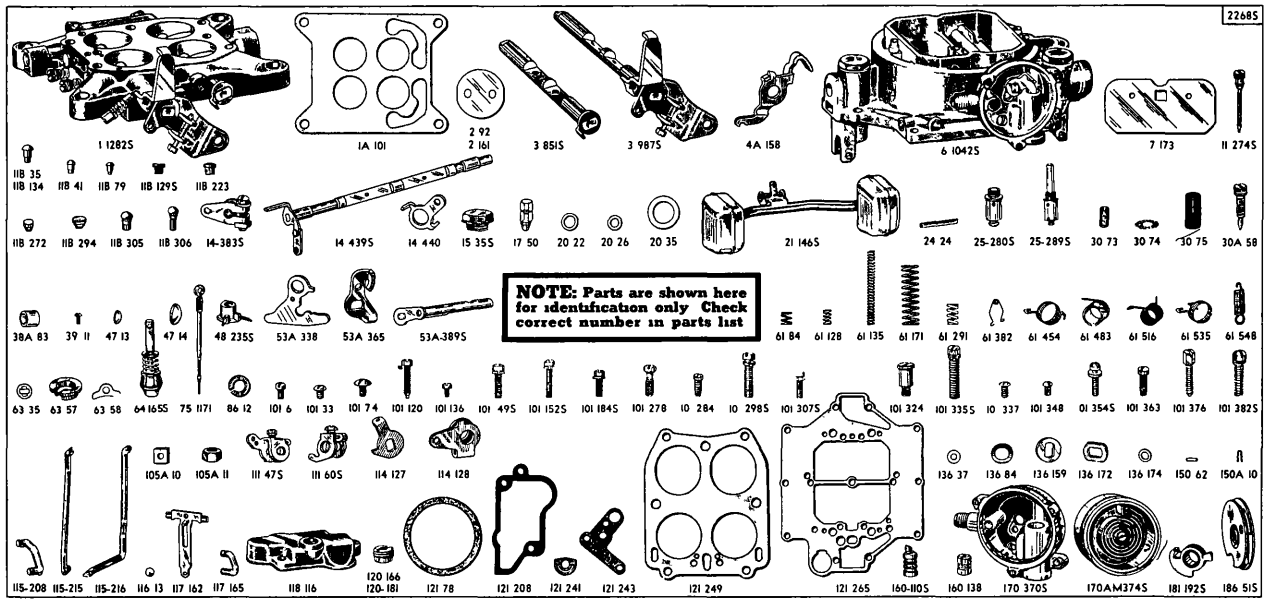


Figure 8
Secondary Throttle Lock-Out Adjustment

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT (Fig. 8):
This adjustment should be made after completing fast idle and secondary throttle lever adjustments. Crack throttle valves and manually open and close the choke valve. Tang (M) on secondary throttle lever should freely engage in notch of lock-out dog. If necessary to adjust, bend tang (M) on secondary throttle lever.



Pontiac 8—1955—Carbureters Nos. 2268S-2283S

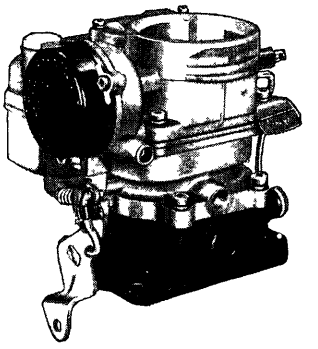
WHEN SERVICING, USE GASKET ASSORTMENT No. 267 (2268S-2283S), REPAIR PACKAGE No 1796 (2268S)
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part N .	PART NAME	
1-1282S	Body flange assembly	
1A-101	FLANGE GASKET	
2-92	Primary throttle valve	(2)
2-161	Secondary throttle valve	(2)
3-851S	Secondary throttle shaft and dog assembly	
3-987S	Primary throttle shaft and lever assembly	
4A-158	Throttle shaft dog	
6-1042S	Air horn assembly (2268S)	
6-1052S	Air horn assembly (2283S)	
7-173	Choke valve	
11-274S	LOW SPEED JET ASSEMBLY (2268S)	(2)
11-276S	Low speed jet assembly (2283S)	(2)
11B-35	Rivet plug	(4)
11B-41	Rivet plug	(2)
11B-79	Rivet plug (early prod) (4) (late prod)	(3)
11B-129S	PUMP DISCHARGE PASSAGE PLUG ASSEMBLY	
11B-134	Rivet plug	
11B-223	Rivet plug	(4)
11B-272	Rivet plug	(2)
11B-294	Idle port rivet plug	(2)
11B-305	Rivet plug	
11B-306	Rivet plug	(2)
14-383S	Choke lever and screw assembly	
14-439S	Choke piston lever link and shaft assembly	
14-440	Cam trip lever	
15-35S	Strainer nut assembly	(2)
17-50	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	(2)
20-26	Pump discharge passage plug gasket	
20-35	BOWL STRAINER GASKET	(2)
21-146S	Float and lever assembly	(2)
24-24	Float lever pin	(2)
25-280S	PRIMARY NEEDLE AND SEAT ASSEMBLY	
25-289S	SECONDARY NEEDLE AND SEAT ASSEMBLY	
30-73	PRIMARY NEEDLE SEAT STRAINER	
30-74	SECONDARY FUEL INLET STRAINER	

Part No.	PART NAME	
30-75	BOWL STRAINER	
30A-58	Idle adjustment screw	(2)
38A-83	Countershaft bushing	
39-11	Choke valve attaching screw	(2)
47-13	Spark port welsh plug	
47-14	Choke housing welsh plug	
48-235S	Pump jet and housing assembly	
53A-338	Lockout arm	
53A-365	Secondary operating lever	
53A-389S	Pump operating lever and countershaft assembly	
61-84	Idle adjustment screw spring	(2)
61-128	Connector rod spring	
61-135	VACUUM PISTON SPRING	
61-171	PUMP SPRING (LOWER)	
61-291	Throttle lever adjusting screw spring	
61-382	METERING ROD SPRING	
61-454	Fast idle cam spring	
61-483	SECONDARY THROTTLE RETURN SPRING	
61-516	Countershaft spring	
61-535	Lockout arm spring	
61-548	Throttle flex spring (Sup by 61 552)	
61-552	Throttle flex spring	
63-35	CONNECTOR ROD SPRING RETAINER	
63-57	INTAKE CHECK BALL RETAINER	
63-58	Coil housing retainer	(3)
64-165S	PUMP PLUNGER AND ROD ASSEMBLY	
75-1171	METERING ROD—STANDARD (2268S)	(2)
75-1183	Metering rod—standard (2283S)	(2)
75-1203	Metering rod—1 size lean (2268S)	(2)
75-1205U	Metering rod and jet unit—2 sizes lean (consists of 2—75 1204 and 2—120 220) (2268S)	
75-1219	Metering rod—1 size lean (2283S)	
75-1221U	Metering rod and jet unit—2 sizes lean (consists of 2—75 1220 and 2—120 181) (2283S)	
86-12	Flange stud lock washer	(4)
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	(2)

(2207S-SB) SYNCROMESH TRANSMISSION

(2182S-SA-SB) HYDRAMATIC TRANSMISSION



Casting No 1185 on Face of Flange

PONTIAC "V-8" MODELS CHIEFTAIN "55-27" STAR CHIEF "55-28" 1955

WGD Dual Down-Draft Climatic® Control Carbureters

Nos. 2182S-2182SA-2182SB-2207S-2207SB

CARBURETER SPECIFICATIONS

For Pontiac 8 Cylinder Engine 3¾ Inch Bore, 3¼ Inch Stroke

Dimensions Flange size 1¼ inch dual 4 bolt type
Primary venturi 11/32 inch I D
Secondary venturi 21/32 inch I D
Main venturi 1 3/16 inch I D

Float Level See adjustments

Vents Outside in bowl cover size No 10 (1935 inch) drill
Vent from bowl cover to bowl No 30 (1285 inch) drill

Gasoline Intake Size No 42 (0935 inch) drill in needle seat

Low Speed Jet Tube Jet size (2182S SA SB) No 70 (028 inch) drill (2207S SB) No 66 (033 inch) drill By pass in air horn size No 60 (040 inch) drill Economizer in air horn size No 63 (037 inch) drill Idle bleed in air horn size No 54 (055 inch) drill

Idle Port Upper slot type length 195 inch width 030 inch

Idle Port Opening 139 to 145 inch above top edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw) Size 0615 to 0655 inch diameter

Set Idle Adjustment Screw (2207S SB) ½ to 1½ (2182S SA SB) 1¼ to 2¼ turns open For richer mixture turn screw out Do not idle engine below 390 410 R P M (Syncromesh) and (Hydramatic—without air conditioning) in neutral or 450 470 (Hydramatic with air conditioning) in neutral

Main Nozzle Nozzle is installed permanently DO NOT REMOVE Anti percolating well jet size No 71 (026 inch) drill Jet (between idle well and anti percolator well) size No 72 (025 inch) drill

Metering Rod (Vacumeter Type) Economy step (2182S SA SB) 063 inch (2207S SB) 060 inch diameter Middle step tapers to (2182S SA SB) 056 inch (2207S SB) 055 inch diameter. Power step 048 inch diameter

Metering Rod Jet Size 086 inch diameter

Metering Rod Setting See adjustments

Accelerating Pump Discharge jet (twin) size No 74 (0225 inch) drill Intake check ball in plunger shaft Discharge needle seat size No 50 (070 inch) drill

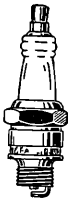
Pump Adjustment See adjustments

Choke Carter Climatic® Control—set (2182S SA SB) one point rich (2207S SB) one point lean Butterfly type offset valve Choke heat suction hole in piston housing size No 42 (0935 inch) drill

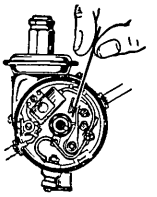
Vacuum Spark Port Round type 062 to 064 inch diameter Top of port to be (2182S SA SB) 029 to 039 inch (2207S-SB) 040 to 050 inch above upper edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

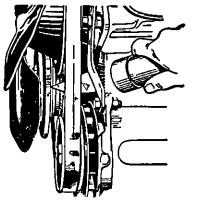
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter.



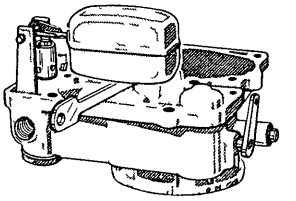
Spark Plug Gap
033"-038"



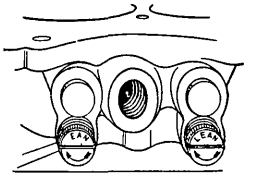
Breaker Point Setting
016"



Ignition Timing Breaker Points to Open
5° B T D C



Float Setting
See Adjustments



Idle Adjustment Screw Setting
(2207S-SB) ½ to 1½
(2182S-SA-SB) 1¼ to 2¼ Turns Open

NOTE These cars equipped with Hydraulic Valve Lifters NO ADJUSTMENT

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CARBURETER ADJUSTMENTS

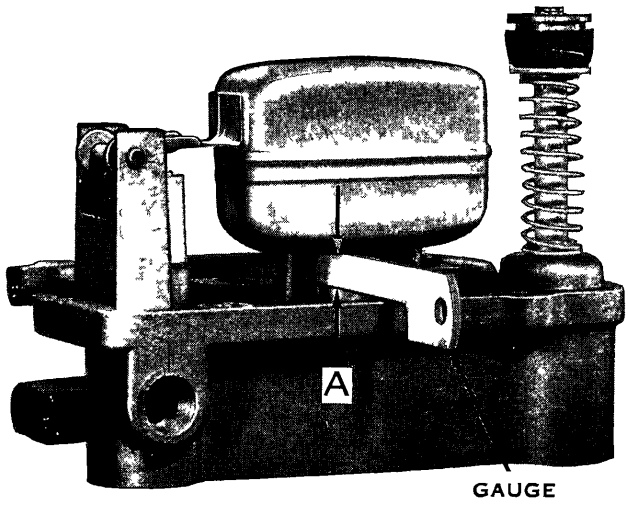


Figure 1
Float Adjustment

FLOAT ADJUSTMENT (Fig. 1):

With bowl cover gasket removed, bowl cover inverted and needle seated there should be 7/32 inch (A) (gauge T109-106) between top of float and bowl cover Adjust by bending float arm

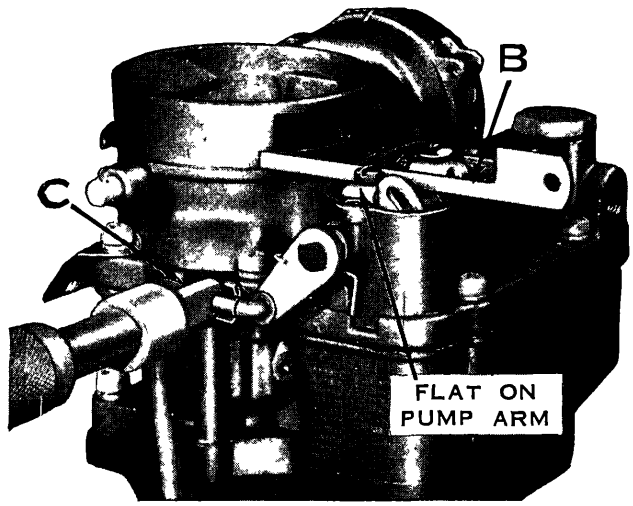


Figure 2
Pump Adjustment

PUMP ADJUSTMENT (Fig. 2):

Back out throttle lever set screw until throttle valves seat in bores of carbureter Hold straight edge (B) across top of dust cover boss at pump arm The flat on top of pump arm should be parallel to straight edge Adjust by bending pump arm at upper angle (C) Use bending tool T109-213

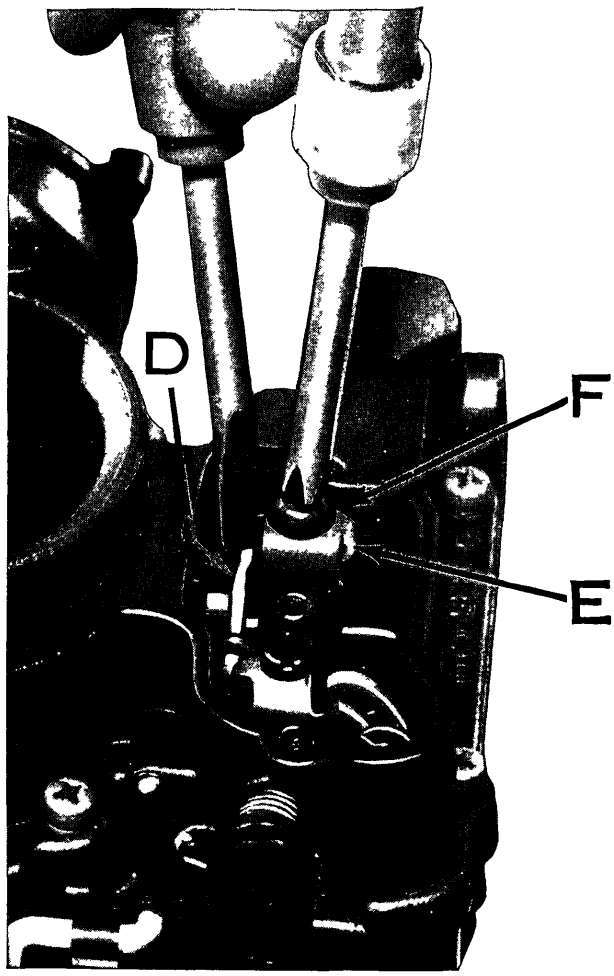


Figure 3
Metering Rod Adjustment

METERING ROD ADJUSTMENT (Fig. 3):

The metering rods must be adjusted after the pump adjustment No metering rod gauges are necessary, procedure is as follows With the throttle lever set screw backed out and throttle valves seated in bores of carbureter press down on vacumeter link (D) until metering rods bottom in casting With rods held in this position, revolve metering rod arm (E) until lip contacts vacumeter link Hold in place and carefully tighten metering rod arm set screw (F)

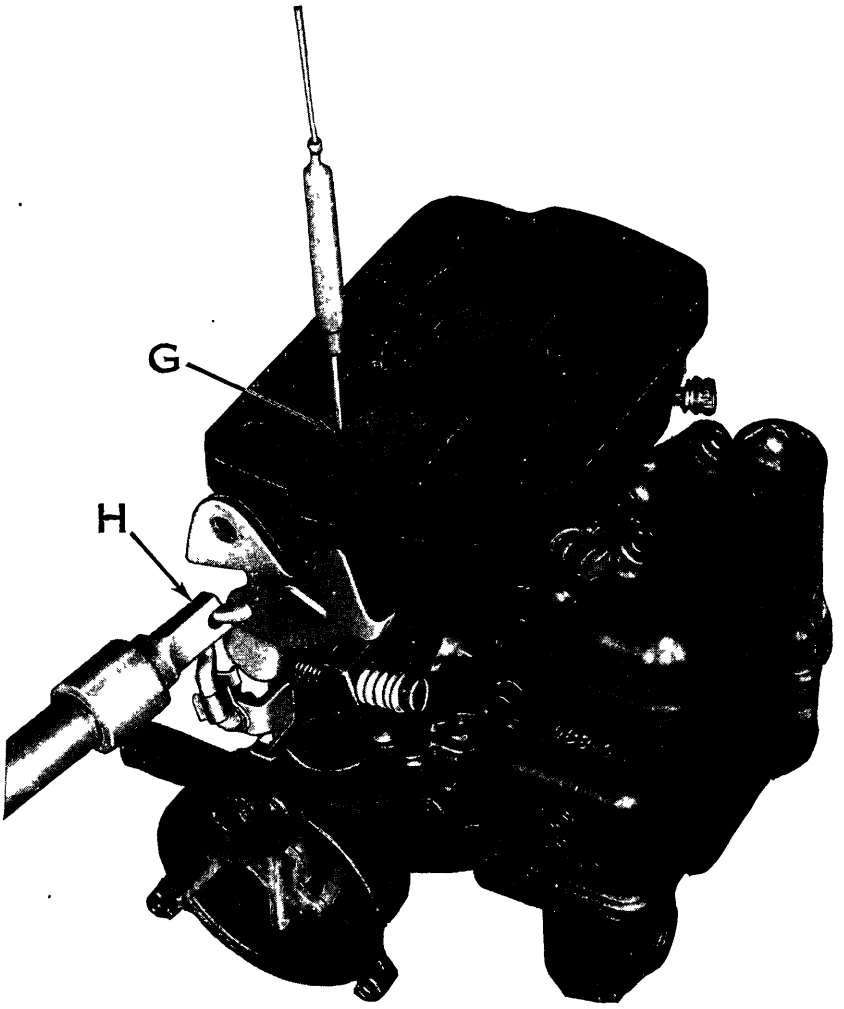


Figure 4
Fast Idle Adjustment

FAST IDLE ADJUSTMENT (Fig. 4):

With the thermostatic coil housing gasket and baffle plate removed, crack throttle valve and hold choke valve closed. Then close throttle. There should now be .026 inch clearance (G) (gauge T109-189) between throttle valve and bore of carbureter (side opposite idle port). Adjust by bending the choke connector rod at lower angle (H).

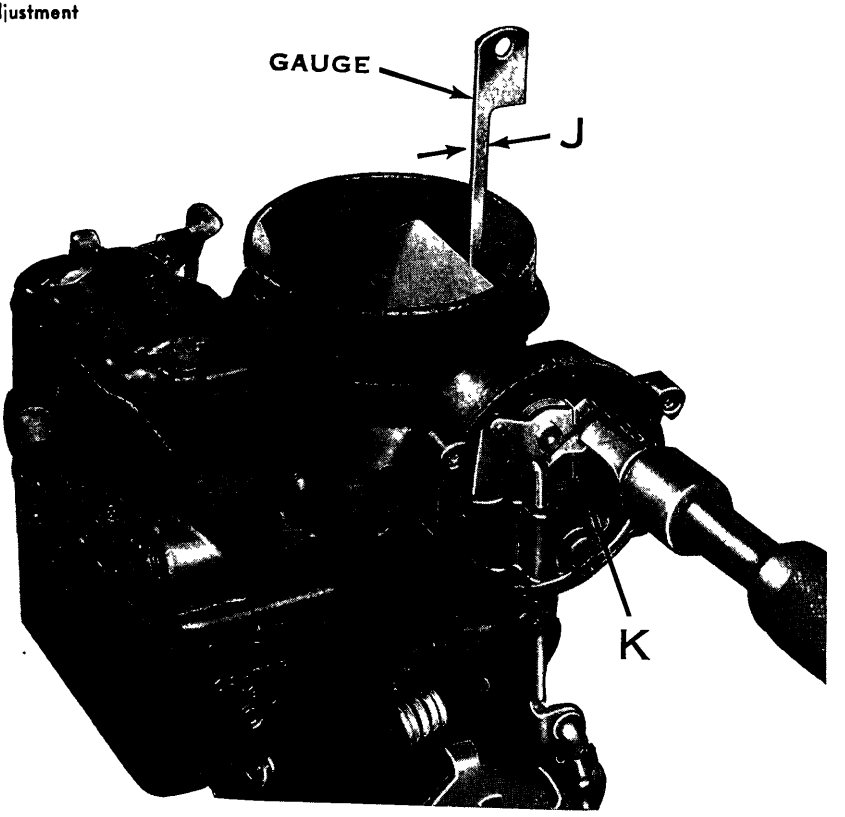
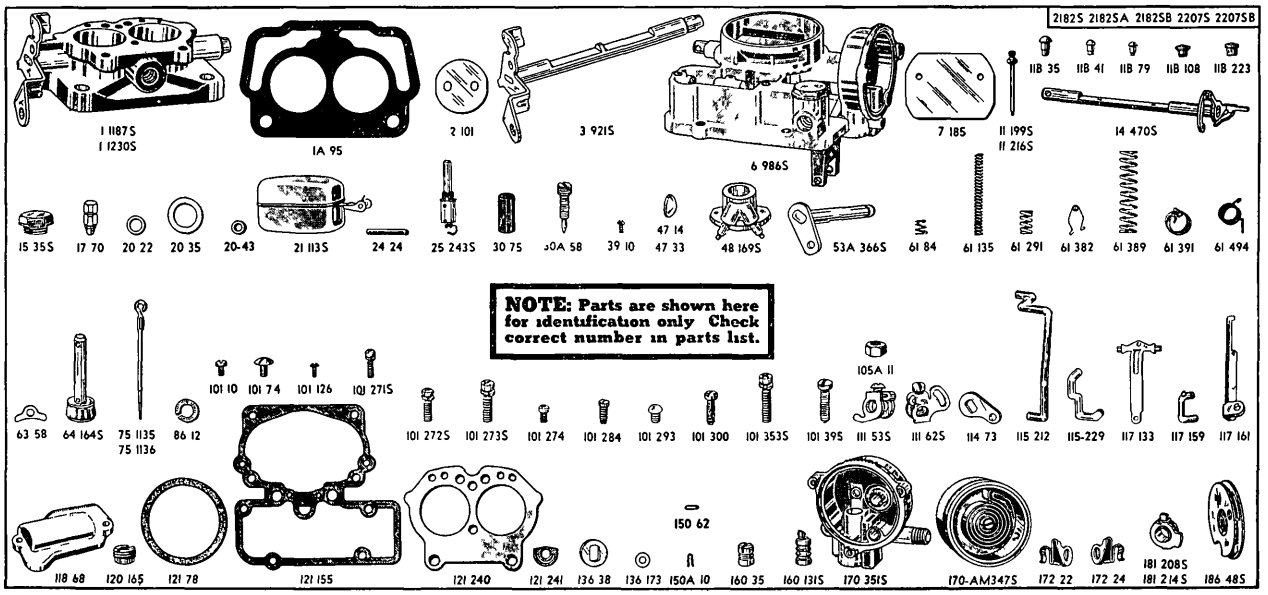


Figure 5
Unl ader Adjustment

UNLOADER ADJUSTMENT (Fig. 5):

This adjustment must be made after fast idle adjustment. Hold throttle valve in wide open position and close choke valve as far as possible without forcing. There should be 5/32 inch (gauge T109-154) clearance (J) between upper edge of choke valve and inner wall of air horn. Adjust by bending choke shaft unloader arm (K) (Use bending tool T109-213).



Pontiac 8—1955—Carbureters Nos. 2182S-2182SA-2182SB-2207S-2207SB

WHEN SERVICING, USE GASKET ASSORTMENT No 254, REPAIR PACKAGE No 1777 (2182S SA-SB), No. 1778 (2207S SB)

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1 1187S	Body flange assembly (2182S SA-SB)	
1 1230S	Body flange assembly (2207S-SB)	
1A 95	*FLANGE GASKET	
2-101	Throttle valve	(2)
3-921S	Throttle shaft and lever assembly	
6-986S	*Air horn assembly	
7-185	Choke valve	
11-198S	LOW SPEED JET ASSEMBLY (2207S-SB)	(2)
11 199S	LOW SPEED JET ASSEMBLY (2182S-SA-SB)	(2)
11 216S	Low speed jet assembly (2207S-SB) (Sup by 11-198S)	(2)
11B 35	Rivet plug	(3)
11B-41	Rivet plug	
11B-79	Rivet plug	(3)
11B-108	Idle port rivet plug	(2)
11B 223	Nozzle passage rivet plug	(2)
14-470S	Choke piston lever, link and shaft assembly	
15 35S	Strainer nut assembly	
17-70	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	
20 35	BOWL STRAINER GASKET	
20-43	Piston housing gasket	
21-113S	*Float and lever assembly (Sup by 21-172S)	
21 172S	Float and lever assembly	
24 24	*Float lever pin	
25-243S	*NEEDLE AND SEAT ASSEMBLY	
30-75	BOWL COVER STRAINER	
30A-58	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
47-14	Welsh plug	
47-33	Spark port welsh plug	
48-169S	Pump jet and housing assembly	
53A-366S	Pump operating lever and countershaft assembly	
61-84	Idle adjustment screw spring	(-)
61-135	VACUUM PISTON SPRING	
61-291	Throttle lever adjusting screw spring	
61-382	METERING ROD SPRING	
61-389	PUMP SPRING	-
61-391	Fast idle cam spring	
61-494	Pump operating lever spring	
63-58	Coil housing retainer	(3)
64-164S	Pump plunger, rod and check assembly (Sup by 64 185S)	
64-185S	PUMP PLUNGER, ROD AND CHECK ASSEMBLY	
75-1124	Metering rod—standard (2182S) (Sup by 75-1136)	(2)
75-1135	METERING ROD—STANDARD (2207S-SB)	(2)
75-1136	METERING ROD—STANDARD (2182S-SA-SB)	(2)
75-1172	Metering rod (1 size lean) (2207S SB)	
75 1173	Metering rod (2 sizes lean) (2207S-SB)	
75-1174	Metering rod (1 size lean) (2182S-SA-SB)	
75 1175	Metering rod (2 sizes lean) (2182S SA SB)	
86-12	Flange stud lock washer	(4)
101-10	Pump arm clamp screw	
101-74	Throttle shaft arm attaching screw	
101 126	Throttle valve attaching screw	(4)
101-271S	Dust cover attaching screw and washer assembly	(2)
101 272S	Air horn attaching screw and washer assembly	(8)
101-273S	Body flange attaching screw and washer assembly	(2)
101-274	Coil housing attaching screw	(3)
101 284	Piston housing attaching screw	(3)
101-293	Metering rod arm clamp screw	
101-300	Pump jet housing attaching screw	
101 353S	Body flange attaching screw and washer assembly	(2)
101-365	Throttle lever adjusting screw (Sup by 101-395)	
101-395	Throttle lever adjusting screw	
105A-11	Flange stud nut	(4)
111 53S	Metering rod arm and screw assembly	
111 62S	Pump arm and screw assembly	
114-73	Throttle shaft arm (Sup by 114-132)	
114 132	Throttle shaft arm	
115-212	THROTTLE CONNECTOR ROD	
115-229	Choke connector rod	
117-133	Vacumeter piston link	
117-159	Pump connector link	
117-161	Fast idle link	
118-68	Dust cover	
120-165	METERING ROD JET	(2)
121-78	*COIL HOUSING GASKET	
121-155	*AIR HORN GASKET	
121-240	BODY FLANGE GASKET	
121-241	PUMP JET HOUSING GASKET	
136 38	Throttle shaft washer	
136 173	Pump connector link washer	
150 62	Choke piston pin	
150A-10	Pin spring	(2)
160-35	Choke piston	
160 131S	Vacuum piston and pin assembly	
170 351S	Piston housing and plug assembly	
170AM347S	Thermostatic coil and housing assembly	
172 22	Throttle connector rod retainer	
172 24	Choke and throttle connector rod retainer	(-)
181 208S	Fast idle cam assembly (2182S-SA-2207S) (Sup by 181-214S)	
181 214S	Fast idle cam assembly	
186-48S	Choke baffle plate assembly	
195-61U	Unitized package	

*Part of 195-61U

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

CARTER CARBURETOR

DIVISION OF acf INDUSTRIES
INCORPORATED
ST. LOUIS 7, MO., U.S.A.

GENERAL BULLETIN

ALL CARBURETER ACCCUNTS

BULLETIN NO. 16 - PONTIAC

DATE September 4, 1957

SUBJECT: 1955 PONTIAC V8 REPLACEMENT CARBURETER WGD-2182SBU

When replacing an equipment carbureter (dual) of a make other than Carter on a 1955 Pontiac, a longer choke heat tube and fittings are required. To make this installation easier, all of the material needed is combined in a "U" type package. The number will be WGD-2182SBU.

WGD-2182SBU Package consists of:

1 - WGD-2182SB carbureter

1 - 98-10 compression nut

1 - 99-10 compression cone

1 - 137-64 heat tube

1 - 188-88 heat tube cover (asbestos loom)

The WGD-2182SB will also be available (without these extra parts) for replacement on cars factory-equipped with Carter carbureters.

V. F. Thompson

V. F. Thompson, Manager
Distribution Sales

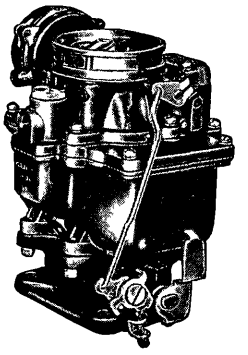
VFT/rm

cc - Personnel and Extra Copies - U.S.A. and Canada

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©

HYDRAMATIC TRANSMISSION



PONTIAC EIGHT MODELS CHIEFTAIN "54-27" STAR CHIEF "54-28" 1954

Casting No 1151 on Face of Flange

WCD Dual Down-Draft Climatic® Control **Carbureter No. 2122S**

CARBURETER SPECIFICATIONS

For Pontiac 8 Cylinder Engine 3⅜ Inch Bore 3¾ Inch Stroke

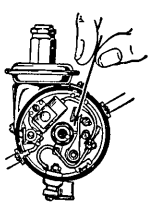
Dimensions Flange size 1¼ inch dual 4 bolt type
Primary venturi 11/32 inch I D
Secondary ventur 19/32 inch I D
Main venturi 1 3/16 inch I D
Float Level See Adjustments
Vents Ins de none Outside No 10 (1935 inch) drill—2 holes
Gasoline Intake Size No 42 (0935 inch) drill in needle seat
Low Speed Jet Tube Jet s ze No 66 (033 nch) drill
By pass in bowl cover size No 56 (0465 nch) drill
Economizer in bowl cover size No 63 (037 inch) drill
Idle bleed in bowl cover size No 55 (052 inch) drill
Idle Port Upper port length 165 inch width 030 inch
Idle Port Opening 122 128 inch above upper edge of valve with valve closed tight
Lower Port (For Idle Adjustment Screw) Size 0615 to 0655 inch diameter
Set Idle Adjustment Screw ¾ to 1¾ turns open For richer mixture turn screw out Idle engine between 365 385 r p m
Main Nozzle Nozzle s installed permanently Do not remove
Metering Rod (Vacumeter Type) Economy step 062 inch di ameter Middle step tapers to 053 inch diameter Power step 049 inch diameter
Main Metering Jet 082 inch diameter
Metering Rod Setting See Adjustments
Accelerating Pump D scharge jet (twin) size No 74 (0225 inch) dr ll
Intake disk check size No 30 (1285 inch) drill
Discharge (needle seat) size No 62 (038 inch) drill
Relief ball check size No 55 (052 inch) drill
Pump Adjustment See Adjustments
Choke Climatic® Control set on index Offset butterfly type
Bleed hole size 082 inch diameter in valve Choke heat suction hole in bowl cover size No 32 dr ll
Vacuum Spark Port 062 to 064 inch diameter Top of port 032 to 036 inch above valve with valve tightly closed

Motor Tune-Up—Be Accurate!

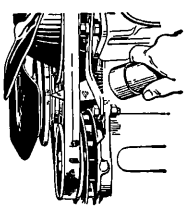
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



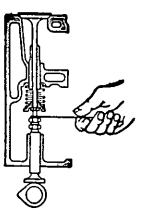
Spark Plug Gap
023" 028'



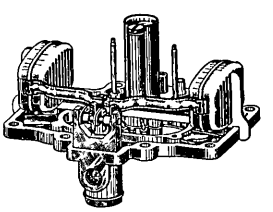
Breaker Point Setting
016"



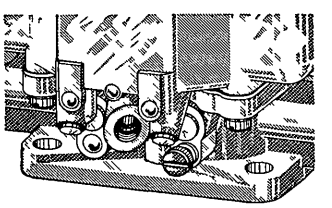
Ignition Timing
Breaker Points to Open
3° B T C



Valve Setting (Hot)
Int 011" 013"
Exh 011" 013"



Float Setting
(See Adjustments)



Idle Adjustment Screw Setting
¾ to 1¾
Turns Open

CARBURETER ADJUSTMENTS

Float Adjustment Two separate float adjustments must be made—lateral and vertical **Lateral Adjustment** With bowl cover assembly inverted bowl cover gasket removed and float lip resting on seated needle, place float gauge T109 162 directly under float with notched portions of gauge fitted over edges of casting Sides of floats should barely touch the vertical uprights of float gauge Adjustment should be made by bending arms of floats **Vertical Adjustment** With float gauge in same position floats should just clear the horizontal portion of gauge (Vertical distance between top of float and machined surface of casting must be 3/16 inch) Adjust by bending float arms Remove float install bowl cover gasket and then reinstall float

Pump Adjustment The total distance the plunger head (not shaft) moves from closed to wide open throttle position controls the amount of fuel discharged Correct pump plunger travel is important and should be checked each time the carbureter is disassembled or when leaner than standard metering rods are installed Procedure is as follows

Install pump connector link in lower hole (short stroke) of pump arm with ends extending towards countershaft arm Back out throttle lever set screw until throttle valves seat in bores of carbureter Be sure fast idle adjusting screw does not hold throttle open Place universal pump travel gauge T109-117S inverted on edge of dust cover boss of bowl cover Turn knurled nut of gauge until finger just

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touches upper end of plunger shaft Number indicated on gauge should be "32" Hold the gauge vertical to insure correct reading

Adjust by bending the throttle connector rod at lower angle

Optional Adjustment With throttle valves seated in bores of carbureter, the distance from the top of the plunger shaft to the top of the dust cover boss should be 20/64"

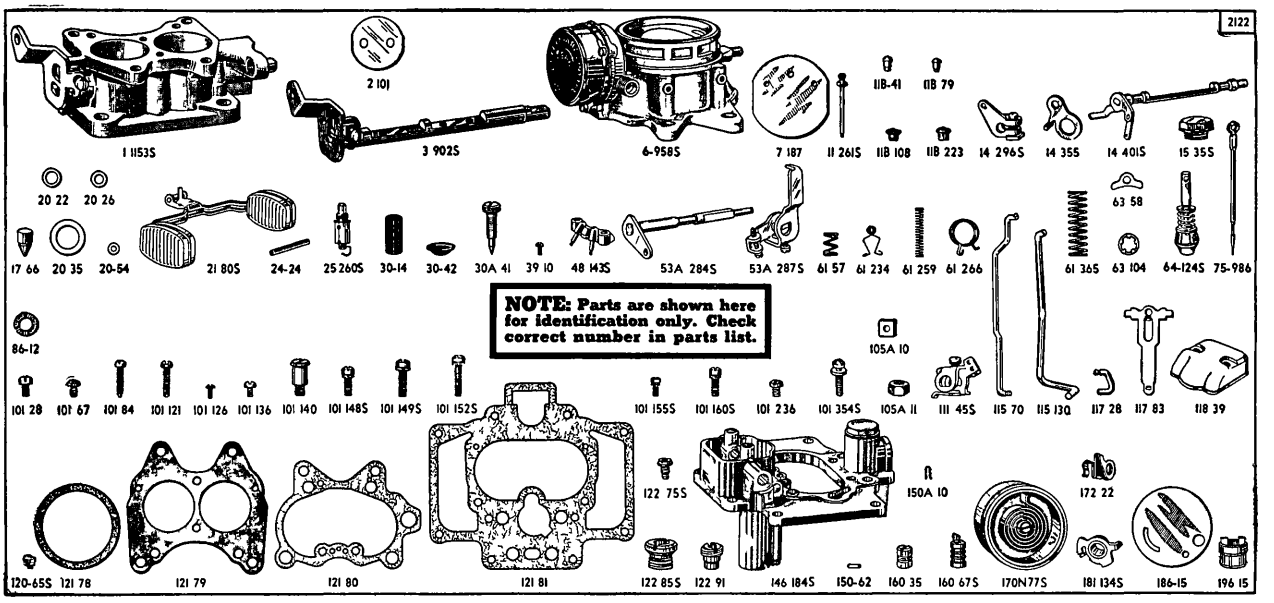
Adjust as mentioned above

Metering Rod Adjustment With throttle valves seated in bores of carbureter, insert one metering rod gauge T109-163 in place of either metering rod Press down lightly on vacuum piston link until lug of piston link contacts lip of metering rod arm There should be less than 005" clearance between metering rod bearing and shoulder in notch of gauge Adjust by bending lip of metering rod arm (Tool T109-105)

Fast Idle Adjustment: Loosen choke lever clamp screw on choke shaft Insert 040 inch feeler gauge T109-193 between lip of fast idle cam and boss of flange casting Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw

With choke valve tightly closed, tighten fast idle adjusting screw until there is 026 inch (gauge T109-189) opening between throttle valve and bore of carbureter (side opposite idle port) Be sure fast idle adjusting screw is on high step of cam while making this adjustment

Unloader Adjustment: With throttle wide open there should be ⅛ inch (gauge T109-36) clearance between upper edge of choke valve and inner wall of air horn Adjust by bending unloader lip on throttle shaft lever Use bending tool (T109-41)



Pontiac 8—1954—Carbureter No. 2122S

WHEN SERVICING, USE GASKET ASST. No. 189, REPAIR PACKAGE No. 1750

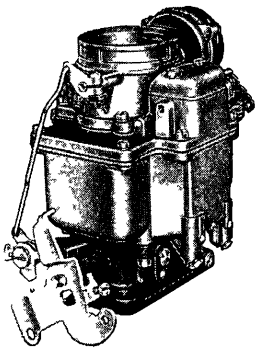
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-1153S	Body flange assembly	
2-101	Throttle valve	(2)
3-902S	Throttle shaft and lever assembly	
6-958S	Air horn and Climatic® control assembly	
7-184	Choke valve (Sup by 7-187)	
7-187	Choke valve	
11-261S	LOW SPEED JET ASSEMBLY	(2)
11B-41	Rivet plug	(2)
11B-79	Rivet plug	(3)
11B-108	IDLE PORT RIVET PLUG	(2)
11B-223	Nozzle passage rivet plug	(2)
14-296S	Choke lever and screw assembly	
14-355	Cam trip lever	
14-401S	Choke piston lever, link and shaft assembly	
15-35S	Strainer nut assembly	
17-66	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	
20-26	Pump relief plug gasket	
20-35	Bowl strainer gasket	
20-54	Metering rod jet gasket	(2)
21-80S	Float and lever assembly	
24-24	Float lever pin	
25-260S	NEEDLE AND SEAT ASSEMBLY	
30-14	BOWL COVER STRAINER	
30-42	PUMP STRAINER	
30A-41	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
48-143S	Pump jet and housing assembly	
53A-284S	Pump operating lever and countershaft assembly	
53A-287S	Fast idle arm and screw assembly	
61-57	Idle adjustment screw spring	(2)
61-234	METERING ROD SPRING	
61-259	VACUUM PISTON SPRING	
61-266	Fast idle cam spring	
61-365	PUMP SPRING (LOWER)	
63-58	Coil housing retainer	(3)
63-123	Choke shaft retaining ring	
64-124S	PUMP PLUNGER, ROD, SPRING AND RETAINER ASSEMBLY	
75-986	METERING ROD—STANDARD	
75-1109	Metering rod—1 size lean	(2)
75-1110	Metering rod—2 sizes lean	(2)
86-12	Flange stud lock washer	(4)

Part No.	PART NAME	
101-28	Fast idle arm clamp screw	
101-67	Pump plunger guide retaining screw	
101-84	Fast idle adjustment screw	
101-121	Throttle lever adjustment screw	
101-126	Throttle valve attaching screw	(4)
101-136	Coil housing attaching screw	(3)
101-140	Fast idle cam attaching screw	
101-148S	Dust cover attaching screw and washer assy	(2)
101-149S	Body flange attaching screw and washer assy	(4)
101-152S	Air horn attaching screw and washer assy	(4)
101-155S	Pump jet housing attaching screw and washer assembly	(2)
101-160S	Bowl cover attaching screw and washer assy	(6)
101-236	Metering rod arm clamp screw	
101-354S	Choke lever clamp screw assembly	
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
111-45S	Pump and metering rod arm assembly	
115-70	Choke connector rod	
115-130	THROTTLE CONNECTOR ROD	
117-28	Pump connector link	
117-83	Vacumeter piston link	
118-39	Dust cover	
120-65S	METERING ROD JET ASSEMBLY	(2)
121-78	COIL HOUSING GASKET	
121-79	BODY FLANGE GASKET	
121-80	AIR HORN GASKET	
121-81	BOWL COVER GASKET	
122-75S	PUMP RELIEF CHECK ASSEMBLY	
122-85S	INTAKE DISK CHECK PLUG ASSEMBLY	
122-91	PUMP DISCHARGE CHECK PLUG	
146-184S	Bowl cover assembly	
150-62	Choke piston pin	
150A-10	PIN SPRING	(3)
160-35	Choke piston	
160-67S	Vacuum piston and pin assembly	
170N-77S	Thermostatic coil and housing assembly	
172-22	THROTTLE CONNECTOR ROD RETAINER	
181-134S	Fast idle cam and spring assembly	
186-15	Choke baffle plate	
196-15	Pump plunger guide	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

Syncro-Mesh, Hydra-Matic
and
Power Glide
Transmissions



PONTIAC SIX MODELS "53-25" "54-25" 1953-1954

WCD Dual Down-Draft Climatic® Control **Carbureter No. 2010S**

CARBURETER SPECIFICATIONS

For Pontiac 6 Cylinder Engine: 3-9/16 Inch Bore, 4 Inch Stroke

Dimensions: Flange size, 1¼ inch dual, 4 bolt type.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 19/32 inch I. D.
Main venturi, 1-3/16 inch I. D.

Float Level: See adjustments.

Vents: Inside, none. Outside, two No. 35 (.110 inch) drill in air horn.

Gasoline Intake: Size No. 42 (.0935 inch) drill in needle seat.

Low Speed Jet Tube: Jet size No. 66 (.033 inch) drill. By-pass, size No. 56 (.0465 inch) drill. Economizer, size No. 63 (.037 inch) drill. Idle bleed, size No. 55 (.052 inch) drill.

Idle Port: Upper, slot type, length .165 inch; width, .030 inch.

Idle Port Opening: .122 to .128 inch above upper edge of valve with valve tightly closed.

Lower Port: (Early prod.) (For idle adjustment screw) 2—Size .0615 to .0655 inch diameter. (Late prod.) Size .0615 to .0655 inch diameter (For idle adjustment screw). Size .050-.054 inch diameter (port without idle adjustment screw).

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture, turn screw out Idle engine between 520-540 r p m (Syncro-mesh), 365-385 r p m. (Hydra-matic) and 410-430 r p m (Power Glide) (All in neutral).

Main Nozzle: Nozzle is installed permanently. Do not remove.

Metering Rod (Vacumeter Type): Economy step .0625 inch diameter. Middle steps tapers to .0535 inch diameter. Power step .050 inch diameter. These rods designed with stabilizing flats on economy step.

Metering Rod Jet: .082 inch diameter.

Metering Rod Setting: See adjustments.

Accelerating Pump: Discharge jet (twin), size No. 74 (.0225 inch) drill. Intake ball check, in plunger shaft. Discharge needle seat, size No. 50 (.070 inch) drill.

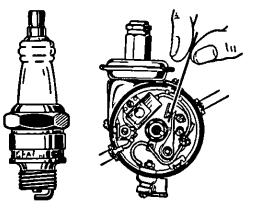
Pump Adjustment: See adjustments.

Choke: Carter Climatic® Control, set 2 notches lean Butterfly type, off-set valve. Air bleed in choke valve, size .156 inch diameter Choke heat suction hole in bowl cover, size No. 30 (.1285 inch) drill.

Vacuum Spark Port: 062 to 064 inch diameter. Top of port to be 052 to 056 inch above valve with valve tightly closed.

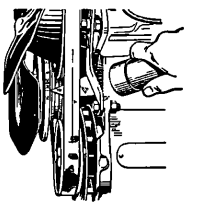
Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

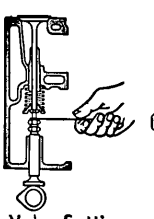


Spark Plug Gap
.023"-.028"

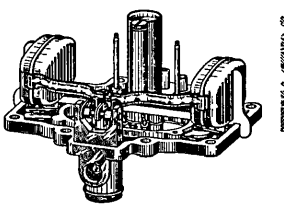
Breaker Point Setting
.022"



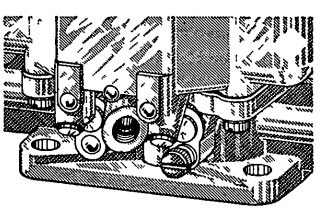
Ignition Timing
Breaker Points to Open:
3° B.T.D.C.



Valve Setting (Hot)
Int. .011"-.013"
Exh. .011"-.013"



Float Setting
See Adjustments



Idle Adjustment Screw Setting
½ to 1½
Turns Open

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CARBURETER
TRADE MARK REG U S PAT. FF.
MARCA REGISTRADA

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CARBURETER ADJUSTMENTS

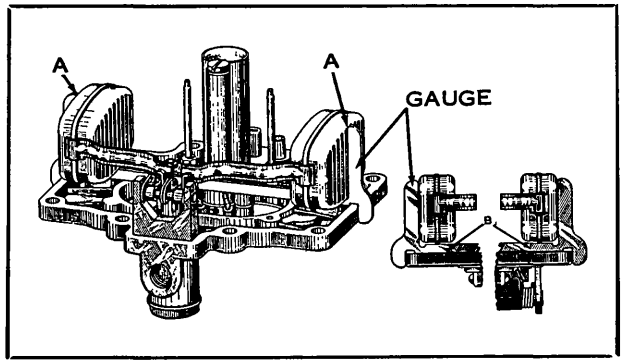


Figure 1

FLOAT ADJUSTMENT (Fig. 1):

Two separate float adjustments must be made—lateral and vertical.

Lateral Adjustment: With bowl cover assembly inverted, bowl cover gasket removed, place float gauge (T109-196) directly under floats with notched portions of gauge fitted over edges of casting. Sides of floats should barely touch the vertical uprights of float gauge (A). Adjustment should be made by bending arms of floats.

Vertical Adjustment: With float gauge in same position floats should just clear the horizontal portion of gauge. Vertical distance between top of float and machined surface of casting must be 5/32 inch (B). Adjust by bending float arms. Remove floats. install bowl cover gasket and then re-install floats.

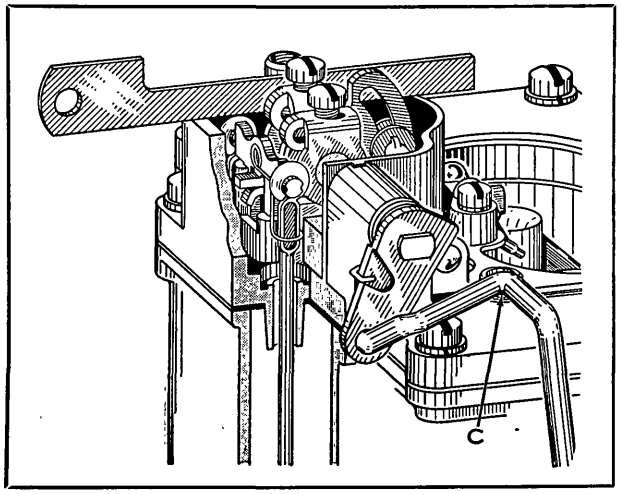


Figure 2

PUMP ADJUSTMENT (Fig. 2):

Back out throttle lever set screw until throttle valves seat in bores of carbureter. Be sure fast idle adjusting screw does not hold throttle open. Hold straight edge across top of dust cover boss at pump arm. The flat on top of pump arm should be parallel to straight edge. Adjust by bending throttle connector rod at upper angle (C). Use tool T109-213.

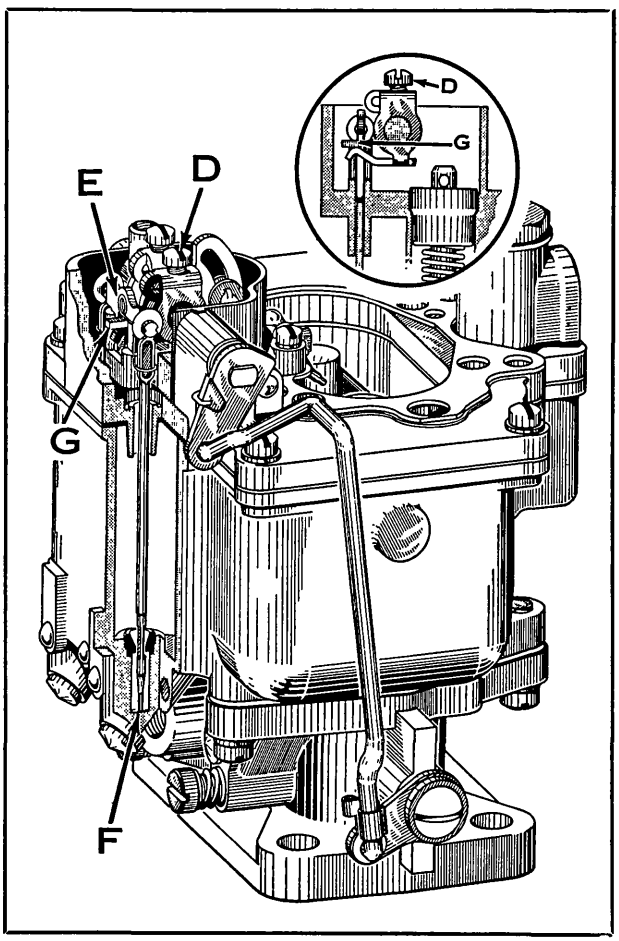


Figure 3

METERING ROD ADJUSTMENT (Fig. 3):

Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows:

1. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw (D).
2. With metering rods in place, press down on vacumeter link (E) until metering rods bottom in carbureter body casting (F).
3. Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link (G). Hold in place and carefully tighten clamp screw (D).

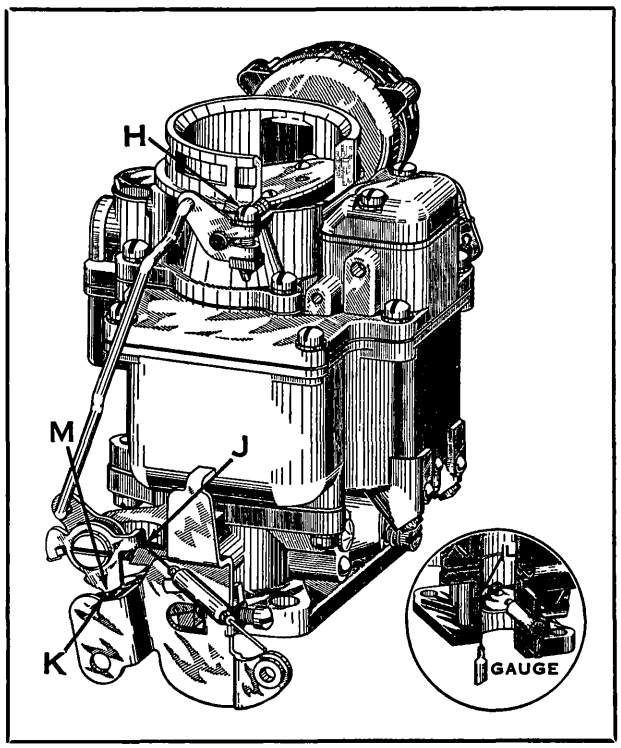


Figure 4

FAST IDLE ADJUSTMENT (Fig. 4):

Loosen choke lever clamp screw (H) on choke shaft. Insert .040 inch feeler gauge (T109-193) between lip of fast idle cam and boss of flange casting (J). Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw (H).

With choke valve tightly closed, tighten fast idle adjusting screw (K) until there is .026 inch (Gauge T109-189) opening between throttle valve and bore of carbureter (side opposite idle port) (L). Be sure fast idle adjusting screw is on high step of cam (M) while making this adjustment.

UNLOADER ADJUSTMENT (Fig. 5):

With throttle wide open there should be 9/64 inch (Gauge T109-34) clearance (N) between upper edge of choke valve and inner wall of air horn. Adjust by bending unloader lip (O) on throttle shaft lever (use bending tool T109-41).

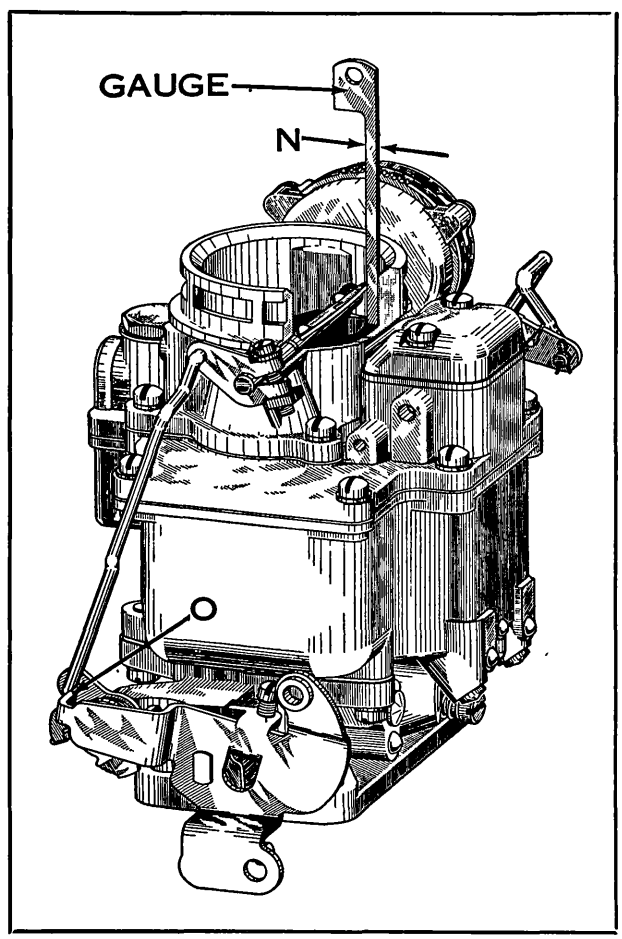
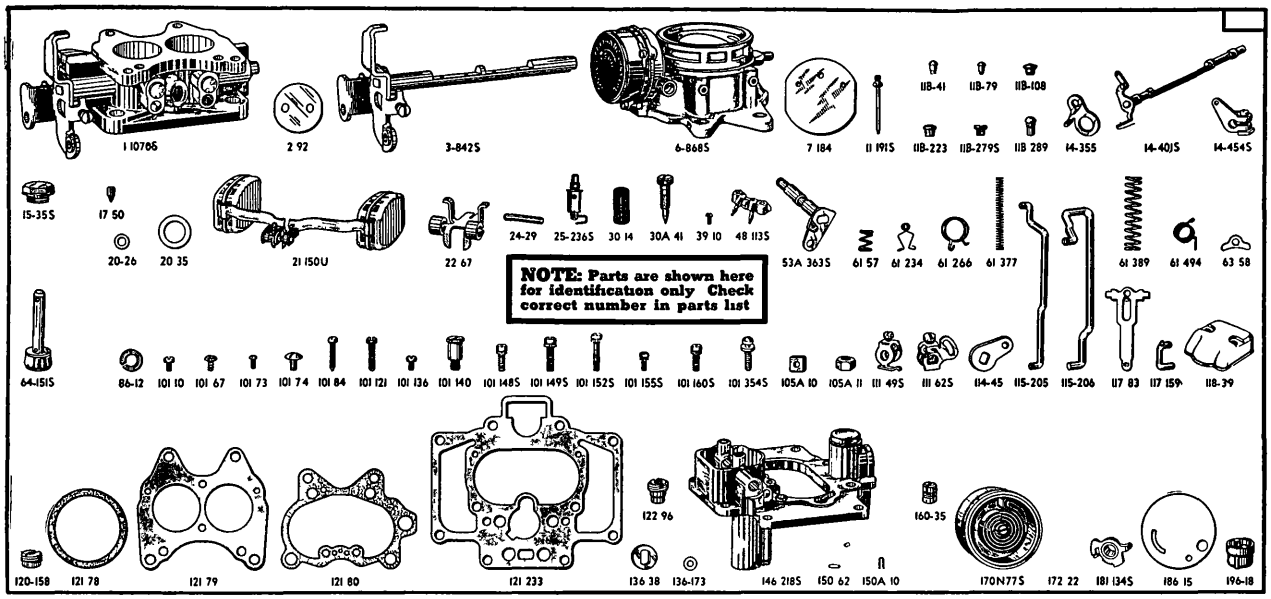


Figure 5



PONTIAC 6—1953-54—CARBURETER No. 2010S

WHEN SERVICING, USE GASKET ASSORTMENT No. 231; REPAIR PACKAGE No. 1731

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part N .	PART NAME	
1-1035S	Body flange assembly (Sup by 1 1070S)	
1-1070S	Body flange assembly	
2-92	Throttle valve	(2)
3-819S	Throttle shaft and lever assembly (Sup by 3 842S)	
3-842S	Throttle shaft and lever assembly	
6-868S	Air horn and Climatic® control assembly	
7-167	Choke valve (Sup by 7-184)	
7-184	Choke valve	
11-191S	LOW SPEED JET ASSEMBLY	(2)
11B-41	Rivet plug	(2)
11B-79	Rivet plug	(3)
11B-108	IDLE PORT RIVET PLUG	(2)
11B-223	Nozzle passage rivet plug	(2)
11B-279S	PUMP DISCHARGE PASSAGE PLUG ASSEMBLY	
11B 289	Lower port rivet plug (late production)	
14-355	Cam trip lever	
14-401S	Choke piston lever link and shaft assembly	
14-454S	Choke lever and screw assembly	
15-35S	Strainer nut assembly	
17-50	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	
20-26	Pump discharge passage plug gasket	
20-35	BOWL STRAINER GASKET	
21-150U	Unitized Package (Consists of (1) 21 147S (1) 21-148S and (1) 22 67)	
22-67	Auxiliary float lever	
24-29	Float lever pin	
25-236S	NEEDLE AND SEAT ASSEMBLY	
30-14	BOWL COVER STRAINER	
30A-41	Idle adjustment screw (2 early prod) (1 late prod)	
39-10	Choke valve attaching screw	(2)
48 113S	Pump jet and housing assembly	
53A-363S	Pump operating lever and countershaft assembly	
61-57	Idle adjustment screw spring (2 early prod) (1 late prod)	
61-234	METERING ROD SPRING	
61-266	Fast idle cam spring	
61-377	VACUUM PISTON SPRING	
61-389	PUMP SPRING	
61-494	PUMP OPERATING LEVER SPRING	
63-58	Coil housing retainer	(3)
64-151S	Plunger rod and check assembly (Sup by 64 185S)	
64-185S	PLUNGER ROD AND CHECK ASSEMBLY	
75-873	Metering rod—standard (Sup by 75 910)	(2)
75-910	METERING ROD—STANDARD	(2)
75-945	Metering rod—1 size lean	(2)
75-946	Metering rod—2 sizes lean	(2)

Part No.	PART NAME	
86-12	Flange stud lock washer	(4)
101-10	Pump and metering rod arm clamp screw	(2)
101-19	Choke lever clamp screw (Sup by 101 354S)	
101-67	Pump plunger guide retaining screw	
101-73	THROTTLE VALVE ATTACHING SCREW	(4)
101-74	Throttle shaft dog screw	
101-84	Fast idle adjustment screw	
101-121	Throttle lever adjusting screw	
101-136	Coil housing attaching screw	(3)
101-140	Fast idle cam attaching screw	
101-148S	Dust cover attaching screw and washer assembly	(2)
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	(4)
101-155S	Pump jet housing attaching screw and washer assembly	(2)
101-160S	Bowl cover attaching screw and washer assembly	(6)
101-354S	Choke lever clamp screw assembly	
105A-10	Choke lever clamp nut	
105A-11	Flange stud nut	(4)
111-49S	Metering rod arm and screw assembly	
111-62S	Pump arm and screw assembly	
114-45	THROTTLE SHAFT ARM	
115-205	Choke connector rod	
115-206	THROTTLE CONNECTOR ROD	
117-83	Vacumeter piston link	
117-159	Pump connector link	
118-39	Dust cover	
120-158	METERING ROD JET	(2)
121-78	COIL HOUSING GASKET	
121-79	BODY FLANGE GASKET	
121-80	AIR HORN GASKET	
121 233	BOWL COVER GASKET	
122-96	PUMP DISCHARGE NEEDLE SEAT	
136-38	Throttle shaft washer	
136-173	Pump connector link washer	(2)
146 218S	Bowl cover assembly	
150-62	Choke piston pin	
150A-10	PIN SPRING	(4)
160-35	Choke piston	
160 67S	Vacuum piston and pin assembly	
170N-77S	Thermostatic coil and housing assembly	
172 22	THROTTLE CONNECTOR ROD RETAINER	
181-134S	Fast idle cam and spring assembly	
186-15	Choke baffle plate	
196-18	Pump plunger guide	

NOTE Figures in parentheses indicate number of pieces used in one carbureter **Where no figure is shown, only one is used.**

CARTER CARBURETOR

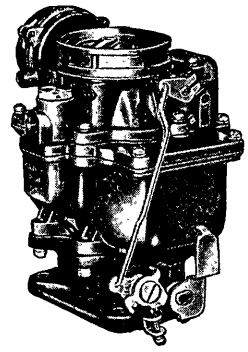
DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

719S-719SA
Syncromesh Trans.—1949-54

720S-720SA
Hydramatic Trans.—1949-54

Power Glide Trans.—1953

Syncromesh Trans.—1954



Cut shows 720S

PONTIAC EIGHT MODELS

"49-27", "50-27",
"51-27", "52-27",
"53-27", "54-27",
"54-28"

1949-1954

(2122S can be used in place of 720S-SA)

Casting No. 550 on Face of Flange (719S-719SA)
Casting No. 558 on Face of Flange (720S-720SA)

WCD Dual Down-Draft Climatic® Control Carbs.—**Models 719S-719SA-720S-720SA**

CARBURETER SPECIFICATIONS

(1949-50) For Pontiac 8 Cylinder Engine: 3 1/4 Inch Bore, 3 3/4 Inch Stroke
(1951-54) For Pontiac 8 Cylinder Engine: 3 3/8 Inch Bore, 3 3/4 Inch Stroke

Dimensions: Flange size, 1 1/4 inch dual, 4 bolt type.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 19/32 inch I. D.
Main venturi, 1-3/16 inch I. D.

Float Level: Distance from seam of float (both sides—at top center) to lower edge of bowl cover, when needle is seated to be 3/16 inch. (Use gauge No. T109-162.)

Vents: Inside, none. Outside, No. 35 (.110) drill—2 holes.

Gasoline Intake: Square vertical push pull needle. Size No. 42 drill in needle seat.

Low Speed Jet Tube: Jet size, No. 68 drill.
By pass, size No. 56 (.0465") drill.
Economizer, size No. 63 (.037") drill.
Idle bleed, size No. 55 (.052") drill.

Idle Ports: Upper port, length .165 inch. Width, .030 inch.

Idle Port Opening: .122-.128 inch above upper edge of valve with valve closed tight.

Lower Port (For Idle Adjustment Screw): Size .0615 to .0655 inch diameter.

Set Idle Adjustment Screw: 3/4 to 1 1/4 turns open. For richer mixture turn screw out. Idle engine between 450-475 r.p.m. (Syncro-mesh Trans.), 365-385 r.p.m. (Hydra-matic Trans. in neutral), 410-430 r.p.m. (Power Glide—in neutral).

Main Nozzle: In primary venturi, closed tip angle 49° from horizontal. Nozzle is installed permanently. Do not remove.

Metering Rod (Vacumeter Type): Economy step .062 inch diameter. Middle step tapers to .056 inch diameter. Power step .051 inch diameter. Length 3-41/64 inches.

Main Metering Jet: .082 inch diameter.

Metering Rod Setting: Use gauge, part No. T109-163 (2.940 inches).

Accelerating Pump: High pressure delayed action type, (spring operated plunger). Adjustable stroke.
Discharge jet (twin) size, No. 74 (.0225") drill.
Intake disk check size, No. 30 (.1285") drill.
Discharge (needle seat) size, No. 62 (.038") drill.
Relief ball check size, No. 55 (.052") drill.

Pump Adjustment: "32" as indicated on gauge T109-117S with thottle valves seated or 20/64" from top of pump shaft to the top of the dust cover housing.

Choke: Carter Climatic® Control, set at center index point. Offset butterfly type. Bleed hole, size .218" diameter (720S), .156" diameter (720SA), .082" diameter (719S-719SA) in valve. Choke heat suction hole, in bowl cover, size No. 32 drill.

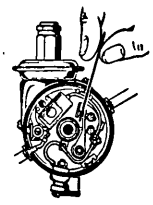
Vacuum Spark Port: .062 to .064 inch diameter. Top of port 052 to .056 inch above valve.

Motor Tune-Up—Be Accurate!

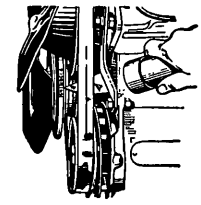
CAUTION: *Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.*



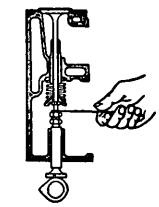
Spark Plug Gap
(1949-50)
.025"
(1951-54)
.023"-.028"



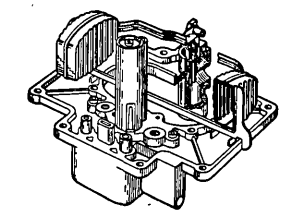
Breaker Point Setting
(1949-50)
.015"
(1951-54)
.016"



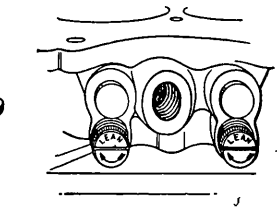
Ignition Timing
Breaker Points to Open:
(1949-50) 2° to 6° B. T. C.
(1951) 6° B. T. C.
(1952-54)
Syncromesh Trans. 6° B. T. C.
Hydramatic Trans. 3° B. T. C.



Valve Setting
(Hot)
Int. .011"-.013"
Exh. .011"-.013"



Float Setting
3/16 Inch
(Use Gauge T109-162)



Idle Adjustment Screw Setting
3/4 to 1 1/4
Turns Open

CARBURETER ADJUSTMENTS

Float Adjustment: Two separate float adjustments must be made—lateral and vertical, as follows: With bowl cover assembly inverted, gasket removed, and float resting on seated needle, place gauge T109-162 (3/16") directly under float with notched portions of gauge fitted over machined surface of casting. Float should just touch vertical sides of gauge and just clear horizontal portion. Adjust by bending arms of float. Remove gauge, install bowl cover gasket, then reinstall float.

Pump Adjustment: The total distance the plunger head (not shaft) moves from closed to wide open throttle position controls the amount of fuel discharged. Correct pump plunger travel is important and should be checked each time the carbureter is dis-assembled or when leaner than standard metering rods are installed. Procedure is as follows:
Install pump connector link in lower hole (short stroke) of pump arm, with ends extending towards countershaft arm. Back out throttle lever set screw until throttle valves

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CARBURETER
TRADE MARK REG. U. S. PAT. OFF.
MARCA REGISTRADA

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seat in bores of carbureter. Be sure fast idle adjusting screw does not hold throttle open. Place universal pump travel gauge T109-117S, inverted on edge of dust cover boss of bowl cover. Turn knurled nut of gauge until finger just touches upper end of plunger shaft. Number indicated on gauge should be "32". Hold the gauge vertical to insure correct reading.

Adjust by bending the throttle connector rod at lower angle.

Optional Adjustment: With throttle valves seated in bores of carbureter, the distance from the top of the plunger shaft to the top of the dust cover boss should be 20/64".

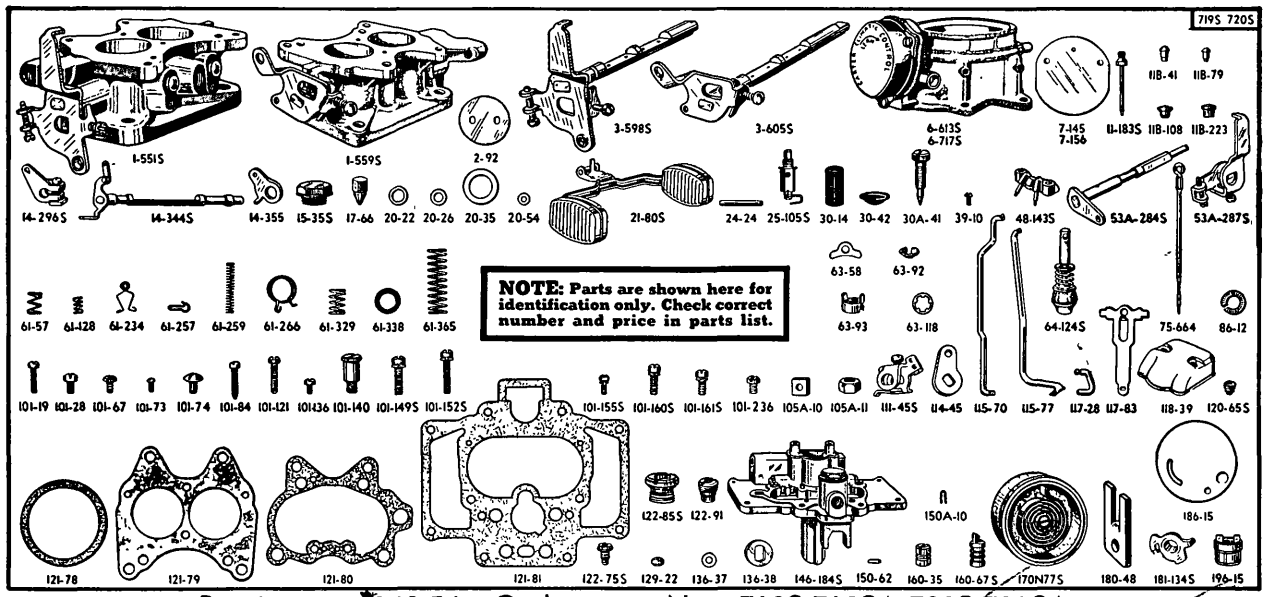
Adjust as mentioned above.

Metering Rod Adjustment: With throttle valves seated in bores of carbureter, insert one metering rod gauge T109-163 in place of either metering rod. Press down lightly on vacuum piston link until lug of piston link contacts lip of metering rod arm. There should be less than .005" clearance between metering rod bearing and shoulder in notch of gauge. Adjust by bending lip of metering rod arm (Tool T109-105).

Fast Idle Adjustment: Loosen choke lever clamp screw on choke shaft. Insert .040" feel gauge T109-193 between lip of fast idle cam and boss of flange casting. Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw.

With choke valve tightly closed, tighten fast idle adjusting screw until there is .020" opening between throttle valve and bore of carbureter (side opposite idle port). Use gauge T109-189. Be sure fast idle adjusting screw is on high step of cam while making this adjustment.

Unloader Adjustment: With throttle wide open there should be 1/8" clearance between upper edge of choke valve and inner wall of air horn (gauge T109-36). Adjust by bending unloader lip on throttle shaft lever (T109-41).



Pontiac 8—1949-54—Carbureters Nos. 719S-719SA-720S-720SA

WHEN SERVICING, USE GASKET ASST. No. 189; REPAIR PACKAGE No. 1507A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME
1-551S	Body flange assembly (719S-SA)
1-559S	Body flange assembly (720S-SA)
2-92	Throttle valve (2)
3-598S	Throttle shaft and lever assembly (719S-SA)
3-605S	Throttle shaft and lever assembly (720S-SA)
6-613S	Air horn assembly (720S) (Sup. by 6-675S)
6-617S	Air horn assembly (719S) (Sup. by 6-674S)
6-674S	Air horn assembly (719S-SA)
6-675S	Air horn assembly (720S-SA)
7-145	Choke valve (719S) (Sup. by 7-166)
7-156	Choke valve (720S) (Sup. by 7-167)
7-166	Choke valve (719S-719SA) (Sup. by 7-187)
7-167	Choke valve (720S-720SA) (Sup. by 7-184)
7-184	Choke valve (720S-SA)
7-187	Choke valve (719S-SA)
11-183S	LOW SPEED JET ASSEMBLY (2)
11B-41	Passage plug (2)
11B-79	Rivet passage plug (3)
11B-108	IDLE PORT RIVET PLUG (2)
11B-223	NOZZLE PASSAGE PLUG (2)
14-296S	Choke lever and screw assembly
14-344S	Choke piston lever, link and shaft assembly (Sup. by 14-401S)
14-355	Cam trip lever
14-401S	Choke piston lever, link and shaft assembly
15-35S	Strainer nut assembly
17-66	PUMP DISCHARGE CHECK NEEDLE
20-22	Needle seat gasket
20-26	Pump relief plug gasket
20-35	Bowl strainer gasket
20-54	Metering rod jet gasket (2)
21-80S	Float and lever assembly
24-24	Float lever pin
25-105S	NEEDLE AND SEAT ASSEMBLY
30-14	BOWL COVER STRAINER
30-42	PUMP STRAINER
30A-41	Idle adjustment screw (2)
39-10	Choke valve attaching screw (2)
48-143S	Pump jet and housing assembly
53A-284S	Pump operating lever and countershaft assembly
53A-287S	Fast idle arm and screw assembly (720S-SA)
61-57	Adjustment screw lock spring (2)
61-128	Connector rod spring (Use with 115-77)
61-157	Plunger spring
61-234	METERING ROD SPRING
61-257	Needle pull clip
61-259	VACUUM PISTON SPRING
61-266	Fast idle cam spring
61-329	Pump spring (upper)
61-365	PUMP SPRING (LOWER)
63-58	Coil housing retainer (3)
63-92	Pump spring retainer
63-93	Spring retainer (Use with 115-77)
63-118	Throttle shaft retaining ring
63-123	Retaining ring (choke shaft)
64-124S	PUMP PLUNGER, ROD, SPRING AND RETAINER ASSEMBLY
75-664	METERING ROD—STANDARD—.062"-.062" to .056"-.051" (2)
75-683	Metering rod—1 size lean—.063"-.063" to .057"-.052" (2)
75-684	Metering rod—2 sizes lean—.064"-.063" to .058"-.053" (2)
86-12	Flange stud lock washer (4)
101-19	Choke lever clamp screw (Sup. by 101-354S)
101-28	Fast idle arm screw (720S-SA)
101-67	Pump retainer screw
101-73	Throttle valve attaching screw (4)
101-74	Throttle shaft dog screw (719S-SA)
101-84	Fast idle adjustment screw
101-121	Throttle lever adjustment screw
101-136	Coil housing attaching screw (3)
101-140	Fast idle attaching screw
101-148S	Dust cover attaching screw and washer assembly (2)
101-149S	Body flange attaching screw and washer assembly (4)
101-152S	Air horn attaching screw and washer assembly (4)
101-155S	Pump jet attaching screw and washer assembly (2)
101-160S	Bowl cover attaching screw and washer assembly (6)
101-161S	Dust cover attaching screw and washer assembly (Sup. by 101-148S) (2)
101-236	Metering rod arm clamp screw
101-354S	Choke lever clamp screw assembly
105A-10	Choke lever clamp nut
105A-11	Flange stud nut (4)
111-45S	Pump and metering rod arm assembly
114-45	THROTTLE LEVER ROD (719S-SA)
115-70	Fast idle connector rod
115-77	Throttle connector rod (Sup. by 115-130)
115-130	THROTTLE CONNECTOR ROD
117-28	Pump arm link
117-83	Piston link (vacumeter)
118-39	Dust cover
120-65S	METERING ROD JET ASSEMBLY
121-78	COIL HOUSING GASKET
121-79	BODY FLANGE GASKET
121-80	AIR HORN GASKET
121-81	BOWL COVER GASKET
122-75S	PUMP RELIEF PLUG ASSEMBLY
122-85S	INTAKE DISK CHECK ASSEMBLY
122-91	PUMP DISCHARGE CHECK PLUG
129-22	Metering rod disk (Discontinued) (2)
136-37	Connector rod washer (Use with 115-77)
136-38	Throttle shaft dog washer (719S-SA)
146-184S	Bowl cover assembly
150-62	Choke piston pin
150A-10	PIN SPRING (3)
160-35	Choke piston
160-67S	Vacuum piston and pin assembly
170N-77S	Thermostatic housing and coil assembly
172-22	THROTTLE CONNECTOR ROD RETAINER (Use with 115-130)
180-48	Air cleaner bracket extension (719S-SA)
181-134S	Fast idle cam assembly
186-15	Coil housing baffle plate
196-15	Pump plunger guide

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

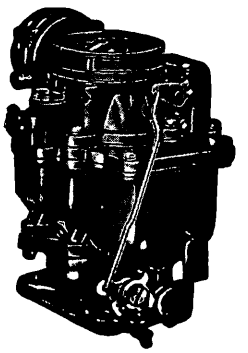
CARTER CARBURETOR CORPORATION, ST. LOUIS, MO., U. S. A.

719S-719SA
Syncromesh Trans.—1949-54

720S-720SA
Hydramatic Trans.—1949-53

Power Glide Trans.—1953

Syncromesh Trans.—1954



Cut shows 720S

PONTIAC EIGHT MODELS

"49-27", "50-27",
"51-27", "52-27",
"53-27", "54-27",
"54-28"

1949-1954

Casting No. 550 on Face of Flange (719S-719SA)
Casting No. 558 on Face of Flange (720S-720SA)

WCD Dual Down-Draft Climatic® Control Carbs.—**Models 719S-719SA-720S-720SA**

CARBURETER SPECIFICATIONS

(1949-50) For Pontiac 8 Cylinder Engine: 3 1/4 Inch Bore, 3 3/4 Inch Stroke
(1951-54) For Pontiac 8 Cylinder Engine: 3 3/8 Inch Bore, 3 3/4 Inch Stroke

Dimensions: Flange size, 1 1/4 inch dual, 4 bolt type.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 19/32 inch I. D.
Main venturi, 1-3/16 inch I. D.

Float Level: Distance from seam of float (both sides—at top center) to lower edge of bowl cover, when needle is seated to be 3/16 inch. (Use gauge No. T109-162.)

Vents: Inside, none. Outside, No. 35 (.110) drill—2 holes.

Gasoline Intake: Square vertical push pull needle. Size No. 42 drill in needle seat.

Low Speed Jet Tube: Jet size, No. 68 drill.
By pass, size No. 56 (.0465") drill.
Economizer, size No. 63 (.037") drill.
Idle bleed, size No. 55 (.052") drill.

Idle Ports: Upper port, length .165 inch. Width, .030 inch.

Idle Port Opening: .122-.128 inch above upper edge of valve with valve closed tight.

Lower Port (For Idle Adjustment Screw): Size .0615 to .0655 inch diameter.

Set Idle Adjustment Screw: 3/4 to 1 1/4 turns open. For richer mixture turn screw out. Idle engine between 450-475 r.p.m. (Syncro-mesh Trans.), 365-385 r.p.m. (Hydra-matic Trans. in neutral), 410-430 r.p.m. (Power Glide—in neutral).

Main Nozzle: In primary venturi, closed tip angle 49° from horizontal. Nozzle is installed permanently. Do not remove.

Metering Rod (Vacumeter Type): Economy step .062 inch diameter. Middle step tapers to .056 inch diameter. Power step .051 inch diameter. Length 3-41/64 inches.

Main Metering Jet: .082 inch diameter.

Metering Rod Setting: Use gauge, part No. T109-163 (2.940 inches).

Accelerating Pump: High pressure delayed action type, (spring operated plunger). Adjustable stroke.
Discharge jet (twin) size, No. 74 (.0225") drill.
Intake disk check size, No. 30 (.1285") drill.
Discharge (needle seat) size, No. 62 (.038") drill.
Relief ball check size, No. 55 (.052") drill.

Pump Adjustment: "32" as indicated on gauge T109-117S with thottle valves seated or 20/64" from top of pump shaft to the top of the dust cover housing.

Choke: Carter Climatic® Control, set at center index point. Offset butterfly type. Bleed hole, size .218" diamet r (720S), .156" diameter (720SA), .082" diameter (719S-719SA) in valve. Choke heat suction hole, in bowl cover, size No. 32 drill.

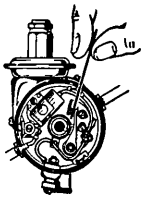
Vacuum Spark Port: .062 to .064 inch diameter. Top of port 052 to .056 inch above valve.

Motor Tune-Up—Be Accurate! Always Use Feeler Gauges!

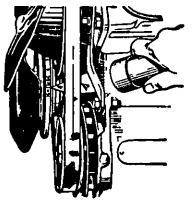
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



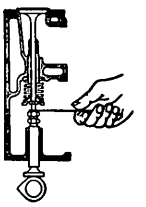
Spark Plug Gap
(1949-50)
.025"
(1951-54)
.023"-.028"



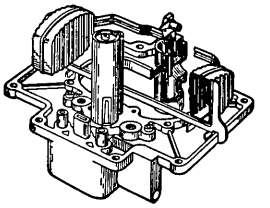
Breaker Point Setting
(1949-50)
.015"
(1951-54)
.016"



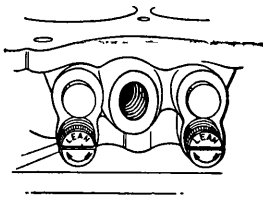
Ignition Timing
Breaker Points to Open:
(1949-50) 2° to 6° B. T. C.
(1951) 6° B. T. C.
(1952-54)
Syncromesh Trans. 6° B. T. C.
Hydramatic Trans. 3° B. T. C.



Valve Setting
(Hot)
Int. .011"-.013"
Exh. .011"-.013"



Float Setting
3/16 Inch
(Use Gauge T109-162)



Idle Adjustment Screw Setting
3/4 to 1 1/4
Turns Open

CARBURETER ADJUSTMENTS

Float Adjustment: Two separate float adjustments must be made—lateral and vertical, as follows: With bowl cover assembly inverted, gasket removed, and float resting on seated needle, place gauge T109-162 (3/16") directly under float with notched portions of gauge fitted over machined surface of casting. Float should just touch vertical sides of gauge and just clear horizontal portion. Adjust by bending arms of float. Remove gauge, install bowl cover gasket, then reinstall float.

Pump Adjustment: The total distance the plunger head (not shaft) moves from closed to wide open throttle position controls the amount of fuel discharged. Correct pump plunger travel is important and should be checked each time the carbureter is dis-assembled or when leaner than standard metering rods are installed. Procedure is as follows: Install pump connector link in lower hole (short stroke) of pump arm, with ends extending towards countershaft arm. Back out throttle lever set screw until throttle valves

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CARBURETER
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seat in bores of carbureter Be sure fast idle adjusting screw does not hold throttle open Place universal pump travel gauge T109-117S, inverted on edge of dust cover boss of bowl cover. Turn knurled nut of gauge until finger just touches upper end of plunger shaft Number indicated on gauge should be "32" Hold the gauge vertical to insure correct reading

Adjust by bending the throttle connector rod at lower angle

Optional Adjustment With throttle valves seated in bores of carbureter, the distance from the top of the plunger shaft to the top of the dust cover boss should be 20/64"

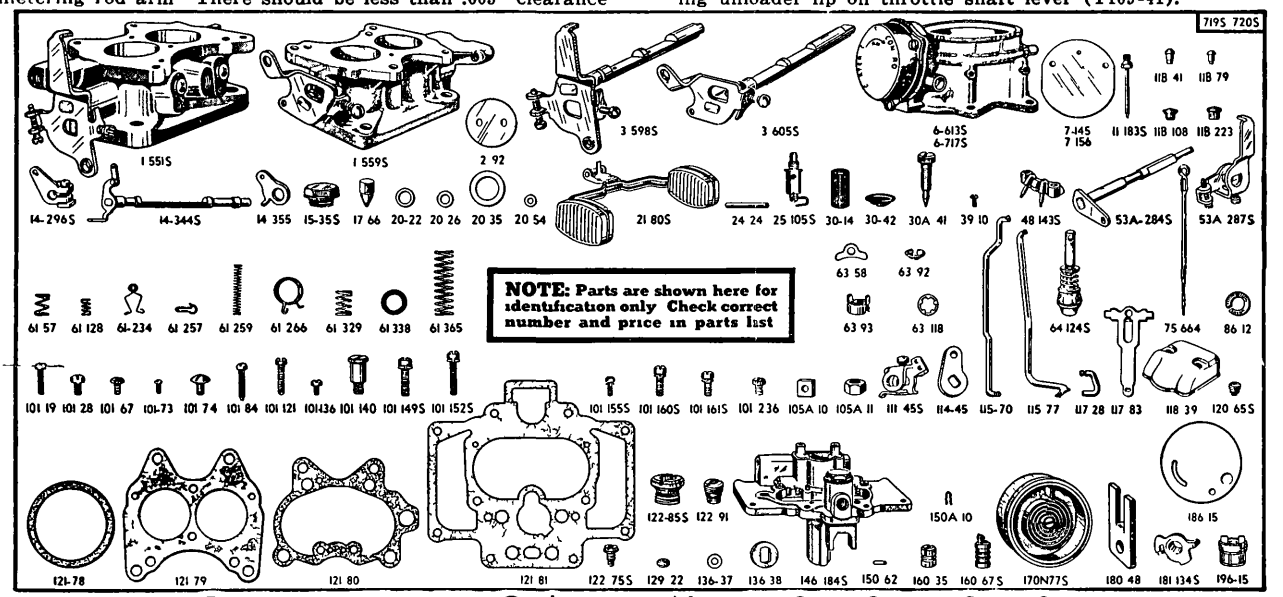
Adjust as mentioned above

Metering Rod Adjustment: With throttle valves seated in bores of carbureter, insert one metering rod gauge T109-163 in place of either metering rod Press down lightly on vacuum piston link until lug of piston link contacts lip of metering rod arm There should be less than .005" clearance between metering rod bearing and shoulder in notch of gauge Adjust by bending lip of metering rod arm (Tool T109-105)

Fast Idle Adjustment: Loosen choke lever clamp screw on choke shaft Insert .040" feeler gauge T109-193 between lip of fast idle cam and boss of flange casting Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw

With choke valve tightly closed tighten fast idle adjusting screw until there is .026" opening between throttle valve and bore of carbureter (side opposite idle port) Use gauge T109-189 Be sure fast idle adjusting screw is on high step of cam while making this adjustment

Unloader Adjustment: With throttle wide open there should be 1/8" clearance between upper edge of choke valve and inner wall of air horn (gauge T109-36) Adjust by bending unloader lip on throttle shaft lever (T109-41).



Pontiac 8—1949-54—Carbureters Nos. 719S-719SA-720S-720SA

WHEN SERVICING USE GASKET ASST No. 189; REPAIR PACKAGE No 1507A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-551S	Body flange assembly (719S-SA)	
1-559S	Body flange assembly (720S-SA)	
2-92	Throttle valve	(2)
3-598S	Throttle shaft and lever assembly (719S-SA)	
3-605S	Throttle shaft and lever assembly (720S-SA)	
6-613S	Air horn assembly (720S) (Sup by 6-675S)	
6-617S	Air horn assembly (719S) (Sup by 6-674S)	
6-674S	Air horn assembly (719S-SA)	
6-675S	Air horn assembly (720S-SA)	
7-145	Choke valve (719S) (Sup by 7-166)	
7-156	Choke valve (720S) (Sup by 7-167)	
7-166	Choke valve (719S-719SA) (Sup by 7-187)	
7-167	Choke valve (720S-720SA) (Sup by 7-184)	
7-184	Choke valve (720S-SA)	
7-187	Choke valve (719S-SA)	
11-183S	LOW SPEED JET ASSEMBLY	(2)
11B-41	Passage plug	(2)
11B-79	Rivet passage plug	(3)
11B-108	IDLE PORT RIVET PLUG	(2)
11B-223	NOZZLE PASSAGE PLUG	(2)
14-296S	Choke lever and screw assembly	
14-344S	Choke piston lever, link and shaft assembly (Sup. by 14-401S)	
14-355	Cam trip lever	
14-401S	Choke piston lever, link and shaft assembly	
15-35S	Strainer nut assembly	
17-66	PUMP DISCHARGE CHECK NEEDLE	
20 22	Needle seat gasket	
20-26	Pump relief plug gasket	
20-35	Bowl strainer gasket	
20-54	Metering rod jet gasket	(2)
21-80S	Float and lever assembly	
24-24	Float lever pin	
25 105S	NEEDLE AND SEAT ASSEMBLY	
30-14	BOWL COVER STRAINER	
30 42	PUMP STRAINER	
30A 41	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
48 143S	Pump jet and housing assembly	
53A-284S	Pump operating lever and countershaft assembly	
53A 287S	Fast idle arm and screw assembly (720S-SA)	
61-57	Adjustment screw lock spring	(2)
61-128	Connector rod spring (Use with 115-77)	
61-157	Plunger spring	
61-234	METERING ROD SPRING	
61 257	Needle pull clip	
61-259	VACUUM PISTON SPRING	
61-266	Fast idle cam spring	
61-329	Pump spring (upper)	
61-365	PUMP SPRING (LOWER)	
63-58	Coil housing retainer	(3)
63-92	Pump spring retainer	
63 93	Spring retainer (Use with 115-77)	
63-118	Throttle shaft retaining ring	
63-123	Retaining ring (choke shaft)	
64-124S	PUMP PLUNGER ROD, SPRING AND RETAINER ASSEMBLY	
75 664	METERING ROD—STANDARD— 062"- 062' to .056"- 051"	(2)
75-683	Metering rod—1 size lean— 063"- 063" to 057"- 052"	(2)
75-684	Metering rod—2 sizes lean— 064"- 063" to .058"-.053"	(2)
86-12	Flange stud lock washer	(4)
101-19	Choke lever clamp screw (Sup by 101 354S)	
101-28	Fast idle arm screw (720S-SA)	
101-67	Pump retainer screw	
101-73	Throttle valve attaching screw	(4)
101-74	Throttle shaft dog screw (719S-SA)	
101-84	Fast idle adjustment screw	
101-121	Throttle lever adjustment screw	
101-136	Coil housing attaching screw	(3)
101-140	Fast idle attaching screw	
101-148S	Dust cover attaching screw and washer assembly	(2)
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	(4)
101-155S	Pump jet attaching screw and washer assembly	(2)
101-160S	Bowl cover attaching screw and washer assembly	(6)
101-161S	Dust cover attaching screw and washer assembly (Sup by 101-148S)	(2)
101-236	Metering rod arm clamp screw	
101-354S	Choke lever clamp screw assembly	
105A-10	Choke lever clamp nut	
105A-11	Flange stud nut	(4)
111-45S	Pump and metering rod arm assembly	
114-45	THROTTLE LEVER ROD (719S-SA)	
115-70	Fast idle connector rod	
115-77	Throttle connector rod (Sup by 115-130)	
115-130	THROTTLE CONNECTOR ROD	
117-28	Pump arm link	
117-83	Piston link (vacumeter)	
118-39	Dust cover	
120 65S	METERING ROD JET ASSEMBLY	
121-78	COIL HOUSING GASKET	
121-79	BODY FLANGE GASKET	
121 80	AIR HORN GASKET	
121-81	BOWL COVER GASKET	
122-75S	PUMP RELIEF PLUG ASSEMBLY	
122-85S	INTAKE DISK CHECK ASSEMBLY	
122 91	PUMP DISCHARGE CHECK PLUG	
129-22	Metering rod disk (Discontinued)	(2)
136-37	Connector rod washer (Use with 115-77)	
136-38	Throttle shaft dog washer (719S-SA)	
146-184S	Bowl cover assembly	
150 62	Choke piston pin	
150A-10	PIN SPRING	(3)
160-35	Choke piston	
160 67S	Vacuum piston and pin assembly	
170N-77S	Thermostatic housing and coil assembly	
172-22	THROTTLE CONNECTOR ROD RETAINER (Use with 115-130)	
180 48	Air cleaner bracket extension (719S-SA)	
181-134S	Fast idle cam assembly	
186-15	Coil housing baffle plate	
196-15	Pump plunger guide	

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST LOUIS MO U S A

PONTIAC
March, 1954
Revised April, 1955

CARTER
AIR CONDITIONING FAST IDLE DEVICE ASSEMBLY
No. 202-56S
FOR PONTIAC

Used on 719SA, 720SA and 2122S carbureters for cars equipped with air conditioning

Part No.	Part Name	
11B-134	Rivet plug	
49-191S	Electro magnet plunger assembly	
61-302	Adjusting nut spring	
61-438	Diaphragm return spring	
61-502	Electro magnet plunger spring	
86-58	Lock washer	
101-142S	Electro magnet housing attaching screw and washer assembly	(2)
101-213S	Diaphragm cover attaching screw and washer assembly	(6)
101-362S	Bracket attaching screw and washer assembly	(2)
101-379S	Bracket attaching screw and washer assembly	
105A-12	Lock nut	
105A-49	Bracket attaching nut	
105A-53	Adjusting nut	
116-13	Check ball	
121-190	Electro magnet housing gasket	
150-168	Diaphragm air bleed pin	
170-190	Inner diaphragm housing	
170-298S	Outer diaphragm housing and plug assembly	
180-77	Bracket	
202-56S	Air conditioning fast idle device assembly (complete)	
202-59S	Diaphragm and shaft assembly	
213-14S	Electro magnet and housing assembly	

NOTE Figures in parenth ses indicate number of pieces used in the idle d vic ass mbly. Where n figure is sh wn, only ne is us d.

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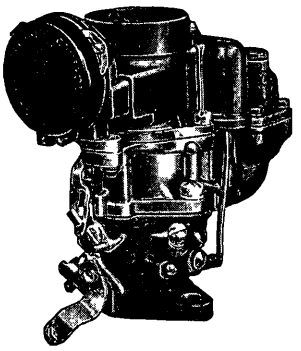
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CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST LOUIS, MO, U S A

PONTIAC 717S-718S
January, 1949
Revised December, 1952

717S SYNCROMESH TRANSMISSION

718S HYDRAMATIC TRANSMISSION



Cut shows 718S

Casting No. 388 on face of flange (717S)
Casting No. 592 on face of flange (718S)

PONTIAC SIX MODELS "49-25" – "50-25" "51-25" 1949-1951 "52-25" – 1952

WA-1 Down-Draft **Carbureters 717S-718S** With Climatic® Control

CARBURETER SPECIFICATIONS

For Pontiac 6 Cylinder Engine· 3-9/16" Bore, 4" Stroke

Dimensions. Flange size 1¼ inch S A E
Primary venturi, 11/32 inch I D
Secondary venturi, 11/16 inch I D
Main venturi, 1-5/16 inch I D

Float Level: Distance from seam of float (at free end) to tip on lower edge of float chamber cover when needle is seated to be 7/16 inch

Vents· Outside, No 10 drill Inside none

Gasoline Intake: Square vertical push pull needle Size No 38 drill hole in needle seat

Low Speed Jet Tube: Jet size No 67 drill
By pass size No 54 drill
Economizer 0665 0675 inch diameter
Idle bleed, size No 50 drill

Idle Port: Keyhole type length 210 inch width 036 inch, with 063 inch diameter hole at top

Idle Port Opening· Top of port located 166 to 170 inch above valve with valve closed tight

Idle Screw Seat: No 46 drill

Set Idle Adjustment Screw: 1 to 1¾ turns open For richer mixture turn screw out Do not attempt to idle engine below 450 475 r p m (717S) 370 380 r p m (718S)

Main Nozzle In primary venturi angle 45° Closed tip Inside diameter No 30 drill
Upper hole 020 inch diameter on 45° angle
Lower hole 070 inch diameter on 60° angle

Metering Rod (Vacumeter Type): Economy step 075 inch diameter middle step tapers to 070 inch diameter power step 042 inch diameter
Length 3 9/64 inches

Metering Rod Jet· 0995 inch diameter

Metering Rod Setting Use gauge part No T109-102 (2 468 inches)

Accelerating Pump Pressure type, with adjustable pump stroke
Pump discharge jet size No 72 (.025") drill
Relief passage to outside size No 42 drill
Intake ball check seat, size No 55 drill
Discharge ball check seat size No 32 drill

Pump Adjustment: 17/64 inch plunger travel (full throttle position) Lower hole (medium stroke) Use Gauge T109-117S

Choke· Carter Climatic® Control, set 3 points rich Butterfly type offset valve Bleed hole (in valve), size No 28 (.1405") drill Choke heat suction hole in body size No 38 (.1015") drill

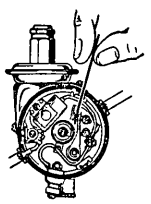
Vacuum Spark Port· 061 to 064 inch diameter Bottom of port 022 to 027 inch above valve

Motor Tune-Up—Be Accurate!

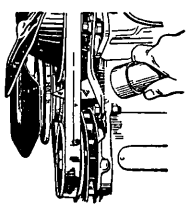
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



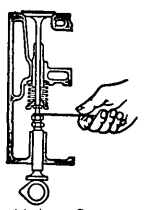
Spark Plug
Gap
.025"



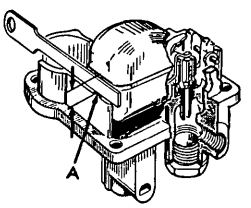
Breaker Point
Setting
.020"



Ignition Timing
Breaker Points to Open
2°-6° B. T. D C.



Valve Setting
(Hot)
Int. .011"-.013"
Exh. .011"-.013"



Float Setting
7/16 Inch
(Measure from point "A"
to top of float seam)



Idle Adjustment
Screw Setting
1 to 1¾
Turns Open

CARBURETER ADJUSTMENTS

Pump Adjustment. With throttle valve seated and connector link in medium stroke (lower hole), pump plunger should travel 17/64" from closed to wide open position Pump travel can be measured by using universal pump stroke gauge T109-117S Place base of gauge on ridged portion of bowl cover so that projecting portion of pump gauge rests on top surface of connector link at pump shaft Hold gauge vertical The difference between the number shown by index mark on gauge at wide open and closed throttle positions, should be "17"

Adjust by bending throttle connector rod at lower angle

Metering Rod Adjustment: Correct setting of metering rod is important and must be made after pump adjustment Metering rod position should be checked when carbureters

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are serviced or leaner than standard rods are installed Correct procedure is as follows

1 Back out throttle lever set screw so throttle valve seats
2 Insert gauge T109-102 in place of metering rod, seating tapered end in metering rod jet
3 Press lightly on vacuum piston arm until lip on arm contacts pump operating lever
4 There should be less than .005" clearance between metering rod pin and shoulder in notch of gauge
5 Adjustment should be made by bending lip on vacuum piston arm (use tool T109-22)
6 Remove gauge and install metering rod and disk Connect metering rod spring

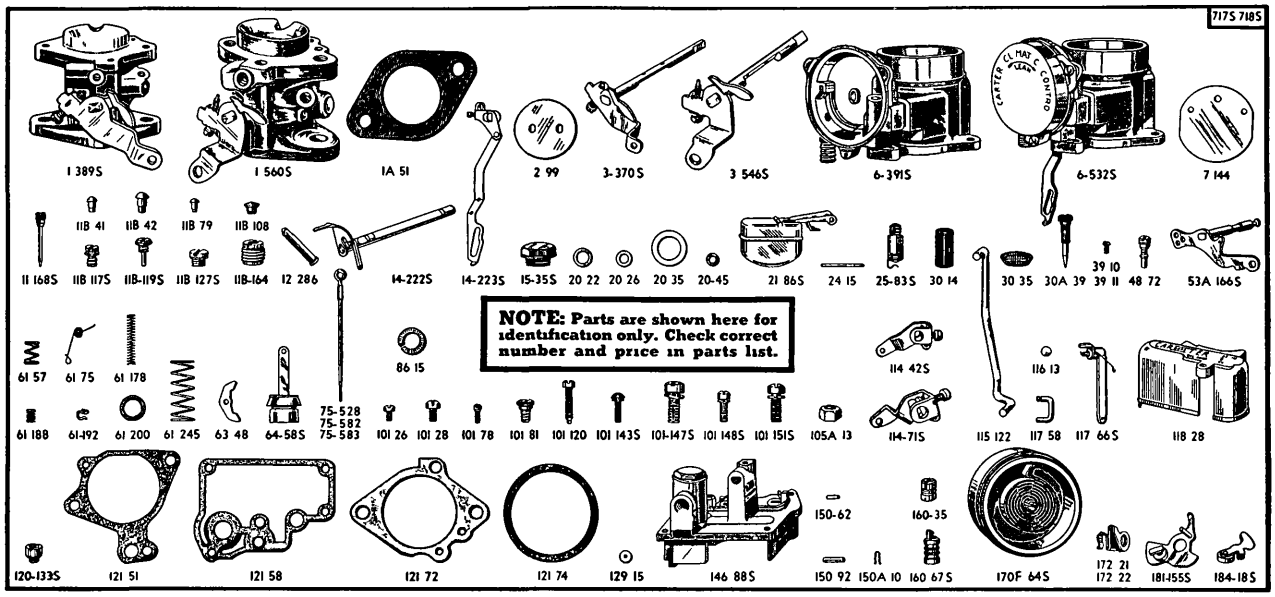
Anti percolator Adjustment Crack throttle valve .030" by placing gauge T109 29 between throttle valve and bore of carbureter (side opposite port) Bend rocker arm (use tool T109-105) until there is a clearance of .005" to .015" between rocker arm lip and pump arm

Fast Idle Adjustment Back out throttle lever adjusting screw Hold fast idle cam in normal idle position (choke wide open) and tighten throttle lever adjustment screw until it just touches fast idle cam Hold throttle lever closed and pull cam back until first (or lower) step on cam is against (not on) set screw

There should now be 5/8" clearance between inner wall of air horn and lower edge of choke valve (Use gauge T109-85) Adjustment can be made by bending at offset portion of fast idle link with tool T109-41

Unloader Adjustment With throttle valve wide open there should be 5/16" clearance between lower edge of choke valve and inner wall of air horn (Use tool T109-107) Adjustment should be made by bending arm on throttle lever (Use tool T109-41)

Lock-out Adjustment With throttle and choke valves wide open, choke should lock in wide open position Adjustment is made by bending lip at lower edge of fast idle link to give 1/32" clearance between lip and throttle lever lock with throttle and choke valves held wide open (Use tool T109-22)



Pontiac 6—1949-1952—Carbureters Nos. 717S-718S

WHEN SERVICING, USE GASKET ASSORTMENT No. 146, REPAIR PACKAGE No 1366B (717S), No 1388A (718S)

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

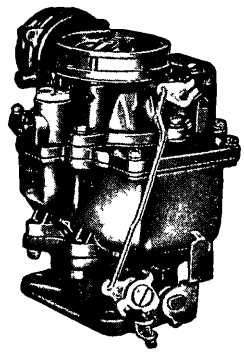
Part No.	PART NAME	
1-389S	Body flange assembly (717S)	
1-560S	Body flange assembly (718S)	
1A 51	FLANGE GASKET	
2-99	Throttle valve	
3-370S	Throttle shaft and lever assembly (717S)	
3-546S	Throttle shaft and lever assembly (718S)	
6-391S	Air horn and piston housing assembly	
6-532S	Air horn assembly	
7-144	Choke valve	
11-168S	LOW SPEED JET ASSEMBLY	
11B 41	Rivet plug	
11B 42	Body flange rivet plug	
11B-79	Rivet plug	(5)
11B-108	Idle port rivet plug	
11B-117S	Idle passage plug assembly	
11B-119S	Ball retainer screw plug assembly	
11B-127S	Passage plug assembly	(2)
11B-164	Nozzle retainer plug	
12-286	Nozzle	
14-222S	Choke piston lever, link and shaft assembly	
14-223S	Choke lever screw and link assembly	
15-35S	Strainer nut assembly	
20-22	Gasket	(3)
20-26	Gasket	(3)
20-35	Bowl strainer gasket	
20-45	NOZZLE GASKET	
21-86S	Float and lever assembly	
24-15	Float lever pin	
25-83S	NEEDLE AND SEAT ASSEMBLY	
30 14	Bowl strainer gauze	
30-35	PUMP STRAINER	
30A-39	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	Throttle valve attaching screw	(2)
48-72	PUMP JET	
53A-166S	Pump arm and countershaft assembly	
61-57	Adjustment screw spring	
61-75	Metering rod spring	
61-130	Pump spring	
61-178	VACUUM PISTON SPRING	
61-188	Rocker arm spring	
61-192	Needle pull clip	
61-200	Plunger spring	
61 245	Pump spring (Sup by 61-130)	
63-48	Coil housing retainer	(3)
64-58S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49-108)	

Part No	PART NAME	
75-528	METERING ROD—STANDARD— .075"- .075 to .070 - .042	
75-582	Metering rod—1 size lean— .076"- .076" to .072'- .048'	
75-583	Metering rod—2 sizes lean— .077'- .077" to .074 - .053"	
86 15	Flange stud lock washer	(2)
101-26	Coil housing attaching screw	(3)
101-28	Throttle shaft arm clamp screw	
101-78	Choke lever clamp screw	
101-81	Fast idle cam screw	
101-120	Throttle lever adjusting screw	
101-143S	Piston housing attaching screw and washer assembly	
101-147S	Body flange attaching screw and washer assembly	(2)
101-148S	Bowl cover attaching screw and washer assembly	(5)
101-151S	Air horn attaching screw and washer assembly	(2)
105A-13	Flange nut	(2)
114-42S	THROTTLE SHAFT ARM AND SCREW ASSEMBLY (717S)	
114-71S	THROTTLE SHAFT ARM AND SCREW ASSEMBLY (718S)	
115-122	THROTTLE CONNECTOR ROD	
116-13	PUMP INTAKE AND DISCHARGE CHECK BALL	(2)
117-58	Pump connector link	
117 66S	Vacuum piston link and spring assembly	
118-28	Dust cover	
120 133S	METERING ROD JET ASSEMBLY	
121-51	AIR HORN GASKET	
121-58	BOWL GASKET	
121-72	BODY FLANGE GASKET	
121-74	COIL HOUSING GASKET	
129-15	Metering rod disk	
146 88S	Bowl cover and strainer assembly	
150-62	Choke piston pin	
150 92	Anti-percolator pin	
150A-10	PIN SPRING	(3)
160 35	Choke piston	
160 67S	Vacuum piston and pin assembly	
170F-64S	Thermostatic housing and coil assembly	
172-21	THROTTLE CONNECTOR ROD RETAINER (LOWER)	
181-155S	Fast idle cam and pin assembly	
184-18S	ANTI-PERCOLATOR CAP AND ROCKER ARM ASSEMBLY	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

CAR AND MOTOR SERIAL NUMBERS

A8PA—1001 and higher
A8PB—1001 and higher
C8PA—1001 and higher
C8PB—1001 and higher
F8PA—1001 and higher
F8PB—1001 and higher
K8PA—1001 and higher
K8PB—1001 and higher
L8PA—1001 and higher
L8PB—1001 and higher
P8PA—1001 and higher
P8PB—1001 and higher
W8PA—1001 and higher
W8PB—1001 and higher



Casting No. 558 on Face of Flange

PONTIAC EIGHT MODELS "48-27" & "48-28" 1948

(HYDRAMATIC TRANSMISSION)

(720SA can also be used)

WCD Dual Down-Draft Climatic® Control Carbureter—**Model 653S**

CARBURETER SPECIFICATIONS

For Pontiac 8 Cylinder Engine: 3 1/4 Inch Bore, 3 3/4 Inch Stroke

Dimensions: Flange size, 1 1/4 inch dual, 4 bolt type.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 19/32 inch I. D.
Main venturi, 1-3/16 inch I. D.

Float Level: Distance from seam of float (both sides—at top center) to lower edge of bowl cover, when needle is seated to be 3/16 inch. (Use gauge No. T109-162.)

Vents: Inside, balance vent tube .218 inch inside diameter. Outside, none.

Gasoline Intake: Square vertical push pull needle. Size No. 42 drill in needle seat.

Low Speed Jet Tube: Jet size, No. 68 drill.
By-pass, size No. 56 (.0465") drill.
Economizer, size No. 63 (.037") drill.
Idle bleed, size No. 55 (.052") drill.

Idle Ports: Upper port, length .165 inch. Width .030 inch.

Idle Port Opening: .122-.128 inch above upper edge of valve with valve closed tight.

Lower Port (For Idle Adjustment Screw): Size .0615 to .0655 inch diameter.

Set Idle Adjustment Screw: 3/4 to 1 3/4 turns open. For richer mixture turn screw out. Do not attempt to idle engine below 8 m.p.h.

Main Nozzle: In primary venturi, closed tip angle 49° from horizontal. Nozzle is installed permanently. **Do not remove.**

Metering Rod (Vacumeter Type): Economy step .060 inch diameter. Middle step tapers to .051 inch diameter. Power step .045 inch diameter. Length 3-41/64 inches.

Main Metering Jet: .082 inch diameter.

Metering Rod Setting: Use gauge, part No. T109-163 (2.940 inches).

Accelerating Pump: High pressure delayed action type, (spring operated plunger). Adjustable stroke.
Discharge jet (twin) size, No. 74 (.0225") drill.
Intake disk check size, No. 30 (.1285") drill.
Discharge (needle seat) size, No. 55 (.052") drill.
Relief ball check size, No. 55 (.052") drill.

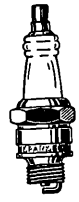
Pump Adjustment: "30" as indicated on gauge T109-117S with throttle valves seated or 18/64" from top of pump shaft to the top of the dust cover housing.

Choke: Carter Climatic® Control, set at center index point. Offset butterfly type. Choke heat suction hole, in bowl cover, size No. 32 drill.

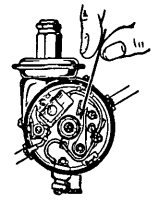
Vacuum Spark Port: .062 to .064 inch diameter. Top of port .052 to .056 inch above valve.

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



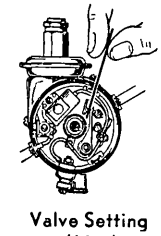
Spark Plug Gap .025"



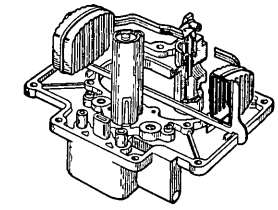
Breaker Point Setting .015"



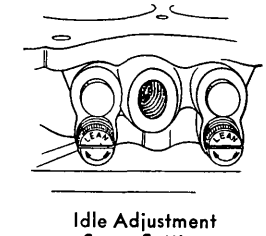
Ignition Timing Breaker Points to Open: 2°-6° B. T. C.



Valve Setting (Hot)
Int. .011"-.013"
Exh. .011"-.013"



Float Setting 3/16 Inch (Use Gauge T109-162)



Idle Adjustment Screw Setting 3/4 to 1 3/4 Turns Open

CARBURETER ADJUSTMENTS

Float Adjustment: Two separate float adjustments must be made—lateral and vertical, as follows: With bowl cover assembly inverted, gasket removed, and float resting on seated needle, place gauge T109-162 (3/16") directly under float with notched portions of gauge fitted over machined surface of casting. Float should just touch vertical sides of gauge, and just clear horizontal portion. Adjust by bending arms of float. Remove gauge, install bowl cover gasket, then reinstall float.

Pump Adjustment: The total distance the plunger head (not shaft) moves from closed to wide open throttle position controls the amount of fuel discharged. Correct pump plunger travel is important and should be checked each time the carbureter is dis-assembled or when leaner than standard metering rods are installed. Procedure is as follows:

Install pump connector link in lower hole (short stroke) of pump arm, with ends extending towards countershaft arm. Back out throttle lever set screw until throttle valves seat in bores of carbureter. Be sure fast idle adjusting screw does not hold throttle open. Place universal pump travel

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gauge T109-117S, inverted on edge of dust cover boss of bowl cover Turn knurled nut of gauge until finger just touches upper end of plunger shaft Number indicated on gauge should be '30' Hold the gauge vertical to insure correct reading

Adjust by bending the throttle connector rod at lower angle

Optional adjustment With throttle valves seated in bores of carbureter, the distance from the top of the plunger shaft to the top of the dust cover boss should be 18/64

Adjust as mentioned above

Metering Rod Adjustment With throttle valves seated in bores of carbureter insert one metering rod gauge T109-163 in place of either metering rod Press down lightly on vacuum piston link until lug of piston link contacts lip of metering rod arm There should be less than 005 clearance between metering rod bearing and shoulder in notch of gauge Adjust by bending lip of metering rod arm (Tool T109-105)

Fast Idle Adjustment With choke valve tightly closed tighten fast idle adjusting screw until there is 026' opening between throttle valve and bore of carbureter (side opposite idle port) Use gauge T109 189 Be sure fast idle adjusting screw is on high step of cam while making this adjustment

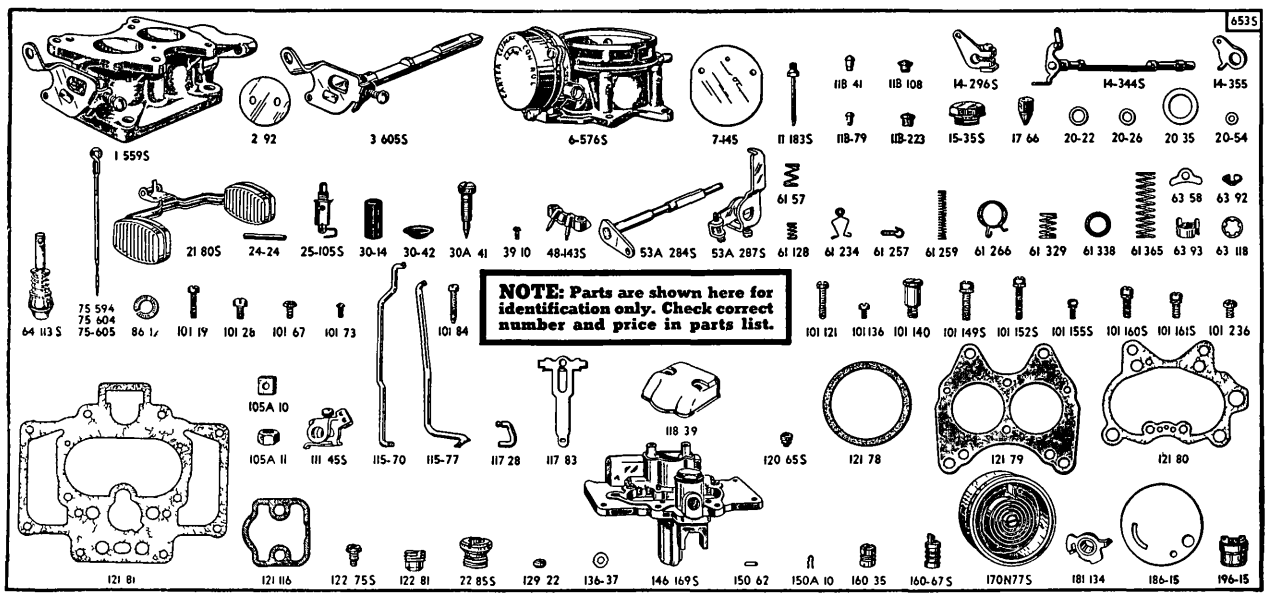
Unloader Adjustment Two adjustments are necessary

A Loosen choke lever clamp screw on choke shaft Insert 040" feeler gauge T109-193 between lip of fast idle cam and boss of flange casting Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw

B With throttle wide open there should be ⅛" clearance between upper edge of choke valve and inner wall of air horn (gauge T109-36) Adjust by bending unloader lip on throttle shaft lever (T109-41)

NOTE Assemble flange in the following manner

1 Install throttle shaft assembly and turn to closed position
2 Press retaining ring (prongs extending away from casting) on throttle shaft so that it is against boss on casting
3 Install throttle valves with "c toward idle ports (viewed from manifold side of flange) Center valves by tapping lightly, hold in place and tighten screws



Pontiac 8—1948—Carbureter No. 653S

WHEN SERVICING, USE GASKET ASSORTMENT No. 190; REPAIR PACKAGE No. 1369B

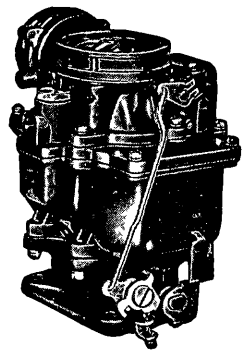
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-559S	Body flange assembly	
2-92	Throttle valve	(2)
3-605S	Throttle shaft and lever assembly	
6-576S	Air horn assembly	
7-145	Choke valve	
11-183S	LOW SPEED JET ASSEMBLY	(2)
11B-41	Passage plug	(2)
11B-79	Rivet passage plug	(3)
11B-108	IDLE PORT PASSAGE PLUG	(2)
11B-223	NOZZLE PASSAGE PLUG	(2)
14-296S	Choke lever and screw assembly	
14-344S	Choke piston lever, link and shaft assembly	
14-355	Cam trip lever	
15-35S	Strainer nut assembly	
17-66	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	
20-26	Pump relief plug gasket	
20-35	Bowl strainer gasket	
20 54	Metering rod jet gasket	(2)
21-80S	Float and lever assembly	
24-24	Float lever pin	
25-105S	NEEDLE AND SEAT ASSEMBLY	
30-14	BOWL COVER STRAINER	
30-42	PUMP STRAINER	
30A-41	Idle adjustment screw	(2)
39-10	Valve attaching screw (choke)	(2)
48 143S	Pump jet and housing assembly	
53A 284S	Pump operating lever and countershaft assembly	
53A-287S	Fast idle arm and screw assembly	
61-57	Adjustment screw lock spring	(2)
61-128	Connector rod spring (Use with 115-77)	
61-234	METERING ROD SPRING	
61 257	Needle pull clip	
61 259	VACUUM PISTON SPRING	
61-266	Fast idle cam spring	
61-329	Upper pump spring	
61-338	Plunger spring	
61-365	LOWER PUMP SPRING	
63-58	Coil housing retainer	(3)
63-92	Pump spring retainer	
63-93	Connector rod spring retainer (Use with 115-77)	
63-118	Throttle shaft retaining ring	
64-113S	PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
75-594	METERING ROD—STANDARD— 060 - 060" to 051"- 045"	(2)
75 604	Metering rod—1 size lean— 0615"- 0615" to 0535"- 048"	(2)
75 605	Metering rod—2 sizes lean— 0635 - 0635 to 056"- 051"	(2)
86-12	Flange stud lock washer	(4)
101-19	Choke lever clamp screw (Sup by 101-354S)	
101-28	Fast idle arm screw	
101-67	Pump retainer screw	
101-73	Throttle valve attaching screw	(4)
101-84	Fast idle adjustment screw	
101-121	Throttle lever adjustment screw	
101-136	Coil housing attaching screw	(3)
101-140	Fast idle attaching screw	
101-148S	Dust cover screw and washer assembly	(2)
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	(4)
101-155S	Pump jet attaching screw and washer assembly	(2)
101-160S	Bowl cover attaching screw and washer assembly	(6)
101-161S	Dust cover attaching screw and washer assembly (Sup by 101-148S)	(2)
101-236	Metering rod arm clamp screw	
101-354S	Choke lever clamp screw assembly	
105A-10	Choke lever nut	
105A-11	Flange stud nut	(4)
111-45S	Pump and metering rod arm assembly	
115-70	Fast idle connector rod	
115-77	Throttle connector rod (Sup by 115-130)	
115-130	THROTTLE CONNECTOR ROD	
117-28	Pump arm link	
117-83	Vacumeter piston link	
118-39	Dust cover	
120-65S	METERING ROD JET ASSEMBLY	(2)
121-78	COIL HOUSING GASKET	
121-79	BODY FLANGE GASKET	
121-80	AIR HORN GASKET	
121-81	BOWL COVER GASKET	
121-116	DUST COVER GASKET	
122-75S	PUMP RELIEF PLUG ASSEMBLY	
122-81	PUMP DISCHARGE CHECK PLUG	
122-85S	DISK CHECK PLUG ASSEMBLY	
129-22	Metering rod disk	(2)
136-37	Connector rod washer	
146 169S	Bowl cover assembly	
150-62	Piston pin	
150A-10	PIN SPRING	(3)
160-35	Choke piston	
160 67S	Vacuum piston and pin assembly	
170N-77S	Thermostatic housing and coil assembly	
172-22	THROTTLE CONNECTOR ROD RETAINER (Use with 115-130)	
181-134S	Fast idle cam assembly	
186-15	Baffle plate	
196-15	Pump plunger guide	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

CAR AND MOTOR SERIAL NUMBERS

A8PA—1001 and higher
A8PB—1001 and higher
C8PA—1001 and higher
C8PB—1001 and higher
F8PA—1001 and higher
F8PB—1001 and higher
K8PA—1001 and higher
K8PB—1001 and higher
L8PA—1001 and higher
L8PB—1001 and higher
P8PA—1001 and higher
P8PB—1001 and higher
W8PA—1001 and higher
W8PB—1001 and higher



Casting No. 558 on Face of Flange

PONTIAC EIGHT MODELS "48-27" & "48-28" 1948

(HYDRAMATIC TRANSMISSION)

(720SA can also be used)

WCD Dual Down-Draft Climatic® Control Carbureter—**Model 653S**

CARBURETER SPECIFICATIONS

For Pontiac 8 Cylinder Engine· 3 1/4 Inch Bore, 3 3/4 Inch Stroke

Dimensions: Flange size, 1 1/4 inch dual, 4 bolt type
Primary venturi, 11/32 inch I D
Secondary venturi, 19/32 inch I D
Main venturi, 1-3/16 inch I. D

Float Level: Distance from seam of float (both sides—at top center) to lower edge of bowl cover, when needle is seated to be 3/16 inch (Use gauge No. T109-162)

Vents: Inside, balance vent tube 218 inch inside diameter Outside, none

Gasoline Intake: Square vertical push pull needle Size No 42 drill in needle seat.

Low Speed Jet Tube: Jet size, No. 68 drill
By-pass, size No 56 (.0465") drill.
Economizer, size No. 63 (037") drill
Idle bleed, size No. 55 (.052") drill

Idle Ports: Upper port, length .165 inch. Width 030 inch

Idle Port Opening: .122-.128 inch above upper edge of valve with valve closed tight.

Lower Port (For Idle Adjustment Screw): Size .0615 to 0655 inch diameter.

Set Idle Adjustment Screw: 3/4 to 1 3/4 turns open For richer mixture turn screw out. Do not attempt to idle engine below 8 m p.h

Main Nozzle: In primary venturi, closed tip angle 49° from horizontal. Nozzle is installed permanently **Do not remove**

Metering Rod (Vacumeter Type): Economy step .060 inch diameter. Middle step tapers to 051 inch diameter. Power step 045 inch diameter. Length 3-41/64 inches

Main Metering Jet: 082 inch diameter

Metering Rod Setting: Use gauge, part No. T109-163 (2.940 inches)

Accelerating Pump: High pressure delayed action type, (spring operated plunger). Adjustable stroke
Discharge jet (twin) size No. 74 (0225") drill
Intake disk check size, No 30 (1285") drill
Discharge (needle seat) size, No. 55 (052") drill
Relief ball check size No. 55 (.052") drill

Pump Adjustment: "30" as indicated on gauge T109-117S with throttle valves seated or 18/64" from top of pump shaft to the top of the dust cover housing.

Choke: Carter Climatic® Control, set at center index point Offset butterfly type Choke heat suction hole, in bowl cover, size No. 32 drill

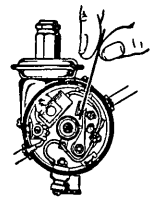
Vacuum Spark Port: 062 to 064 inch diameter Top of port 052 to 056 inch above valve

Motor Tune-Up—Be Accurate!

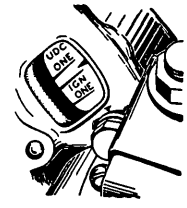
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



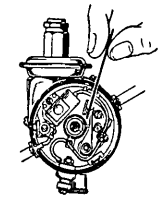
Spark Plug Gap .025"



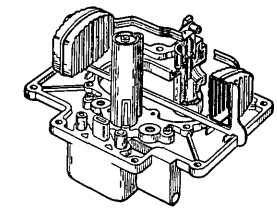
Breaker Point Setting 015"



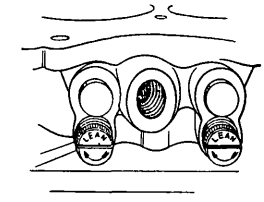
Ignition Timing Breaker Points to Open· 2°-6° B. T. C.



Valve Setting (Hot)
Int. 011"-.013"
Exh 011"-.013"



Float Setting 3/16 Inch (Use Gauge T109-162)



Idle Adjustment Screw Setting 3/4 to 1 3/4 Turns Open

CARBURETER ADJUSTMENTS

Float Adjustment: Two separate float adjustments must be made—lateral and vertical, as follows. With bowl cover assembly inverted, gasket removed, and float resting on seated needle, place gauge T109-162 (3/16") directly under float with notched portions of gauge fitted over machined surface of casting Float should just touch vertical sides of gauge, and just clear horizontal portion Adjust by bending arms of float Remove gauge, install bowl cover gasket, then reinstall float

Pump Adjustment: The total distance the plunger head (not shaft) moves from closed to wide open throttle position controls the amount of fuel discharged. Correct pump plunger travel is important and should be checked each time the carbureter is dis-assembled or when leaner than standard metering rods are installed Procedure is as follows:

Install pump connector link in lower hole (short stroke) of pump arm, with ends extending towards countershaft arm Back out throttle lever set screw until throttle valves seat in bores of carbureter. Be sure fast idle adjusting screw does not hold throttle open Place universal pump travel

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gauge T109-117S, inverted on edge of dust cover boss of bowl cover Turn knurled nut of gauge until finger just touches upper end of plunger shaft Number indicated on gauge should be "30' Hold the gauge vertical to insure correct reading

Adjust by bending the throttle connector rod at lower angle

Optional adjustment With throttle valves seated in bores of carbureter, the distance from the top of the plunger shaft to the top of the dust cover boss should be 18/64'

Adjust as mentioned above

Metering Rod Adjustment· With throttle valves seated in bores of carbureter insert one metering rod gauge T109-163 in place of either metering rod Press down lightly on vacuum piston link until lug of piston link contacts lip of metering rod arm There should be less than 005' clearance between metering rod bearing and shoulder in notch of gauge Adjust by bending lip of metering rod arm (Tool T109-105)

Fast Idle Adjustment With choke valve tightly closed tighten fast idle adjusting screw until there is 026 opening between throttle valve and bore of carbureter (side opposite idle port) Use gauge T109-189 Be sure fast idle adjusting screw is on high step of cam while making this adjustment

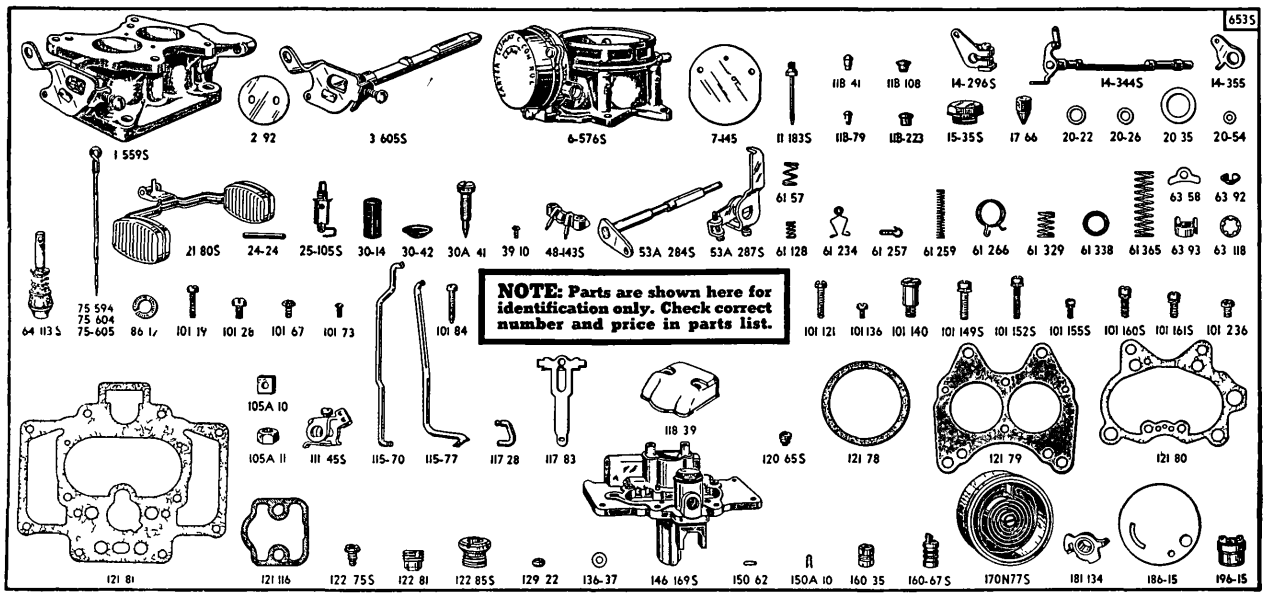
Unloader Adjustment: Two adjustments are necessary

A Loosen choke lever clamp screw on choke shaft Insert 040" feeler gauge T109-193 between lip of fast idle cam and boss of flange casting Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw

B With throttle wide open there should be ⅛" clearance between upper edge of choke valve and inner wall of air horn (gauge T109-36) Adjust by bending unloader lip on throttle shaft lever (T109-41)

NOTE. Assemble flange in the following manner

1 Install throttle shaft assembly and turn to closed position
2 Press retaining ring (prongs extending away from casting) on throttle shaft so that it is against boss on casting
3 Install throttle valves with "c" toward idle ports (viewed from manifold side of flange) Center valves by tapping lightly, hold in place and tighten screws



Pontiac 8—1948—Carbureter No. 653S

WHEN SERVICING, USE GASKET ASSORTMENT No. 190; REPAIR PACKAGE No. 1369B

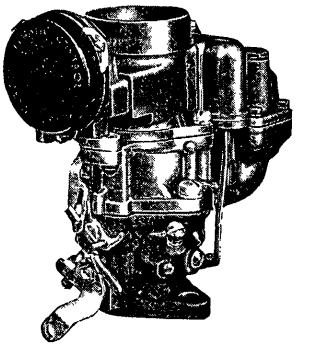
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-559S	Body flange assembly	
2-92	Throttle valve	(2)
3-605S	Throttle shaft and lever assembly	
6-576S	Air horn assembly	
7-145	Choke valve	
11-183S	LOW SPEED JET ASSEMBLY	(2)
11B-41	Passage plug	(2)
11B-79	Rivet passage plug	(3)
11B-108	IDLE PORT PASSAGE PLUG	(2)
11B-223	NOZZLE PASSAGE PLUG	(2)
14-296S	Choke lever and screw assembly	
14-344S	Choke piston lever, link and shaft assembly	
14-355	Cam trip lever	
15-35S	Strainer nut assembly	
17-66	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	
20-26	Pump relief plug gasket	
20-35	Bowl strainer gasket	
20-54	Metering rod jet gasket	(2)
21-80S	Float and lever assembly	
24-24	Float lever pin	
25-105S	NEEDLE AND SEAT ASSEMBLY	
30-14	BOWL COVER STRAINER	
30-42	PUMP STRAINER	
30A-41	Idle adjustment screw	(2)
39-10	Valve attaching screw (choke)	(2)
48-143S	Pump jet and housing assembly	
53A-284S	Pump operating lever and countershaft assembly	
53A-287S	Fast idle arm and screw assembly	
61-57	Adjustment screw lock spring	(2)
61-128	Connector rod spring (Use with 115-77)	
61-234	METERING ROD SPRING	
61 257	Needle pull clip	
61-259	VACUUM PISTON SPRING	
61-266	Fast idle cam spring	
61-329	Upper pump spring	
61-338	Plunger spring	
61-365	LOWER PUMP SPRING	
63-58	Coil housing retainer	(3)
63-92	Pump spring retainer	
63-93	Connector rod spring retainer (Use with 115-77)	
63-118	Throttle shaft retaining ring	
64-113S	PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
75-594	METERING ROD—STANDARD— 060 - 060" to 051"- 045"	(2)
75 604	Metering rod—1 size lean— 0615"- 0615" to 0535"- 048"	(2)
75 605	Metering rod—2 sizes lean— 0635"- 0635' to 056"- 051"	(2)
86-12	Flange stud lock washer	(4)
101-19	Choke lever clamp screw (Sup by 101-354S)	
101-28	Fast idle arm screw	
101-67	Pump retainer screw	
101-73	Throttle valve attaching screw	(4)
101-84	Fast idle adjustment screw	
101-121	Throttle lever adjustment screw	
101-136	Coil housing attaching screw	(3)
101-140	Fast idle attaching screw	
101-148S	Dust cover screw and washer assembly	(2)
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	(4)
101-155S	Pump jet attaching screw and washer assembly	(2)
101-160S	Bowl cover attaching screw and washer assembly	(6)
101-161S	Dust cover attaching screw and washer assembly (Sup by 101-148S)	(2)
101-236	Metering rod arm clamp screw	
101-354S	Choke lever clamp screw assembly	
105A-10	Choke lever nut	
105A-11	Flange stud nut	(4)
111-45S	Pump and metering rod arm assembly	
115-70	Fast idle connector rod	
115-77	Tarottle connector rod (Sup by 115-130)	
115-130	THROTTLE CONNECTOR ROD	
117-28	Pump arm link	
117-83	Vacumeter piston link	
118-39	Dust cover	
120-65S	METERING ROD JET ASSEMBLY	(2)
121-78	COIL HOUSING GASKET	
121-79	BODY FLANGE GASKET	
121-80	AIR HORN GASKET	
121-81	BOWL COVER GASKET	
121-116	DUST COVER GASKET	
122-75S	PUMP RELIEF PLUG ASSEMBLY	
122-81	PUMP DISCHARGE CHECK PLUG	
122-85S	DISK CHECK PLUG ASSEMBLY	
129-22	Metering rod disk	(2)
136-37	Connector rod washer	
146 169S	Bowl cover assembly	
150-62	Piston pin	
150A-10	PIN SPRING	(3)
160-35	Choke piston	
160-67S	Vacuum piston and pin assembly	
170N-77S	Thermostatic housing and coil assembly	
172-22	THROTTLE CONNECTOR ROD RETAINER (Use with 115-130)	
181-134S	Fast idle cam assembly	
186-15	Baffle plate	
196-15	Pump plunger guide	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.

CAR AND MOTOR SERIAL NUMBERS

A6PA—1001 and higher
A6PB—1001 and higher
C6PA—1001 and higher
C6PB—1001 and higher
F6PA—1001 and higher
F6PB—1001 and higher
K6PA—1001 and higher
K6PB—1001 and higher
L6PA—1001 and higher
L6PB—1001 and higher
P6PA—1001 and higher
P6PB—1001 and higher
W6PA—1001 and higher
W6PB—1001 and higher



PONTIAC SIX MODELS "48-25" & "48-26" 1948

(HYDRAMATIC TRANSMISSION)

Casting Number 592 on face of flange

WA-1 Down-Draft **Carbureter 652S** With Climatic® Control

CARBURETER SPECIFICATIONS

For Pontiac 6 Cylinder Engine: 3-9/16" Bore, 4" Stroke

Dimensions: Flange size, 1¼ inch S. A. E.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 11/16 inch I. D.
Main venturi, 1-5/16 inch I. D.

Float Level: Distance from seam of float (at free end) to tip on lower edge of float chamber cover, when needle is seated, to be 7/16 inch

Vents: Outside, No. 10 drill. Inside, none.

Gasoline Intake: Square vertical push pull needle. Size No. 38 drill hole in needle seat

Low Speed Jet Tube: Jet size No. 67 drill
By-pass, size No. 54 drill.
Economizer, .0665-.0675 inch diameter
Idle bleed, size No. 50 drill.

Idle Port: Keyhole type, length .210 inch· width .036 inch with 063 inch diameter hole at top.

Idle Port Opening: Top of port located 166 to .170 inch above valve with valve closed tight.

Idle Screw Seat: No. 46 drill.

Set Idle Adjustment Screw: 1 to 1¾ turns open. For richer mixture, turn screw out. Do not attempt to idle engine below 350 r.p.m.

Main Nozzle: In primary venturi, angle 45°. Closed tip Inside diameter, No. 30 drill.
Upper hole: .020 inch diameter on 45° angle
Lower hole· .070 inch diameter on 60° angle.

Metering Rod (Vacumeter Type): Economy step, .075 inch diameter, middle step tapers to 070 inch diameter; power step .042 inch diameter
Length 3-9/64 inches

Metering Rod Jet: .0995 inch diameter.

Metering Rod Setting: Use gauge, part No. T109-102 (2.468 inches)

Accelerating Pump: Low pressure type, with adjustable pump stroke
Pump discharge jet, size No. 72 (.025") drill
Relief passage to outside, size No. 42 drill
Intake ball check seat, size No. 55 drill
Discharge ball check seat, size No. 32 drill

Pump Adjustment: 17/64 inch plunger travel (full throttle position). Lower hole (medium stroke). Use Gauge T109-117S

Choke: Carter Climatic® Control, set 3 points rich. Butterfly type, offset valve Bleed hole, size No. 28 (.1405") drill. Choke heat suction hole, in body, size No. 41 (.096") drill.

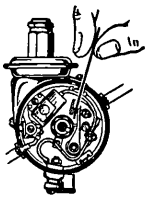
Vacuum Spark Port: .061 to .064 inch diameter. Bottom of port 022 to 027 inch above valve.

Motor Tune-Up—Be Accurate!

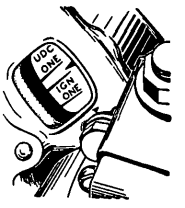
CAUTION· Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter



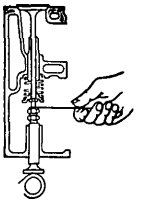
Spark Plug Gap .025"



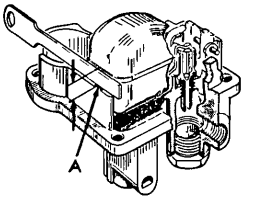
Breaker Point Setting .020"



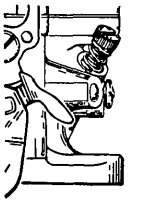
Ignition Timing Breaker Points to Open: 2°-6° B. T. D. C.



Valve Setting (Hot)
Int. .011"-.013"
Exh. .011"-.013"



Float Setting 7/16 Inch (Measure from point "A" to top of float seam)



Idle Adjustment Screw Setting 1 to 1¾ Turns Open

CARBURETER ADJUSTMENTS

Pump Adjustment With throttle valve seated and connector link in medium stroke (lower hole), pump plunger should travel 17/64" from closed to wide open position Pump travel can be measured by using universal pump stroke gauge T109-117S Place base of gauge on ridged portion of bowl cover so that projecting portion of pump gauge rests on top surface of connector link at pump shaft Hold gauge vertical The difference between the number shown by index mark on gauge, at wide open and closed throttle positions, should be "17".

Adjustment should be made by bending throttle connector rod at lower angle

Metering Rod Adjustment: Correct setting of metering rod is important and must be made after pump adjustment Metering rod position should be checked when carbureters are serviced or leaner than standard rods are installed Correct procedure is as follows

1 Back out throttle lever set screw so throttle valve seats
2 Insert gauge T109-102 in place of metering rod, seating tapered end in metering rod jet

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3 Press lightly on vacuum piston arm until lip on arm contacts pump operating lever
4 There should be less than .005" clearance between metering rod pin and shoulder in notch of gauge
5 Adjustment should be made by bending lip on vacuum piston arm (use tool T109-22)
6 Remove gauge, and install metering rod and disk Connect metering rod spring

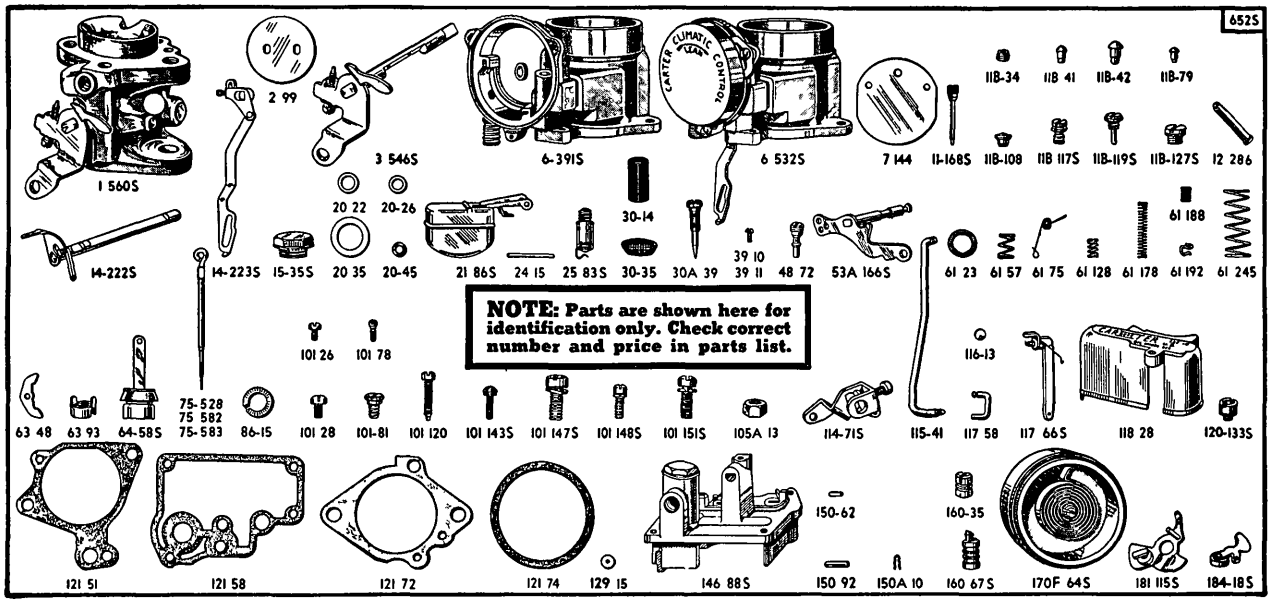
Anti-Percolator Adjustment Crack throttle valve .030' by placing gauge T109-29 between throttle valve and bore of carbureter (side opposite port) Bend rocker arm (use tool T109-105) until there is a clearance of .005" to .015' between rocker arm lip and pump arm

Fast Idle Adjustment Back out throttle lever adjusting screw Hold fast idle cam in normal idle position (choke wide open) and tighten throttle lever adjusting screw until it just touches fast idle cam Hold throttle lever closed and pull cam back until first (or lower) step on cam is against (not on) set screw

There should now be 5/8" clearance between inner wall of air horn and lower edge of choke valve (Use gauge T109-85) Adjustment can be made by bending at offset portion of fast idle link with tool T109-41

Unloader Adjustment With throttle valve wide open there should be 5/16 clearance between lower edge of choke valve and inner wall of air horn (Use tool T109-107) Adjustment should be made by bending arm on throttle lever (Use tool T109-41)

Lock-Out Adjustment With throttle and choke valves wide open, choke should lock in wide open position Adjustment is made by bending lip at lower end of fast idle link to give 1/32 clearance between lip and throttle lever lock, with throttle and choke valves held wide open (use tool T109-22)



Pontiac 6—1948—Carbureter No. 652S

WHEN SERVICING, USE GASKET ASSORTMENT No 146, REPAIR PACKAGE No. 1388A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-560S	Body flange assembly	
1A 51	FLANGE GASKET	
2 99	Throttle valve	
3 546S	Throttle shaft and lever assembly	
6 391S	Air horn and piston housing assembly	
6 532S	Air horn assembly	
7 144	Choke valve	
11 168S	LOW SPEED JET ASSEMBLY	
11B 34	Nozzle retainer plug (Sup by 11B-164)	
11B-41	Rivet plug	
11B 42	Body flange rivet plug	
11B 79	Rivet plug	(5)
11B-108	Idle port rivet plug	
11B-117S	Idle passage plug assembly	
11B-119S	Ball retainer screw plug assembly	
11B 127S	Nozzle and pump check passage plug assembly	(2)
11B-164	Nozzle retainer plug	
12 286	Nozzle	
14 222S	Choke piston lever, link and shaft assembly	
14 223S	Choke lever, screw and link assembly	
15 35S	Bowl strainer nut assembly	
20-22	Gasket	(3)
20-26	Gasket	(3)
20-35	Bowl strainer nut gasket	
20 45	NOZZLE GASKET	
21 86S	Float and lever assembly	
24 15	Float lever pin	
25-83S	NEEDLE AND SEAT ASSEMBLY	
30-14	Bowl strainer gauze	
30-35	PUMP STRAINER	
30A 39	Idle adjustment screw	
39 10	Choke valve attaching screw	(2)
39-11	Throttle valve attaching screw	(2)
48 72	PUMP JET	
53A 166S	Pump arm and countershaft assembly	
61-23	Plunger spring (Sup by 61-200)	
61 57	Adjustment screw spring	
61-75	Metering rod spring	
61-128	Connector rod spring (Use with 115-41)	
61-130	Pump spring	
61 178	Vacuum piston spring	
61-188	Rocker arm spring	
61 192	Needle pull clip	
61-200	Plunger spring	
61 245	Pump spring (Sup by 61-130)	
63 48	Thermostatic housing retainer	(3)
63-93	Spring retainer (Use with 115-41)	
64-58S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49-108)	

Part No.	PART NAME	
75-528	METERING ROD—STANDARD— .075 - .075" to .070"- .042"	
75 582	Metering rod—1 size lean— .076"- .076" to .072"- .048'	
75 583	Metering rod—2 sizes lean— .077"- .077" to .074"- .053"	
86 15	Flange stud lock washer	
101-26	Coil housing attaching screw	(3)
101-28	Throttle shaft arm clamp screw	
101-78	Choke lever clamp screw	
101-81	Fast idle cam screw	
101-120	Throttle lever adjusting screw	
101-143S	Piston housing attaching screw and washer assembly	
101-147S	Body flange attaching screw and washer assembly	(2)
101-148S	Bowl cover attaching screw and washer assembly	(5)
101-151S	Air horn attaching screw and washer assembly	(2)
105A-13	Flange nut	
114 71S	THROTTLE SHAFT ARM AND SCREW ASSEMBLY	
115 41	Throttle connector rod (Sup by 115-122)	
115-122	THROTTLE CONNECTOR ROD	
116-13	PUMP INTAKE AND DISCHARGE CHECK BALL	(2)
117 58	Pump connector link	
117-66S	Vacuum piston link assembly	
118-28	Dust cover	
120-133S	METERING ROD JET ASSEMBLY	
121 51	AIR HORN GASKET	
121-58	BOWL GASKET	
121 72	BODY FLANGE GASKET	
121-74	COIL HOUSING GASKET	
129-15	Metering rod disk	
146 88S	Bowl cover assembly	
150-62	Piston pin	
150-92	Anti-percolator pin	
150A-10	PIN SPRING	(3)
160-35	Choke piston	
160-67S	Vacuum piston and pin assembly	
170F-64S	Thermostatic housing and coil assembly	
170F-64SU	Unitized package (Consists of 1—170F-64S 3—63-48 3—101-26 1—121-74)	
172-21	THROTTLE CONNECTOR ROD RETAINER	
181-115S	Fast idle cam and pin assembly	
184-18S	ANTI-PERCOLATOR CAP AND ROCKER ARM ASSEMBLY	

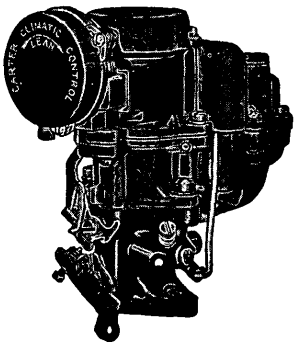
NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

CAR AND MOTOR SERIAL NUMBERS

1946—P-6LA, P-6LB
1001 and up

1947—P-6MA, P-6MB, K-6MA, K-6MB, W-6MA, W-6MB, C-6MA, C-6MB, L-6MA, L-6MB
1001 and up

1948—P-6PA, P-6PB, C-6PA, C-6PB, W-6PA, W-6PB, F-6PA, F-6PB, L-6PA, L-6PB, K-6PA, K-6PB, A-6PA, A-6PB
1001 and up



PONTIAC
"46-26" SIX
1946
"47-25" & "47-26" SIX
1947
"48-25" & "48-26" SIX
1948

(Standard Transmission)
(717S can also be used)

Casting Number 388 on face of flange

WA-1 Down-Draft **Carbureter 537S** With Climatic® Control

CARBURETER SPECIFICATIONS

For Pontiac 6 Cylinder Engine, 3-9/16" Bore, 4" Stroke

Dimensions: Flange size, 1¼ inch S. A. E.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 11/16 inch I. D.
Main venturi, 1-5/16 inch I. D.

Float Level: Distance from seam of float (at free end) to tip on lower edge of float chamber cover, when needle is seated, to be 7/16 inch.

Vents: Outside, No. 10 drill. Inside, none.

Gasoline Intake: Square vertical needle. Size No. 38 drill hole in needle seat.

Low Speed Jet Tube: Jet size, No. 67 drill.
By-pass, size No. 54 drill.
Economizer, .0665-.0675 inch diameter.
Idle bleed, size No. 50 drill.

Idle Port: Keyhole type, length .210 inch; width .036 inch, with .063 inch diameter hole at top.

Idle Port Opening: Top of port located .166 to .170 inch above valve with valve closed tight.

Idle Screw Seat: No. 46 drill.

Set Idle Adjustment Screw: 1 to 1¾ turns open. For richer mixture, turn screw out. Do not attempt to idle engine below 350 r.p.m.

Main Nozzle: In primary venturi, angle 45°. Closed tip. Inside diameter, No. 30 drill.
Upper hole: .020 inch diameter on 45° angle.
Lower hole: .070 inch diameter on 60° angle.

Metering Rod (Vacumeter Type): Economy step, .075 inch diameter; middle step tapers to .070 inch diameter; power step, .042 inch diameter.
Length 3-9/64 inches.

Metering Rod Jet: .0995 inch diameter.

Metering Rod Setting: Use gauge, part No. T109-102 (2.468 inches).

Accelerating Pump: Low pressure type, with adjustable pump stroke.
Pump discharge jet, size No. 72 drill.
Relief passage to outside, size No. 42 drill.
Intake ball check seat, size No. 55 drill.
Discharge ball check seat, size No. 32 drill.

Pump Adjustment: 17/64 inch plunger travel (full throttle position). Lower hole (medium stroke). Use Gauge T109-117S.

Choke: Carter Climatic® Control, set 3 points rich. Butterfly type, offset valve. Bleed hole, size No. 28 (.1405") drill. Choke heat suction hole, in body, size No. 41 (.096") drill.

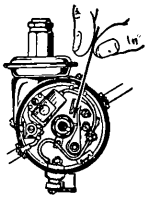
Vacuum Spark Port: .061 to .064 inch diameter. Bottom of port .022 to .027 inch above valve.

Motor Tune-Up—Be Accurate! Always Use Feeler Gauges!

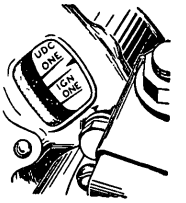
CAUTION: **Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.**



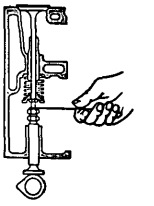
Spark Plug Gap
1946
.023"-.028"
1947-48
.025"



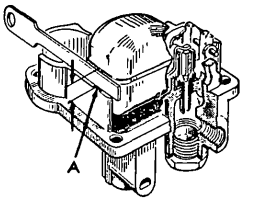
Breaker Point Setting
.018"-.024"



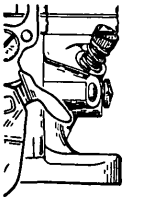
Ignition Timing
Breaker Points to Open:
2°-6° B. T. D. C.



Valve Setting
(Hot)
Min. .011"
Max. .013"



Float Setting
7/16 Inch
(Measure from point "A" to top of float seam)



Idle Adjustment Screw Setting
1 to 1¾
Turns Open

CARBURETER ADJUSTMENTS

Pump Adjustment: With throttle valve seated and connector link in medium stroke (lower hole), pump plunger should travel 17/64 inch from closed to wide open position. Pump travel can be measured by using universal pump stroke gauge T109-117S. Place base of gauge on ridged portion of bowl cover so that projecting portion of pump gauge rests on top surface of connector link at pump shaft. Hold gauge vertical. The difference between the number shown by index mark on gauge, at wide open and closed throttle positions, should be "17."

Adjustment should be made by bending throttle connector rod at lower angle.

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CARBURETER
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Metering Rod Adjustment: Correct setting of metering rod is important and must be made after pump adjustment. Metering rod position should be checked when carbureters are serviced or leaner than standard rods are installed. Correct procedure is as follows:

1. Back out throttle lever set screw so throttle valve seats.
2. Insert gauge (T109-102) in place of metering rod, seating tapered end in metering rod jet.
3. Press lightly on vacuum piston arm until lip on arm contacts pump operating lever.
4. There should be less than .005" clearance between metering rod pin and shoulder in notch of gauge.
5. Adjustment should be made by bending lip on vacuum piston arm (use tool T109-22).
6. Remove gauge, and install metering rod and disk. Connect metering rod spring.

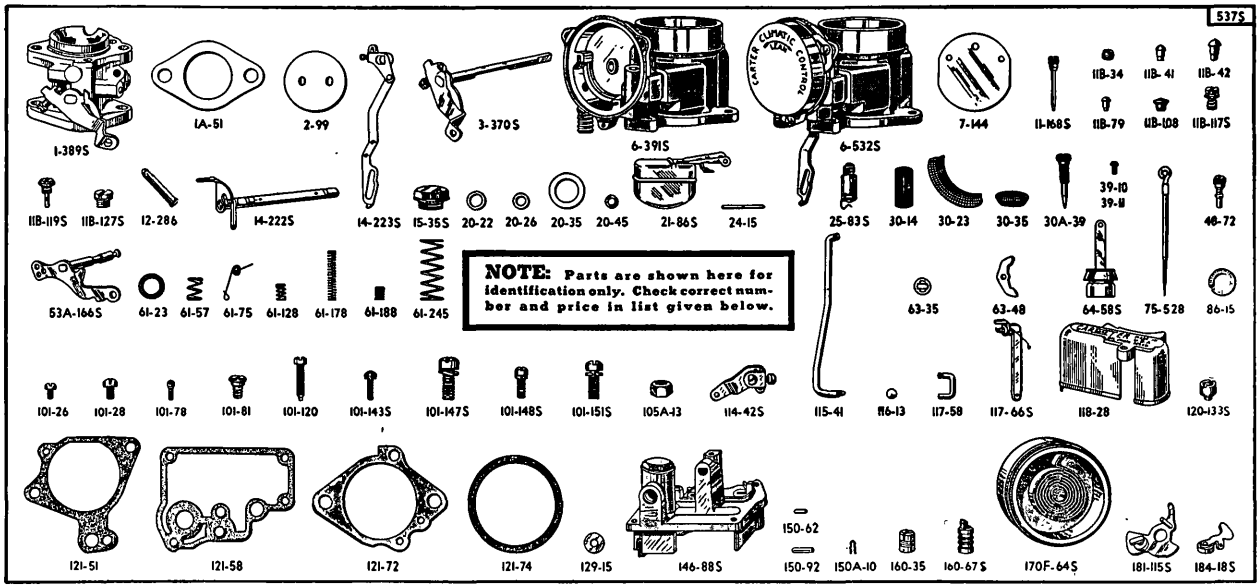
Anti-Percolator Adjustment: Crack throttle valve .030" by placing gauge T109-29 between throttle valve and bore of carbureter (side opposite port). Bend rocker arm (use Tool T109-105) until there is a clearance of .005" to .015" between rocker arm lip and pump arm.

Fast Idle Adjustment: Back out throttle lever adjusting screw. Hold fast idle cam in normal idle position (choke wide open) and tighten throttle lever adjusting screw until it just touches fast idle cam. Hold throttle lever closed and pull cam back until first (or lower) step on cam is against (not on) set screw.

There should now be 5/8" clearance between inner wall of air horn and lower edge of choke valve. (Use gauge T109-85) Adjustment can be made by bending at offset portion of fast idle link with Tool T109-41.

Unloader Adjustment: With throttle valve wide open there should be 5/16" clearance between lower edge of choke valve and inner wall of air horn. (Use Tool T109-107) Adjustment should be made by bending arm on throttle lever. (Use Tool T109-41)

Lock-out Adjustment: With throttle and choke valves wide open, choke should lock in wide open position. Adjustment is made by bending lip at lower end of fast idle link to give 1/32" clearance between lip and throttle lever lock, with throttle and choke valves held wide open. (Use Tool T109-22)



Pontiac 6—1946-47-48—Carbureter 537S

WHEN SERVICING, USE GASKET ASSORTMENT No. 146; REPAIR PARTS PKG. No. 1366B

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME
1A-51	FLANGE GASKET
1-389S	Body flange assembly
2-99	Throttle valve
3-370S	Throttle shaft and lever assembly
6-391S	Air horn and piston housing assembly
6-532S	Air horn assembly
7-144	Choke valve
11-168S	LOW SPEED JET ASSEMBLY
11B-34	Nozzle retainer plug (Sup. by 11B-164)
11B-41	Rivet passage plug
11B-42	Body flange rivet plug
11B-79	Rivet passage plug (5)
11B-108	Idle port rivet plug
11B-117S	Idle passage plug assembly
11B-119S	Ball retainer screw plug assembly
11B-127S	Passage plug assembly (2)
11B-164	Nozzle retainer plug
12-286	Nozzle
14-222S	Choke piston lever, link and shaft assembly
14-223S	Choke lever, screw and link assembly
15-35S	Strainer nut assembly
20-22	Gasket
20-26	Gasket (3)
20-35	Bowl strainer gasket
20-45	NOZZLE GASKET
21-86S	Float and lever assembly
24-15	Float lever pin
25-83S	NEEDLE AND SEAT ASSEMBLY
30-14	Bowl strainer gauze
30-23	★Piston housing strainer
30-35	PUMP STRAINER
30A-39	Idle adjustment screw
39-10	Choke valve attaching screw (2)
39-11	Throttle valve attaching screw (2)
48-72	PUMP JET
53A-166S	Pump arm and countershaft assembly
61-23	Plunger spring (Sup. by 61-200)
61-57	Idle adjustment screw spring
61-75	Metering rod spring
61-128	Connector rod spring (Use with 115-41)
61-178	VACUUM PISTON SPRING
61-188	Anti-percolator rocker arm spring
61-200	Plunger spring
61-245	Pump spring
63-35	Spring retainer (Sup. by 63-93)
63-48	Housing retainer (3)
63-93	Spring retainer (Use with 115-41)
64-58S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No. 49-108)

Part No.	PART NAME
75-528	METERING ROD—STANDARD—.075"-.075" to .070"-.042"
75-582	Metering rod—1 size lean—.076"-.076" to .072"-.048"
75-583	Metering rod—2 sizes lean—.077"-.077" to .074"-.053"
86-15	Flange stud lock washer
101-26	Coil housing attaching screw (3)
101-28	Throttle shaft arm clamp screw
101-78	Choke lever clamp screw
101-81	Fast idle cam screw
101-120	Throttle lever adjusting screw
101-143S	Piston housing attaching screw and washer assembly
101-147S	Body flange attaching screw and washer assembly (2)
101-148S	Bowl cover attaching screw and washer assembly (5)
101-151S	Air horn attaching screw and washer assembly (2)
105A-13	Flange nut
114-42S	THROTTLE SHAFT ARM AND SCREW ASSEMBLY
115-41	Throttle connector rod (Sup. by 115-122)
115-122	THROTTLE CONNECTOR ROD
116-13	CHECK BALL (2)
117-58	Pump connector link
117-66S	Vacuum piston link and spring assembly
118-28	Dust cover
120-133S	METERING ROD JET ASSEMBLY
121-51	AIR HORN GASKET
121-58	BOWL GASKET
121-72	BODY FLANGE GASKET
121-74	THERMOSTATIC COIL HOUSING GASKET
129-15	Metering rod disk
146-88S	Bowl cover and strainer assembly
150-62	Choke piston pin
150-92	Anti-percolator pin
150A-10	PIN SPRING (3)
160-35	Choke piston
160-67S	Vacuum piston and pin assembly
170F-64S	Thermostatic housing and coil assembly
170F-64SU	Unitized package (consists of 1—170F-64S, 3—63-48, 3—101-26, 1—121-74)
172-21	THROTTLE CONNECTOR ROD RETAINER
181-115S	Fast idle cam and pin assembly
184-18S	ANTI-PERCOLATOR CAP AND ROCKER ARM ASSEMBLY

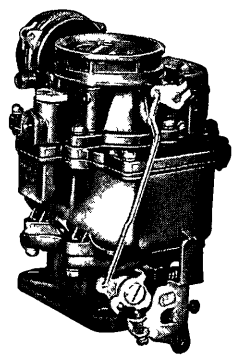
★Used on early production only.

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

CARTER CARBURETOR CORPORATION, ST. LOUIS, MO., U. S. A.

CAR AND MOTOR SERIAL NUMBERS

1947—All Models
1948—A8PA—1001 and higher
A8PB—1001 and higher
C8PA—1001 and higher
C8PB—1001 and higher
F8PA—1001 and higher
F8PB—1001 and higher
K8PA—1001 and higher
K8PB—1001 and higher
L8PA—1001 and higher
L8PB—1001 and higher
P8PA—1001 and higher
P8PB—1001 and higher
W8PA—1001 and higher
W8PB—1001 and higher



PONTIAC EIGHT
"47-27" & "47-28" 1947
"48-27" & "48-28" 1948

(Standard Transmission)
(719SA can also be used)

Casting Number on Face of Flange: 630S—373; 630SA, 630SB—550.

WCD Dual Down-Draft Climatic® Control Carbs.—**Models 630S-630SA-630SB**

CARBURETER SPECIFICATIONS

For Pontiac 8 Cylinder Engine: 3¼ Inch Bore, 3¾ Inch Stroke

Dimensions: Flange size 1¼ inch dual 4 bolt type.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 19/32 inch I. D.
Main venturi, 1-3/16 inch I. D.

Float Level: Distance from seam of float (both sides—at top center) to lower edge of bowl cover, when needle is seated to be 3/16 inch. (Use gauge No. T109-162.)

Vents: Inside, balance vent tube .218 inch inside diameter. Outside, none.

Gasoline Intake: Square vertical needle. Size No. 42 drill in needle seat.

Low Speed Jet Tube: Jet size, No. 68 drill
By-pass, size No. 56 drill.
Economizer, size No. 63 drill.
Idle bleed, size No. 55 drill.

Idle Ports: Upper port, length .165 inch. Width .030 inch.

Idle Port Opening: (Early production) .117 to .123 inch above upper edge of valve with valve closed tight. (Late production) .122-.128 inch above upper edge of valve with valve closed tight

Lower Port (For Idle Adjustment Screw): Size .0615 to .0655 inch diameter.

Set Idle Adjustment Screw: ¾ to 1¾ turns open For richer mixture turn screw out. Do not attempt to idle engine below 8 m.p.h.

Main Nozzle: In primary venturi, closed tip angle 49° from horizontal. Nozzle is installed permanently. **Do not remove**

Metering Rod (Vacumeter Type): Economy step 060 inch diameter Middle step tapers to 051 inch diameter. Power step .045 inch diameter. Length 3-41/64 inches.

Metering Rod Jet: 082 inch diameter.

Metering Rod Setting: Use gauge part No T109 163 (2940 inches).

Accelerating Pump: High pressure delayed action type Adjustable stroke
Discharge jet (twin) size, No. 74 drill.
Intake disk check size No. 30 drill
Discharge (needle seat) size, No 55 drill
Relief ball check size No. 55 drill.

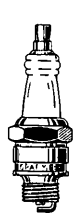
Pump Adjustment: 30 as indicated on gauge T109-117S with throttle valves seated or 18/64" from top of pump shaft to the top of the dust cover housing

Choke: Carter Climatic® Control, set on index (6-547S), one point lean (6-576S) Offset butterfly type Choke heat suction hole, in bowl cover, size No. 32 drill

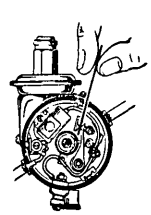
Vacuum Spark Port: 062 to 064 inch diameter. Top of port .052 to .056 inch above valve.

Motor Tune-Up—Be Accurate! Always Use Feeler Gauges!

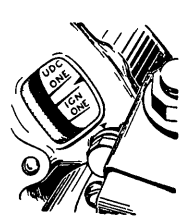
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



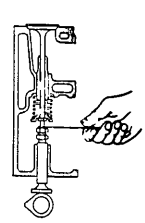
Spark Plug Gap .023"-.028"



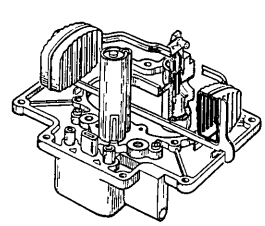
Breaker Point Setting .015"



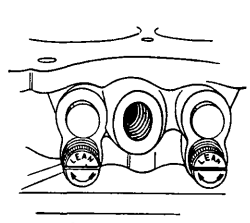
Ignition Timing Breaker Points to Open: 2°-6° B. T. C



Valve Setting (Hot) Min. .011" Max. .013"



Float Setting 3/16 Inch (Use Gauge T109-162)



Idle Adjustment Screw Setting ¾ to 1¾ Turns Open

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENTS Two separate float adjustments must be made—lateral and vertical

LATERAL ADJUSTMENT (Fig 1) With bowl cover assembly inverted bowl cover gasket removed and float lip resting on seated needle place float gauge T109 162 directly under float with notched portions of gauge fitted over edges of casting Sides of floats should barely touch the vertical uprights of float gauge (A) Adjustment should be made by bending arms of floats

VERTICAL ADJUSTMENTS (Fig 1) With float gauge in position shown floats should just clear the horizontal portion of gauge (B) Vertical distance between top of float and ma chined surface of casting must be 3/16" Adjust by bending float arms Remove float install bowl cover gasket and then reinstall float

PUMP ADJUSTMENT (Fig 2) The accelerating pump has been designed to produce a uniform pump action The total distance the plunger head (not shaft) moves from closed to wide open throttle controls the amount of fuel discharged Correct pump plunger travel is important and should be checked each t me the carbureter is disassembled Procedure is as follows

Install pump connector link in lower ho e (short stroke) with ends extending toward countershaft arm Back out throttle lever set screw to allow throttle valves to seat in bores of car bureter Be sure fast idle adjusting screw does not hold throttle

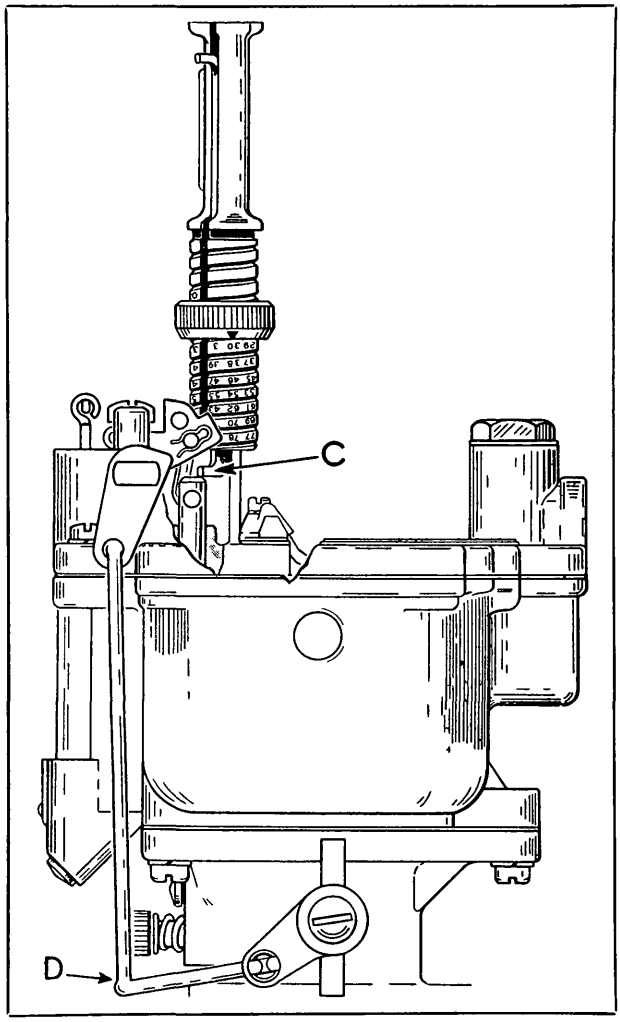


Figure 2

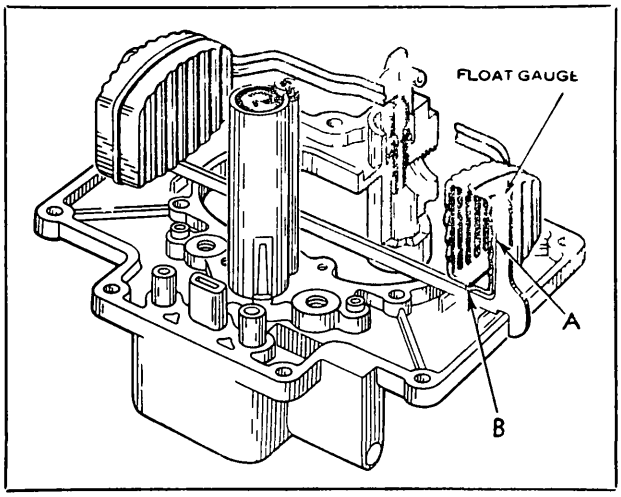


Figure 1

open Place pump travel gauge T109 117S inverted on edge of dust cover boss of bowl cover as shown Turn knurled nut of gauge until finger (C) just touches upper end of plunger shaft with throttle valves seated Number indicated on gauge should be 30 Hold gauge vertical to insure correct reading Adjust by bending throttle connector rod at lower angle (D)

PUMP JET ADJUSTMENT (Fig 3) Good acceleration per formance at low speeds depends primarily on the gasoline d s charged from the pump jets Each of the two streams must be directed to its proper section of the dual venturi system In order to obtain maximum efficiency each stream must be direc ted to a point between the primary and secondary venturi missing the outer wall of the primary venturi but striking the lower part of the inner wall of the secondary venturi

Only a slight bend should be necessary to properly aim the pump jets

METERING ROD ADJUSTMENT (Fig 4) Back out throttle lever adjusting screw until throttle valves seat in bores of car bureter Be sure fast idle adjusting screw does not hold throttle open Insert one metering rod gauge T109 163 n place of either metering rod Press down lightly on vacuum piston link (E) until lug of piston link (F) contacts lip of metering rod arm (G) There should be less than 005" clearance between metering rod bearing (H) and shoulder in notch of gauge Adjustment should be made by bending lip of metering rod arm (G) Use bending tool T109 105

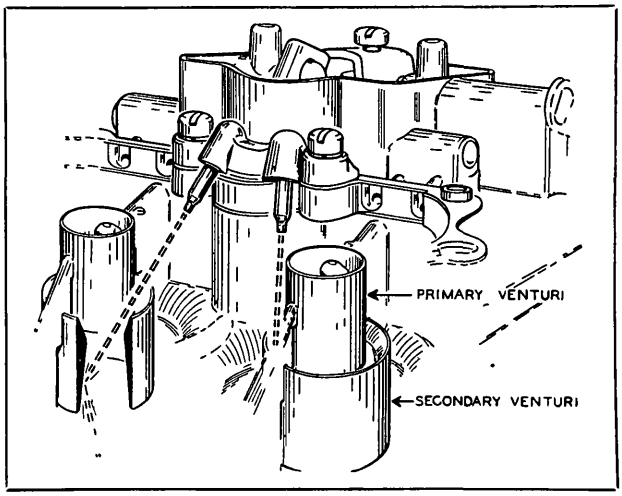


Figure 3

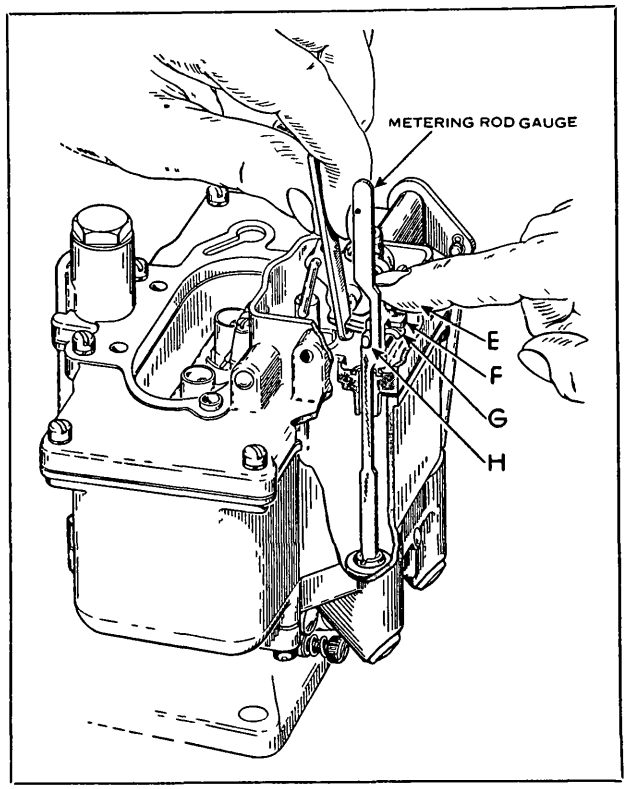


Figure 4

FAST IDLE ADJUSTMENT (Fig 5) With choke valve tightly closed, tighten fast idle adjusting screw (J) until there is 026" (K) opening between throttle valve and bore of carbureter side opposite port Use gauge T109-189 Be sure fast idle adjusting screw is on high step of cam (L) when making this setting

UNLOADER ADJUSTMENT. (Fig 6) Two adjustments are necessary

A Loosen choke lever clamp screw (M) on choke shaft Insert 040" feeler gauge T109 193 between lip of fast idle cam and boss on flange casting (N) Hold choke valve tightly closed and take all slack out of linkage by pressing choke lever toward closed position—hold in place tighten clamp screw (M)

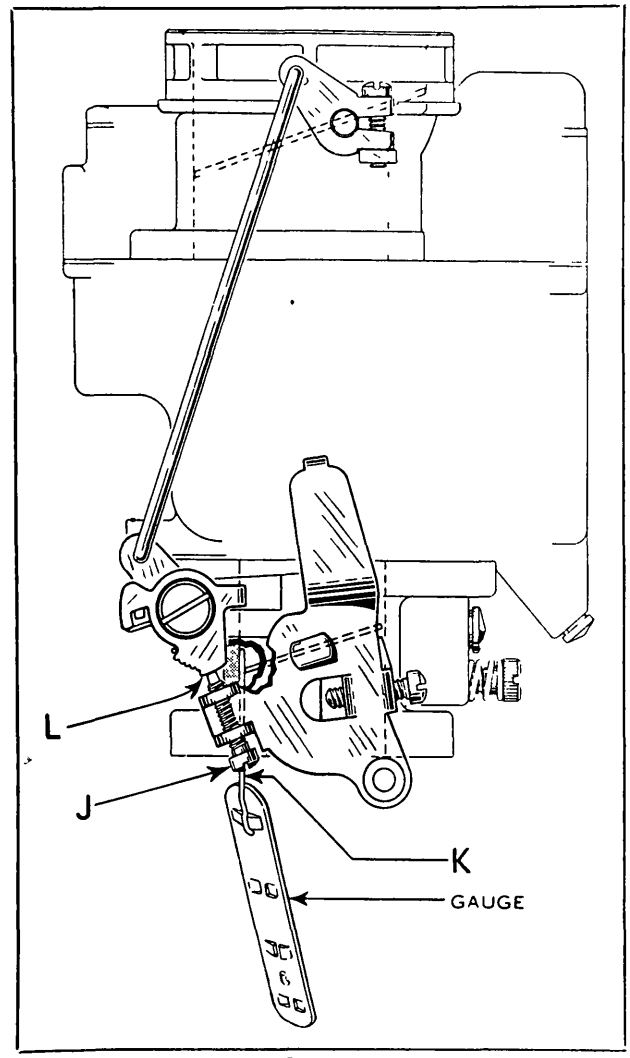


Figure 5

B Adjust unloader lip (O) on throttle shaft lever until there is 1/8" clearance between upper edge of choke valve and inner wall of air horn (P) **with throttle held in wide open position** (use gauge T109 36)

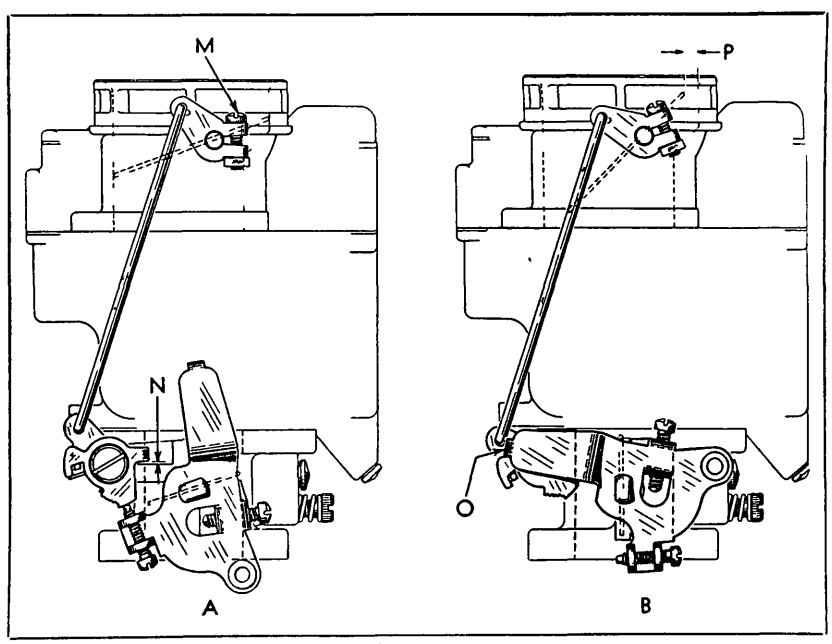
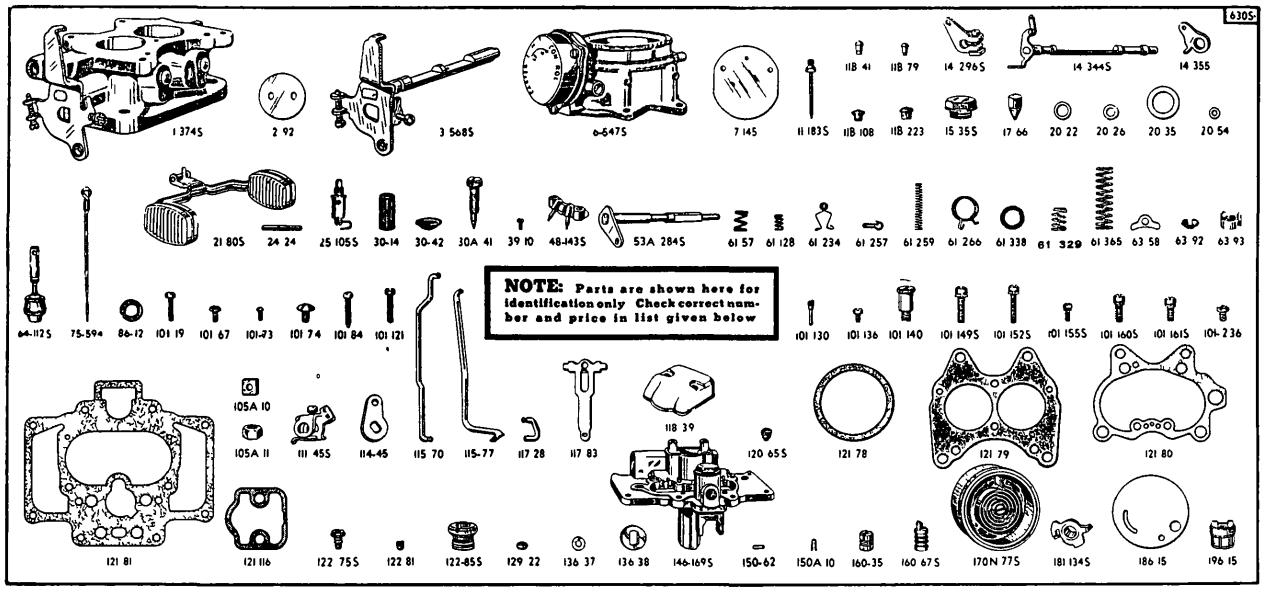


Figure 6

FLANGE ASSEMBLY The throttle centering screw 101 130 has been removed from flange 1 551S used on 630SA 630SB Throttle shaft and lever assembly 3 598S must be used with this flange as shaft is not grooved for the throttle centering screw but has additional length to accommodate throttle shaft retaining ring 63 118

To assemble flange 1 374S (with throttle centering screw) install throttle shaft and lever assembly and throttle centering screw then install throttle valves with c in circle **toward the idle port** when viewing the carbureter from the manifold side Center valves by tapping lightly and holding in place with fingers **before** tightening screws Always use new screws

To assemble flange 1 551S (without centering screw), install throttle shaft and turn to closed throttle position Push retaining ring **with prongs extending outward,** over end of throttle shaft until it is against casting (no end play in shaft). Throttle valves should then be installed centering them as mentioned above with throttle lever in closed position and throttle lever set screw backed out



Pontiac 8—1947-48—Carbureters 630S-630SA-630SB

WHEN SERVICING, USE GASKET ASSORTMENT No. 190; REPAIR PACKAGE No 1369B

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-374S	Body flange assembly (Sup by 1-551S)	
1-551S	Body flange assembly	
2-92	Throttle valve	(2)
3-568S	Throttle shaft and lever assembly (Use with 1 374S only)	
3-598S	Throttle shaft and lever assembly (Use with 1-551S only)	
6-547S	Air horn and Climatic ® control assembly (Sup by 6 576S)	
6-576S	Air horn and Climatic ® control assembly	
7-145	Choke valve	
11-183S	LOW SPEED JET ASSEMBLY	(2)
11B-41	Rivet plug	(2)
11B-79	Rivet plug	(3)
11B-108	IDLE PORT RIVET PLUG	(2)
11B-223	NOZZLE PASSAGE PLUG	(2)
14-296S	Choke lever and screw assembly	
14-344S	Choke piston lever link and shaft assembly	
14-355	Cam trip lever	
15-35S	Strainer nut assembly	
17-66	PUMP DISCHARGE CHECK NEEDLE	
20-22	Needle seat gasket	
20-26	Pump discharge passage plug gasket	
20-35	Bowl strainer nut gasket	
20-54	Metering rod jet gasket	(2)
21-80S	Float and lever assembly	
24-24	Float lever pin	
25-105S	NEEDLE AND SEAT ASSEMBLY	
30-14	BOWL COVER STRAINER	
30-42	PUMP STRAINER	
30A-41	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
48-143S	Pump jet housing assembly	
53A-284S	Pump operating lever and countershaft assembly	
61-57	Idle adjusting screw spring	(2)
61-128	Connector rod spring (Use with 115 77)	
61-234	METERING ROD SPRING	
61-257	Needle pull clip	
61-259	VACUUM PISTON SPRING	
61-266	Fast idle cam spring	
61-329	Pump spring (upper) (Part of 64 113S)	
61-338	Plunger spring	
61-365	PUMP SPRING (LOWER)	
63-58	Coil housing retainer	(3)
63-92	Pump spring retainer (Part of 64 113S)	
63-93	Spring retainer (Use with 115 77)	
63-118	Throttle shaft retaining ring (Install with prongs extending outward)	
64-112S	Pump plunger and rod assembly (Identify by shaft No 49-164) (Sup by 64 113S)	
64-113S	PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY (Identify by shaft No 49-164)	
75-594	METERING ROD—STANDARD—060" 060" to 051"-045"	(2)
75-604	Metering rod (1 size lean) 0615" 0615" to 0535"-048"	
75 605	Metering rod (2 sizes lean) 0635" 0635" to 0565"-051"	
75-648U	Unitized package (Consists of (1) 11B 228 and (2) 75 647)	
86-12	Flange stud lock washer	(4)
101-19	Choke lever clamp screw (Sup by 101 354S)	
101-67	Pump retainer screw	
101-73	Throttle valve attaching screw	(4)
101-74	Throttle shaft dog screw	
101-84	Fast idle adjustment screw	
101-121	Throttle lever adjustment screw	
101-130	Throttle centering screw (Use with 1 374S only)	
101-136	Coil housing attaching screw	(3)
101-140	Fast idle cam attaching screw	
101-148S	Dust cover screw and washer assembly	(2)
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	(4)
101-155S	Pump jet housing attaching screw and washer assembly	(2)
101-160S	Bowl cover attaching screw and washer assembly	(6)
101-161S	Dust cover attaching screw and washer assembly (Sup by 101-148S)	(2)
101-236	Pump arm clamp screw	
101-354S	Choke lever clamp screw assembly	
105A-10	Choke lever clamp nut	
105A-11	Flange stud nut	(4)
111-45S	Pump arm and screw assembly	
114-45	THROTTLE LEVER DOG	
115-70	Fast idle connector rod	
115-77	Throttle connector rod (Sup by 115 130)	
115-130	THROTTLE CONNECTOR ROD	
117-28	Pump link	
117 83	Vacuum piston link	
118-39	Dust cover	
120-65S	METERING ROD JET ASSEMBLY	(2)
121-78	COIL HOUSING GASKET	
121-79	BODY FLANGE GASKET	
121-80	AIR HORN GASKET	
121-81	BOWL COVER GASKET	
121-116	DUST COVER GASKET	
122-75S	PUMP RELIEF PLUG ASSEMBLY	
122-81	PUMP DISCHARGE CHECK PLUG	
122-85S	INTAKE DISK CHECK ASSEMBLY	
129-22	Metering rod disk	(2)
136-37	Connector rod washer	
136-38	Throttle shaft dog washer	
146-169S	Bowl cover assembly	
150-62	Piston pin	
150A-10	PIN SPRING	(3)
160-35	Choke piston	
160-67S	Vacuum piston and pin assembly	
170N-77S	Thermostatic housing and coil assembly	
172-22	THROTTLE CONNECTOR ROD RETAINER (Use with 115 130)	
181-134S	Fast idle cam assembly	
186-15	Climatic® control baffle plate	
196-15	Pump plunger guide	

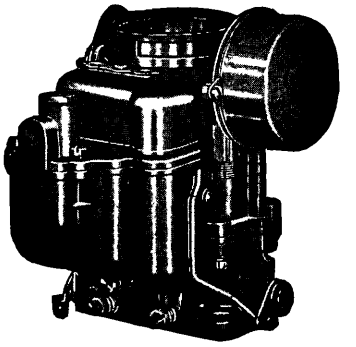
NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

CAR SERIAL NUMBERS

TORPEDO
P8KA-C8KA-L8KA 1001 and Higher

STREAMLINER
P8KB-C8KB-L8KB 1001 and Higher

STREAMLINER CHIEFTAIN
P8KC-C8KC-L8KC 1001 and Higher



Casting No 306 on face of flange

PONTIAC EIGHT
"42-27" & "42-28"
1942
"46-27" & "46-28"
1946

(719SA can also be used)

WDO Dual Down-Draft Climatic® Control Carbureter—**Models 540S-548S**

CARBURETER SPECIFICATIONS

For Pontiac 8 Cylinder Engine 3¼ Inch Bore 3¾ Inch Stroke

Dimensions Flange size 1¼ inch dual 4 bolt type
Primary venturi 11/32 inch I D
Secondary venturi 21/32 inch I D
Main venturi 1 3/16 inch I D

Float Level Distance from float to bowl cover when needle is seated to be 5/16 inch

Vents Outside No 20 drill Inside none

Gasoline Intake Square vertical push pull needle Size No 38 drill hole in needle seat

Low Speed Jet Tube (540S) Jet size No 71 drill
(548S) (Pressed in body Do not remove for service) Jet size No 72 drill
(540S) By pass in body size No 53 drill
(548S) (Early production) By pass in body Size No 53 drill
(548S) (Late production) By pass in body 061" diameter
Economizer in body size No 50 drill
(540S) Idle bleed size No 55 drill
(548S) (Early production) Idle bleed size No 53 drill
(548S) (Late production) Idle bleed 061" diameter

Idle Port Upper port slot type length 175 inch width 030 inch

Idle Port Opening 140 to 146 inch above upper edge of valve with valve closed tight

Lower Port (For Idle Adjustment Screw) Size 0615 0655 inch diameter

Set Idle Adjustment Screw ¼ to 1¼ turns open For richer mixture turn screw out Do not attempt to idle engine below 350 R P M

Main Nozzle In primary venturi angle 45° Closed tip Inside diameter No 30 drill
Upper hole No 75 drill on 45° angle
Lower hole No 52 drill on 60° angle

Metering Rod Economy step 0705 inch diameter Middle step tapers to 065 inch diameter Power step 052 inch diameter Length 2 59/64 inches

Metering Rod Jet 089 inch diameter

Metering Rod Setting Use gauge part No T109 27 (2 359)

Accelerating Pump High pressure type (spring operated lever) with adjustable stroke
Discharge jet size No 70 drill
Intake ball check size No 40 drill
Discharge ball check size No 32 drill
Relief passage (to outside) No 38 drill

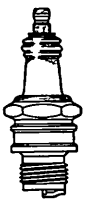
Pump Adjustment 19/64 inch plunger travel (full throttle position) in short stroke Use gauge T109 117S

Choke Carter Climatic® Control set 2 points rich Butterfly type offset valve
Choke heat suction hole in air horn Size No 36 (1065") drill

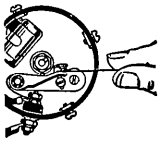
Vacuum Spark Port 062 to 064 inch diameter Top of port 052 to 056 inch above valve

Motor Tune-Up—Be Accurate!

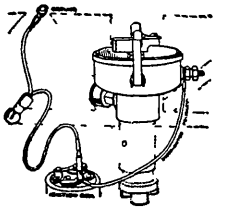
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



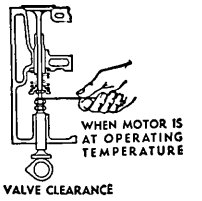
Spark Plug Gap
023" 028"



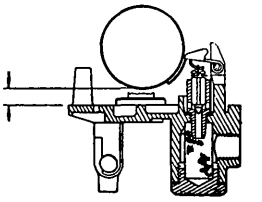
Set Breaker Points
015"



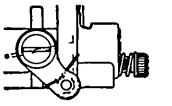
Use Timing Light Breaker Points to Open 2° to 6° Before Top Dead Center



Set Valves
Min 011"
Max 013"



Correct Float Level (Remove Cork Gasket)
5/16"



Idle Adjustment Screw Setting
¼ to 1¼
Turns Open

BRIEF CARBURETER ADJUSTMENTS

PUMP ADJUSTMENT With pump connector link in lower hole in pump arm and throttle adjustment screw backed out pump plunger should travel 19/64" from closed to wide open position Adjustment can be made by bending throttle connector rod at lower angle (Use tool T109-75) Pump travel can be measured by using gauge T-109-117S Difference between reading at wide open and seated throttle should be 19 Projecting portion of indicator should be placed on top surface of connector link at pump shaft

METERING ROD ADJUSTMENT (A) Insert two metering rod gauges in place of metering rods **Use gauge No T109-27** Be sure gauges seat in metering rod jets after backing out throttle lever adjusting screw so that throttle valves seat

(B) Install metering rod pin and pin spring in metering rod arm

(C) Rest screwdriver lightly on metering rod arm until metering rod pin rests on shoulder of notches in both gauges A slight bend in metering arm may be necessary to equalize There may be less than 005" clearance between metering rod pin and gauges

(D) With throttle valves seated and metering rod pin resting lightly on notches in gauges tighten anti percolator arm screw

(E) Remove gauges and metering rod pin and install metering rods disks metering rod spring pin and pin spring and hook metering spring on metering rods

ANTI PERCOLATOR ADJUSTMENT This adjustment must be made after pump and metering rod adjustments have been made Do not disturb these adjustments Back out throttle

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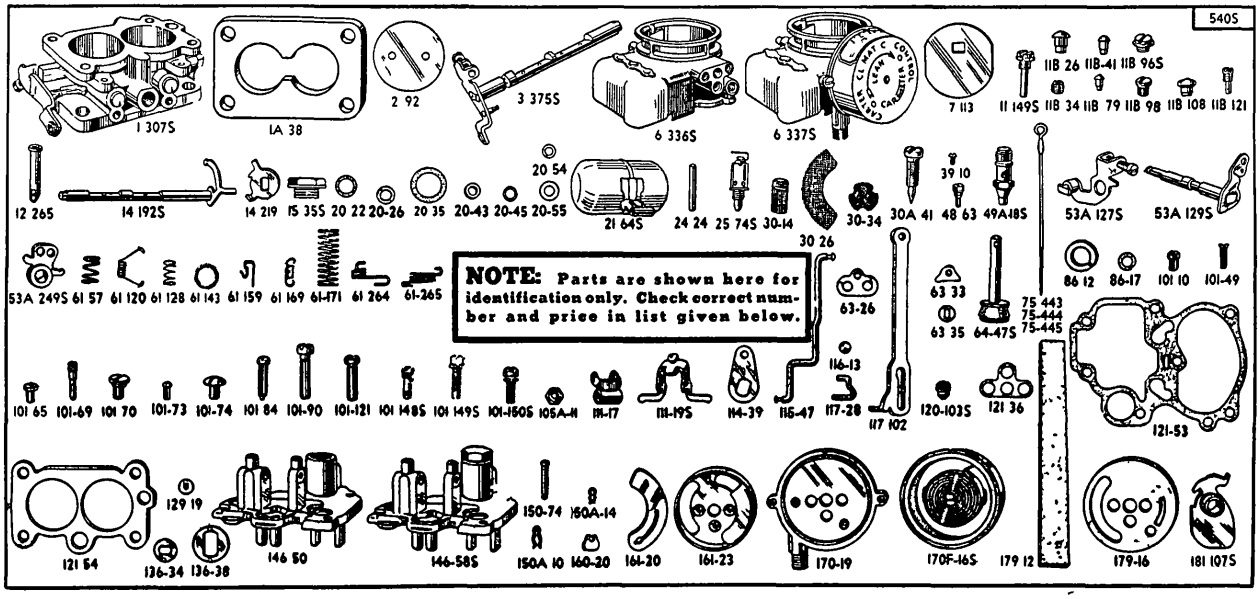
CARBURETER
TRADE MARK REG U S PAT OFF.
MARCA REGISTRADA

PRINTED IN U.S.A.

lever adjusting screw so that throttle valves seat in bores of carbureter
(540S) With throttle valves seated, bend lips on anti-percolator arm so that center of indicator line is just flush with top of anti-percolator plugs
(548S) With throttle valves seated, insert .015" flat feeler gauge (T109-72) between anti-percolator arm and anti-percolator valve stem Bend lips so that center of indicator line is flush with top of anti-percolator plug Arms must contact Crowns of anti-percolator stems
Since there are two anti-percolators on these carbureters, care must be taken so that there is an even adjustment on both anti-percolator arm lips

UNLOADER ADJUSTMENT With throttle wide open distance between upper edge of choke valve and inner wall of air horn should be 3/16" Adjustment can be made by bending lip on fast idle connector link If unloader is adjusted properly, with throttle wide open, move choke valve wide open and choke valve will be locked in wide open position Closing the throttle will release choke valve Choke trip lever is notched out for this setting

FAST IDLE ADJUSTMENT Hold choke valve tightly closed and adjust fast idle arm screw to give .026" opening between edge of throttle valve and bore of carbureter side opposite port (Use gauge No T109-189)



Pontiac 8—1942-46—Carbureter Nos. 540S-548S

WHEN SERVICING, USE GASKET ASSORTMENT No 134, REPAIR PKG. No 1086C (FOR 540S), No 1351C (FOR 548S)

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-307S	Body flange assembly	
1A-38	Flange gasket—(Dual special) (Superseded by 1A-39)	
1A-39	FLANGE GASKET	
2 92	Throttle valve	(2)
3-375S	Throttle shaft and lever assembly	
6-336S	Air horn and cover plate assembly (540S) (Sup by 6-460U)	
6-337S	Air horn and Climatic® control assembly (540S) (Sup by 6-457S)	
6-457S	Air horn and Climatic® control assembly	
6-460U	Air horn and screw unit	
7-113	Choke valve	
11-149S	LOW SPEED JET ASSEMBLY (540S)	(2)
11B-26	Rivet plug	
11B-34	Nozzle retainer plug (Sup by 11B-164)	(2)
11B-41	Rivet plug	(2)
11B-79	Rivet plug	(5)
11B-96S	Nozzle plug assembly (Sup by 11B-127S)	(2)
11B-98	Pump jet passage plug	(2)
11B-108	Idle port rivet plug	(2)
11B-121	Ball retainer plug	
11B-127S	Nozz e passage plug assembly	(2)
11B-129S	Low speed jet plug assembly (548S)	(2)
11B-164	RETAINER PLUG	(2)
12-265	Nozzle	(2)
14-192S	Choke piston lever and shaft assembly	
14-219	Choke trip lever	
15-35S	Strainer nut assembly	
20 22	Needle seat and nozzle plug gasket	(3)
20-26	Low speed jet gasket	(2)
20-35	BOWL STRAINER GASKET	
20-43	HOT AIR PASSAGE GASKET	
20-45	NOZZLE GASKET	(2)
20-54	Metering rod jet gasket	(2)
20-55	IDLE PASSAGE GASKET	(2)
21-64S	Float and lever assembly	
24-24	Float lever pin	
25-74S	NEEDLE AND SEAT ASSEMBLY	
30-14	BOWL COVER STRAINER GAUZE	
30-26	PISTON PLATE STRAINER (Use on early production 548S only)	
30-34	PUMP STRAINER	
30A-41	Idle adjustment screw	(2)
39-10	VALVE AND DISK RETAINER ATTACHING SCREW	(2)
48-63	PUMP JET—No 70 DRILL	(2)
49A-18S	Anti-percolator valve plug assembly	(2)
53A-127S	Fast idle arm, pin and screw assembly	
53A-129S	Pump operating lever and countershaft assy	
53A-249S	Pump arm and collar assembly	
61-57	Adjustment screw lock spring	(2)
61-120	Metering rod spring	
61-128	Connector rod spring	(2)
61-143	Plunger spring	
61-159	Needle pull clip	
61-169	Pump operating lever spring	
61-171	Pump spring	
61-264	Connector link spring	

Part No.	PART NAME	
61-265	Fast idle arm spring	
63-26	Metering rod disc retainer (early production)	
63-33	Housing retainer	(2)
63-35	Spring retainer (Sup by 63-93)	(2)
63-93	Spring retainer	(2)
64-47S	PLUNGER AND ROD ASSEMBLY (Identify by Shaft No 49-109)	
75 443	METERING ROD—STANDARD— .0705"- .0705" to .065'- .052"	(2)
75 444	Metering rod—1 size lean— .0715"- .0715" to .0665"- .0537"	(2)
75-445	Metering rod—2 sizes lean— .0727"- .0727" to .0682 - .056"	(2)
86-12	Flange lock washer	(4)
86-17	Air horn lock washer (Inside)	
101-10	Anti-percolator arm clamp screw	
101-49	Piston plate attaching screw (540S)	(3)
101-65	Thermostat housing and trip lever attaching screw	(3)
101-69	Throttle centering screw	
101-70	Fast idle attaching screw	
101-73	THROTTLE VALVE ATTACHING SCREW	(4)
101-74	Throttle shaft arm attaching screw	
101-84	Fast idle adjustment screw	
101-90	Air horn attaching screw (Inside)	
101-121	Throttle lever adjustment screw	
101-148S	Bowl cover screw and washer assy	(4)
101-149S	Body flange screw and washer assy	(4)
101-150S	Air horn screw and washer assembly	(2)
101-170	Piston housing attaching screw	(3)
105A-11	Flange stud nut	(4)
111-17	Metering rod arm	
111-19S	Anti-percolator arm and screw assembly	
114-39	Throttle shaft arm	
115-47	THROTTLE CONNECTOR ROD	
116-13	CHECK BALL	(2)
117-28	Connector link	
117-102	Fast idle connector link	
120-103S	METERING ROD JET ASSEMBLY— .089"	(2)
121-36	PISTON PLATE HOUSING GASKET	
121-53	BODY GASKET	
121-54	BODY FLANGE GASKET	
129-15	Metering rod disc (Late production)	(2)
129-19	Metering rod disc (Early production)	(2)
136-34	Choke shaft washer	
136-38	Throttle shaft washer	
146-50	Bowl cover (Not sold separately—Part of 146-58S)	
146 58S	Bowl cover and strainer assembly	
150 74	Metering rod pin	
150A-10	PIN SPRING	(3)
150A-14	PIN SPRING	
160-20	Choke piston	
161-20	Port plate	
161 23	Piston plate	
170-19	Piston plate housing	
170F-16S	Thermostatic coil and housing assembly	
179 12	CORK INSULATOR STRIP	
179-16	CORK INSULATOR DISK	
181-107S	Fast idle cam and collar assembly	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST LOUIS, MO., U S. A

NASH 2887S
December, 1958

RAMBLER SIX

POWER PAK
MODEL 5910
1959

(Use 2586S to replace 2887S)

WCD DUAL DOWN-DRAFT CLIMATIC® CONTROL **CARBURETER No. 2887S**

CARBURETER SPECIFICATIONS

For Rambler 6 Cylinder 196 Cu. In. Engine: Vacuum at Idle 18-20 Inches

Dimensions: Flange size 1 1/8 inch dual 4 bolt type
Primary venturi 11/32 inch I D
Secondary venturi 21/32 inch I D
Main venturi 1-1/16 inch I D

Vents: Inside, (in air horn) (1)
Outside (in dust cover) (1)

Low Speed Circuit. Jet size No 71 (.026 inch) drill
By pass size (.053 inch) diameter
Economizer size No 56 (.0465 inch) drill
Idle bleed size No 55 (.052 inch) drill
Idle port, (upper) length .120 inch width .030 inch

Idle Port Opening: .095 to .101 inch above upper edge of valve with valve closed tight

Lower Port (For Idle Adjustment Screw): Size .0615 to .0655 inch diameter

Set Idle Adjustment Screw: 1/2 to 2 turns open For richer mixture turn screw out Do not idle engine below 475 r p m (Auto Trans.) in neutral 525 r p m (Std and Overdrive Trans.)

Main Nozzle: In primary venturi closed tip Nozzle is installed permanently Do not remove

Accelerating Pump Discharge jet (twin) size No 67 (.032 inch) drill
Intake ball check seat size .115 to .120 inch diameter
Discharge (needle seat) size No 50 (.070 inch) drill

Choke Carter Climatic® Control set on index Offset butterfly type Choke heat suction hole in bowl cover Size No 36 (.1065 inch) drill

Vacuum Spark Port: Round type .040 inch diameter Top of port .028 to .038 inch above valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .020"	Ignition Timing Breaker Points to Open: 5° B. T. D. C. At Vibration Damper	Valve Setting (Hot) Intake .012" Exhaust .015"	Float Setting 5/32 Inch (Use Gauge T109-196)	Idle Adjustment Screw Setting 1/2 to 2 Auto. Trans. (In Neutral) 475 R.P.M. Std. & O'Drive 525 R.P.M.

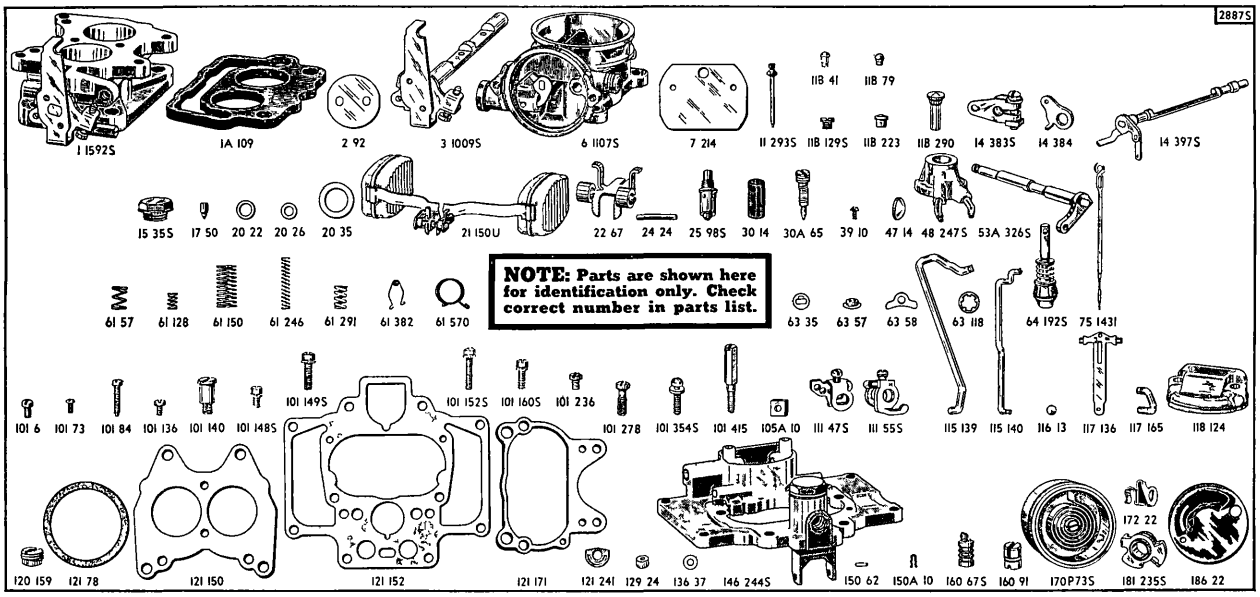
CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: Two separate float adjustments must be made—lateral and vertical
LATERAL ADJUSTMENT With bowl cover assembly inverted, bowl cover gasket removed, place float gauge directly under floats with notched portions of gauge fitted over edges of casting Sides of floats should barely touch the vertical uprights of float gauge Adjustment should be made by bending arms of floats
VERTICAL ADJUSTMENT With float gauge in same position, floats should just clear the horizontal portion of gauge (Vertical distance between top of float and machined surface of casting must be 5/32 inch.) (Gauge T109-196.) Adjust by bending float arms Remove floats, install bowl cover gasket and then reinstall floats
PUMP ADJUSTMENT: Install pump connector link in outer hole (long stroke) of pump arm, with ends extending away from countershaft arm Back out throttle lever set screw until throttle valves seat in bores of carbureter Be sure fast idle adjusting screw does not hold throttle open Hold straight edge across top of dust cover boss at pump arm The flat on top of pump arm should be parallel to straight edge Adjust by bending throttle connector rod at upper angle Use tool T109-213
METERING ROD ADJUSTMENT: Metering rod adjustment is important and must be made after completing the pump adjustment No metering rod gauges are necessary Procedure is as follows 1 Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw 2 With metering rods in place, press down on vacumeter link until metering rods bottom in carbureter body casting 3. Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link Hold in place and carefully tighten clamp screw
FAST IDLE ADJUSTMENT: Loosen choke lever clamp screw on choke shaft Insert .010 inch feeler gauge T109-200 between lip of fast idle cam and boss of flange casting Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw.
With choke valve tightly closed, tighten fast idle adjusting screw until there is .020 inch (gauge T109-29) opening between throttle valve and bore of carbureter (side opposite idle port) Be sure fast idle adjusting screw is on high step of cam while making this adjustment
UNLOADER ADJUSTMENT: With throttle wide open there should be 3/16 inch (gauge T109-28) clearance between upper edge of choke valve and inner wall of air horn Adjust by bending unloader lip on throttle shaft lever (Use bending tool T109-41)

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CARBURETER
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Rambler 6—1959—Carbureter No. 2887S

WHEN SERVICING, USE GASKET ASSORTMENT No. 285; RE-CARBURETION KIT No. 1836N

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF RE-CARBURETION KIT

Part No.	PART NAME	
1-1495S	Body flange assembly	
1-1592S	—Body flange assembly (Use 1 1495S)	
1A-109	FLANGE GASKET	
2-92	Throttle valve	(2)
3-1009S	Throttle shaft and lever assembly	
6-1107S	Air horn and plug assembly	
7-214	Choke valve	
11-293S	Low speed jet assembly (.026")	(2)
11B-41	Rivet plug	(2)
11B-79	Rivet plug	(7)
11B-129S	Pump discharge passage plug assembly	
11B-223	Nozzle passage rivet plug	(2)
11B-290	Idle port rivet plug	(2)
14-383S	Choke lever and screw assembly	
14-384	Cam trip lever	
14-397S	Choke piston lever link and shaft assembly	
15-35S	Strainer nut assembly	
17-50	Pump check needle	
20-22	Needle seat gasket	
20-26	Gasket	
20-35	Bowl strainer gasket	
21-150U	Unitized package	
22-67	Auxiliary float lever	
24-24	Float lever pin	
25-98S	NEEDLE AND SEAT ASSEMBLY (.015")	
30-14	Bowl cover strainer	
30A-65	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
47-14	Welsh plug	
48-247S	Pump jet and housing assembly	
53A-326S	Pump operating lever and countershaft assembly	
61-57	Idle adjustment screw spring	(2)
61-128	Connector rod spring	
61-150	Lower pump spring	
61-246	Vacuum piston spring	
61-291	Throttle lever adjusting screw spring	
61-382	Metering rod spring	
61-570	Fast idle cam spring	
63-35	Connector rod retainer	
63-57	Intake check ball retainer	
63-58	Coil housing retainer	(2)
63-118	Throttle shaft retaining ring	
64-192S	PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY	

Part No.	PART NAME	
75-1431	METERING ROD—STANDARD .073" x .068" x .06175"	(2)
101-6	Pump arm clamp screw	
101-73	Throttle valve attaching screw	(4)
101-84	Fast idle adjustment screw	
101-136	Coil housing attaching screw	(2)
101-140	Fast idle cam attaching screw	
101-148S	Dust cover attaching screw and washer assembly	(2)
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	(4)
101-160S	Bowl cover attaching screw and washer assembly	(6)
101-236	Metering rod arm clamp screw	
101-278	Pump jet housing attaching screw	
101-354S	Choke lever clamp screw and washer assembly	
101-415	Throttle lever adjusting screw	
105A-10	Choke lever clamp screw nut	
111-47S	Pump arm and screw assembly	
111-55S	Metering rod arm and screw assembly	
115-139	Throttle connector rod	
115-140	Choke connector rod	
116-13	Ball	
117-136	Vacumeter piston link	
117-165	Pump connector link	
118-124	Dust cover	
120-159	METERING ROD JET (.089")	(2)
121-78	COIL HOUSING GASKET	
121-150	BODY FLANGE GASKET	
121-152	BOWL COVER GASKET	
121-171	AIR HORN GASKET	
121-241	PUMP JET HOUSING GASKET	
129-24	Metering rod disk	(2)
136-37	Connector rod washer	
146-244S	—Bowl cover and strainer assembly	
150-62	Piston pin	
150A-10	Pin spring	(2)
160-67S	Vacuum piston and pin assembly	
160-91	Choke piston	
170P-73S	Thermostatic coil and housing assembly	
172-22	Throttle connector rod retainer	
181-235S	Fast idle cam assembly	
186-22	Baffle plate	

—Parts so marked are new and listed for the first time

NOTE: Figures in parentheses indicate number of pieces used in one carbuerter. Where no figure is shown, only one is used

RAMBLER SIX
AUTOMATIC TRANSMISSION
1958

YF Down-Draft Climatic® Control **Carbureter No. 2757S**

CARBURETER SPECIFICATIONS

For Rambler 6 Cylinder Engine

Dimensions: Flange size, 1¼ inch S A E
Primary venturi 11/32 inch I D
Secondary venturi 11/16 inch I D
Main venturi 1¼ inch I D

Vents: Outside none Inside balance vent to air horn above choke valve

Low Speed Circuit: Jet size No 70 (.028 inch) drill
By pass in air horn size No 55 (.052 inch) drill
Economizer in body, size No 53 (.0595 inch) drill
Idle bleed, in body, size No 52 (.0635 inch) drill
Idle port slot type length .200 inch, width .030 inch

Idle Port Opening: Top of port .142 to .146 inch above top edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw): .0615 to .0655 inch diameter

Set Idle Adjustment Screw: ½ to 1½ turns open For richer mixture turn screw out Do not idle engine below 450 r p m (Auto Trans—in neutral)

Main Nozzle: Nozzle is installed permanently DO NOT RE MOVE Anti percolator air bleed size No 70 (.028 inch) drill

Accelerating Pump: Diaphragm type vacuum and mechanically operated Discharge restriction (in housing) size No 65 (.035 inch) diameter Intake ball check seat (in diaphragm housing), size No 40 (.098 inch) drill Discharge ball check seat (in diaphragm housing) size No 32 (.116 inch) drill Vacuum restriction (in flange) size No 55 (.052 inch) drill Vacuum passage (diaphragm bleed) size No 65 (.035 inch) drill

Choke Carter Climatic® Control set one point lean offset butterfly type Choke heat suction hole in body size No 46 (.081 inch) drill

Vacuum Spark Port: Round type size .040 inch diameter Bottom of port .021 to .029 inch above top edge of valve with valve tightly closed

Transmission Vacuum Control Port: Round type, size .041 inch diameter Bottom of port .022 to .030 inch below lower edge of valve with valve tightly closed Bleed to cavity size No 58 (.042 inch) drill

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .030"	Breaker Point Setting .020"	Ignition Timing Breaker Points to Open: 4° A. T. D. C. At Vibration Damper	Valve Setting (Hot) Intake .015" Exhaust .015"	Float Setting ½ Inch (Use Gauge T109-83)	Idle Adjustment Screw Setting ½ to 1½ Auto. Trans. 450 R.P.M. In Neutral

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: With gasket removed, bowl cover assembly inverted and float resting on seated needle, the distance from the bowl cover to the top of float at free end should be ½ inch (gauge T109 83) Adjust by bending lip of float, not float arm

METERING ROD ADJUSTMENT. This adjustment is important and should be checked each time the carbureter is reassembled or lean rods are installed With throttle valve seated in bore of carbureter press down on upper end of diaphragm shaft until diaphragm bottoms in vacuum chamber Tool T109 212 may be used to hold diaphragm shaft down while adjusting metering rod Metering rod should contact bottom of metering rod well and metering rod arm should contact lifter link at the outer end nearest the springs and at supporting lug Adjust by bending lip of metering rod arm to which metering rod is attached up or down

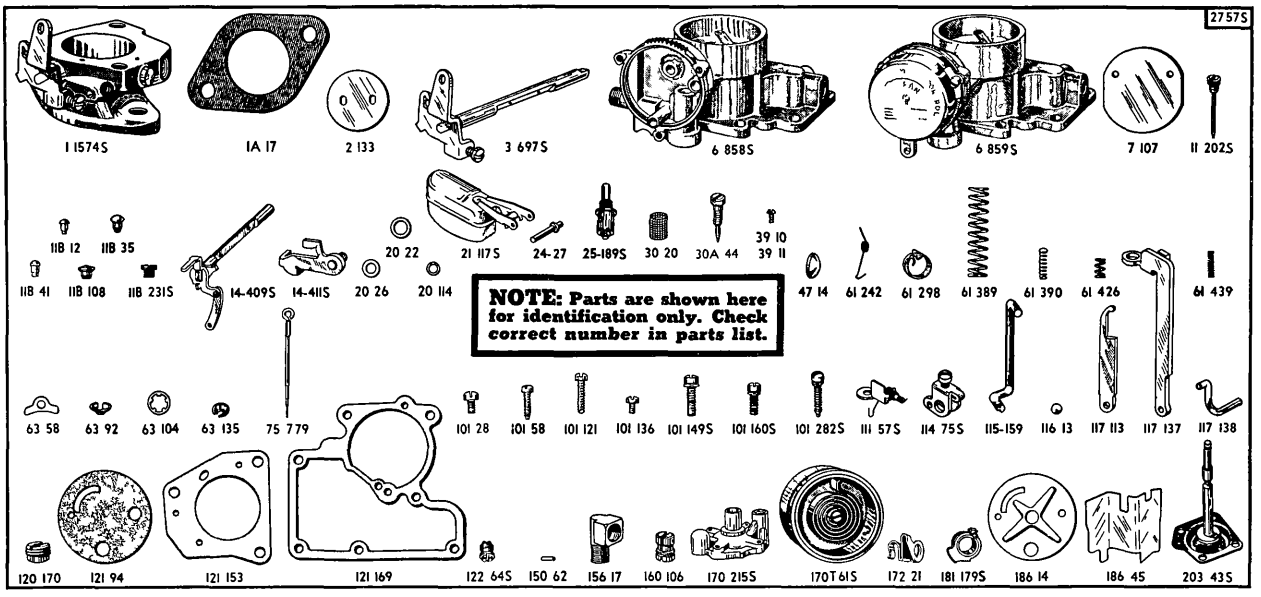
ACCELERATING PUMP: If acceleration is not satisfactory remove pump housing intake check assembly and discharge check ball and spring Examine diaphragm for wear or damage Be sure intake screen intake check and discharge check are not clogged with lint or foreign matter Discharge check ball must

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seat as a leak at this point will result in poor acceleration Inspect and replace all worn parts clean and blow out all passages with compressed air

FAST IDLE ADJUSTMENT Remove thermostatic coil housing gasket and baffle plate Crack throttle valve and hold choke valve fully closed then close throttle This will allow fast idle cam to revolve to fast idle position With choke valve held tightly closed and throttle closed as far as possible there should now be 054 inch clearance (gauge T109 193) between throttle valve and bore of carbureter (side opposite idle port) Adjust by bending connector link at lower angle (Use bending tool T109 213)

UNLOADER ADJUSTMENT: This adjustment must be made after fast idle adjustment Hold throttle valve in wide open position and close choke valve as far as possible without forcing There should be 9/32 inch clearance between lower edge of choke valve and inner wall of air horn (gauge T109 126) Adjust by bending arm of choke trip lever (Use tool T109 214)



Rambler 6—1958—Carbureter No. 2757S

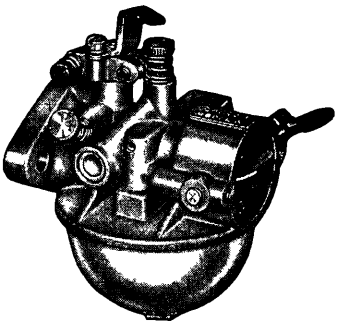
WHEN SERVICING, USE GASKET ASSORTMENT No. 216; RE-CARBURETION KIT No. 1950N

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF RE-CARBURETION KIT

Part No.	PART NAME	
1-1574S	Body flange assembly	
1A-17	FLANGE GASKET	
2-133	Throttle valve	
3-697S	Throttle shaft and lever assembly	
6-858S	Air horn and climatic® control assembly	
6-859S	Air horn assembly	
7-107	Choke valve	
11-202S	Low speed jet assembly	
11B-12	Flange passage plug	
11B-35	Nozzle passage rivet plug	
11B-41	Rivet plug	
11B-108	Idle port rivet plug	
11B-231S	Ball retainer screw plug assembly	
14-409S	Choke piston lever and shaft assembly	
14-411S	Choke trip lever and pin assembly	
20-22	Needle seat gasket	
20-26	Ball retainer screw plug gasket	
20-114	Diaphragm housing attaching screw gasket	
21-117S	Float and lever assembly	
24-27	Float lever pin	
25-189S	NEEDLE AND SEAT ASSEMBLY	
30-20	Pump intake strainer	
30A-44	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	Throttle valve attaching screw	(2)
47-14	Welsh plug	
61-242	Metering rod spring	
61-298	Fast idle cam spring	
61-389	Pump diaphragm spring	
61-390	Upper pump spring	
61-426	Idle adjustment screw spring	
61-439	Pump discharge spring	
61-451	Pump diaphragm spring	
63-58	Coil housing retainer	(3)
63-92	Diaphragm spring retainer	
63-104	Throttle shaft retaining ring	

Part No.	PART NAME	
63-135	Upper pump spring retainer	
75-779	METERING ROD—STANDARD	
75-793	Metering rod—1 size lean	
75-794	Metering rod—2 sizes lean	
101-28	Throttle shaft arm attaching screw	
101-58	Diaphragm housing attaching screw	
101-121	Throttle lever adjustment screw	
101-136	Coil housing attaching screw	(3)
101-149S	Body flange attaching screw and washer assembly	(3)
101-160S	Air horn attaching screw and washer assembly	(7)
101-282S	Diaphragm housing attaching screw and washer assembly	(3)
111-57S	Metering rod arm assembly	
114-75S	Throttle shaft arm assembly	
115-159	Choke connector rod	
116-13	Pump check ball	
117-113	Fast idle link	
117-137	Pump lifter link	
117-138	Pump connector link	
120-170	METERING ROD JET	
121-94	THERMOSTATIC COIL HOUSING GASKET	
121-153	BODY FLANGE GASKET	
121-169	BOWL COVER AND AIR HORN GASKET	
122-64S	Intake ball check assembly	
150-62	Choke piston pin	
156-17	Fuel line elbow	
160-106	Choke piston	
170-215S	Pump diaphragm housing assembly	
170T-61S	Thermostatic coil and housing assembly	
172-21	Throttle connector rod retainer	
181-179S	Fast idle cam assembly	
186-14	Coil housing baffle plate	
186-45	Fuel bowl baffle plate	
203-43S	PUMP DIAPHRAGM ASSEMBLY	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.



REED PRENTICE CORP.
POWER SAW
1951

HORIZONTAL, MODEL N TYPE, **CARBURETER No. N-850S**

CARBURETER SPECIFICATIONS

For Reed Prentice Power Saw 1 Cylinder (2 Cycle) Engine 2 Inch Bore, 2 Inch Stroke

Dimensions Flange size 1/2" S A E (Slotted)
Main Venturi size 1/2 inch

Float Level Distance from top of float (at free end) opposite needle seat to lower edge of float chamber cover when needle is seated to be 13/64 plus or minus 1/64 inch

Vents Inside—none Outside—No 50 (.070") drill

Gasoline Intake Square vertical needle seat size No 48 (.076") drill

Low Speed Jet Tube Jet size No 70 (.028") drill Auxiliary jet (idle bleed) 4—size No 70 (.028") drill

Idle Port .039 .042 inch diameter
Idle port opening—top of port to be .022 to .026 inch above upper edge of valve
Idle adjustment screw tapered

Set Idle Adjustment Screw 1 to 3 turns open For richer mixture turn screw out Do not idle engine below 1500 r p m

Main Nozzle Accelerating jets 4—No 55 (.052") drill in side of nozzle (in nozzle well)

Nozzle passage (nozzle well to air horn) restriction size No 35 (.110") drill

High Speed Adjusting Needle Seat (in base of nozzle) size .040 inch diameter

Setting See adjustments page two

Choke Manual—butterfly type

Spark Plug Gap .025"	Breaker Point Setting .018"	Ignition Timing Breaker Points to Open 25° B T D C	Float Setting 13/64" ± 1/64"	High Speed Adj Screw Setting 1 to 3 Turns Open	Idle Adjustment Screw Setting 1 to 3 Turns Open

SERVICE PROCEDURE

To Disassemble

1. Remove carbureter from engine
2. Remove bowl nut gasket and bowl
3. Remove float pin float needle and needle seat Check float for dents leaks and wear on float lip or in float pin holes
4. Remove bowl ring gasket
5. Remove low speed jet and high speed needle assembly and spring
6. Remove idle adjustment screw and spring
7. Remove nozzle
8. Remove throttle valve screws valve and shaft and lever assembly
9. Do not remove choke valve and shaft unless replacement of these parts is necessary A spring loaded ball retains choke in wide open position Be sure to use a new ball and spring when replacing choke shaft and lever assembly CAUTION Hold a screw driver handle or a small piece of wood over threaded hole in air horn (side opposite choke lever) to prevent the ball from flying out when shaft is removed
10. Clean all parts in clean gasoline or solvent making sure all carbon accumulation is removed from bore especially where throttle valve seats in casting Blow out all passages with compressed air Replace all worn or damaged parts Always use new gaskets

To Assemble

11. Install throttle shaft and valve Valve must be installed with trademark c on side toward idle port when viewing from flange side Always use new screws With valve screws loose and throttle lever set screw backed out seat valve by tapping lightly with a small screw driver Hold in place while tightening screws
12. Install nozzle making sure it seats in casting
13. Install needle seat needle float and float pin
14. Set float level With carbureter casting inverted float resting lightly against needle in its seat there should be 13/64" clearance (use gauge T109 39) between machine surface of casting and free end of float (side opposite needle seat) Adjust by bending lip of float with small screw driver
15. Install bowl ring gasket bowl bowl nut gasket and bowl nut Tighten securely after making sure bowl is centered in gasket
16. Install low speed jet and high speed needle assembly Turn in until it seats in nozzle then back out 2 turns
17. Then install idle adjusting screw finger tight Back out approximately 1 1/2 turns DO NOT USE PLIERS OR SCREW DRIVER AS IT MAY DAMAGE IDLE SCREW

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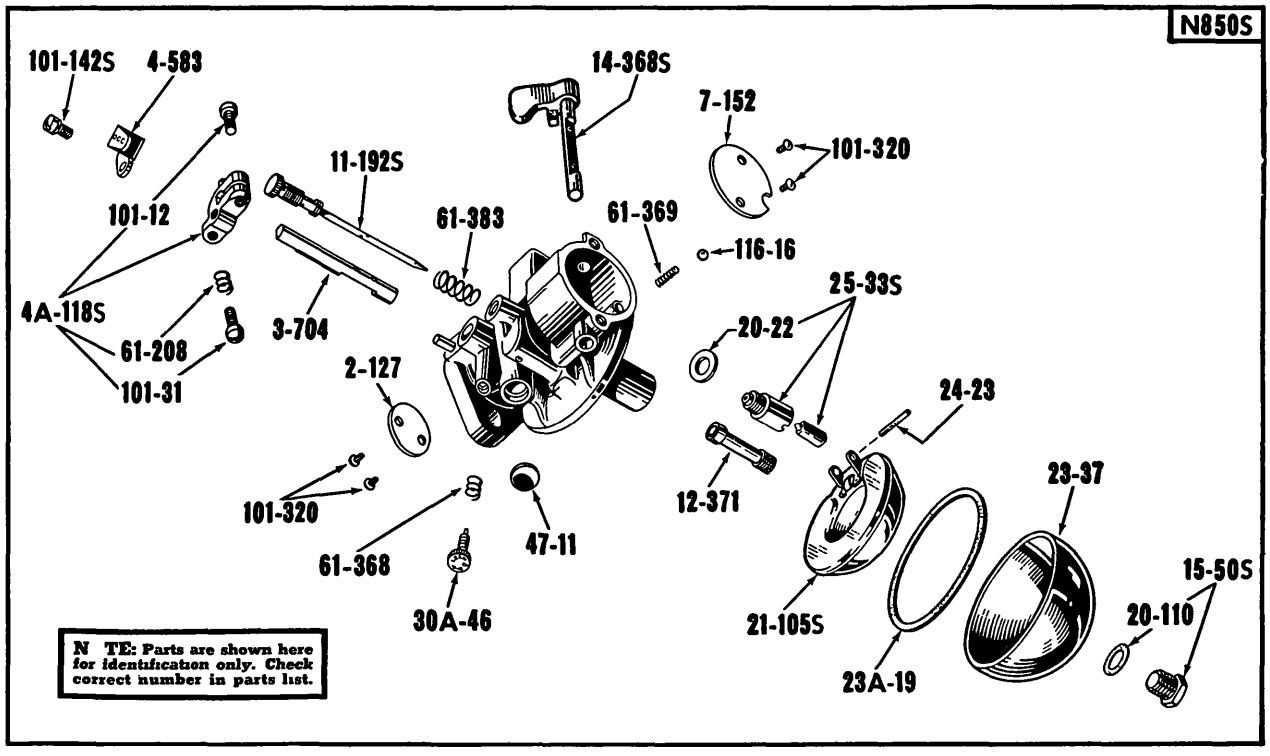
HIGH SPEED AND IDLE SCREW ADJUSTMENT

After rebuilding and installation on engine is complete the high speed and idle screw adjustments must be made

With the high speed needle turned counter clockwise (from closed position) 1½ turns and idle screw turned 1½ turns open start engine

With the engine at normal operating temperature accelerate engine and check response The high speed needle should be adjusted for the leanest possible mixture which will allow satis factory acceleration If the engine misses and backfires the high speed mixture is too lean and the high speed adjustment screw must be turned counter clockwise ¼ turn at a time to correct this condition If the engine loads (heavy exhaust) and is sluggish the mixture is too rich and the high speed adjust ment screw must be turned clockwise ¼ turn at a time to correct To make final check of the high speed adjustment operate the engine under load and adjust

The idle screw should be adjusted intermittently while making the high speed adjustment The final idle adjustment should be made at a speed not less than 1500 r p m until smoothest pos sible idle is obtained DO NOT USE FORCE ON THE HIGH SPEED NEEDLE OR IDLE SCREW AS DAMAGE MAY RESULT

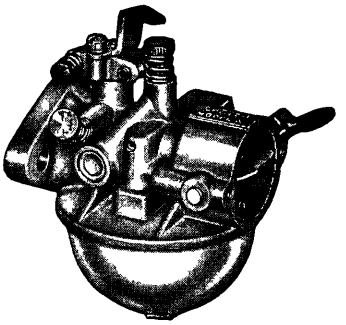


Reed Prentice—Carbureter No. N-850S

Part No	PART NAME
1A-73	Flange gasket
2-127	Throttle valve
3-704	Throttle shaft
4-583	Throttle lever
4A-118S	Throttle shaft dog assembly
7-152	Choke valve
11-192S	Idle jet and high speed adjusting needle assembly
12-338	Nozzle (Sup by 12 371)
12-371	Nozzle
14-368S	Choke lever and shaft assembly
15-50S	Bowl nut assembly
20-22	Needle seat gasket
20-110	Bowl nut gasket
21-105S	Float and lever assembly
23-37	Bowl

Part No	PART NAME	
23A-19	Bowl ring gasket	
24-23	Float lever pin	
25-33S	Needle and seat assembly	
30A-46	Idle adjustment screw	
39-10	Valve attaching screw (Sup by 101 320)	
47-11	Welsh plug	
61-208	Throttle lever adjusting screw spring	
61-368	Idle adjustment screw spring	
61-369	Choke shaft spring	
61-383	High speed adjusting needle spring	
101-12	Throttle shaft dog screw	
101-31	Throttle adjusting screw	
101-142S	Screw and washer assembly	
101-320	Valve attaching screw	(4)
116-16	Choke shaft ball	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used



REED PRENTICE CORP.
POWER SAW
1951

HORIZONTAL, MODEL N TYPE, **CARBURETER No. N-850S**

CARBURETER SPECIFICATIONS

For Reed Prentice Power Saw 1 Cylinder (2 Cycle) Engine 2 Inch Bore 2 Inch Stroke

Dimensions Flange size 1/2" S A E (Slotted)
Main Venturi size 1/2 inch

Float Level Distance from top of float (at free end) opposite needle seat to lower edge of float chamber cover when needle is seated to be 13/64 plus or minus 1/64 inch

Vents Inside—none Outside—No 50 (.070") drill

Gasoline Intake Square vertical needle seat size No 48 (.076") drill

Low Speed Jet Tube Jet size No 70 (.028") drill Auxiliary jet (Idle bleed) 4—size No 70 (.028") drill

Idle Port .039 .042 inch diameter
Idle port opening—top of port to be .022 to .026 inch above upper edge of valve
Idle adjustment screw tapered

Set Idle Adjustment Screw 1 to 3 turns open For richer mixture turn screw out Do not idle engine below 1500 r p m

Main Nozzle Accelerating jets 4—No 55 (.052") drill in side of nozzle (in nozzle well)

Nozzle passage (nozzle well to air horn) restriction size No 35 (.110") drill

High Speed Adjusting Needle Seat (in base of nozzle) size .040 inch diameter

Setting See adjustments page two

Choke Manual—butterfly type

Spark Plug Gap .025"	Breaker Point Setting .018"	Ignition Timing Breaker Points to Open 25° B T D C	Float Setting 13/64" ± 1/64"	High Speed Adj Screw Setting 1 to 3 Turns Open	Idle Adjustment Screw Setting 1 to 3 Turns Open

SERVICE PROCEDURE

To Disassemble

1. Remove carbureter from engine
2. Remove bowl nut gasket and bowl
3. Remove float pin float needle and needle seat Check float for dents leaks and wear on float lip or in float pin holes
4. Remove bowl ring gasket
5. Remove low speed jet and high speed needle assembly and spring
6. Remove idle adjustment screw and spring
7. Remove nozzle
8. Remove throttle valve screws valve and shaft and lever assembly
9. Do not remove choke valve and shaft unless replacement of these parts is necessary A spring loaded ball retains choke in wide open position Be sure to use a new ball and spring when replacing choke shaft and lever assembly CAUTION Hold a screw driver handle or a small piece of wood over threaded hole in air horn (side opposite choke lever) to prevent the ball from flying out when shaft is removed
10. Clean all parts in clean gasoline or solvent making sure all carbon accumulation is removed from bore especially where throttle valve seats in casting Blow out all passages with compressed air Replace all worn or damaged parts Always use new gaskets

To Assemble

11. Install throttle shaft and valve Valve must be installed with trademark c on side toward idle port when viewing from flange side Always use new screws With valve screws loose and throttle lever set screw backed out seat valve by tapping lightly with a small screw driver Hold in place while tightening screws
12. Install nozzle making sure it seats in casting
13. Install needle seat needle float and float pin
14. Set float level With carbureter casting inverted float resting lightly against needle in its seat there should be 13/64" clearance (use gauge T109 39) between machine surface of casting and free end of float (side opposite needle seat) Adjust by bending lip of float with small screw driver
15. Install bowl ring gasket bowl bowl nut gasket and bowl nut Tighten securely after making sure bowl is centered in gasket
16. Install low speed jet and high speed needle assembly Turn in until it seats in nozzle then back out 2 turns
17. Then install idle adjusting screw finger tight Back out approximately 1 1/2 turns DO NOT USE PLIERS OR SCREW DRIVER AS IT MAY DAMAGE IDLE SCREW

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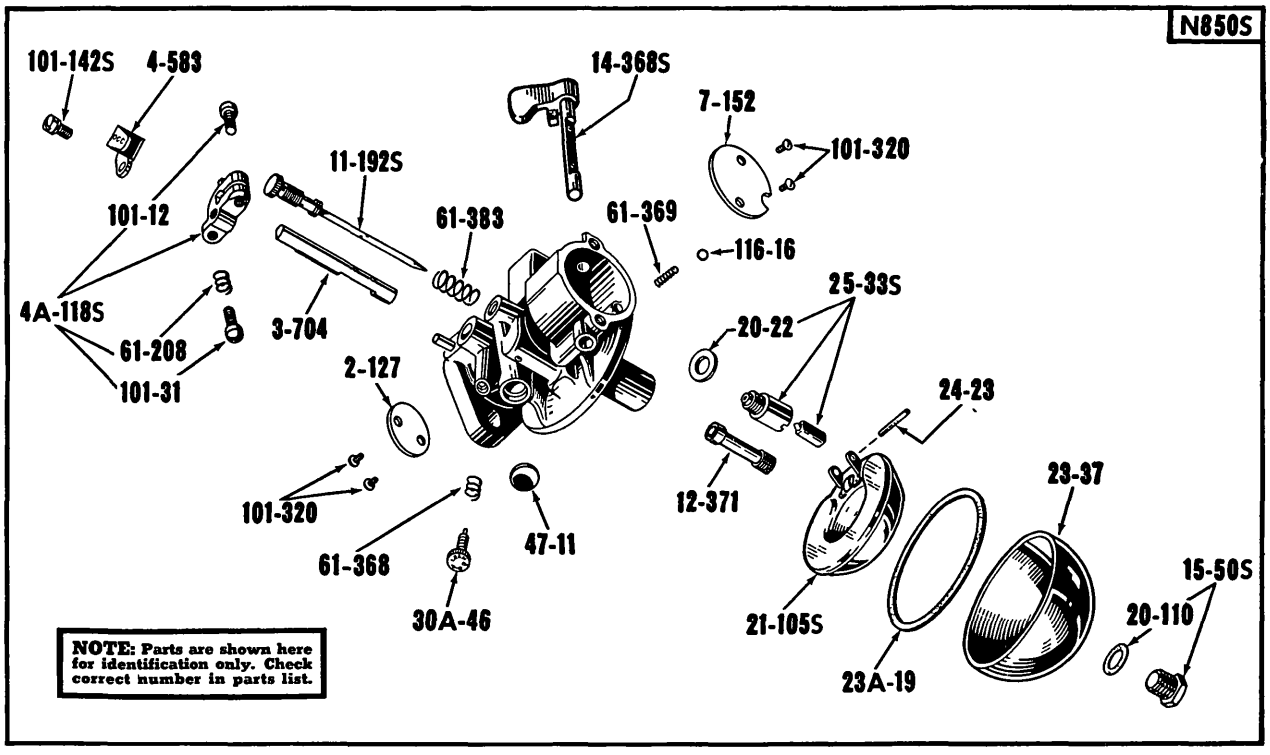
HIGH SPEED AND IDLE SCREW ADJUSTMENT

After rebuilding and installation on engine is complete the high speed and idle screw adjustments must be made

With the high speed needle turned counter clockwise (from closed position) 1½ turns and idle screw turned 1½ turns open start engine

With the engine at normal operating temperature accelerate engine and check response The high speed needle should be adjusted for the leanest possible mixture which will allow satis factory acceleration If the engine misses and backfires the high speed mixture is too lean and the high speed adjustment screw must be turned counter clockwise ¼ turn at a time to correct this condition If the engine loads (heavy exhaust) and is sluggish the mixture is too rich and the high speed adjustment screw must be turned clockwise ¼ turn at a time to correct To make final check of the high speed adjustment operate the engine under load and adjust

The idle screw should be adjusted intermittently while making the high speed adjustment The final idle adjustment should be made at a speed not less than 1500 r p m until smoothest pos sible idle is obtained DO NOT USE FORCE ON THE HIGH SPEED NEEDLE OR IDLE SCREW AS DAMAGE MAY RESULT



Reed Prentice—Carbureter No. N-850S

Part No	PART NAME
1A-73	Flange gasket
2-127	Throttle valve
3-704	Throttle shaft
4-583	Throttle lever
4A-118S	Throttle shaft dog assembly
7-152	Choke valve
11-192S	Idle jet and high speed adjusting needle assembly
12-338	Nozzle (Sup by 12 371)
12-371	Nozzle
14-368S	Choke lever and shaft assembly
15-50S	Bowl nut assembly
20-22	Needle seat gasket
20-110	Bowl nut gasket
21-105S	Float and lever assembly
23-37	Bowl

Part No.	PART NAME	
23A-19	Bowl ring gasket	
24-23	Float lever pin	
25-33S	Needle and seat assembly	
30A-46	Idle adjustment screw	
39-10	Valve attaching screw (Sup by 101 320)	
47-11	Welsh plug	
61-208	Throttle lever adjusting screw spring	
61-368	Idle adjustment screw spring	
61-369	Choke shaft spring	
61-383	High speed adjusting needle spring	
101-12	Throttle shaft dog screw	
101-31	Throttle adjusting screw	
101-142S	Screw and washer assembly	
101-320	Valve attaching screw	(4)
116-16	Choke shaft ball	

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

REO TRUCK—1957

F-20 and F-120

GOLD COMET OA-255

WA1 Down-Draft Climatic® Control Carbureter No. 2542S

CARBURETER SPECIFICATIONS

For Reo 6 Cylinder 255 Cu. In. Engine

Dimensions: Flange size 1½ inch S A E
Primary venturi 11/32 inch I D
Secondary venturi, 11/16 inch I D
Main venturi 1-3/8 inch I D

Float Level: Distance from seam of float (at free end) to tip on lower edge of float chamber cover, when needle is seated to be ½ inch

Vents: Outside No 10 (1935 inch) drill Inside none

Gasoline Intake: Square vertical needle Size No 46 (081 inch) drill hole in needle seat

Low Speed Jet Tube: Jet size No 64 (036 inch) drill By-pass in body size 063 inch diameter Economizer in body size No 52 (0635 inch) drill Idle bleed in body size No 52 (0635 inch) drill

Idle Port: Upper port slot type length 190 inch, width 040 inch

Idle Port Opening: 178 to 182 inch above valve with valve tightly closed

Idle Screw Seat: No 46 (084 inch) drill

Set Idle Adjustment Screw: 1¼ to 2¾ turns open For richer mixture turn screw out Do not idle engine below 500 r p m

Main Nozzle: Flush type (angle tip) seats in primary venturi at 45° angle

Metering Rod (Vacumeter Type): See Parts List for Size

Metering Rod Jet: 0995 inch diameter

Metering Rod Setting: Use gauge part No T109-102 (2 468 inches)

Accelerating Pump: Pressure type with adjustable stroke Discharge jet Size No 72 (025 inch) drill Intake ball check seat size No 60 (040 inch) drill Discharge ball check seat size No 32 (116 inch) drill Relief passage (to outside) size No 42 (0935 inch) drill

Choke: Carter Climatic® Control set 2 points lean—butterfly type offset valve Choke Heat Suction Hole in body size No 40 (098 inch) drill

Vacuum Spart Port: None

Motor Tune-Up — Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .025"	Breaker Point Setting .022"	Ignition Timing Breaker Points to Open: 8° B. T. C. At Fan Drive Pulley	Valve Setting (Hot) Intake .015" Exhaust .015"	Float Setting ½ Inch (Use Gauge T109-83)	Idle Adjustment Screw Setting 1¼ t 2¾ Turns Open Idle Engine at 500 R. P. M.

CARBURETER ADJUSTMENTS

Pump Adjustment: With throttle valve seated and connector link in upper hole (long stroke) pump plunger should travel 26/64" from closed to wide open throttle position Measure pump travel by using Universal pump travel gauge T109 117S Place base of the gauge on ridged portion of bowl cover so that projecting portion of pump gauge rests on top surface of connector link at pump shaft Hold gauge vertical The difference between the numbers shown by index mark on gauge at wide open and closed throttle position should be "26" (26/64") Adjust by bending throttle connector rod at lower angle

Metering Rod Adjustment: Correct setting of metering rod is important and must be made after pump adjustment or when leaner than standard rods are installed Insert gauge (tool T109-102) in place of metering rod, seating tapered end of gauge in metering rod jet Hold gauge vertical to insure seating in jet With throttle valve seated, press down on piston link directly over piston until it contacts the pump arm There should now be less than 005" clearance between metering rod pin and shoulder in notch of gauge Gauge must not drag on pin Adjust by bending lip on piston link (use tool T109 105) Remove gauge and install metering rod disc pin and spring

Anti-Percolator Adjustment: Crack throttle valve 016" by placing gauge T109 44 between throttle valve and bore of carbureter (side opposite idle port) Bend rocker arm (use tool T109 105) until there is a clearance of 010" between rocker arm lip and pump arm

Fast Idle Adjustment: With fast idle cam in normal idle position tighten throttle lever adjusting screw until it just seats against cam Hold throttle lever closed and pull cam back until first (or lower) step is against (not on) set screw There should now be 5/8" (T109-85) clearance between inside wall of air horn and lower edge of choke valve Adjust by bending fast idle link at offset portion (use tool T109-41)

Unloader Adjustment: With throttle valve wide open there should be 9/16" clearance (gauge T109-84) between lower edge of choke valve and inner wall of air horn Adjust by bending cam on throttle lever (T109 41)

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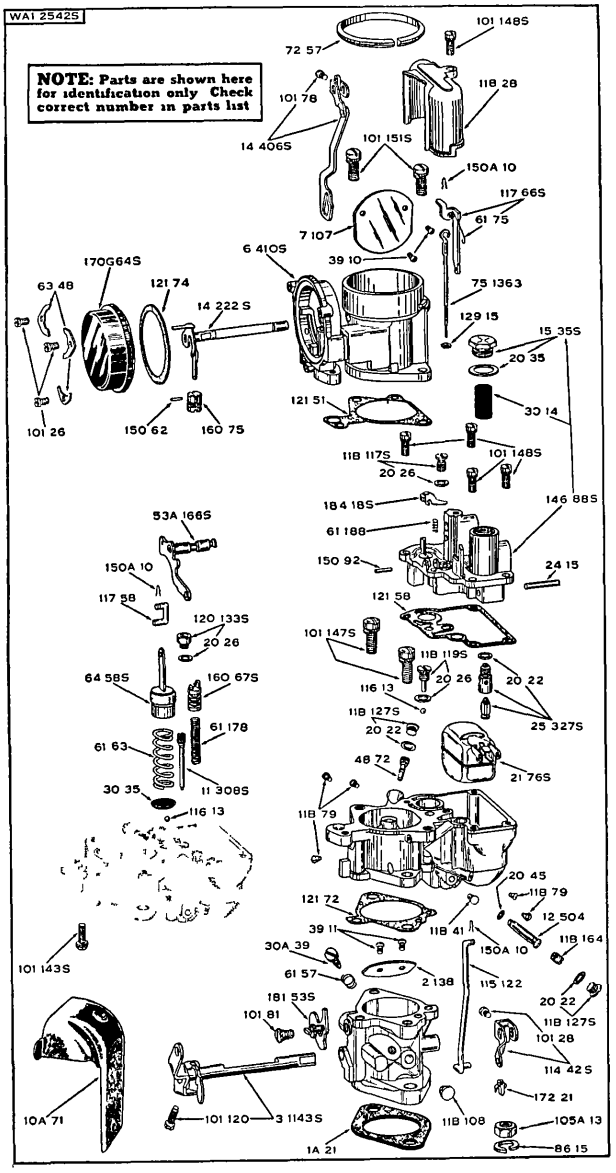
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Reo Truck — 1957 — Carbureter No. 2542S

WHEN SERVICING, USE GASKET ASSORTMENT No. 198

Part No	PART NAME	
1-1491S	—Body flange assembly	
1A-21	Flange gasket	
2 138	Throttle valve	
3-1143S	—Throttle shaft and lever assembly	
6-410S	Air horn assembly	
6-810S	Air horn and Climatic® control assembly	
7-107	Choke valve	
10A-71	Manifold stove	
11-308S	—Low speed jet assembly	
11B-41	Rivet plug	
11B-79	Rivet plug	(5)
11B-108	Idle port rivet plug	
11B-117S	Idle passage plug assembly	
11B-119S	Ball retainer screw plug assembly	
11B 127S	Passage plug assembly	(2)
11B-164	Nozzle retainer plug	
12-504	—Nozzle	
14 222S	Choke piston lever link and shaft assembly	
14-406S	Choke lever screw and link assembly	
15-35S	Strainer nut assembly	



Part No	PART NAME	
20-22	Needle seat and plug gasket	(3)
20-26	Metering rod jet and plug gasket	(3)
20-35	Bowl strainer gasket	
20 45	Nozzle gasket	
21-76S	Float and lever assembly	
24-15	Float lever pin	
25-327S	Needle and seat assembly	
30-14	Bowl strainer gauze	
30-35	Pump strainer	
30A-39	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	Throttle valve attaching screw	(2)
48-72	Pump jet	
53A-166S	Pump arm and countershaft assembly	
61-57	Idle adjustment screw spring	
61-63	Pump spring	
61-75	Metering rod spring	
61-178	Vacuum piston spring	
61-188	Rocker arm spring	
63-48	Coil housing retainer	(3)
64-58S	Plunger and rod assembly	
72-57	V Seal air horn adaptor	
75-1363	—Metering rod—standard .076" x .0675" x .059"	
86-15	Flange stud lock washer	(2)
101-26	Coil housing attaching screw	(3)
101 28	Throttle shaft arm clamp screw	
101-78	Choke lever clamp screw	
101-81	Fast idle cam screw	
101-120	Throttle lever adjusting screw	
101-143S	Piston housing attaching screw and washer assembly	
101-147S	Body flange attaching screw and washer assembly	(2)
101-148S	Bowl cover attaching screw and washer assembly	(5)
101-151S	Air horn attaching screw and washer assembly	(2)
105A-13	Flange stud nut	(2)
114-42S	Throttle shaft arm and screw assembly	
115-122	Throttle connector rod	
116-13	Pump intake and discharge check ball	(2)
117-58	Pump connector link	
117-66S	Piston link and spring assembly	
118-28	Dust cover	
120-133S	Metering rod jet assembly	
121-51	Air horn gasket	
121-58	Bowl cover gasket	
121-72	Body flange gasket	
121-74	Coil housing gasket	
129 15	Metering rod disk	
146-88S	Bowl cover and strainer assembly	
150-62	Choke piston pin	
150-92	Anti percolator pin	
150A-10	Pin spring	(3)
160-67S	Vacuum piston and pin assembly	
160-75	Choke piston	
170G-64S	Thermostatic coil and housing assembly	
172-21	Throttle connector rod retainer	
181-53S	Fast idle cam and pin assembly	
184-18S	Anti percolator cap and rocker arm assembly	

—Parts so marked are new and listed for the first time

NOTE **Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.**

REO TRUCK "V-8"

GOLD COMET

1957

Engine Models: OV-207, OV-235

WCFB Four-Bore Down-Draft Climatic® Control **Carbureters Nos. 2563S-2563SA**

CARBURETER SPECIFICATIONS

For Reo 8 Cylinder Engine: 3⅞ Inch Bore, 4⅛ Inch Stroke (OV-207)

For Reo 8 Cylinder Engine. 4⅛ Inch Bore, 4⅛ Inch Stroke (OV235)

Dimensions Flange size, 1⅛ inch Four Bore—4 bolt type
Primary venturi size 11/32 inch I. D
Main venturi (primary) size 1-1/16 inch
Main venturi (secondary) size, 15/16 inch I D

Vents Outside none Inside, (5)

Gasoline Intake Size No 42 (.0935 inch) drill hole in needle seat

Low Speed Jet Tube: (Primary side only) Jet, pressed in place (DO NOT REMOVE) size No 68 (.031 inch) drill
By pass in body size No 52 (.0635 inch) drill
Economizer in screw plug size No 57 (.043 inch) drill
Idle bleed in body, size No 52 (.0635 inch) drill

Idle Port (Upper) slot type Primary length .174 inch, width .040 inch Secondary none

Idle Port Opening Primary, .113 to .119 inch above top edge of valve with valve tightly closed Secondary none

Lower Port Primary (for idle adjustment screw), size No 53 (.0595 inch) drill Secondary, none

Set Idle Adustment Screw: ¾ to 1¾ turns open For richer mixture turn screw out Do not idle engine below 400 r p m

Main Nozzle: Installed permanently DO NOT REMOVE Anti-percolating bleed (off nozzle well), size No 60 (.040 inch) drill

Metering Rod: (Vacumeter type) see parts list for size.

Metering Rod Jet: Primary, size .096 inch diameter (for metering rod)
Secondary, size .059 inch diameter (no metering rod).

Accelerating Pump: Discharge jet (twin) primary side only, size No 74 (.0225 inch) drill.
Intake ball check seat, size .115 to .120 inch diameter
Discharge needle seat, size .070 inch diameter.

Choke: Carter Climatic® Control, set on index Butterfly type —offset choke valve, primary side only. Choke heat suction hole restriction in piston housing, size No 43 (.089 inch) drill

Vacuum Spark Port: None

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .025"	Breaker Point Setting .016"	Ignition Timing Breaker Points to Open T. D. C.	Valve Setting (Hot) Intake .020" Exhaust .020"	Float Setting 3/16 Inch (Use Gauge T109-222)	Idle Adjustment Screw Setting ¾ to 1¾ Turns Open Idle Engine at 400 R.P.M.

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: Two separate float adjustments must be made—lateral and vertical. **LATERAL ADJUSTMENT:** With bowl cover assembly inverted, bowl cover gasket removed and float resting on seated needle, place float gauge (T109-222) directly under floats with notched portion of gauge fitted over edge of casting. Side of floats should just clear the vertical uprights of float gauge. Adjustment should be made by bending arms of floats. **VERTICAL ADJUSTMENT:** With float gauge in same position, floats should just clear the horizontal portion of gauge. Vertical distance between top of float and machined surface of casting must be 3/16 inch for both primary and secondary floats (gauge T109-222). Adjust by bending float arm.

FLOAT DROP ADJUSTMENT: With bowl cover held in upright position and measuring from center of float, the distance between top of floats and bowl cover should be 11/16 inch for both primary and secondary floats. Adjust by bending stop tabs on float brackets.

PUMP ADJUSTMENT: Install pump connector link in outer hole (long stroke) of pump arm, with ends extending toward countershaft arm. Back out throttle lever set screw until throttle valves seat in bores of carbureter. Hold straight edge across top of dust cover boss at pump arm. The flat on top of pump arm should be parallel to straight edge. Adjust by bending throttle connector rod at lower angle. (Use tool T109-213.)

METERING ROD ADJUSTMENT: Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows: (1) Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw. (2) With metering rods in place, press down on vacumeter link until metering rods bottom in carbureter body casting. (3) Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link. Hold in place and carefully tighten clamp screw.

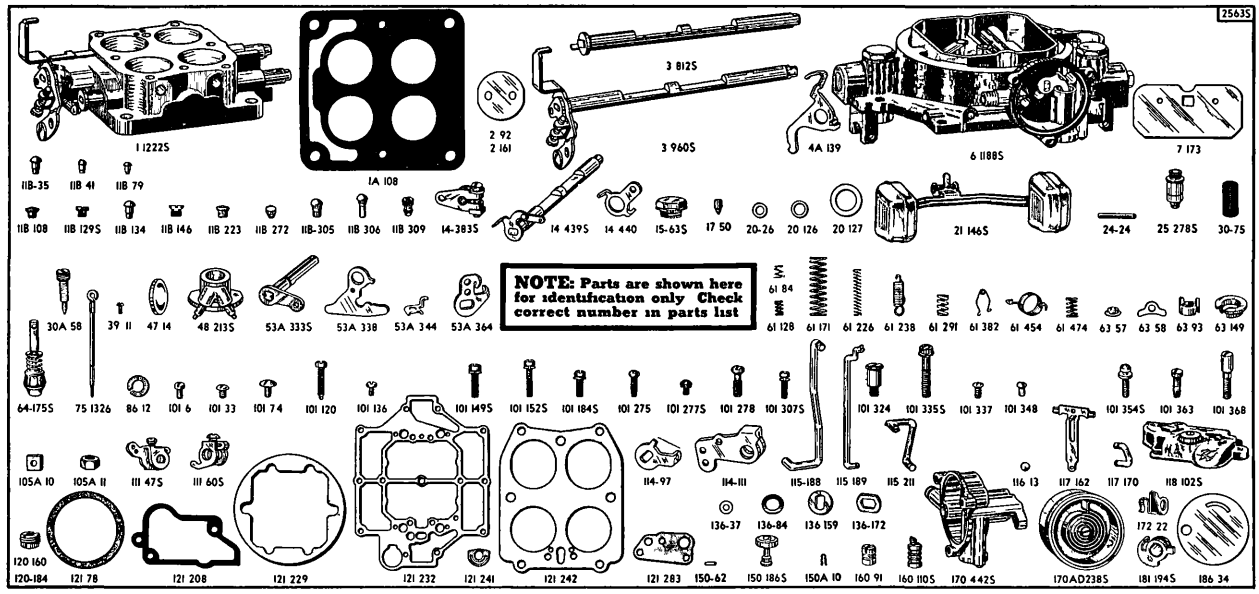
BOWL VAPOR VENT ADJUSTMENT: This adjustment should be made after completing pump and metering rod adjustments. Install dust cover and dust cover gasket. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter. There should be 1/16 inch (gauge T109-197) between lower edge of bowl vapor vent valve and dust cover. To adjust, remove dust cover and bend vapor vent arm.

FAST IDLE ADJUSTMENT: (a) Loosen choke lever clamp screw on choke shaft. Insert .020 inch feeler gauge (T109-29) between lip of fast idle cam and boss of flange casting. Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw. (b) With choke valve tightly closed, tighten fast idle adjusting screw until there is .030 inch (gauge T109-29) opening between throttle valve and bore of carbureter, side opposite idle port. Be sure fast idle adjusting screw is on high step of cam while making this adjustment.

UNLOADER ADJUSTMENT: With throttle wide open there should be 3/16 inch (gauge T109-28) clearance between upper edge of choke valve and inner wall of air horn. Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41).

SECONDARY THROTTLE LEVER ADJUSTMENT: Primary and secondary throttle valves should reach wide open position at the same time. To adjust, bend throttle operating rod at upper angle. (Use bending tool T109-213.) With primary and secondary throttle valves in tightly closed position there should be .017-.022 inch (gauge T109-29) clearance between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on primary lever.

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: This adjustment should be made after completing fast idle and secondary throttle lever adjustments. Crack throttle valves and manually open and close the choke valve. Tang on secondary throttle lever should freely engage in notch of lock-out dog. If necessary to adjust, bend tang on secondary throttle lever.



Reo Truck—1957—Carbureters Nos. 2563S-2563SA

WHEN SERVICING, USE GASKET ASSORTMENT No. 308

Part No.	PART NAME	
1-1222S	Body flange assembly	
1A-108	Flange gasket	
2-92	Primary throttle valve	(2)
2-161	Secondary throttle valve	(2)
3-812S	Secondary throttle shaft and dog assembly	
3-960S	Primary throttle shaft and lever assembly	
4A-139	Throttle shaft dog	
6-1188S	Air horn assembly (2563S) (Sup by 6 1295S)	
6-1295S	Air horn assembly	
7-173	Choke valve	
11B-35	Rivet passage plug	(4)
11B-41	Rivet plug	
11B-79	Rivet plug (early prod (4) (late prod (3)	
11B-108	Idle port rivet plug	(2)
11B-129S	Pump discharge passage plug assembly	
11B-134	Rivet plug	
11B-146	Level sight plug	(2)
11B-223	Nozzle passage rivet plug	(4)
11B-272	Rivet plug	(2)
11B-305	Rivet plug	(2)
11B-306	Rivet plug	
11B-309	Economizer screw plug	(2)
14-383S	Choke lever and screw assembly	
14-439S	Choke piston lever link and shaft assembly	
14-440	Cam trip lever	
15-63S	Strainer nut assembly	(2)
17-50	Pump check needle	
20-26	Pump discharge passage plug gasket	
20-126	Needle seat gasket	(2)

Part No	PART NAME	
20-127	Bowl strainer gasket	(2)
21-146S	Float and lever assembly	(2)
24-24	Float lever pin	(2)
25 278S	Needle and seat assembly	(2)
30-75	Gas intake bowl strainer	
30A-58	Idle adjustment screw	(2)
39-11	Choke valve attaching screw	(2)
47-14	Welsh plug	
48-213S	Pump jet and housing assembly	
53A-333S	Pump operating lever and countershaft assembly	
53A-338	Lockout arm	
53A-344	Vent arm	
53A-364	Secondary operating lever	
61-84	Idle adjustment screw spring	(2)
61-128	Connector rod spring	
61-171	Pump spring (lower)	
61 226	Vacuum piston spring	
61-238	Throttle flex spring	
61-291	Throttle lever adjusting screw spring	
61 382	Metering rod spring	
61-454	Fast idle cam spring	
61-474	Bowl vent spring	
63-57	Intake check ball retainer	
63-58	Coil housing retainer	(3)
63 93	Connector rod spring retainer	
63-149	Bowl vent spring retainer	
64-175S	Pump plunger rod spring and retainer assembly	
75 1326	Metering rod—standard 0725" x 067"	(2)
86 12	Flange stud lock washer	(4)

Part No.	PART NAME	
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	(2)
101 120	Fast idle adjustment screw	
101-136	Coil housing attaching screw	(3)
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-275	Piston housing attaching screw	
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet housing attaching screw	
101-307S	Air horn attaching screw and washer assembly	(8)
101-324	Fast idle cam screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-348	Primary throttle valve attaching screw	(4)
101-354S	Choke lever clamp screw assembly	
101-363	Piston housing attaching screw	(2)
101-368	Throttle lever adjusting screw	
103-14	Lead shot (late prod)	
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
114-97	Throttle shaft arm (outer)	
114-111	Throttle shaft arm (inner)	
115-188	Throttle connector rod	
115-189	Choke connector rod	
115-211	Throttle operating rod	

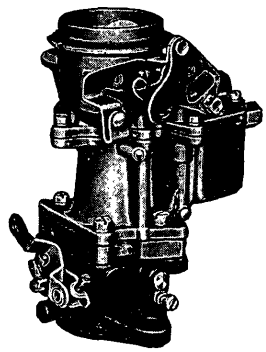
Part No	PART NAME	
116 13	Pump intake check ball	
117-162	Vacumeter piston link	
117-170	Pump connector link	
118-102S	Dust cover assembly	
120 160	Primary metering rod jet	(2)
120-184	Secondary metering jet	(2)
121-78	Coil housing gasket	
121-208	Dust cover gasket	
121-229	Air cleaner gasket	
121-232	Air horn gasket	
121-241	Pump jet housing gasket	
121-242	Body flange gasket	
121-283	Piston housing gasket (2563S) (Sup by 121 298)	
121-298	Piston housing gasket	
136-37	Throttle operating rod washer	
136-84	Spring washer	
136-159	Throttle shaft washer	
136 172	Secondary throttle shaft washer	
150-62	Choke piston pin	
150-186S	Pin and valve cap assembly	
150A-10	Pin spring	(4)
160-91	Choke piston	
160-110S	Vacuum piston and pin assembly	
170-442S	Piston housing and plug assembly (2563S)	
170-507S	Piston housing and plug assembly (2563SA)	
170AD238S	Thermostatic coil and housing assembly	
172-22	Throttle connector rod retainer	
181-194S	Fast idle cam assembly	
186-34	Choke baffle plate	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.

CARBURETER
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TRUCK MODELS
E20—1950-51
F20—1950-57
E120—1951-52
F120—1953-57

ENGINE MODEL
Gold Comet
OA-255



REO TRUCK
1950-1957

BBR2 DOWN-DRAFT CARBURETER—**No. 799S**

CARBURETER SPECIFICATIONS

For Reo Truck, 6 Cylinder Engine: 3⅝ Inch Bore, 4⅛ Inch Stroke

Dimensions: Flange size, 1½ inch.
Throttle bore, 1-11/16 inch.
Main venturi, 1-11/32 inch I. D.

Float Setting: Top of float 5/64 inch below top surface of carbureter body casting. Plus or minus 1/64 inch.

Vents: Outside none. Inside balance vent tube .218 inch diameter.

Gasoline Intake Needle: Triangular, horizontal No. 38 (.1015 inch) drill in needle seat.

Idle Orifice Tube: Jet size, .0276 inch (.70 mm) drill. Idle passage air bleed, in air horn, size .0465 inch diameter. Restriction in body, size .0452 inch diameter.

Idle Ports: Upper port. Slot type; length .149 inch, width .030 inch. Top of port located .118 to .122 inch above top edge of valve.
Lower port size .053 to .057 inch drill. (For idle adjustment screw.)

Set Idle Adjustment Screw: ¾ to 1¼ turns open. For richer mixture turn screw out. Do not idle engine below 450 r.p.m.

Main Metering Screw: Calibrated to flow 328 to 332 cc per minute. (Do not gauge for size. If in doubt replace with new part.)

Main Vent: Through diffuser (air bleed inside bowl.) Size .0315 inch drill.

Vent Tube: Side Holes:
2—.0354 inch (.90 mm). Approximately 21/64 inch from end.
2—.0354 inch (.90 mm). Approximately 1-1/64 inches from end.

Step-Up Jet: Power orifice No. 63 (.037 inch) drill.

Accelerating Pump: Type—delayed action, seasonal adjustment. Stroke—Summer setting (inner hole, short stroke). Intermediate setting (center hole). Winter setting (outer hole, long stroke). Pump intake passage ball check seat, size .107 to .112 inch diameter in body. Pump discharge passage: Restriction (under ball check) size .062 to .065 inch diameter in body. Pump (discharge) jet size, .0375 inch drill.

Pump Adjustment: 30/64 inch plunger travel—full throttle position, long stroke. Use gauge T109-117S.

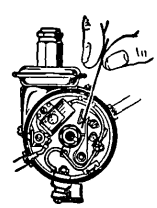
Choke: Offset butterfly type, with poppet valve.

Motor Tune-Up—Be Accurate!

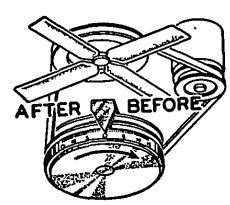
CAUTION: **Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.**



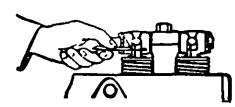
Spark Plug Gap .025"



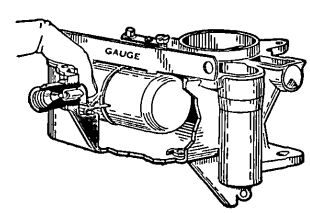
Breaker Point Setting .022"



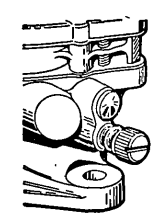
Ignition Timing Breaker Points to Open: 8° B.T.D.C. at 400 R.P.M. or below



Valve Setting Hot Intake .015" Exhaust .015"



Float Setting (Use Gauge) 5/64" ± 1/64"



Idle Adjustment Screw Setting ¾ to 1¼ Turns Open

CARBURETER ADJUSTMENTS

If carbureter loads up after considerable service, check float level. Wear on lip of float lever will raise float level. Before adjusting float, be sure float lever pin is firmly seated. Reset float level by bending lip of float lever away from needle to raise level, or bend lip toward needle to lower float level. Bend vertical lip of float only.

If motor stalls while idling, set throttle lever adjusting screw so motor does not idle below 450 r.p.m. Then set idle adjustment screw to specifications. If these adjustments do not correct the trouble, remove idle orifice tube and plug assembly. Clean tube passages with compressed air.

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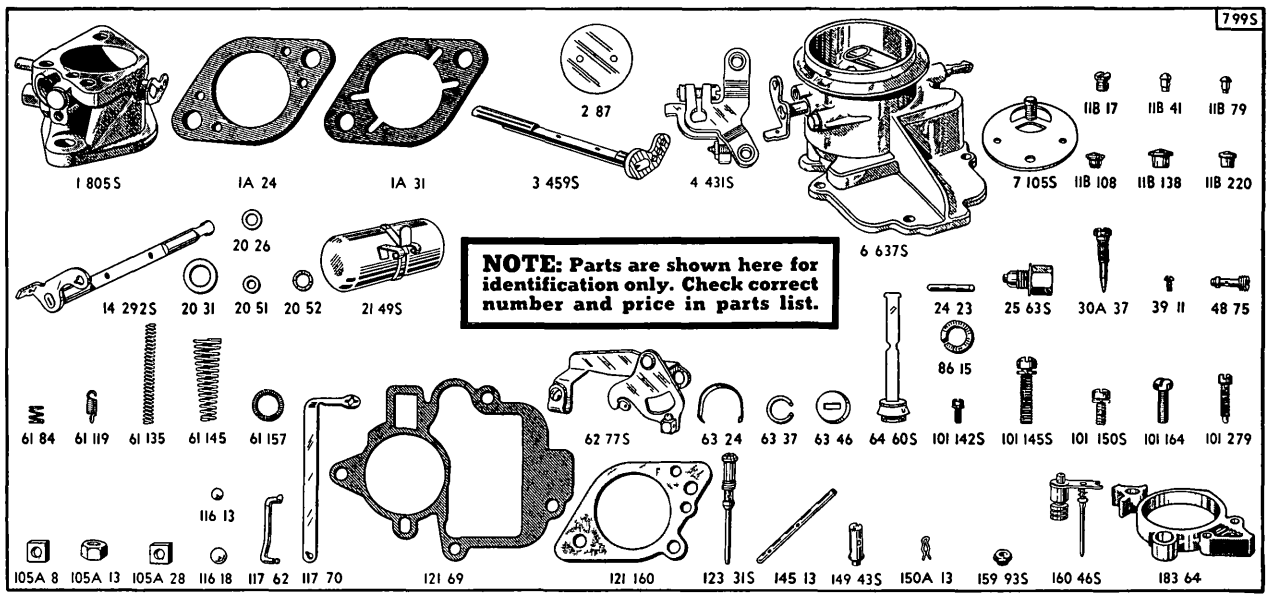
If acceleration is not satisfactory, remove pump jet and clean with compressed air However, it is usually advisable to replace the pump jet, as its cost is nominal All jets must be seated gasoline tight Poor acceleration may be due to damaged or worn plunger leather in accelerating pump, sediment in pump cylinder or clogged intake ball check at bottom of pump cylinder and discharge ball check in discharge passage If plunger is removed from cylinder, use care in installing to avoid damage to plunger leather

Correct air fuel ratio is provided by a "balance tube" in the air horn The balance tube should be checked each time the carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type, size or condition of air cleaner Should the cleaner become clogged, the capacity will be reduced but the air-fuel mixture ratio will not be changed

Excessive richness above 50 miles per hour may be caused by a clogged main vent tube After removal of rivet plug beneath float bowl with Tool No T109-43, main vent tube can be removed and a new tube inserted with Tool No T109-195 Care must be exercised in inserting new tube which must seat tightly Use new rivet to complete the installation

Pump Adjustment. Remove air horn assembly, back out throttle adjustment screw, and place pump operating link in center hole of throttle shaft arm Place gauge T109-117S on edge of bowl cover so that lip of gauge extends over top of plunger shaft Turn knurled nut of gauge until lip contacts plunger shaft at closed and wide open throttle positions Difference in readings obtained at closed and wide open throttle positions should be 30 (30/64") plunger travel Adjustments can be made by bending horizontal portion of pump lifter link

Pump stroke adjustable for high or low temperature Set to long stroke for cold weather, short stroke for hot weather driving



Reo Carbureter No. 799S

WHEN SERVICING, USE GASKET ASSORTMENT No 137A, REPAIR PACKAGE No 1564

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-805S	Body flange assembly	
1A-24	Flange gasket—for use with governor	
1A-31	FLANGE GASKET—FOR USE WITHOUT GOVERNOR	
2-87	Throttle valve	
3-452S	Throttle shaft and arm assembly	
3-459S	Throttle shaft and arm assembly (Sup by 3 452S)	
4-431S	Throttle lever assembly	
6-637S	Air horn assembly	
7-105S	Choke valve assembly	
11B-17	Pump discharge passage plug	
11B-41	Rivet plug	
11B-79	Rivet passage plug	(2)
11B-108	IDLE PORT RIVET PLUG	
11B-138	PUMP JET RIVET PLUG	
11B-220	HIGH SPEED PASSAGE PLUG	
14-292S	Choke lever and shaft assembly	
20-26	Gasket	
20-31	Needle seat gasket	
20-51	Step up jet gasket	
20-52	STEP UP PISTON GASKET	
21-49S	Float and lever assembly	
24-23	Float lever pin	
25-63S	Needle and seat assembly (Sup by 25 235S)	
25-235S	NEEDLE AND SEAT ASSEMBLY	
30A-37	Idle adjustment screw	
39-11	Choke and throttle valve attaching screw	(4)
48-75	PUMP JET	
61-84	Idle adjustment screw spring	
61-119	Choke pull back spring	
61-135	STEP UP PISTON SPRING	
61-145	PUMP SPRING	

Part No	PART NAME	
61-157	Plunger spring	
62-77S	Choke tube bracket assembly	
63-24	FLOAT LEVER PIN RETAINER	
63-37	PUMP CHECK BALL RETAINING RING	
63-46	Pump spring retainer	
64-60S	PUMP PLUNGER AND ROD ASSEMBLY (Identify by shaft 49 120)	
86-15	Flange stud lock washer	(2)
101-142S	Choke tube bracket attaching screw and washer assembly	
101-145S	Body flange attaching screw and washer assembly	(3)
101-150S	Air horn attaching screw and washer assembly	(4)
101-164	Throttle lever clamp screw	
101-279	Throttle adjusting screw	
105A-8	Choke tube clamp nut	
105A-13	Flange nut	(2)
105A-28	Throttle lever clamp nut	
116-13	PUMP INTAKE CHECK BALL	
116-18	PUMP DISCHARGE CHECK BALL	
117-62	PUMP LINK	
117-70	PUMP LIFTER LINK	
121-69	BODY GASKET	
121-160	BODY FLANGE GASKET	(2)
123-31S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
145-13	MAIN VENT TUBE	
149-43S	STEP UP JET ASSEMBLY	
150A-13	PIN SPRING	
159-93S	MAIN METERING JET ASSEMBLY	
160-46S	STEP UP PISTON PLATE AND ROD ASSEMBLY	
183-64	Insulator	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

REO

Models:

(5200-K)
WK-18 and WK-21 Royales

(5210-K)
RK-25 Trimalawn

(5220-K) PK-20 Snow Throw

(5230-K)
TK-18 and TK-21 Spin Trims

(5250-K)
TKS-18 and TKS-21 Power Trim

(5260-K)
YRK-25 Ride a Lawn

(5240-K) WLK-18 Scotty

HORIZONTAL, MODEL N TYPE, **CARBURETERS Nos. N-2376S, N-2465S**

CARBURETER SPECIFICATIONS

For Reo One (1) Cylinder Four (4) Cycle Engine 2⅛ Inch Bore, 1⅞ Inch Stroke

Dimensions Flange size ½ inch S A E (Slotted) Main Venturi size 7/16 inch

Float Level Distance from top of float (at free end) opposite needle seat to outer edge of float chamber cover when needle is seated to be (N 2376S) 11/64 inch (gauge T109 166)

Vent Inside size No 20 (.161 inch) drill

Gasoline Intake Size No 48 (.076 inch) drill

Low Speed Jet Tube Jet size No 75 (.021 inch) drill Auxiliary jets (Idle Bleed) in side of tube 4—size No 70 (.028 inch) drill

Idle Port Round type size 039 to 042 inch diameter

Idle Port Opening Top of port to be 025 to 029 inch above top edge of valve with valve tightly closed

Idle Screw Seat Size 051 inch diameter

Set Idle Adjustment Screw ¾ to 2¼ turns open For richer mixture turn screw out Do not idle engine below 2000 r p m

Main Nozzle (N 2376S) accelerating jets (in side of nozzle) 4—size No 62 (.038 inch) drill (N 2465S) Nozzle installed permanently DO NOT REMOVE Nozzle passage (nozzle well to air horn) size No 32 (.116 inch) drill

High Speed Adjusting Needle Seat (in base of nozzle) size 040 inch diameter Setting see adjustments

Choke Manual—butterfly type

MOTOR TUNE-UP

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open	Valve Setting (Cold)	Float Setting	High Speed Adj Screw Setting	Idle Adjustment Screw Setting
025"	.020"	22½° B T D C	Int 008"-012" Exh 010"-014"	11/64" (Plus or Minus 1/32')	¼ to 1¾ Turns Open	¾ to 2¼ Turns Open

SERVICE PROCEDURE

To Disassemble

1 Remove carbureter from engine
2 Remove bowl nut gasket and bowl
3 Remove float pin float needle and needle seat C float for dents leaks and wear on float lip or in floa holes
4 Remove bowl ring gasket
5 Remove low speed jet and high speed adjusting neec sembly and spring
6 Remove idle adjustment screw and spring
7 (N 2376S) Remove nozzle (N 2465S) Nozzle installe manently DO NOT REMOVE
8 Remove throttle valve screws valve and shaft and assembly
9 Do not remove choke valve and shaft unless replac of these parts is necessary A spring loaded ball choke in wide open position Be sure to use a ne and spring when replacing choke shaft and lever ass CAUTION Hold a screw driver handle or a small piece of wood over threaded hole in air horn (side opposite choke lever) to prevent the ball from flying out when shaft is removed
10 Clean all parts in clean solvent making sure all carbon accumulation is removed from bore especially where throttle valve seats in casting Blow out all passages with compressed air Replace all worn and damaged parts Always use new gaskets

To Assemble

11 Install throttle shaft and valve Valve must be installed with trademark c on side toward idle port when viewing from flange side Always use new screws With valve set screw backed out seat small screw driver Hold

REO
Form 5161C
Carb. N-2376S, N 2465S
Change to read
23 59 Bowl (N 2465S early prod)
Add
11B 375S—Bowl drain plug assembly (N 2465S late prod)
20 113 — Bowl drain gasket (N 2465S late prod)
23 64 — Bowl (with drain) (N 2465S late prod)
61 600 —Bowl drain spring (N 2465S late prod)

g sure it seats in casting
t and float pin
eter casting inverted float
n its seat there should be
13/64" clearance between
end of float (side opposite
ding lip of float with small
bowl nut gasket and bowl
nut tighten securely after making sure bowl is centered in gasket

16 Install low speed jet and high speed needle assembly Turn in until it seats in nozzle then back out 1 turn
17 Then install idle adjusting screw finger tight Back out approximately 1¾ turns DO NOT USE PLIERS OR SCREW DPIVER AS IT MAY DAMAGE IDLE SCREW

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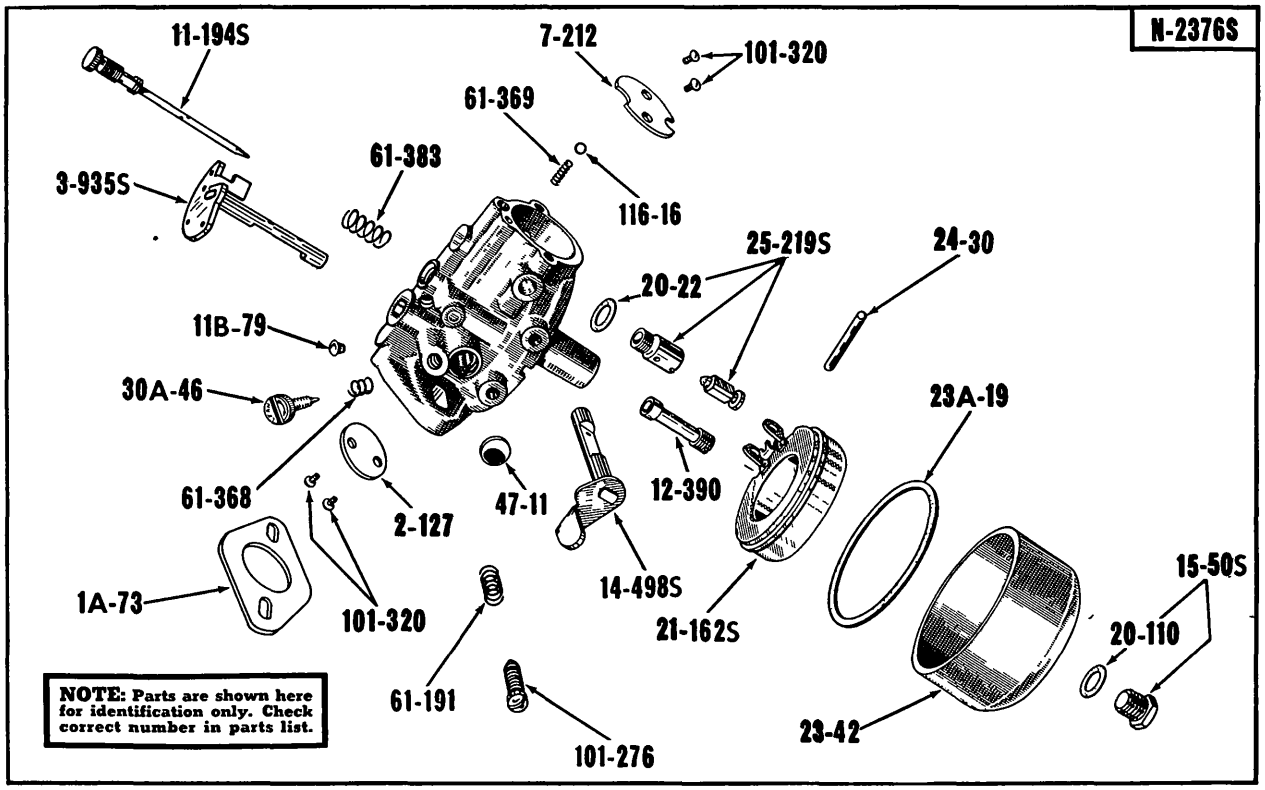
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HIGH SPEED AND IDLE SCREW ADJUSTMENT

After rebuilding and installation on engine is complete the high speed and idle screw adjustments must be made With the high speed needle turned counter clockwise (from closed position) 1 turn and idle screw turned 1¾ turns open start engine

With the engine at normal operating temperature accelerate engine and check response The high speed needle should be adjusted for the leanest possible mixture which will allow satisfactory acceleration and steady governor operation If the engine misses and backfires the high speed mixture is too lean and the high speed adjustment screw must be turned counter clockwise ⅛ turn at a time to correct this condition If the engine loads (heavy exhaust) and is sluggish the mixture is too rich and the high speed adjustment screw must be turned clockwise ⅛ turn at a time to correct To make final check of the high speed adjustment operate the engine under load and adjust

The idle screw should be adjusted intermittently while making the high speed adjustment DO NOT USE FORCE ON THE HIGH SPEED NEEDLE OR IDLE SCREW AS DAMAGE MAY RESULT



Reo—Carbureters Nos. N-2376S, N-2465S

WHEN SERVICING USE REPAIR PACKAGE No. 1815 (N-2376S)

PART NAMES IN CAPITAL LETTERS, LISTED BELOW INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME
1A-73	FLANGE GASKET
2-127	Throttle valve
3-935S	Throttle shaft and lever assembly
7-212	Choke valve
11-194S	Low speed jet and high speed adjusting needle assembly (Sup by 11 300S)
11-300S	LOW SPEED JET AND HIGH SPEED ADJUSTING NEEDLE ASSEMBLY
11B-79	Rivet plug
12-390	NOZZLE (N 2376S)
14-498S	Choke shaft and lever assembly (Sup by 14 563S)
14-563S	Choke shaft and lever assembly
15-50S	Bowl nut assembly (N 2376S) (Sup by 15 54S)
15-54S	Bowl nut assembly (Sup by 15 64S)
15-64S	Bowl nut assembly
20-22	Needle seat gasket
20-110	BOWL NUT GASKET
21-162S	Float and lever assembly (N 2376S)
21-163S	Float and lever assembly (N 2465S)

Part No.	PART NAME
23-42	Bowl (N 2376S)
23 59	Bowl (N 2465S)
23A-19	BOWL RING GASKET
24 30	FLOAT LEVER PIN
25-33S	Needle and seat assembly (N 2465S)
25-219S	NEEDLE AND SEAT ASSEMBLY (N 2376S)
30A-46	Idle adjustment screw (Sup by 30A 72)
30A-72	Idle adjustment screw
47-11	Welsh plug
61-191	Throttle lever adjusting screw spring
61-368	Idle adjustment screw spring
61-369	Choke shaft spring
61-383	High speed adjusting screw spring
101-276	Throttle lever adjusting screw
101-320	CHOKE AND THROTTLE VALVE ATTACHING SCREW (4)
116-16	Choke shaft ball

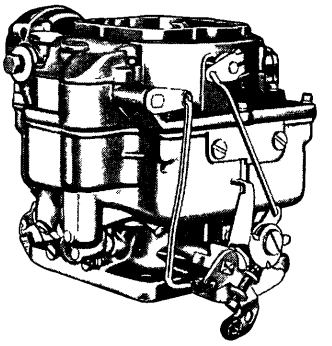
NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.

CARTER CARBURETOR
DIVISION OF ACF INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

REO TRUCK 2220S-2265S
February, 1955
Revised June, 1956

(2220S)
Engine Model OV-220

(2265S)
Engine Model OV-195, OV-220
OV-200 OV235



REO TRUCK "V-8" GOLD COMET 1955-1956

(2265S can be used in in place of 2220S)

WCFB Four-Bore Down-Draft Climatic® Control **Carbureters Nos. 2220S-2265S**

CARBURETER SPECIFICATIONS

For Reo 8 Cylinder Engine: 4 1/8 Inch Bore, 4 1/8 Inch Stroke (2220S)
For Reo 8 Cylinder Engine: 3 7/8 Inch Bore, 4 1/8 Inch Stroke (2265S)

Dimensions: Flange size, 1 1/8 inch Four Bore—4 bolt type.
Primary venturi size, 11/32 inch I. D.
Main venturi (primary) size, 1-1/16 inch.
Main venturi (secondary) size, 15/16 inch I. D.

Float Level: See adjustments.

Vents: Outside, none. Inside, balance vent tube in air horn, 2 on primary side, 3 on secondary side.

Gasoline Intake: Size No. 42 (.0935 inch) drill hole in needle seat.

Low Speed Jet Tube: (Primary side only).
Jet, pressed in place (DO NOT REMOVE) size No. 68 (.031 inch) drill.
By pass, in body, size No. 52 (.0635 inch) drill.
Economizer, in screw plug, size No. 57 (.043 inch) drill.
Idle bleed, in body, size No. 52 (.0635 inch) drill.

Idle Port: (Upper) slot type. Primary, length .174 inch; width .040 inch. Secondary, none.

Idle Port Opening: Primary, .113 to .119 inch above top edge of valve with valve tightly closed. Secondary, none.

Lower Port: Primary (for idle adjustment screw), size No. 53 (.0595 inch) drill. Secondary, none.

Set Idle Adjustment Screw: (2220S) 1 1/2 to 2 1/2, (2265S) 3/4 to 1 3/4, turns open. For richer mixture turn screw out. Do not idle engine below 500 r.p.m.

Main Nozzle: Installed permanently. DO NOT REMOVE. Anti-percolating jet (off nozzle well), size No. 60 (.040 inch) drill.

Metering Rod: Primary, economy step .071 inch diameter. Middle step tapers to .066 inch diameter. Power step .051 inch diameter. Secondary, none.

Metering Rod Jet: Primary, size .096 inch diameter (for metering rod). Secondary, size .0492 inch diameter (no metering rod).

Metering Rod Setting: See adjustments.

Accelerating Pump: Discharge jet (twin) primary side only, size No. 74 (.0225 inch) drill.
Intake ball check seat, size .115 to .120 inch diameter.
Discharge needle seat, size .070 inch diameter.

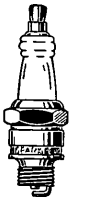
Pump Adjustment: See adjustments.

Choke: Carter Climatic® Control, set on index. Butterfly type—offset choke valve, primary side only. Choke heat suction hole, restriction in piston housing, size No. 43 (.089 inch) drill.

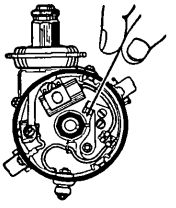
Vacuum Spark Port: None.

Motor Tune-Up—Be Accurate!

CAUTION: **Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.**



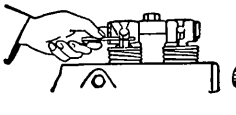
Spark Plug
Gap
.025"



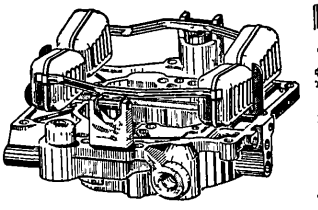
Breaker Point
Setting
.016"



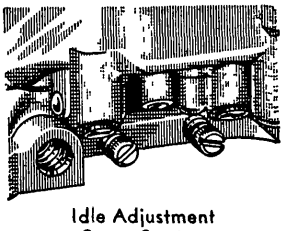
Ignition Timing
OV-220 Eng.
6° B.T.D.C.
OV-195 Eng.
2° B.T.D.C.



Valve Setting
(Hot)
Intake .020"
Exhaust .020"



Float Setting
See Adjustments



Idle Adjustment
Screw Setting
(2220S) 1 1/2 to 2 1/2
(2265S) 3/4 t 1 3/4
Turns Open

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: Two separate float adjustments must be made—lateral and vertical. **LATERAL ADJUSTMENT:** With bowl cover assembly inverted, bowl cover gasket removed and float resting on seated needle, place float gauge (T109-222) directly under floats with notched portion of gauge fitted over edge of casting. Side of floats should just clear the vertical uprights of float gauge. Adjustment should be made by bending arms of floats. **VERTICAL ADJUSTMENT:** With float gauge in same position, floats should just clear the horizontal portion of gauge. Vertical distance between top of float and machined surface of casting must be 3/16 inch for both primary and secondary floats (gauge T109-222). Adjust by bending float arm.

FLOAT DROP ADJUSTMENT: With bowl cover held in upright position and measuring from center of float, the distance between top of floats and bowl cover should be 11/16 inch for both primary and secondary floats. Adjust by bending stop tabs on float brackets.

PUMP ADJUSTMENT: Install pump connector link in outer hole (long stroke) of pump arm, with ends extending toward countershaft arm. Back out throttle lever set screw until throttle valves seat in bores of carbureter. Hold straight edge across top of dust cover boss at pump arm. The flat on top of pump arm should be parallel to straight edge. Adjust by bending throttle connector rod at lower angle. (Use tool T109-213.)

METERING ROD ADJUSTMENT: Metering rod adment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows: (1) Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw. (2) With metering rods in place, press down on vacumeter link until metering rods bottom in carbureter body casting. (3) Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link. Hold in place and carefully tighten clamp screw.

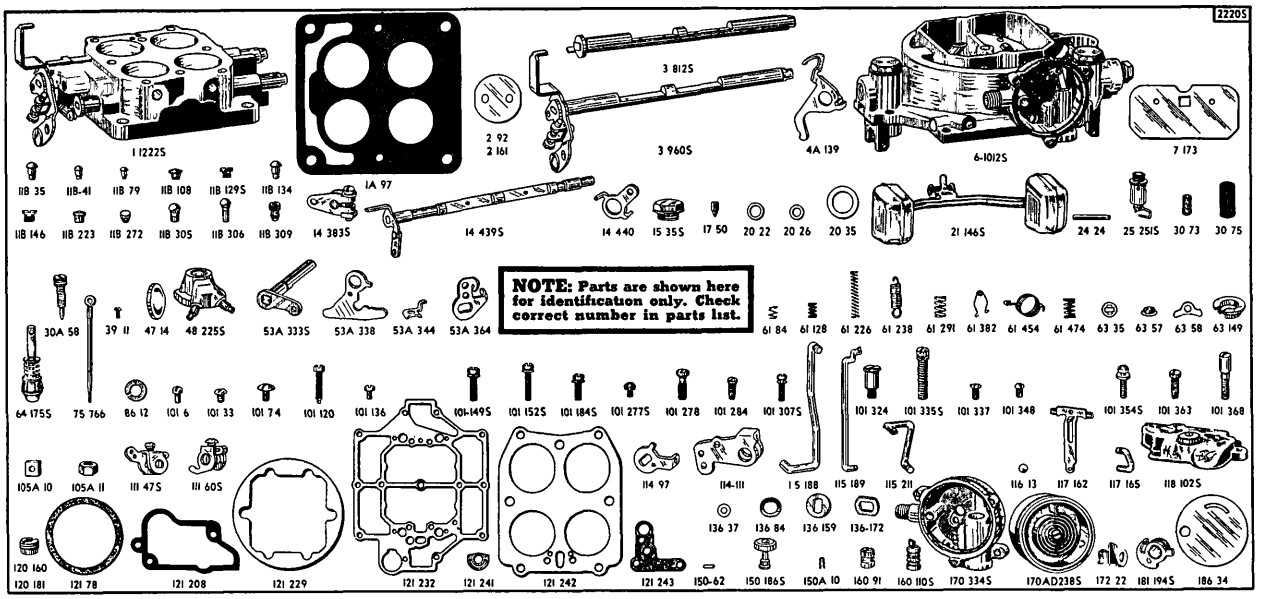
BOWL VAPOR VENT ADJUSTMENT: This adjustment should be made after completing pump and metering rod adjustments. Install dust cover and dust cover gasket. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter. There should be 1/16 inch (gauge T109-197) between lower edge of bowl vapor vent valve and dust cover. To adjust, remove dust cover and bend vapor vent arm.

FAST IDLE ADJUSTMENT: (a) Loosen choke lever clamp screw on choke shaft. Insert .020 inch feeler gauge (T109-29) between lip of fast idle cam and boss of flange casting. Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw. (b) With choke valve tightly closed, tighten fast idle adjusting screw until there is .030 inch (gauge T109-29) opening between throttle valve and bore of carbureter, side opposite idle port. Be sure fast idle adjusting screw is on high step of cam while making this adjustment.

UNLOADER ADJUSTMENT: With throttle wide open there should be 3/16 inch (gauge T109-28) clearance between upper edge of choke valve and inner wall of air horn. Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41).

SECONDARY THROTTLE LEVER ADJUSTMENT: Primary and secondary throttle valves should reach wide open position at the same time. To adjust, bend throttle operating rod at upper angle. (Use bending tool T109-213.) With primary and secondary throttle valves in tightly closed position there should be .017-.022 inch (gauge T109-29) clearance between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on primary lever.

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: This adjustment should be made after completing fast idle and secondary throttle lever adjustments. Crack throttle valves and manually open and close the choke valve. Tang on secondary throttle lever should freely engage in notch of lock-out dog. If necessary to adjust, bend tang on secondary throttle lever.



Reo—1955-1956—Carbureters Nos. 2220S-2265S

WHEN SERVICING, USE GASKET ASSORTMENT No. 233

Part No.	PART NAME	
1-1222S	Body flange assembly	
1A-97	Flange gasket (Sup by 1A 108)	
1A 108	Flange gasket	
2-92	Primary throttle valve	(2)
2-161	Secondary throttle valve	(2)
3-812S	Secondary throttle shaft and dog assembly	
3-960S	Primary throttle shaft and lever assembly	
4A-139	Throttle shaft dog	
6-1012S	Air horn assembly (Casting No 6 972) (2220S)	
6-1038S	†Air horn assembly (Casting No 6 1037) (2265S)	
6-1188S	—Air horn assembly (Casting No 6 1160)	
7-173	Choke valve	
11B-35	Rivet passage plug	(4)
11B-41	Rivet plug (6 1012S 6 1038S (2) (6-1188S (1)	
11B-79	Rivet passage plug	(4)
11B-108	Idle port rivet plug	(2)
11B-129S	Pump discharge passage plug assembly	
11B-134	Rivet plug	
11B-146	Level sight plug	(2)
11B-223	Nozzle passage rivet plug	(4)
11B-272	Rivet plug	(2)
11B-305	Rivet plug (6 1012S 6 1038S (1), (6 1188S (2).	
11B-306	Rivet plug (6 1012S 6-1038S (2), (6-1188S (1)	
11B-309	Economizer screw plug	(2)
14-383S	Choke lever and screw assembly	
14-439S	Choke piston lever link and shaft assembly	
14-440	Cam trip lever	
15-35S	Strainer nut assembly	(2)
17-50	Pump check needle	
20-22	Needle seat gasket	(2)
20-26	Pump discharge passage plug gasket	
20-35	Bowl strainer gasket	(2)
21-146S	Float and lever assembly	(2)
24-24	Float lever pin	(2)
25-251S	Needle and seat assembly	(2)
30-75	Gas intake bowl strainer	
30A-58	Idle adjustment screw	(2)
39-11	Choke valve attaching screw	(2)
47-14	Welsh plug	
48-213S	Pump jet and housing assembly	
48-225S	Pump jet and housing assembly (Sup by 48 213S)	
53A-333S	Pump operating lever and countershaft assembly	
53A-338	Lockout arm	
53A-344	Vent arm	
53A-364	Secondary operating lever	
61-84	Idle adjustment screw spring	(2)
61-128	Connector rod spring	
61-171	Pump spring (lower)	
61-226	Vacuum piston spring	
61-238	Throttle flex spring	
61-291	Throttle lever adjusting screw spring	
61-382	Metering rod spring	
61-454	Fast idle cam spring	
61-474	Bowl vent spring	
63-35	Connector rod spring retainer (Sup by 63 93)	
63-57	Intake check ball retainer	
63-58	Coil housing retainer	(3)
63-93	Connector rod spring retainer	
63-149	Bowl vent spring retainer	

Part No.	PART NAME	
64-175S	Pump plunger rod spring and retainer assembly	
75 766	Metering rod (2220S) (Sup by 75 1167)	(2)
75-1167	Metering rod	(2)
86 12	Flange stud lock washer	(4)
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	(2)
101-120	Fast idle adjustment screw	
101-136	Coil housing attaching screw	(3)
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-275	Piston housing attaching screw (Use with 6 1188S)	
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet housing attaching screw	
101-284	Piston housing attaching screw (6 1012S 6 1038S)	(2)
101-307S	Air horn attaching screw and washer assembly	(8)
101-324	Fast idle cam screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-348	Primary throttle valve attaching screw	(4)
101-354S	Choke lever clamp screw assembly	
101-363	Piston housing attaching screw (6 1012S 6 1038S (1) (6 1188S (2)	
101-368	Throttle lever adjusting screw	
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
114-97	Throttle shaft arm (outer)	
114-111	Throttle shaft arm (inner)	
115-188	Throttle connector rod	
115-189	Choke connector rod	

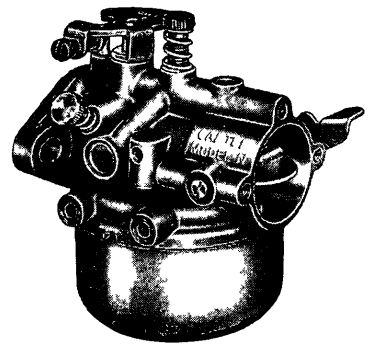
Part No	PART NAME	
115-211	Throttle operating rod	
116-13	Pump intake check ball	
117 162	Vacumeter piston link	
117 165	Pump connector link (Sup by 117 170)	
117-170	—Pump connector link	
118-102S	Dust cover assembly	
120-160	Primary metering rod jet	(2)
120-181	Secondary metering jet	(2)
121-78	Coil housing gasket	
121-208	Dust cover gasket	
121-229	Air cleaner gasket	
121-232	Air horn gasket	
121-241	Pump jet housing gasket	
121-242	Body flange gasket	
121-243	Piston housing gasket (Use with 6 1012S 6 1038S)	
121-283	Piston housing gasket (Use with 6 1188S)	
122-98S	Pump discharge relief valve assembly (2265S) (Sup by 11B 129S)	
136-37	Throttle operating rod washer	
136 84	Spring washer	
136-159	Throttle shaft washer	
136-172	Secondary throttle shaft washer	
150-62	Choke piston pin	
150-186S	Pin and valve cap assembly	
150A-10	Pin spring	(4)
160-91	Choke piston	
160-110S	Vacuum piston and pin assembly	
170-334S	Piston housing and plug assembly (Use with 6 1012S 6 1038S)	
170AD238S	Thermostatic coil and housing assembly	
170-442S	—Piston housing and plug assembly (Use with 6 1188S)	
172-22	Throttle connector rod retainer	
181-194S	Fast idle cam assembly	
186-34	Choke baffle plate	

—Parts so marked are new and listed for the first time

†When using 6 1038S or 6 1188S on 2220S carbureter connect choke cold air supply tube to air horn and plug hole in air cleaner

NOTE **Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.**

CARBURETER
TRADE MARK REG U S PAT OFF
MARCA REGISTRADA



REO

ROYALE MOWER WG-21, WH-21; RUNABOUT WH-18; TRIMALAWN RH-25; FLYING CLOUD TG-20, TH-20; REVO-LAWN TG-18R, TH-18; HOLIDAY WH-18L & 21L; SABRE-JET THS-21; TROLLABOUT INBOARD MARINE KITS MKG-1, MKG-11, MKH-1, MKH-11; SNOW THROW PH-20

(N-2475S can be used in place of N-2026S)

HORIZONTAL, MODEL N TYPE, **CARBURETERS Nos. N-2026S, N-2475S**

CARBURETER SPECIFICATIONS

For Reo One (1) Cylinder Engine 2 Inch Bore 1¾ Inch Stroke

Dimensions Flange size ½ inch S A E
Main venturi size 13/32 inch

Float Level Distance from top of float (at free end) opposite needle seat to outer edge of float chamber cover when needle is seated to be (N 2026S) 11/64 inch (gauge T109 166) (N 2475S) 13/64 inch (gauge T109 39) plus or minus 1/64 inch

Vent Inside none Outside size No 50 (070 inch) drill

Gasoline Intake Size No 48 (076 inch) drill

Low Speed Jet Tube Jet size No 75 (021 inch) drill Auxiliary jets (Idle Bleed) in side of tube 4—size No 70 (028 inch) drill

Idle Port Round type size 027 to 030 inch diameter

Idle Port Opening Top of port to be 006 to 010 inch above top edge of valve with valve tightly closed

Idle Screw Seat Size 051 inch diameter

Set Idle Adjustment Screw 1 to 2 turns open For richer mixture turn screw out Do not idle engine below 1500 r p m

Main Nozzle (N 2026S) Accelerating jets (in side of nozzle) 4—size No 55 (052 inch) drill (N 2475S) Nozzle installed permanently DO NOT REMOVE Nozzle passage (nozzle well to air horn) size No 32 (116 inch) drill

High Speed Adjusting Needle Seat (in base of nozzle) size 040 inch diameter Setting see adjustments

Choke Manual—butterfly type

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open	Valve Setting (Cold)	Float Setting	High Speed Adj Screw Setting	Idle Adjustment Screw Setting
025"	020"	22° B T D C	Int 008"-012" Exh 010" 014"	11/64" (Plus or Minus 1/64")	1¼ to 1¾ Turns Open	1 to 2 Turns Open

SERVICE PROCEDURE

To Disassemble

1 Remove carbureter from engine
2 Remove bowl nut gasket and bowl
3 Remove float pin, float needle and needle seat Check float for dents leaks and wear on float lip or in float pin holes
4 Remove bowl ring gasket
5 Remove low speed jet and high speed adjusting needle assembly and spring
6 Remove idle adjustment screw and spring
7 (N 2026S) Remove nozzle (N 2475S) Nozzle installed permanently DO NOT REMOVE
8 Remove throttle valve screws valve and shaft and lever assembly
9 Do not remove choke valve and shaft unless replacement of these parts is necessary A spring loaded ball retains choke in wide open position Be sure to use a new ball and spring when replacing choke shaft and lever assembly CAUTION Hold a screw driver handle or a small piece of wood over threaded hole in air horn (side opposite choke lever) to prevent the ball from flying out when shaft is removed
10 Clean all parts in clean solvent making sure all carbon accumulation is removed from bore especially where throttle valve seats in casting Blow out all passages with compressed air Replace all worn and damaged parts Always use new gaskets

To Assemble

11 Install throttle shaft and valve Valve must be installed with trademark c on side toward idle port when viewing from flange side Always use new screws With valve screws loose and throttle lever set screw backed out seat valve by tapping lightly with a small screw driver Hold in place while tightening screws
12 (N 2026S) Install nozzle making sure it seats in casting
13 Install needle seat needle float and float pin
14 Set float level With carbureter casting inverted float resting lightly against needle in its seat there should be (N 2026S) 11/64 (N 2475S) 13/64 clearance between outer edge of casting and free end of float (side opposite needle seat) Adjust by bending lip of float with small screw driver
15 Install bowl ring gasket bowl bowl nut gasket and bowl nut Tighten securely after making sure bowl is centered in gasket
16 Install low speed jet and high speed needle assembly Turn in until it seats in nozzle then back out 1½ turns
17 Then install idle adjusting screw finger tight Back out approximately 1½ turns DO NOT USE PLIERS OR SCREW DRIVER AS IT MAY DAMAGE IDLE SCREW

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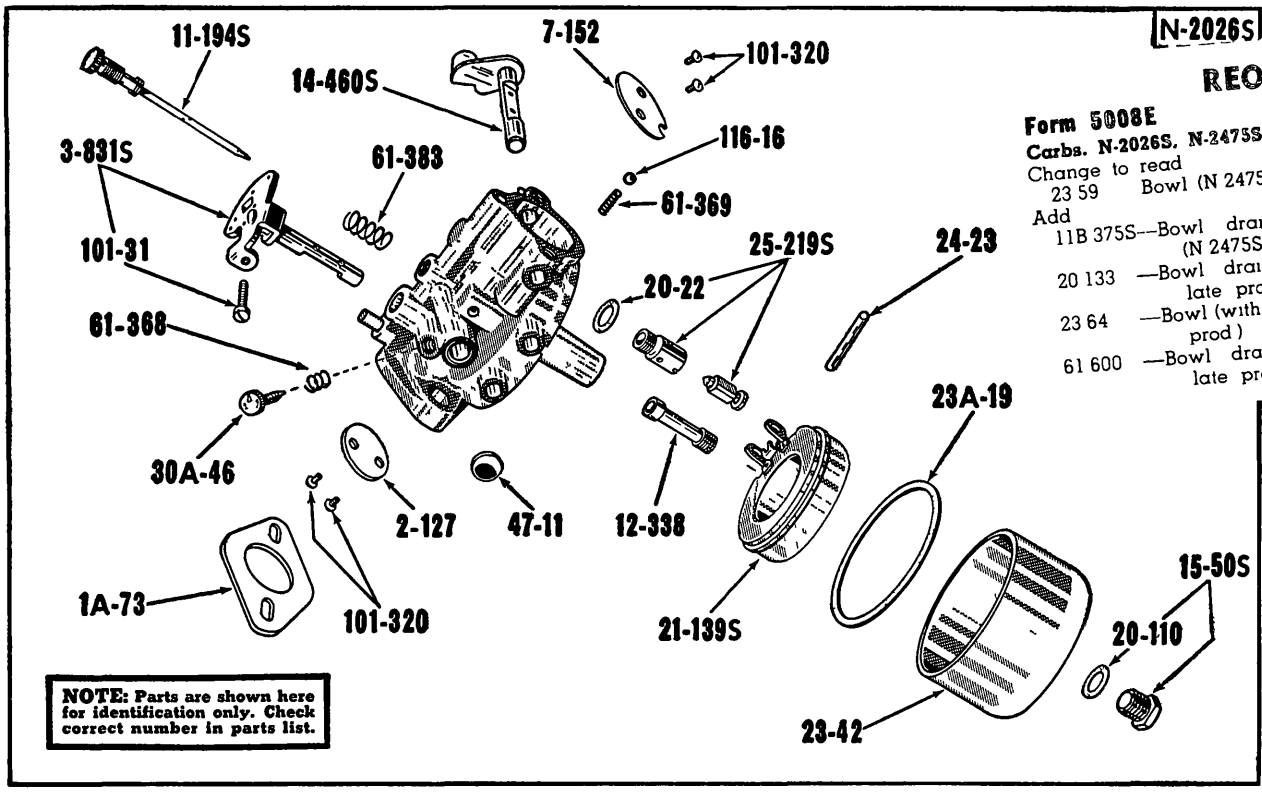
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HIGH SPEED AND IDLE SCREW ADJUSTMENT

After rebuilding and installation on engine is complete the high speed and idle screw adjustments must be made With the high speed needle turned counter clockwise (from closed position) 1½ turns and idle screw turned 1½ turns open start engine

With the engine at normal operating temperature accelerate engine and check response The high speed needle should be adjusted for the leanest possible mixture which will allow satisfactory acceleration and steady governor operation If the engine misses and backfires the high speed mixture is too lean and the high speed adjustment screw must be turned counter clockwise ⅛ turn at a time to correct this condition If the engine loads (heavy exhaust) and is sluggish, the mixture is too rich and the high speed adjustment screw must be turned clockwise ⅛ turn at a time to correct To make final check of the high speed adjustment operate the engine under load and adjust

The idle screw should be adjusted intermittently while making the high speed adjustment The final idle adjustment should be made at a speed not less than 1500 rpm DO NOT USE FORCE ON THE HIGH SPEED NEEDLE OR IDLE SCREW AS DAMAGE MAY RESULT



N-2026S

REO

Form 5008E

Carbs. N-2026S, N-2475S

Change to read

23 59 Bowl (N 2475S early prod)

Add

11B 375S—Bowl drain plug assembly (N 2475S late prod)

20 133 —Bowl drain gasket (N 2475S late prod)

23 64 —Bowl (with drain) (N 2475S late prod)

61 600 —Bowl drain spring (N 2475S late prod)

Reo Carbureters Nos. N-2026S, N-2475S

WHEN SERVICING USE REPAIR PACKAGE No 1738 (N-2026S)

PART NAMES IN CAPITAL LETTERS LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME
1A-73	FLANGE GASKET
2 127	Throttle valve
3-831S	Throttle shaft and lever assembly
7 152	Choke valve
11-194S	LOW SPEED JET AND HIGH SPEED ADJUSTING NEEDLE ASSEMBLY
12-338	NOZZLE (N 2026S)
14-460S	Choke shaft and lever assembly
15-50S	Bowl nut assembly (N 2026S) (Sup by 15 54S)
15-54S	Bowl nut assembly (Sup by 15 64S)
15-64S	Bowl nut assembly
20 22	Needle seat gasket
20-110	BOWL NUT GASKET
21-139S	Float and lever assembly (N 2026S)
21-163S	Float and lever assembly (N 2475S)
23 42	Bowl (N 2026S)

Part No	PART NAME
23-59	Bowl (N 2475S)
23A-19	BOWL RING GASKET
24-23	FLOAT LEVER PIN (N 2026S) (Sup by 24 30)
24-30	Float lever pin
25-33S	Needle and seat assembly (N 2475S)
25-219S	NEEDLE AND SEAT ASSEMBLY (N 2026S)
30A-46	Idle adjustment screw
47-11	Welsh plug
61-368	Idle adjustment screw spring
61-369	Choke shaft spring
61-383	High speed adjusting needle spring
101-31	Throttle lever adjusting screw
101-320	CHOKE AND THROTTLE VALVE ATTACHING SCREW (4)
116-16	Choke shaft ball

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used.

REO – 1955

(Engine Model 3330-J)

LAWN MOWER MODELS—TJ-21 SPIN-TRIM, TJ-18 REVO-TRIM

(Engine Model 3600-J)

LAWN MOWER MODEL—TLJ-18 REVO JET

HORIZONTAL, MODEL N TYPE, **CARBURETER No. N-2272S**

CARBURETER SPECIFICATIONS

For Reo One (1) Cylinder, Four (4) Cycle Engine: 2⅛ Inch Bore, 1⅞ Inch Stroke

Dimensions: Flange size ½ inch S A E (Slotted) Main venturi size, ½ inch

Float Level Distance from top of float (at free end) opposite needle seat to outer edge of float chamber cover when needle is seated to be 11/64 inch plus or minus 1/64 inch

Vent: Inside size No 20 (.161 inch) drill

Gasoline Intake: Size No 48 (.076 inch) drill

Low Speed Jet Tube Jet size No 75 (.021 inch) drill Auxiliary jets (Idle Bleed) in side of tube 4—size No 70 (.028 inch) drill

Idle Port Round type size 039 to 042 inch diameter

Idle Port Opening Top of port to be 025 to 029 inch above top edge of valve with valve tightly closed

Idle Screw Seat. Size 051 inch diameter

Set Idle Adjustment Screw ¼ to 1¾ turns open For richer mixture turn screw out Do not idle engine below 2000 r p m

Main Nozzle Accelerating jets (in side of nozzle) 4—size No 62 (.038 inch) drill Nozzle passage (nozzle well to air horn) size No 32 (.116 inch) drill

High Speed Adjusting Needle Seat (in base of nozzle) size 0595 inch diameter Setting, see adjustments

Choke Manual—butterfly type

Spark Plug Gap .025"	Breaker Point Setting .020"	Ignition Timing Breaker Points to Open 22½° B. T. D. C	Valve Setting (Cold) Int. .008"-.012" Exh. .010"-.014"	Float Setting 11/64" (Plus or Minus 1/64")	High Speed Adj Screw Setting ¼ to 1¾ Turns Open	Idle Adjustment Screw Setting ¼ to 1¾ Turns Open

SERVICE PROCEDURE

To Disassemble

1 Remove carbureter from engine
2 Remove bowl nut gasket and bowl
3 Remove float pin float needle and needle seat Check float for dents leaks and wear on float lip or in float pin holes
4 Remove bowl ring gasket
5 Remove low speed jet and high speed adjusting needle assembly and spring
6 Remove idle adjustment screw and spring
7 Remove nozzle
8 Remove throttle valve screws valve and shaft and lever assembly
9 Do not remove choke valve and shaft unless replacement of these parts is necessary A spring loaded ball retains choke in wide open position Be sure to use a new ball and spring when replacing choke shaft and lever assembly CAUTION Hold a screw driver handle or a small piece of wood over threaded hole in air horn (side opposite choke lever) to prevent the ball from flying out when shaft is removed
10 Clean all parts in clean solvent, making sure all carbon accumulation is removed from bore, especially where throttle valve seats in casting Blow out all passages with compressed air Replace all worn and damaged parts Always use new gaskets

To Assemble

11 Install throttle shaft and valve Valve must be installed with trademark "c on side toward idle port when viewing from flange side Always use new screws With valve screws loose and throttle lever set screw backed out, seat valve by tapping lightly with a small screw driver Hold in place while tightening screws
12 Install nozzle, making sure it seats in casting
13 Install needle seat, needle float and float pin
14 Set float level With carbureter casting inverted, float resting lightly against needle in its seat there should be 11/64" clearance between outer edge of casting and free end of float (side opposite needle seat) Adjust by bending lip of float with small screw driver
15 Install bowl ring gasket bowl bowl nut gasket and bowl nut Tighten securely after making sure bowl is centered in gasket
16 Install low speed jet and high speed needle assembly Turn in until it seats in nozzle then back out 1 turn
17 Then install idle adjusting screw finger tight Back out approximately 1 turn DO NOT USE PLIERS OR SCREW DRIVER AS IT MAY DAMAGE IDLE SCREW

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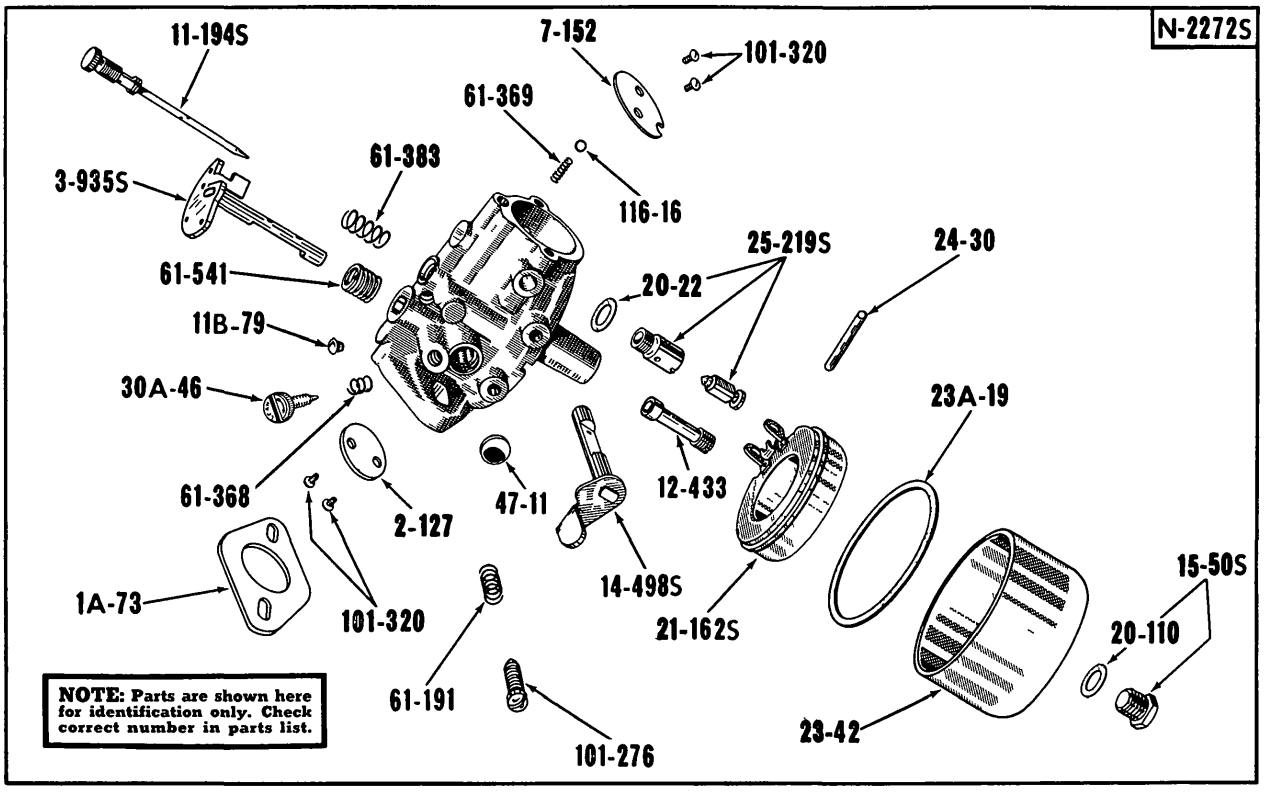
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HIGH SPEED AND IDLE SCREW ADJUSTMENT

After rebuilding and installation on engine is complete the high speed and idle screw adjustments must be made With the high speed needle turned counter clockwise (from closed position) 1 turn and idle screw turned 1 turn open start engine

With the engine at normal operating temperature accelerate engine and check response The high speed needle should be adjusted for the leanest possible mixture which will allow satisfactory acceleration and steady governor operation If the engine misses and backfires the high speed mixture is too lean and the high speed adjustment screw must be turned counter clockwise 1/8 turn at a time to correct this condition If the engine loads (heavy exhaust) and is sluggish the mixture is too rich and the high speed adjustment screw must be turned clockwise 1/8 turn at a time to correct To make final check of the high speed adjustment, operate the engine under load and adjust

The idle screw should be adjusted intermittently while making the high speed adjustment DO NOT USE FORCE ON THE HIGH SPEED NEEDLE OR IDLE SCREW AS DAMAGE MAY RESULT



Reo Carbureter No. N-2272S

WHEN SERVICING, USE REPAIR PACKAGE No 1811
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME
1A-73	FLANGE GASKET
2-127	Throttle valve
3-935S	Throttle shaft and lever assembly
7-152	Choke valve
11-194S	LOW SPEED JET AND HIGH SPEED ADJUSTING NEEDLE ASSEMBLY
11B-79	Rivet plug
12-433	NOZZLE
14-498S	Choke shaft and lever assembly
15-50S	Bowl nut assembly (Sup by 15 54S)
15-54S	Bowl nut assembly (Sup by 15 64S)
15-64S	Bowl nut assembly
20-22	Needle seat gasket
20-110	BOWL NUT GASKET
21-139S	Float and lever assembly (Sup by 21-162S)
21-162S	Float and lever assembly

Part No.	PART NAME
23-42	Bowl (Sup by 23 59)
23-59	Bowl
23A-19	BOWL RING GASKET
24-30	FLOAT LEVER PIN
25-219S	NEEDLE AND SEAT ASSEMBLY
30A-46	Idle adjustment screw
47-11	Welsh plug
61-191	Throttle lever adjusting screw spring
61-368	Idle adjustment screw spring
61-369	Choke shaft spring
61-383	High speed adjusting screw spring
61-541	Throttle shaft spring
101-276	Throttle lever adjusting screw
101-320	CHOKE AND THROTTLE VALVE ATTACHING SCREW (4)
116-16	Choke shaft ball

NOTE **Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.**

REO – 1955

(N-2206S)
LAWN MOWER MODELS, WJ-21 ROYALE, WJ-18 RUNABOUT, WLJ-18 SCOTTY — PJ-20 SNOW THROW

(N-2228S)
LAWN MOWER MODELS, TLJ-18 REVO-JET, TJS-21 SABRE-TRIM, TJ-21 SPIN-TRIM, TJ-18 REVO-TRIM, RJ-25 TRIMALAWN

(N-2228S can be used in place of N-2206S)

HORIZONTAL, MODEL N TYPE, **CARBURETERS Nos. N-2206S, N-2228S**

CARBURETER SPECIFICATIONS

For Reo One (1) Cylinder, Four (4) Cycle Engine 2⅛ Inch Bore 1⅞ Inch Stroke

Dimensions Flange size ½ inch S A E (Slotted) Main venturi size ½ inch

Float Level Distance from top of float (at free end) opposite needle seat to outer edge of float chamber cover when needle is seated to be 11/64 inch plus or minus 1/64 inch

Vent (2206S) Outside size No 50 (.070 inch) drill (2228S) Inside size No 20 (.161 inch) drill

Gasoline Intake Size No 48 (.076 inch) drill

Low Speed Jet Tube Jet size No 75 (.021 inch) drill Auxiliary jets (Idle Bleed) in side of tube 4—size No 70 (.028 inch) drill

Idle Port Round type size 039 to 042 inch diameter

Idle Port Opening Top of port to be .025 to .029 inch above top edge of valve with valve tightly closed

Idle Screw Seat Size 051 inch diameter

Set Idle Adjustment Screw ¼ to 1¼ turns open For richer mixture turn screw out Do not idle engine below 1200 r p m (Models WJ 18 21 WLJ 18 PJ 20 RJ 25) 2000 r p m (Models TJS 21 TLJ 18 TJ 18 21)

Main Nozzle Accelerating jets (inside of nozzle) 4—size (2206S) No 55 (.052 inch) (2228S) No 62 (.038 inch) drill Nozzle passage (nozzle well to air horn) size No 32 (.116 inch) drill

High Speed Adjusting Needle Seat (in base of nozzle) size (N 2206S) 040 inch (N 2228S) 0595 inch diameter Setting see adjustments

Choke Manual—butterfly type

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open	Valve Setting (Cold)	Float Setting	High Speed Adj Screw Setting	Idle Adjustment Screw Setting
.025"	.020"	22½° B T D C	Int .008"-.012" Exh .010"-.014"	11/64" (Plus or Minus 1/64")	¾ to 2¼ Turns Open	¼ to 1¼ Turns Open

SERVICE PROCEDURE

To Disassemble

1 Remove carbureter from engine
2 Remove bowl nut gasket and bowl
3 Remove float pin float needle and needle seat Check float for dents leaks and wear on float lip or in float pin holes
4 Remove bowl ring gasket
5 Remove low speed jet and high speed adjusting needle assembly and spring
6 Remove idle adjustment screw and spring
7 Remove nozzle
8 Remove throttle valve screws valve and shaft and lever assembly
9 Do not remove choke valve and shaft unless replacement of these parts is necessary A spring loaded ball retains choke in wide open position Be sure to use a new ball and spring when replacing choke shaft and lever assembly CAUTION Hold a screw driver handle or a small piece of wood over threaded hole in air horn (side opposite choke lever) to prevent the ball from flying out when shaft is removed
10 Clean all parts in clean solvent making sure all carbon accumulation is removed from bore especially where throttle valve seats in casting Blow out all passages with compressed air Replace all worn and damaged parts Always use new gaskets

To Assemble

11 Install throttle shaft and valve Valve must be installed with trademark c on side toward idle port when viewing from flange side Always use new screws With valve screws loose and throttle lever set screw backed out seat valve by tapping lightly with a small screw driver Hold in place while tightening screws
12 Install nozzle making sure it seats in casting
13 Install needle seat needle float and float pin
14 Set float level With carbureter casting inverted float resting lightly against needle in its seat there should be 11/64" clearance between outer edge of casting and free end of float (side opposite needle seat) Adjust by bending lip of float with small screw driver
15 Install bowl ring gasket bowl bowl nut gasket and bowl nut Tighten securely after making sure bowl is centered in gasket
16 Install low speed jet and high speed needle assembly Turn in until it seats in nozzle then back out 1 turn
17 Then install idle adjusting screw finger tight Back out approximately 1½ turns DO NOT USE PLIERS OR SCREW DRIVER AS IT MAY DAMAGE IDLE SCREW

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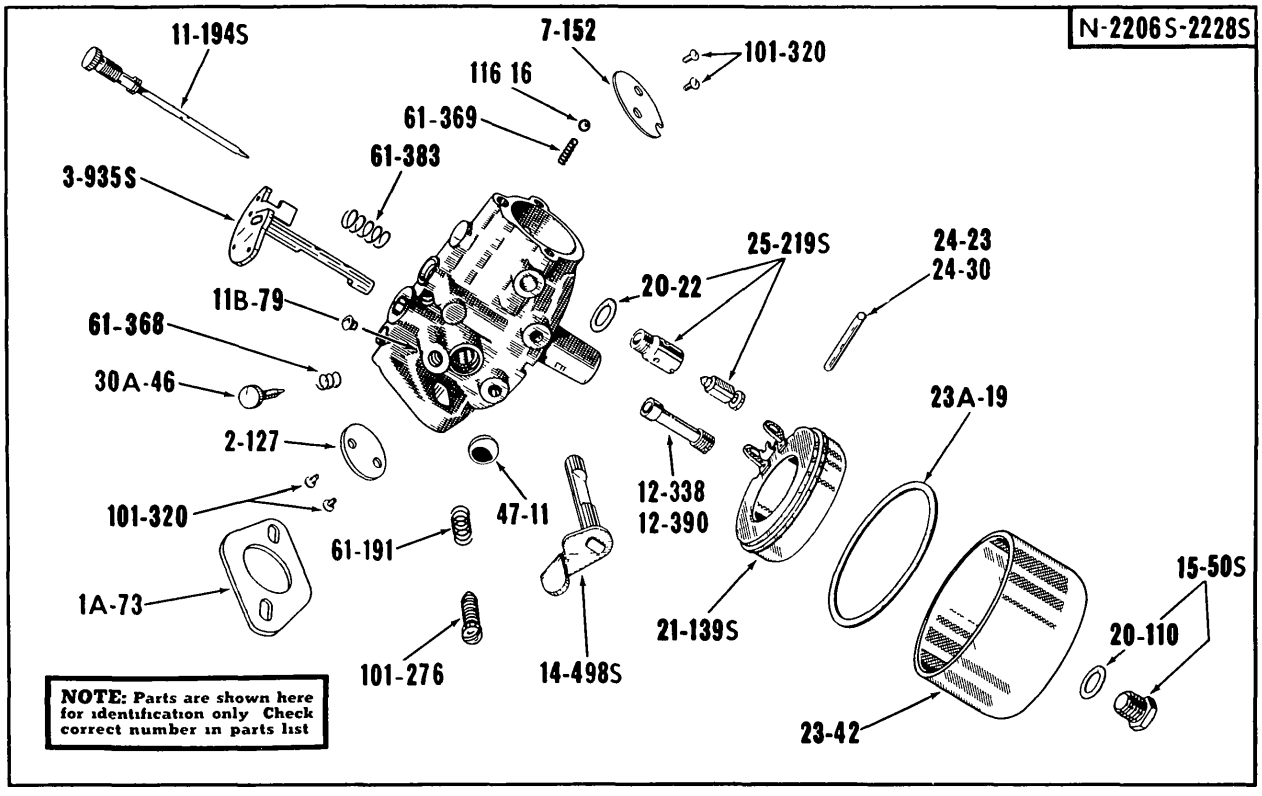
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HIGH SPEED AND IDLE SCREW ADJUSTMENT

After rebuilding and installation on engine is complete the high speed and idle screw adjustments must be made With the high speed needle turned counter clockwise (from closed position) 1½ turns and idle screw turned 1 turn open start engine

With the engine at normal operating temperature accelerate engine and check response The high speed needle should be adjusted for the leanest possible mixture which will allow satisfactory acceleration and steady governor operation If the engine misses and backfires the high speed mixture is too lean and the high speed adjustment screw must be turned counter clockwise ⅛ turn at a time to correct this condition If the engine loads (heavy exhaust) and is sluggish the mixture is too rich and the high speed adjustment screw must be turned clockwise ⅛ turn at a time to correct To make final check of the high speed adjustment operate the engine under load and adjust

The idle screw should be adjusted intermittently while making the high speed adjustment DO NOT USE FORCE ON THE HIGH SPEED NEEDLE OR IDLE SCREW AS DAMAGE MAY RESULT



Reo Carbureters Nos. N-2206S, N-2228S

WHEN SERVICING, USE REPAIR PACKAGE No 1738 (N 2206S), No. 1811 (N-2228S)
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME
1A-73	FLANGE GASKET
2-127	Throttle valve
3-935S	Throttle shaft and lever assembly
7-152	Choke valve (N 2206S) (Sup by 7 212 on N 2228S)
7-212	Choke valve (N 2228S)
11-194S	LOW SPEED JET AND HIGH SPEED ADJUSTING NEEDLE ASSEMBLY
11B-79	Rivet plug
12-338	NOZZLE (N 2206S)
12-390	Nozzle (Sup by 12 433) (N 2228S)
12-433	NOZZLE (N 2228S)
14-498S	Choke shaft and lever assembly
15-50S	Bowl nut assembly (Sup by 15 54S)
15-54S	Bowl nut assembly (Sup by 15 64S)
15-64S	Bowl nut assembly
20-22	Needle seat gasket
20-110	BOWL NUT GASKET
21-139S	Float and lever assembly (Sup by 21 162S)
21-162S	Float and lever assembly
23-42	Bowl (Sup by 23 59)
23-59	Bowl
23A-19	BOWL RING GASKET
24-23	FLOAT LEVER PIN (N 2206S) (Sup by 24 30)
24-30	FLOAT LEVER PIN
25-219S	NEEDLE AND SEAT ASSEMBLY
30A-46	Idle adjustment screw
47-11	Welsh plug
61-191	Throttle lever adjusting screw spring
61-368	Idle adjustment screw spring
61-369	Choke shaft spring
61-383	High speed adjusting screw spring
101-276	Throttle lever adjusting screw
101-320	CHOKE AND THROTTLE VALVE ATTACHING SCREW (4)
116-16	Choke shaft ball

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

REO

INDUSTRIAL ENGINE

MODEL "OA-331"

YF Down-Draft Climatic® Control **Carbureter No. 2079S**

CARBURETER SPECIFICATIONS

Reo 6 Cylinder Engine 4 1/8 Inch Bore 4 1/8 Inch Stroke

Dimensions Flange size 1 1/2 inch S A E
Primary venturi 11/32 inch I D
Secondary venturi 11/16 inch I D
Main venturi 1 5/16 inch I D

Float Setting See Ad ustments

Vents Outside none Inside balance vent tube in air horn above choke valve

Gasoline Intake Spring loaded needle Size No 46 (081 inch) drill in needle seat

Low Speed Jet Tube Jet size No 67 (032 inch) drill By pass in body size No 52 (0635 inch) drill Economizer size No 55 (052 inch) drill

Idle Port Upper port slot type length 190 width 040 inch

Idle Port Opening Top of port 143 to 147 inch above top edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw) 0615 to 0655 inch diameter

Set Idle Adjustment Screw 1 1/4 to 2 3/4 turns open For richer mixture turn screw out Do not idle engine below 450 r p m

Main Nozzle Nozzle is installed permanently DO NOT RE MOVE Drilled passage from anti percolator passage to bore size No 70 (028 inch) drill

Metering Rod Economy step 064 inch diameter Power step 043 inch diameter

Metering Rod Jet 104 inch diameter

Metering Rod Setting See Adjustments

Accelerating Pump Diaphragm type vacuum and mechanically operated Pump jet size No 68 (031 inch) dr ll Intake ball check seat (in diaphragm housing) size No 40 (098 inch) drill Discharge ball check seat (in body) size No 42 (0935 inch) drill Pump bleed (in diaphragm housing) size No 73 (024 inch) drill Vacuum restriction (in flange) size No 55 (052 inch) drill Vacuum passage (diaphragm bleed) size No 65 (035 inch) drill

Pump Adjustment See Adjustments

Choke Carter Climatic® Control set on index Offset butter fly type Choke heat suction hole in body size No 36 (1065 inch) drill

Vacuum Spark Port None

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter

Spark Plug Gap	Breaker Point Setting	Ignition Timing	Valve Setting (Hot)	Float Setting	Idle Adjustment Screw Setting
025" (Standard) 035' (Resistor)	018" 022"	Breaker Points to Open 6°-9° B T D C At Vibration Damper	Serial Nos up to 177190 Intake 015" Exhaust 015" Serial No 177190 and higher Intake 020" Exhaust 020"	See Adjustments	1 1/4 to 2 3/4 Turns Open

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT With bowl cover assembly inverted and float resting on pin in seated needle, and with gasket removed, the distance from the bowl cover to the top of float should be 9/32 inch (Gauge T109-126) Do not depress float lip against spring loaded pin in needle but let float rest of its own weight Adjust by bending lip of float, not float arm Float setting must be checked with the bowl cover held at eye height in a level position

FLOAT DROP With bowl cover assembly held in upright position the distance between free end of float and bowl cover should be 1¼ inch Adjust by bending stop tabs on float arm

PUMP ADJUSTMENT This adjustment should be made before the metering rod adjustment and should be checked each time the carbureter is reassembled With throttle valve seated in the bore of carbureter, press down on upper end of diaphragm shaft until it reaches its bottom position (tool T109-212 may be used to hold diaphragm shaft down while checking pump adjustment) The metering rod arm should now contact the pump lifter link at the outer end nearest the springs Adjust by bending pump connector link at its lower angle Use bending tool T109-213

CAUTION Bend connector rod only at its lower angle, as any other method may cause pump lifter link to bind

METERING ROD ADJUSTMENT This adjustment is important and should be checked each time the carbureter is reassembled With throttle valve seated in bore of carbureter, press down on upper end of diaphragm shaft until diaphragm bottoms in vacuum chamber Tool T109-212 may be used to hold diaphragm shaft down while adjusting metering rod Metering rod should contact bottom of metering well and metering rod arm should contact lifter link between springs and at supporting lug Adjust by bending lip of metering rod arm to which metering rod is attached, up or down

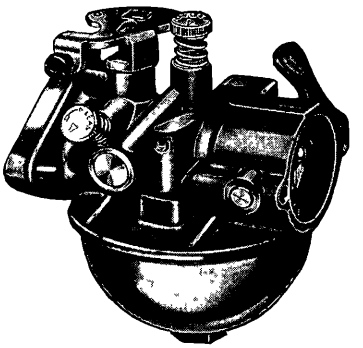
Reo—1954—Carbureter No. 2079S

WHEN SERVICING, USE GASKET ASSORTMENT No. 253

Part No	PART NAME	
1-1115S	Body flange assembly	
1A 24	Flange gasket	
2 136	Throttle valve	
3-876	Throttle shaft	
4 691S	Throttle lever assembly	
4A 146S	Throttle shaft dog assembly	
6-931S	Air horn assembly	
6-934S	Air horn and Climatic® control assembly	
7 107	Choke valve	
11 232S	Low speed jet assembly	
11B 12	Rivet plug	
11B-35	Rivet plug	
11B-79	Rivet plug	(2)
11B-108	Idle port rivet plug	
14-409S	Choke piston lever and shaft assembly	
20-22	Needle seat gasket	
21-122S	Float and lever assembly	
24-27	Float lever pin	
25-195S	Needle pin spring and seat assembly	
30A-44	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	Throttle valve attaching screw	(2)
47-14	Welsh plug	
61-242	Metering rod spring	
61-412	Upper pump spring (inner)	
61-413	Pump diaphragm spring	
61-426	Idle adjustment screw spring	
61-431	Upper pump spring (outer)	
63 58	Coil housing retainer	(3)
63-135	Upper pump spring retainer	
63-149	Pump diaphragm spring retainer	
63 152	Pump intake and discharge ball check retainer ring (early prod (2) (late prod (1)	

Part No.	PART NAME	
63-174	Pump stem retaining ring	
63-202	Pump intake ball check retainer ring (late prod)	
75-947	Metering rod	
86-15	Flange stud lock washer	(2)
100-15	Throttle shaft dog set screw	
101-28	Throttle shaft arm attaching screw	
101-121	Throttle lever adjusting screw	
101-136	Coil housing attaching screw	(3)
101-149S	Body flange attaching screw and washer assembly	(3)
101-160S	Air horn attaching screw and washer assembly	(7)
101-282S	Diaphragm housing attaching screw and washer assembly	(4)
105-12	Throttle lever clamp screw	
105A-8	Throttle lever clamp nut	
105A-13	Flange stud nut	(2)
111-57S	Metering rod arm assembly	
114-75S	Throttle shaft arm assembly	
116-25	Pump intake and discharge check ball	(2)
117-137	Pump lifter link	
117-157	Pump connector link	
120-161	Metering rod jet	
121-94	Coil housing gasket	
121-169	Bowl cover and air horn gasket	
121-220	Body flange gasket	
150-62	Choke piston pin	
160-35	Choke piston	
170-263S	Diaphragm housing and ball check assembly	
170Y61S	Thermostatic coil and housing assembly	
186-14	Choke baffle plate	
203-60S	Pump diaphragm assembly	
221-15	Ball check weight	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used



REO
ROYALE MOWER
WF-21
TRIMALAWN MOWER
RF-25
1950-52
TROLLABOUT INBOARD MARINE KIT
MKG-1, MKG-11
1953

(N-2026S can also be used)

HORIZONTAL, MODEL N TYPE, **CARBURETER No. N-927S**

CARBURETER SPECIFICATIONS

For Reo One (1) Cylinder Engine: 2 Inch Bore, 1 7/8 Inch Stroke
For Reo One (1) Cylinder Engine: 2 Inch Bore, 1 3/4 Inch Stroke

Dimensions: Flange size, 1/2 inch S. A. E. (slotted). Main venturi size, 13/32 inch.

Float Level: Distance from top of float (at free end) opposite needle seat to lower edge of float chamber cover when needle is seated to be 13/64 inch plus or minus 1/64 inch (use gauge T109-39).

Vents: Inside—none. Outside—No. 50 (.070") drill.

Gasoline Intake: Square vertical needle, seat size No. 48 (.076") drill.

Low Speed Jet Tube: Jet size No. 75 (.021") drill. Auxiliary jets: (idle bleed) in side of tube, 4 No. 70 (.028") drill.

Idle Port: Round type .027-.030 inch diameter. Idle port opening—Top of port to be .006-.010 inch above top edge of valve.

Idle adjustment screw seat, tapered 10° included angle, size .051 inch diameter at seat end.

Set Idle Adjustment Screw: 1 to 2 turns open. For richer mixture, turn screw out. Do not idle engine below 1500 r.p.m. for lawnmowers and 900 r.p.m. for the Trollabout.

Main Nozzle: Accelerating jets 4—No. 55 (.052") drill in side of nozzle (in nozzle well). Nozzle passage: (nozzle well to air horn) No. 35 (.110") drill.

High Speed Adjusting Needle: Seat (in base of nozzle) size: .040 inch diameter. Setting, see "Adjustments", Page 2.

Choke: Manual—butterfly type.

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open:	Valve Setting (Cold)	Float Setting (Gauge T109-39)	High Speed Adj. Screw Setting	Idle Adjustment Screw Setting
.025"	.020"	20°-22° B.T.D.C.	Int. .008"-.012" Exh. .010"-.014"	13/64" (Plus or Minus 1/64")	1 1/4 to 1 3/4 Turns Open	1 to 2 Turns Open

SERVICE PROCEDURE

To Disassemble

1. Remove carbureter from engine.
2. Remove bowl nut, gasket and bowl.
3. Remove float pin, float, needle and needle seat. Check float for dents, leaks, and wear on float lip or in float pin holes.
4. Remove bowl ring gasket.
5. Remove low speed jet and high speed adjusting needle assembly and spring.
6. Remove idle adjustment screw and spring.
7. Remove nozzle.
8. Remove throttle valve screws, valve, and shaft and lever assembly.
9. Do not remove choke valve and shaft unless replacement of these parts is necessary. A spring loaded ball retains choke in wide open position. Be sure to use a new ball and spring when replacing choke shaft and lever assembly. CAUTION: Hold a screw driver handle or a small piece of wood over threaded hole in air horn (side opposite choke lever) to prevent the ball from flying out when shaft is removed.
10. Clean all parts in clean gasoline or solvent, making sure all carbon accumulation is removed from bore, especially where throttle valve seats in casting. Blow out all passages with compressed air. Replace all worn and damaged parts. Always use new gaskets.

To Assemble

11. Install throttle shaft and valve. Valve must be installed with trademark "c" on side toward idle port when viewing from flange side. Always use new screws. With valve screws loose and throttle lever set screw backed out, seat valve by tapping lightly with a small screw driver. Hold in place while tightening screws.
12. Install nozzle, making sure it seats in casting.
13. Install needle seat, needle, float and float pin.
14. Set float level. With carbureter casting inverted, float resting lightly against needle in its seat, there should be 13/64" clearance between machined surface of casting and free end of float (side opposite needle seat). Adjust by bending lip of float with small screw driver.
15. Install bowl ring gasket, bowl, bowl nut gasket and bowl nut. Tighten securely after making sure bowl is centered in gasket.
16. Install low speed jet and high speed needle assembly. Turn in until it seats in nozzle, then back out 1 1/2 turns.
17. Then install idle adjusting screw, finger tight. Back out approximately 1 1/2 turns. DO NOT USE PLIERS OR SCREW DRIVER AS IT MAY DAMAGE IDLE SCREW.

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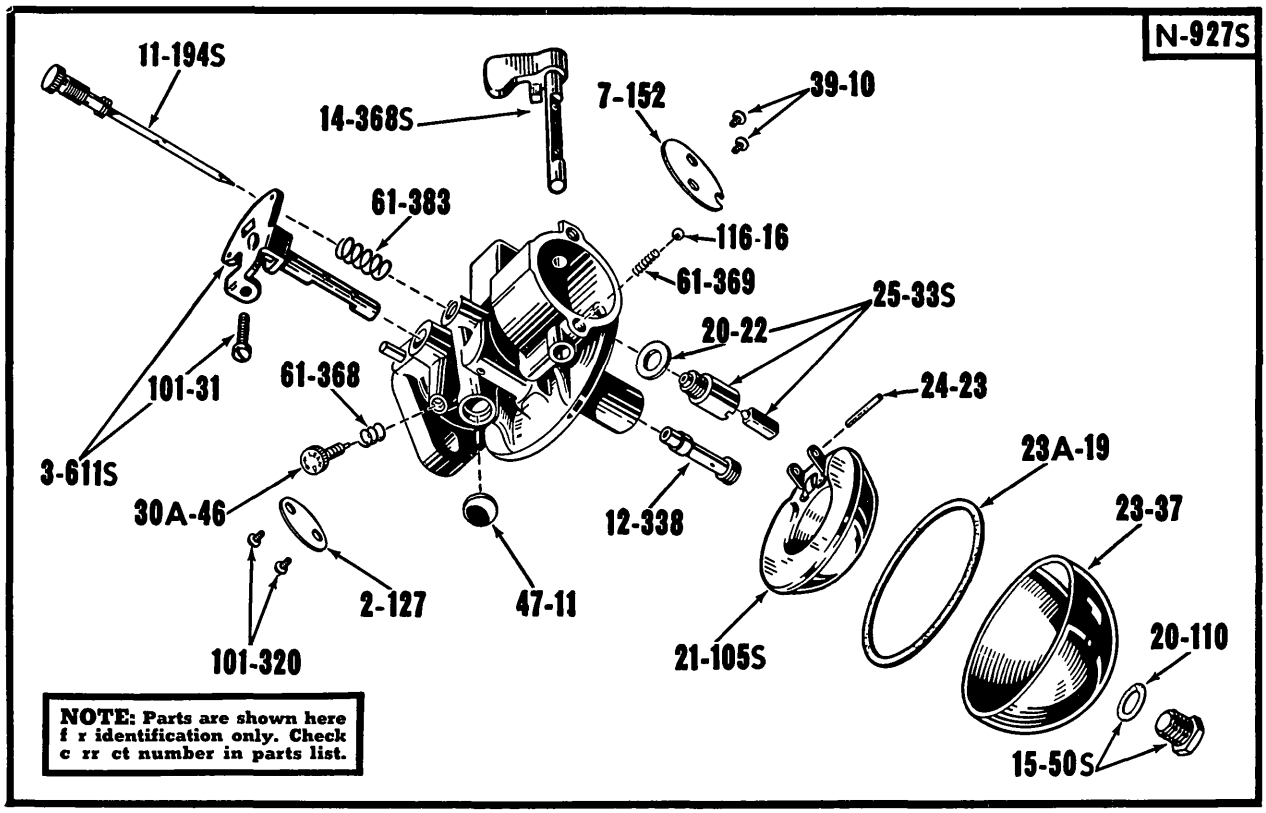
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HIGH SPEED AND IDLE SCREW ADJUSTMENT

After rebuilding and installation on engine is complete the high speed and idle screw adjustments must be made With the high speed needle turned counter clockwise (from closed position) 1½ turns and idle screw turned 1½ turns open start engine

With the engine at normal operating temperature accelerate engine and check response The high speed needle should be adjusted for the leanest possible mixture which will allow satis factory acceleration and steady governor operation If the engine misses and backfires the high speed mixture is too lean and the high speed adjustment screw must be turned counter clockwise ⅛ turn at a time to correct this condition If the engine loads (heavy exhaust) and is sluggish the mixture is too rich and the high speed adjustment screw must be turned clockwise ⅛ turn at a time to correct To make final check of the high speed adjustment operate the engine under load and adjust

The idle screw should be adjusted intermittently while making the high speed adjustment The final idle adjustment should be made at a speed not less than 1500 r p m for lawnmowers or 900 r p m for Trol'about DO NOT USE FORCE ON THE HIGH SPEED NEEDLE OR IDLE SCREW AS DAMAGE MAY RESULT



Reo Carbureter No. N-927S

WHEN SERVICING USE REPAIR PACKAGE No 1575B

PART NAMES IN CAPITAL LETTERS, LISTED BELOW INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME
1A-73	FLANGE GASKET
2-127	Throttle valve
3-611S	Throttle shaft and lever assembly (Sup by 3 774S)
3-774S	Throttle shaft and lever assembly
7-152	Choke valve
11-194S	LOW SPEED JET AND HIGH SPEED ADJUSTING NEEDLE ASSEMBLY
12-338	NOZZLE
14-368S	Choke lever and shaft assembly
15-50S	Bowl nut assembly
20-22	Needle seat gasket
20-110	BOWL NUT GASKET
21-105S	Float and lever assembly

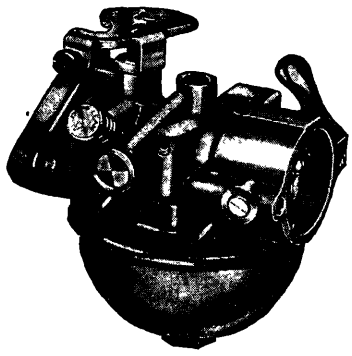
Part No	PART NAME	
23-37	Bowl	
23A-19	BOWL RING GASKET	
24-23	FLOAT LEVER PIN	
25 33S	NEEDLE AND SEAT ASSEMBLY	
30A-46	Idle adjustment screw	
39-10	Choke and throttle valve attaching screw (Sup by 101 320)	
47-11	Welsh plug	
61-368	Idle adjustment screw spring	
61-369	Choke shaft spring	
61-383	High speed adjusting needle spring	
101-31	Throttle lever adjusting screw	
101-320	VALVE ATTACHING SCREW	(4)
116-16	Choke shaft ball	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

CARBURETER
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MOWER MODELS
WD and WE

ENGINE MODELS
552 Type A
211 Type E



REO ROYALE MOWER (WHEEL TYPE) 1950-1951

(N-2026S can also be used)

HORIZONTAL, MODEL N TYPE, **CARBURETER No. N-744S**

CARBURETER SPECIFICATIONS

For Reo 1 Cylinder Engine: 2 Inch Bore, 1¾ Inch Stroke

Dimensions: Flange size: ½ inch S. A. E.
Main venturi size 13/32 inch.

Float Level: Distance from top of float (at free end) opposite needle seat to lower edge of float chamber cover when needle is seated to be 13/64 inch. (Use gauge T109-39).

Vents: Inside, none. Outside, No. 50 (.070") drill.

Gasoline Intake: Square vertical needle, seat size No. 48 (.076") drill.
Intake fuel restriction (in needle seat), size No. 65 (.035") drill.

Low Speed Jet Tube: Jet size No. 70 (.028") drill. Auxiliary jets: in side of tube, 4 No. 70 (.028") drill.

Idle Port: Round type, .030"-.033" diameter. Top of hole to be .023"-.027" above top edge of valve.
Idle adjustment screw seat, size No. 58 (.042") drill (early production); .051" (late production, tapered 10° included angle).

Set Idle Adjustment Screw: 1 to 3 turns open. For richer mixture, turn screw out. Do not idle engine below 1500 r.p.m.

Main Nozzle: Discharge: through 4 No. 60 (.040") jets.
Accelerating jets 4 No. 62 (.038") drill in side of nozzle (in nozzle well). Nozzle passage (nozzle well to air horn) No. 35 (.110") drill.

Main Metering Jet: Calibrated to flow 43 to 45 c.c. per minute. Do not gauge for size. If in doubt, replace with new part.

Choke: Manual—butterfly type.

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open	Valve Setting (Cold)	Float Setting	Idle Adjustment Screw Setting
.025"	.018"-.022"	22½° B. T. D. C.	Int. .008"-.012" Exh. .010"-.014"	13/64"	1 to 3 Turns Open

SERVICE PROCEDURE

To Disassemble

1. Remove carbureter from engine.
2. Remove bowl nut, gasket and bowl.
3. Remove float pin, float, needle and needle seat. Check float for dents, leaks, and wear on float lip or in float pin holes.
4. Remove bowl ring gasket.
5. Remove main metering jet assembly.
6. Remove low speed jet, idle adjusting screw and idle adjusting screw spring.
7. Remove nozzle.
8. Remove throttle valve screws, valve, and shaft and lever assembly.
9. Do not remove choke valve and shaft unless replacement of these parts is necessary. A spring loaded ball retains choke in wide open position. Be sure to use a new ball and spring when replacing choke shaft and lever assembly.
10. Clean all parts in clean gasoline or solvent, making sure all carbon accumulation is removed from bore, especially where throttle valve seats in casting. Blow out all passages with compressed air. **Do not attempt to remove welch plug at idle port.** Replace all worn and damaged parts. Always use new gaskets.

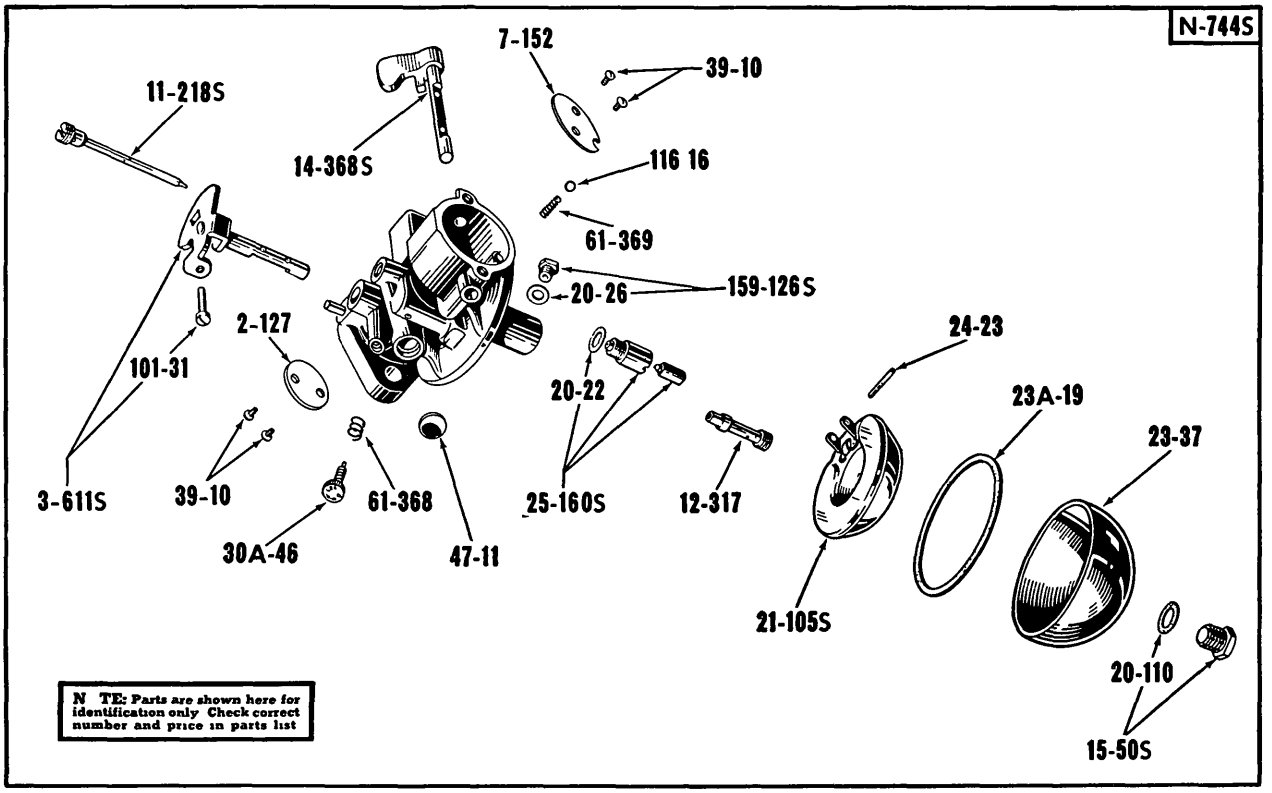
To Assemble

11. Install throttle shaft and valve. Valve must be installed with trademark "c" on side toward idle port when viewing from flange side. Always use new screws. With valve screws loose and throttle lever set screw backed out, seat valve by tapping lightly with a small screw driver. Hold in place while tightening screws.
12. Install nozzle, making sure it seats in casting.
13. Install main metering jet assembly.
14. Install needle seat, needle, float and float pin.
15. Set float level. With carbureter casting inverted, float resting lightly against needle in its seat, there should be 13/64" clearance between machined surface of casting and free end of float (side opposite needle seat). Adjust by bending lip of float with small screw driver. (Use gauge T109-39).
16. Install bowl ring gasket, bowl, bowl nut gasket and bowl nut. Tighten securely after making sure bowl is centered in gasket.
17. Install low speed jet, seating it securely in casting.
18. Then install idle adjusting screw, finger tight. Back out 1 to 3 turns. Do not use pliers or screw driver, as it may damage idle screw.

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REO CARBURETER No. N-744S

WHEN SERVICING USE REPAIR PACKAGE No 1387E

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	Part Name
1A-73	FLANGE GASKET
2-127	Throttle valve
3-611S	Throttle shaft and lever assembly (Sup by 3 774S)
3-774S	Throttle shaft and lever assembly
7-152	Choke valve
11-189S	Low speed jet assembly (Sup by 11 218S)
11-218S	LOW SPEED JET ASSEMBLY
11-231U	†Conversion unit
12-317	NOZZLE
14-368S	Choke lever and shaft assembly
15-50S	Bowl nut assembly
20-22	Needle seat gasket
20-26	Main metering jet gasket
20-110	BOWL NUT GASKET
21-105S	Float and lever assembly
23-37	Bowl
23A-19	BOWL RING GASKET
24-23	FLOAT LEVER PIN
25-160S	NEEDLE AND SEAT ASSEMBLY
30A-46	Idle adjustment screw
39-10	Valve attaching screw (Sup by 101-320)
47-11	Welsh plug
61-368	Idle adjustment screw spring
61-369	Choke shaft spring
101-31	Throttle lever adjusting screw
101-320	VALVE ATTACHING SCREW (4)
116-16	Choke shaft ball
159-126S	Main metering jet assembly (Sup by 159 143S)
159-143S	MAIN METERING JET ASSEMBLY

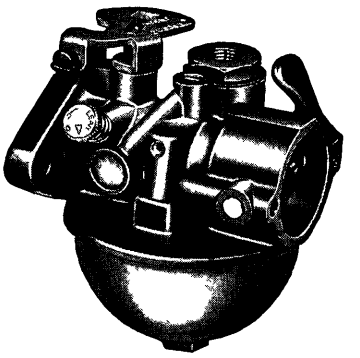
†To convert N 744S to N 927S Complete installation instructions packed with each unitized package

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

MOWER MODELS
WD-21 RD-21 RD-25

ENGINE MODELS
MOWER
552 Type A 556 Type A
338 Type E

COMMERCIAL
LM-400 LM-410
400 Type E 410 Type E



REO ROYALE MOWER
(WHEEL TYPE)
1948-1949
REO TRIMALAWN MOWER
(WHEEL TYPE)
1948-1951
REO COMMERCIAL ENGINE
1950-1951
(N-2026S can also be used with new gas line and elbow fitting.

HORIZONTAL, MODEL N TYPE, **CARBURETER No. N-689S**

CARBURETER SPECIFICATIONS

For Reo 1 Cylinder Engine 2" Bore, 1¾" Stroke

Dimensions Flange size ½ S A E Main venturi size 13/32 inch

Float Level Distance from top of float (at free end) opposite needle seat to lower edge of float chamber cover when needle is seated to be 13/64 inch (Use gauge T109 39)

Vents Inside—none Outside—No 50 (.070") drill

Gasoline Intake Square vertical needle seat size No 48 (.076") drill
Intake fuel restriction (in needle seat) size No 65 (.035") drill

Low Speed Jet Tube Jet size No 70 (.028") drill
Auxiliary jets in side of tube 4 No 70 (.028") drill

Idle Port Round type .030" .033" diameter Top of hole to be .023" .027" above top edge of valve
Idle adjustment screw seat size No 58 (.042") drill (early production) .051" (late production tapered 10° included angle)

Set Idle Adjustment Screw 1 to 3 turns open For richer mixture turn screw out
Do not idle engine below 1 500 r p m

Main Nozzle Discharge through 4—No 60 (.040") jets
Accelerating jets 4—No 62 (.038") drill in side of nozzle (in nozzle well)
Nozzle passage (nozzle well to air horn) No 35 (.110") drill

Main Metering Jet Calibrated to flow 43 to 45 c c per minute
Do not gauge for size If in doubt replace with new part

Choke Manual—butterfly type

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open	Valve Setting (Cold)	Float Setting	Idle Adjustment Screw Setting
.025"	.015" .018"	15° B T D C	Int .008"-.012" Exh .010" .014"	13/64"	1 to 3 Turns Open

SERVICE PROCEDURE

To Disassemble

1 Remove carbureter from engine
2 Remove bowl nut gasket and bowl
3 Remove float pin float needle and needle seat Check float for dents leaks and wear on float lip or in float pin holes
4 Remove bowl ring gasket
5 Remove main metering jet assembly
6 Remove low speed jet idle adjusting screw and idle adjusting screw spring
7 Remove strainer nut assembly and strainer
8 Remove nozzle
9 Remove throttle valve screws valve and shaft and lever assembly
10 Do not remove choke valve and shaft unless replacement of these parts is necessary A spring loaded ball retains choke in wide open position Be sure to use a new ball and spring when replacing choke shaft and lever asesmbly
11 Clean all parts in clean gasoline or solvent making sure all carbon accumulation is removed from bore especially where throttle valve seats in casting Blow out all passages with compressed air **Do not attempt to remove welch plug at idle port** Replace all worn and damaged parts Always use new gaskets

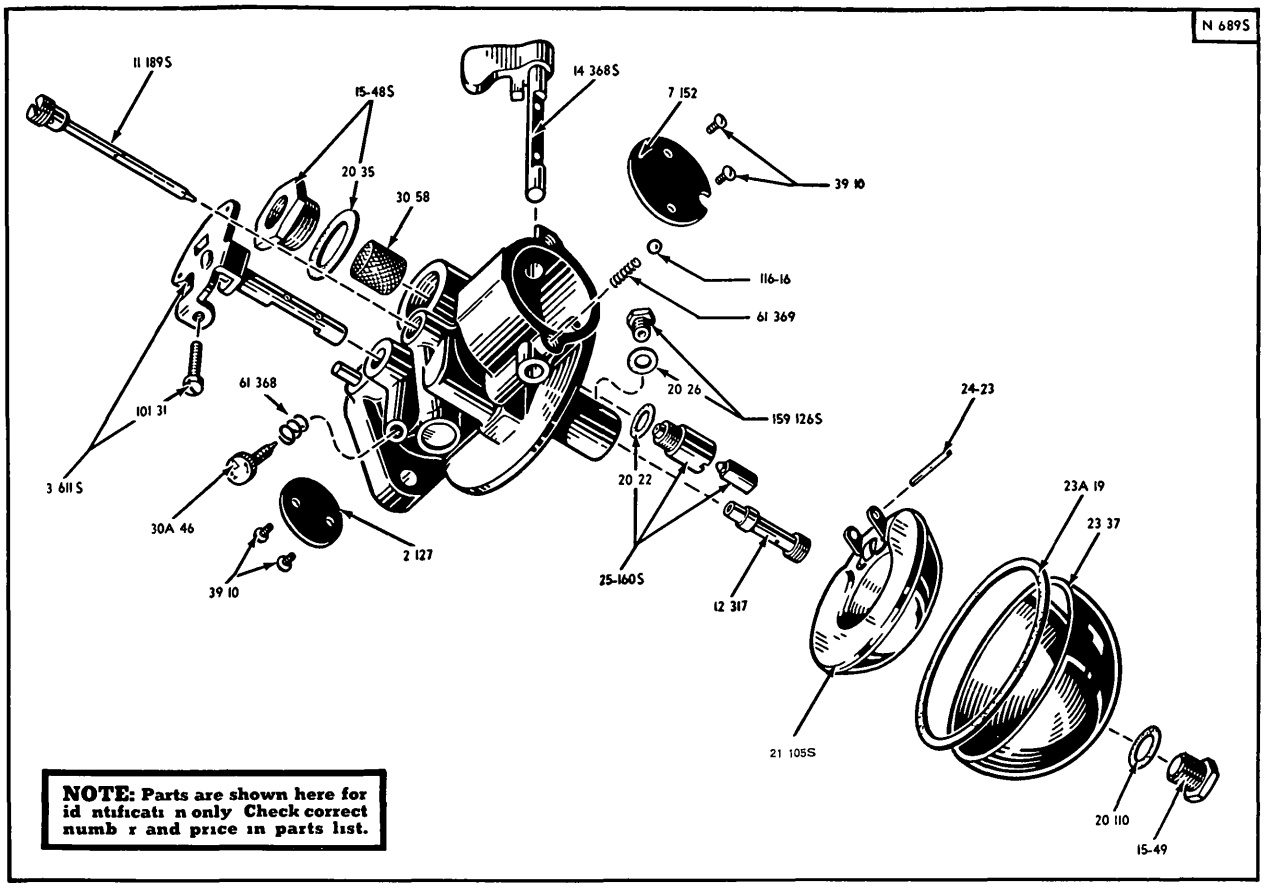
To Assemble

12 Install throttle shaft and valve Valve must be installed with trademark c on side toward idle port when viewing from flange side Always use new screws With valve screws loose and throttle lever set screw backed out seat valve by tapping lightly with a small screw driver Hold in place while tightening screws
13 Install nozzle making sure it seats in casting
14 Install main metering jet assembly
15 Install needle seat needle float and float pin
16 Set float level With carbureter casting inverted float resting lightly against needle in its seat there should be 13/64" clearance between machine surface of casting and free end of float (side opposite needle seat) Adjust by bending lip of float with small screw driver (Use gauge T109 39)
17 Install bowl ring gasket bowl bowl nut gasket and bowl nut Tighten securely after making sure bowl is centered in gasket
18 Install low speed jet seating it securely in casting
19 Install open end of strainer in strainer nut assembly and install strainer nut assembly
20 Then install idle adjusting screw finger tight Back out 1 to 3 turns **Do not use pliers or screw driver as it may damage idle screw**

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REO CARBURETER No. N-689S

WHEN SERVICING, USE REPAIR PACKAGE No 1387E

PART NAMES IN CAPITAL LETTERS, LISTED BELOW INDICATE CONTENTS OF REPAIR PACKAGE

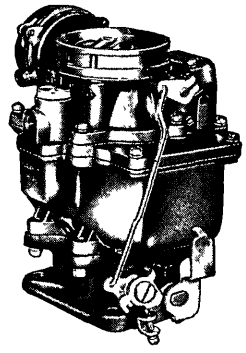
Part No.	Part Name	
1A-73	FLANGE GASKET	
2-127	Throttle valve	
3-611S	Throttle shaft and lever assembly (Sup by 3 774S)	
3-774S	Throttle shaft and lever assembly	
7-152	Choke valve	
11-189S	Low speed jet assembly (Sup by 11 218S)	
11-218S	LOW SPEED JET ASSEMBLY	
11-231U	†Conversion unit	
12-317	NOZZLE	
14-368S	Choke lever and shaft assembly	
15-48S	Strainer nut assembly	
15-49	Bowl nut (Sup by 15 50S)	
15-50S	Bowl nut assembly	
20-22	Needle seat gasket	
20-26	Main metering jet gasket	
20-35	Strainer nut gasket	
20-110	BOWL NUT GASKET	
21-105S	Float and lever assembly	
23-37	Bowl	
23A-19	BOWL RING GASKET	
24-23	FLOAT LEVER PIN	
25-160S	NEEDLE AND SEAT ASSEMBLY	
30-58	STRAINER	
30A-46	Idle adjustment screw	
39-10	Choke and throttle valve attaching screw (Sup by 101-320)	(4)
61-368	Adjustment screw spring	
61-369	Choke shaft spring	
101-31	Throttle adjustment screw	
101-320	VALVE ATTACHING SCREW	(4)
116-16	Choke shaft ball	
159-126S	Main metering jet assembly (Sup by 159 143S)	
159-143S	MAIN METERING JET ASSEMBLY	

†To convert N 689S to N 927S Complete installation instructions packed with each unitized package

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

CAR SERIAL NUMBERS
1001 and higher

MOTOR SERIAL NUMBERS
HT-6427-102 and higher



Casting No. 571 on Face of Flange

REO MODEL "37" COACH 1948-1950

WCD Dual Down-Draft Climatic® Control Carbureter—**No. 657S**

CARBURETER SPECIFICATIONS

For Reo 6 Cylinder Engine: 4-5/16 Inch Bore, 4-7/8 Inch Stroke

Dimensions: Flange size, 1¼ inch dual, 4 bolt type.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 19/32 inch I. D.
Main venturi, 1-3/16 inch I. D.

Float Level: Distance from seam of float (both sides—at top center to lower edge of bowl cover, when needle is seated to be 3/16 inch. (Use gauge No. T109-162.)

Vents: Inside, balance vent tube .218 inch inside diameter. Outside, none.

Gasoline Intake: Square vertical (push-pull) needle. Size No. 42 drill in needle seat.

Low Speed Jet Tube: Jet size, No. 67 (.032") drill.
By-pass, size No. 56 (.0635") drill.
Economizer, size No. 63 (.037") drill.
Idle bleed, size No. 55 (.052") drill.

Idle Ports: Upper port, length .165 inch. Width .030 inch.

Idle Port Openings: .122 to .128 inch above upper edge of valve with valve closed tight.

Lower Port (For Idle Adjustment Screw): Size .0615 to .0655 inch diameter.

Set Idle Adjustment Screw: 1 to 1½ turns open. For richer mixture turn screw out. Do not attempt to idle engine below 8 m. p. h.

Main Nozzle: In primary venturi, closed tip angle 49° from horizontal. Nozzle is installed permanently. **Do not remove.**

Metering Rod (Vacumeter Type): Economy step .068 inch diameter. Middle step tapers to .054 inch diameter. Power step .045 inch diameter. Length 3-41/64 inches.

Metering Rod Jet: .089 inch diameter.

Metering Rod Setting: Use gauge, part No. T109-163 (2.940 inches).

Accelerating Pump: High pressure delayed action type. Adjustable stroke.

Discharge jet (twin) size, No. 68 (.031") drill.
Intake disk check size, No. 30 drill.
Discharge (needle seat) size, No. 55 drill.
Relief ball check size, No. 55 drill.

Pump Adjustment: "32" as indicated on gauge T109-117S with throttle valve seated or 17/64 inch from top of pump shaft to the top of the dust cover housing.

Choke: Carter Climatic® Control, set at center index point. Offset butterfly type. Choke heat suction hole, in bowl cover, size No. 32 drill.

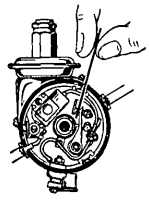
Vacuum Spark Port: None.

Motor Tune-Up—Be Accurate!

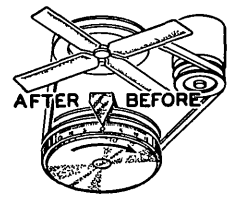
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



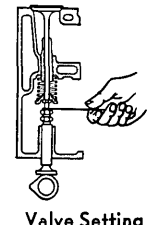
Spark Plug Gap .025"



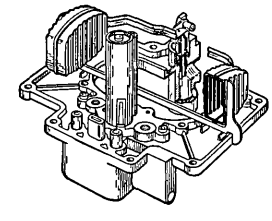
Breaker Point Setting .018" - .024"



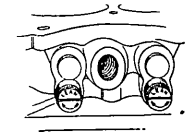
Ignition Timing Breaker Points to Open: 6° B.T.D.C.



Valve Setting (Hot) Intake .016" Exhaust .016"



Float Setting 3/16 Inch (Use Gauge T109-162)



Idle Adjustment Screw Setting 1 to 1½ Turns Open

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: Two separate float adjustments must be made—lateral and vertical.

LATERAL ADJUSTMENT: (Fig. 1) With bowl cover assembly inverted bowl cover gasket removed and float lip resting on seated needle, place float gauge T109-162 directly under float with notched portions of gauge fitted over edges of casting. Sides of floats should barely touch the vertical uprights of float gauge (A). Adjustments should be made by bending arms of floats.

VERTICAL ADJUSTMENT: (Fig. 1) With float gauge in position shown, floats should just clear the horizontal portion of gauge (B). Vertical distance between top of float and machined surface of casting must be 3/16". Adjust by bending float arms. Remove float, install bowl cover gasket and then reinstall float.

PUMP ADJUSTMENT: (Fig. 2) The accelerating pump has been designed to produce a uniform pump action. The total distance the plunger head (not shaft) moves from closed to wide open throttle controls the amount of fuel discharged. Correct pump travel is important and should be checked each time the carbureter is disassembled. Procedure is as follows:

Install pump connector link in lower hole (short stroke), with ends of link extending toward countershaft arm. Back out throttle

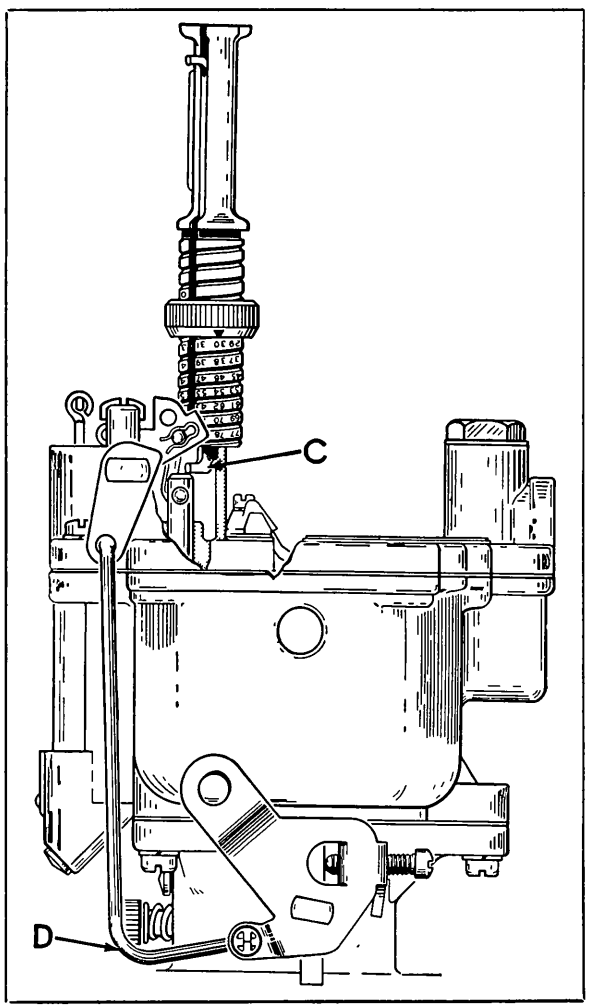


Figure 2

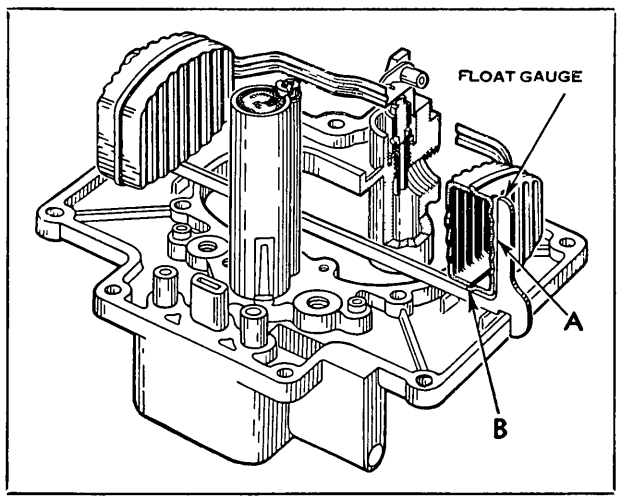


Figure 1

lever set screw to allow throttle valves to seat in bores of carbureter. Be sure fast idle adjusting screw does not hold throttle open. Place pump travel gauge T109-117S inverted on edge of dust cover boss of bowl cover as shown. Turn knurled nut of gauge until finger (C) just touches upper end of plunger shaft with throttle valves seated. Number indicated on gauge should be "32". Hold gauge vertical to insure correct reading.

Optional Adjustment: Top of pump plunger shaft should be 17/64" vertically below upper edge of dust cover boss on bowl cover, with throttle valves seated.

Adjust by bending throttle connector rod at lower angle (D).

PUMP JET ADJUSTMENT: (Fig. 3) Good acceleration performance at low speeds depends primarily on the gasoline discharged from the pump jets. Each of the two streams must be directed to its proper section of the dual venturi system. In order to obtain maximum efficiency each stream must be directed to a point between the primary and secondary venturi, missing the outer wall of the primary venturi but striking the lower part of the inner wall of the secondary venturi.

Only a slight bend should be necessary to properly aim the pump jets.

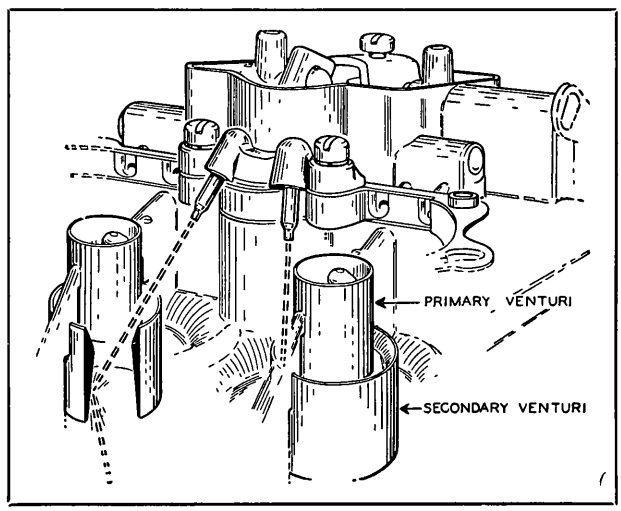


Figure 3

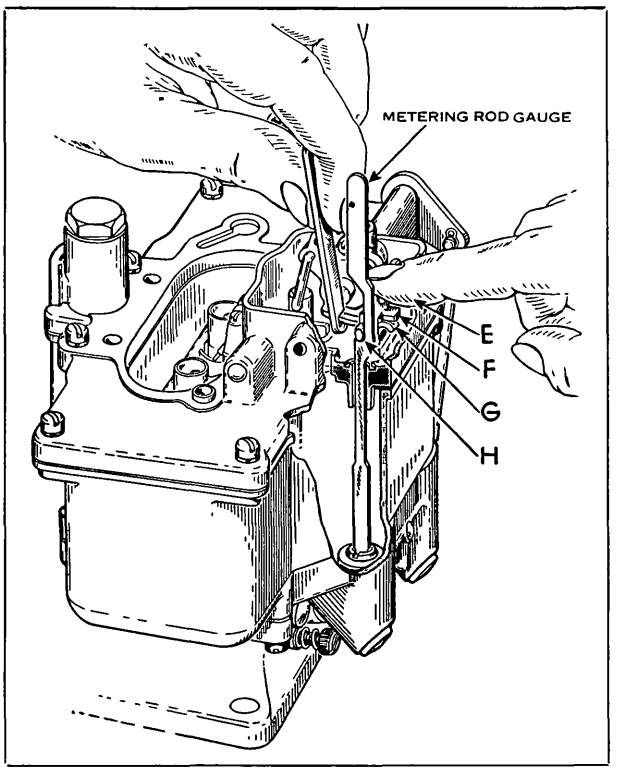


Figure 4

METERING ROD ADJUSTMENT: (Fig. 4) Back out throttle lever adjusting screw until throttle valves seat in bores of carbureter. Be sure fast idle adjusting screw does not hold throttle open. Insert one metering rod gauge T109-163 in place of either metering rod. Press down lightly on vacuum piston link (E) until lug of piston link (F) contacts lip of metering rod arm (G). There should be less than .005" clearance between metering rod bearing (H) and shoulder in notch of gauge. Adjustment should be made by bending lip of metering rod arm (G). Use bending tool T109-105.

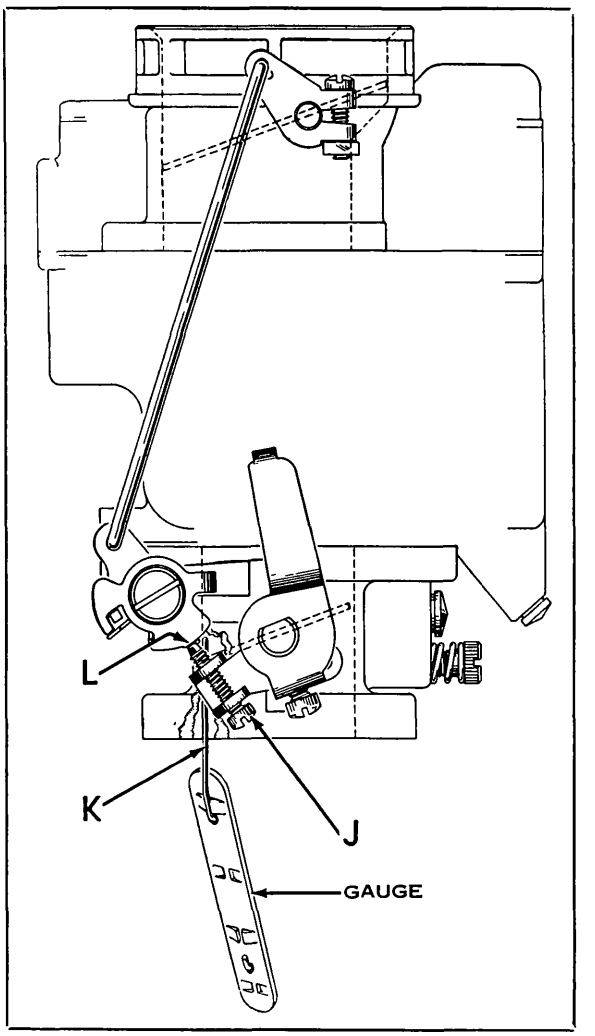


Figure 5

FAST IDLE ADJUSTMENT: (Fig. 5) With choke valve tightly closed, tighten fast idle adjusting screw (J) until there is .018" (K) opening between throttle valve and bore in carbureter, side opposite port. Use gauge T109-44. Be sure fast idle adjusting screw is on high step of cam (L) when making this setting.

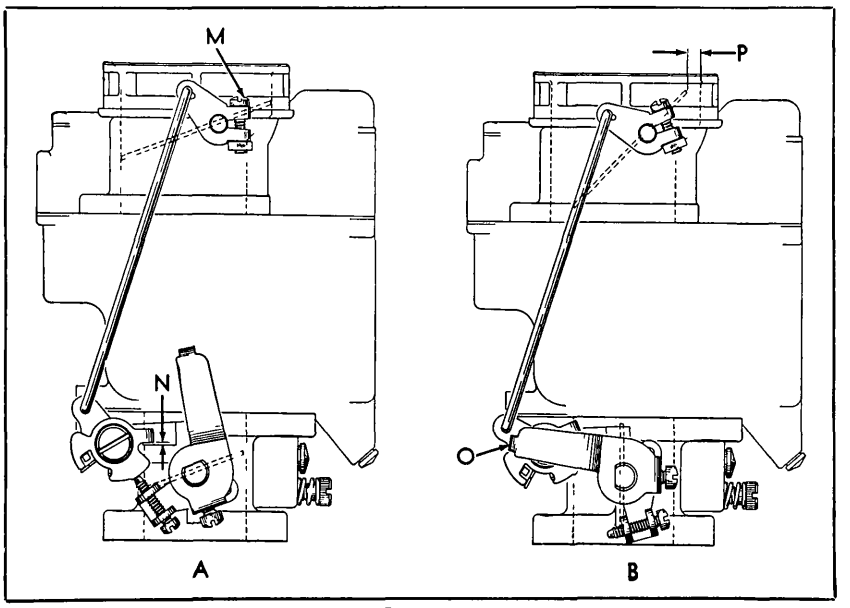
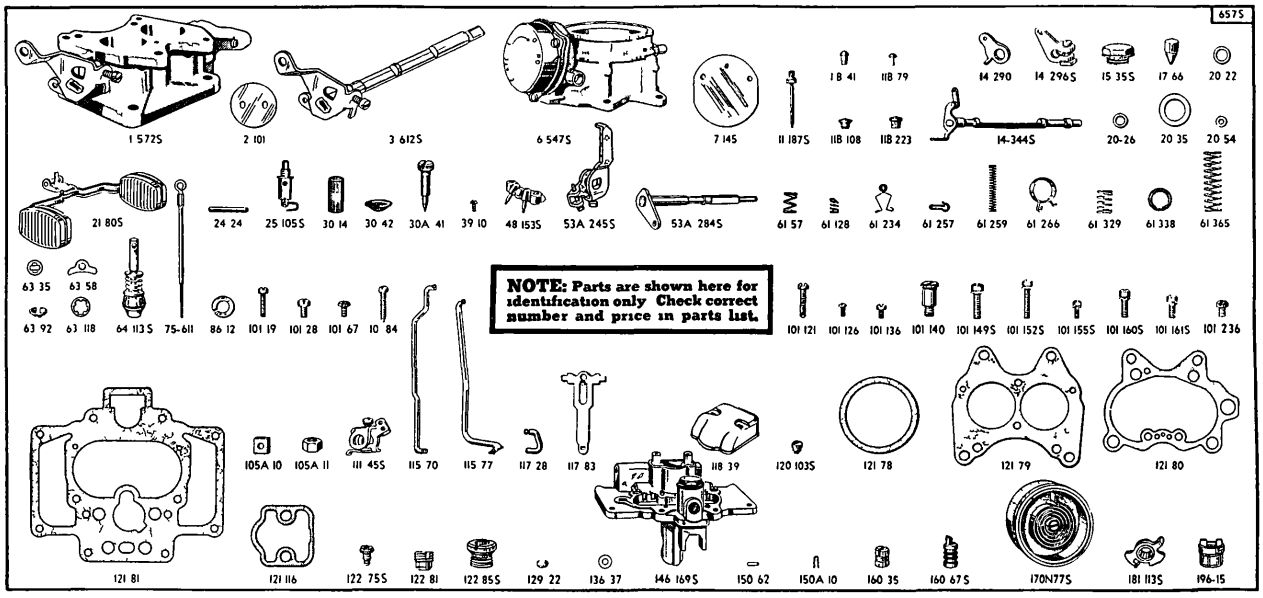


Figure 6

UNLOADER ADJUSTMENT: (Fig. 6) Two adjustments are necessary:

A. Loosen choke lever clamp screw (M) on choke shaft. Insert .010" feeler gauge T109-29 between lip of fast idle cam and boss on flange casting (N). Hold choke valve tightly closed and take all slack out of linkage by pressing choke lever toward closed position — hold in place — tighten clamp screw (M).

B. Adjust unloader lip (O) on throttle shaft lever until there is 3/16" clearance between upper edge of choke valve and inner wall of air horn (P) with throttle held in wide open position (Use gauge T109-28).



Reo 6—1948-50—Carbureter No. 657S

WHEN SERVICING, USE REPAIR PACKAGE No 1398A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-572S	Body flange assembly	
2-101	Throttle valve	(2)
3-612S	Throttle shaft and lever assembly	
6-547S	Air horn assembly	
6 655S	Air horn and piston housing assembly	
7-145	Choke valve	
11-187S	LOW SPEED JET ASSEMBLY	(2)
11B-41	Rivet plug	(2)
11B-79	Rivet plug	(3)
11B-108	IDLE PORT RIVET PLUG	(2)
11B-223	NOZZLE PASSAGE PLUG	(2)
14-290	Cam trip lever	
14-296S	Choke lever and screw assembly	
14-344S	Choke piston lever link and shaft assembly	
15-35S	Strainer nut assembly	
17-66	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	
20-26	Pump relief plug gasket	
20-35	Bowl strainer gasket	
20-54	Metering rod jet gasket	(2)
21-80S	Float and lever assembly	
24 24	Float lever pin	
25-105S	NEEDLE AND SEAT ASSEMBLY	
30-14	BOWL COVER STRAINER	
30-42	PUMP STRAINER	
30A-41	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
48-153S	Pump jet and housing assembly	
53A-245S	Fast idle arm and screw assembly	
53A-284S	Pump operating lever and countershaft assembly	
61-57	Adjustment screw lock spring	(2)
61-128	Connector rod spring (Use with 115 77)	
61-178	VACUUM PISTON SPRING	
61-234	METERING ROD SPRING	
61-257	Needle pull clip	
61-266	Fast idle cam spring	
61-329	Upper pump spring	
61-338	Plunger spring	
61-365	PUMP SPRING (LOWER)	
63-35	Spring retainer (Use with 115 77)	
63-58	Coil housing retainer	(3)
63-92	Pump spring retainer	
63-118	Throttle shaft retaining ring	
64-113S	PUMP PLUNGER SPRING AND RETAINER ASSEMBLY (Identify by shaft No 49 164)	
75-611	METERING ROD—STANDARD—068" 068" to 054" 045"	(2)

Part No	PART NAME	
86-12	Flange stud lock washer	(4)
101-19	Choke lever clamp screw (Sup by 101 354S)	
101-28	Fast idle arm clamp screw	
101-67	Pump retainer screw	
101-84	Fast idle adjustment screw	
101-126	Throttle valve attaching screw	(4)
101-136	Coil housing attaching screw	(3)
101-140	Fast idle attaching screw	
101-148S	Dust cover attaching screw and washer assembly	(2)
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	(4)
101-155S	Pump jet attaching screw and washer assembly	(2)
101-160S	Bowl cover attaching screw and washer assembly	(6)
101-161S	Dust cover attaching screw and washer assembly (Sup by 101 148S)	(2)
101-236	Metering rod arm clamp screw	
101-266	Throttle lever adjustment screw	
101-354S	Choke lever clamp screw assembly	
105A-10	Choke lever nut	
105A-11	Flange stud nut	(4)
111-45S	Pump and metering rod arm assembly	
115-70	Fast idle connector rod	
115-77	Throttle connector rod (Sup by 115 130)	
115-130	CONNECTOR ROD	
117-28	Pump arm link	
117-83	Vacumeter piston link	
118-39	Dust cover	
120-103S	METERING ROD JET ASSEMBLY	(2)
121-78	COIL HOUSING GASKET	
121-79	BODY FLANGE GASKET	
121-80	AIR HORN GASKET	
121-81	BOWL COVER GASKET	
121-116	DUST COVER GASKET	
122-75S	PUMP RELIEF PLUG ASSEMBLY	
122-81	Pump discharge check plug	
122-85S	DISK CHECK PLUG ASSEMBLY	
129-22	Metering rod disk	(2)
136-37	CONNECTOR ROD WASHER (Use with 115 77)	
146-169S	Bowl cover assembly	
150-62	Choke piston pin	
150A-10	PIN SPRING	(3)
160-35	Choke piston	
160-67S	Vacuum piston and pin assembly	
170N-77S	Thermostatic housing and coil assembly	
172-22	CONNECTOR ROD RETAINER (Use with 115 130)	
181-113S	Fast idle cam assembly	
196-15	Pump plunger guide	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

CARBURETER
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SCOTT-ATWATER

"ELGIN"

Models S104A, 5A, 6A, 7A

(25 H. P.)

HORIZONTAL, MODEL N TYPE **CARBURETER No. N-2899S**

CARBURETER SPECIFICATIONS

For Scott-Atwater Two Cylinder 30 Cu. In. Engine

Dimensions: Flange size 1 inch S A E (slotted). Main venturi 1 1/16 inch 1 D

Float Level: Distance from top of float (at free end) opposite needle seat to outer edge of float chamber cover when needle is seated to be 11/64 inch plus or minus 1/32 inch

Vents: Inside None Outside No 50 (.070 inch) drill

Gasoline Intake: Size No 48 (.076 inch) drill in needle seat

Low Speed Jet Tube: Jet size No 64 (.036 inch) drill Idle bleed size No 70 (.028 inch) drill

Idle Port· Slot type round ends length .137 inch width .030 inch

Idle Port Opening. Top of slot to be .122 to .126 inch above upper edge of valve with valve tightly closed

Idle Screw Seat: In low speed passage size No 47 (.0785 inch) drill Discharge into bore size No 50 (.070 inch) drill

Set Idle Adjustment Screw: 1/2 to 1 1/4 turns open For richer mixture turn screw out

Main Nozzle Inside diameter No 41 (.096 inch) drill Nozzle bleed (bore to nozzle 4 drilled holes) size No 60 (.040 inch) drill

High Speed Adjusting Needle: 1/4 to 1 1/4 turns open Seat (in body) size No 44 (.086 inch) drill

Choke. Manual butterfly type

MOTOR TUNE-UP

Spark Plug Gap .035"	Breaker Point Setting .020"	Float Setting 11/64" ± 1/32"	High Speed Adj. Screw Setting 1/4 to 1 1/4 Turns Open	Idle Adjustment Screw Setting 1/2 to 1 1/4 Turns Open

SERVICE PROCEDURE

CAUTION: REMOVE HIGH SPEED NEEDLE BEFORE REMOVING BOWL

To Disassemble

1 Remove carbureter from engine

2 Remove high speed adjusting needle, packing nut and packing (SCRIBE MARK ON BODY AND BOWL)

3 Remove bowl nut, gasket and bowl

4 Remove bowl drain spring spacer (if any) plug and gasket from inside of bowl

5 Remove float pin, float needle pin spring needle and needle seat Check float for dents leaks and wear on float lip or in float pin holes

6 Remove bowl ring gasket

7 Remove idle adjustment screw

8 Remove nozzle DO NOT REMOVE LOW SPEED JET TUBE

9 Remove throttle valve screws, valve and shaft and lever assembly

10 Clean all parts with solvent making sure all carbon accumulation is removed from bore especially where throttle valve seats in casting Blow out all passages with compressed air Replace all worn and damaged parts Always use new gaskets

To Assemble

11 Install throttle shaft and valve Valve must be installed with trademark C on side toward idle port when viewing from flange side Always use new screws With valve screws loose and throttle lever set screw backed out seat valve by tapping lightly with a small screwdriver Hold in place while tightening screws

12 Install nozzle making sure it seats in casting

13 Install needle seat needle needle spring pin float and float pin

14 Set float level with carbureter casting inverted float resting lightly against needle pin with needle seated There should be 11/64 inch clearance between outer surface of casting and free end of float (side opposite needle seat) Adjust by bending lip of float

15 Install bowl drain gasket plug spacer (if any) and spring in bottom of bowl When installing spring make sure the end fitting over drain plug points downward at a slight angle giving maximum tension on plug Place bowl nut and gasket through bottom of bowl to hold in place

16 Install bowl ring gasket and bowl (line up scribe marks) Tighten securely

17 Install high speed adjusting needle packing nut and new packing Turn needle in until it just seats in body then back out 3/4 turns

18 Install idle adjusting screw finger tight Back out approximately 3/4 turns Do not use pliers or screwdriver as it may damage idle screw

19 Install carbureter on engine and make idle and high speed adjustment as necessary

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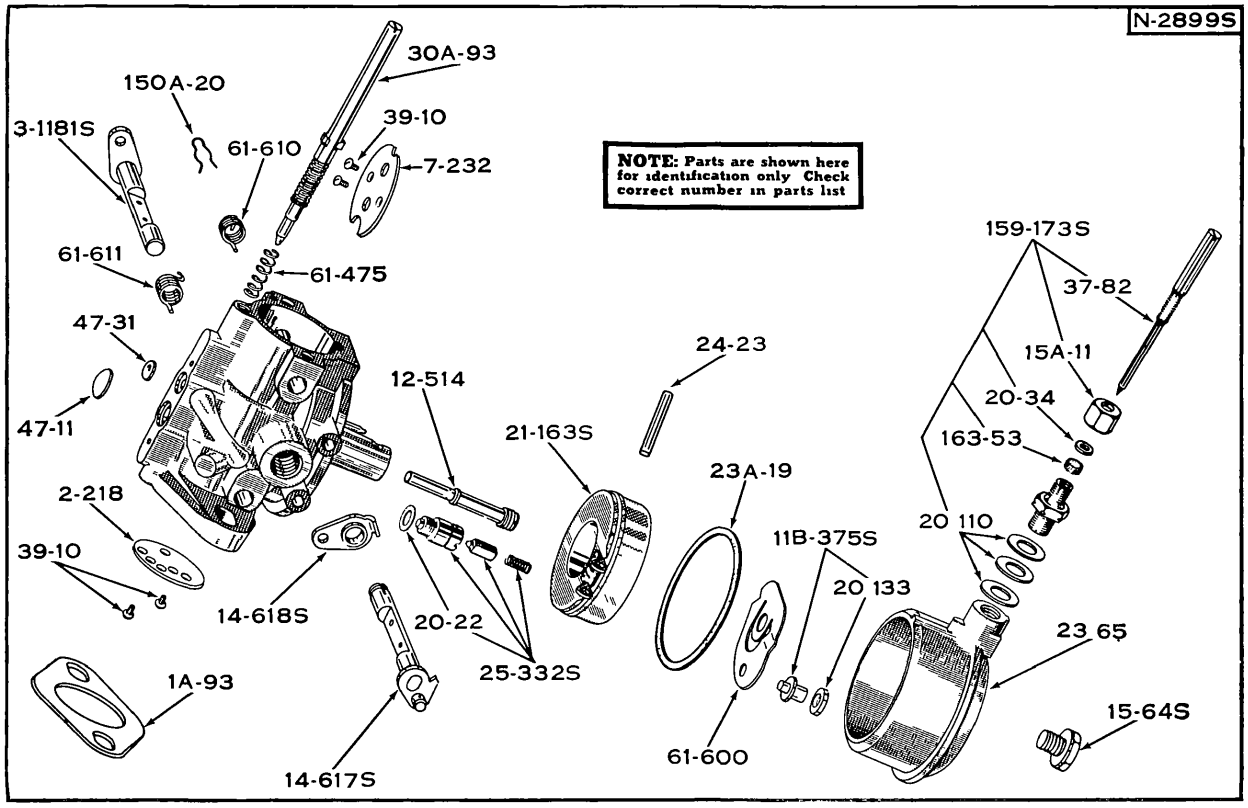
HIGH SPEED AND IDLE SCREW ADJUSTMENT

After rebuilding and installation on engine is complete the high speed and idle screw adjustments must be made

With the high speed needle turned counter clockwise (from closed position) ¾ turn and idle screw turned ¾ turns open start engine

With the engine at normal operating temperature accelerate engine and check response The high speed needle should be adjusted for the leanest possible mixture which will allow satis factory acceleration If the engine misses and backfires the high speed mixture is too lean and the high speed adjustment needle must be turned counter clockwise 1/10 turn at a time to correct this condition If the engine loads (heavy exhaust) and is slug gish the mixture is too rich and the high speed adjustment needle must be turned clockwise 1/10 turn at a time to correct To make final check of the high speed adjustments operate the engine under load and adjust

The idle screw should be adjusted intermittently while making the high speed adjustment DO NOT USE FORCE ON THE HIGH SPEED NEEDLE OR IDLE SCREW AS DAMAGE MAY RESULT



Scott-Atwater — Carbureter No. N-2899S

Part No.	PART NAME	
1A-93	Flange gasket	
2-218	Throttle valve	
3-1181S	Throttle shaft and lever assemb y	
7-232	Choke valve	
11B-375S	Bowl drain plug assembly	
12-514	Nozzle	
14-617S	—Choke shaft and lever assembly	
14-618S	—Choke pickup lever and collar assembly	
15-64S	Bowl nut assembly	
15A-11	Packing nut	
20-22	Needle seat gasket	
20-34	Packing nut gasket	
20-110	Bowl nut and metering screw gasket	(3)
20-133	Bowl drain gasket	
21-163S	Float and lever assembly	
23-65	Bowl	

Part No.	PART NAME	
23A 19	Bowl ring gasket	
24-23	Float lever pin	
25-332S	Needle and seat assembly	
30A-93	—Idle adjustment screw	
37-82	—High speed adjusting needle	
39-10	Choke and throttle valve attaching screw	(4)
47-11	Idle port welsh plug	
47-31	Idle tube passage welsh plug	
61-475	Idle adjustment screw spring	
61 600	Bowl drain spring	
61-610	Choke return spring	
61-611	Throttle return spring	
150A-20	Pin spring	
159-173S	—Adjustable main metering screw assembly	
163-53	High speed adjusting needle packing	

—Parts so marked are new and listed for the first time

NOTE **Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used**

SCOTT-ATWATER

40 HP
"SUPER SCOTT" and
"ROYAL SCOTT"

Models: 136A-236A-336A-436A-536A-636A

HORIZONTAL, MODEL N TYPE, **CARBURETERS Nos. N-2750S, N-2930S**

CARBURETER SPECIFICATIONS

For Scott-Atwater Two Cylinder 42.18 Cu. In. Engine

Dimensions: Flange size 1-7/16 inch I D, counterbored Main venturi 1¼ inch I D

Float Level: Distance from top of float (at free end) opposite needle seat to outer edge of float chamber cover when needle is seated to be (N-2750S) 11/64 inch, (N-2930S) ⅛ inch plus or minus 1/32 inch

Vents: Inside none Outside No 50 (070 inch) drill

Low Speed Jet Tube: Jet, size No 57 (043 inch) drill Idle bleed size No 70 (028 inch) drill

Idle Port: Round type 030 inch diameter

Idle Port Opening. Bottom of port to be 018 to 022 inch above upper edge of valve with valve tightly closed

Idle Screw Seat: In low speed passage, size No 47 (0785 inch) drill Discharge into bore, size No 50 (070 inch) drill

Set Idle Adjustment Screw: ¼ to 1¾ turns open For richer mixture turn screw out

Main Nozzle: Inside diameter No 32 (116 inch) drill Nozzle bleed, (N-2750S only) bore to nozzle, 4 drilled holes size No 60 (040 inch) drill

High Speed Adjusting Needle: ¼ to 1¾ turns open Seat (in body), size No 39 (0995 inch) drill

Choke: Manual butterfly type

MOTOR TUNE-UP

Spark Plug Gap .035"	Breaker Point Setting .020"	Float Setting 11/64" ± 1/32"	High Speed Adj. Screw Setting ¼ to 1¾ Turns Open	Idle Adjustment Screw Setting ¼ to 1¾ Turns Open

SERVICE PROCEDURE

CAUTION: REMOVE HIGH SPEED NEEDLE BEFORE REMOVING BOWL

To Disassemble

1 Remove carbureter from engine

2 Remove high speed adjusting needle, packing nut and packing (SCRIBE MARK ON BODY AND BOWL)

3 Remove bowl nut, gasket and bowl

4 Remove float pin, float needle spring needle and needle seat Check float for dents leaks and wear on float lip or in float pin holes

5 Remove bowl ring gasket

6 Remove idle adjustment screw

7 Remove nozzle DO NOT REMOVE LOW SPEED JET TUBE

8 Remove throttle valve screws valve and shaft and lever assembly

9 Clean all parts with solvent, making sure all carbon accumulation is removed from bore, especially where throttle valve seats in casting Blow out all passages with compressed air Replace all worn and damaged parts Always use new gaskets

To Assemble

10 Install throttle shaft and valve Valve must be installed with trademark 'C on side toward idle port when viewing from flange side Always use new screws With valve screws loose and throttle lever set screw backed out, seat valve by tapping lightly with a small screwdriver Hold in place while tightening screws

11 Install nozzle making sure it seats in casting

12 Install needle seat needle, needle spring, float and float pin

13 Set float level with carbureter casting inverted float resting lightly against needle spring with needle seated There should be (N 2750S) 11/64 inch (N-2930S) ⅛ inch clearance between outer surface of casting and free end of float (side opposite needle seat)

14 Install bowl ring gasket and bowl (line up scribe marks) Tighten securely

15 Install high speed adjusting needle packing nut and new packing Turn needle in until it just seats in body then back out 1 turn

16 Install idle adjusting screw finger tight Back out approximately 1 turn Do not use pliers or screwdriver as it may damage idle screw

17 Install carbureter on engine and make idle and high speed adjustment as necessary

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CARBURETER

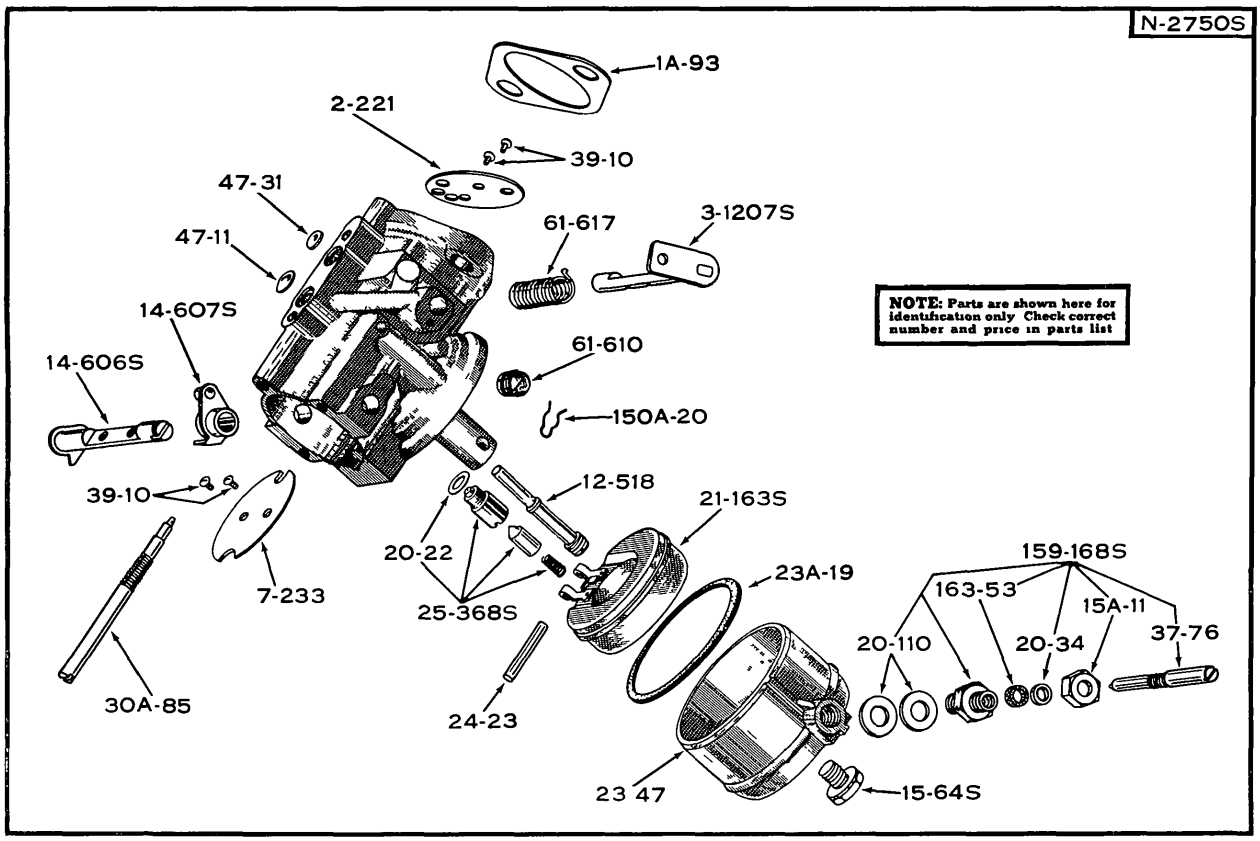
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HIGH SPEED AND IDLE SCREW ADJUSTMENT

After rebuilding and installation on engine is complete the high speed and idle screw adjustments must be made
With the high speed needle turned counter clockwise (from closed position) 1 turn and idle screw turned 1 turn open start engine
With engine at normal operating temperature accelerate en gine and check response The high speed needle should be adjusted for the leanest possible mixture which will allow satis factory acceleration If the engine misses and backfires the high speed mixture is too lean and the high speed adjustment needle must be turned counter clockwise 1/10 turn at a time to correct this condition If the engine loads (heavy exhaust) and is sluggish the mixture is too rich and the high speed adjustment needle must be turned clockwise 1/10 turn at a time to correct

The idle screw should be adjusted intermittently while making the high speed adjustment DO NOT USE FORCE ON THE HIGH SPEED NEEDLE OR IDLE SCREW AS DAMAGE MAY RESULT



Scott-Atwater—Carbureters Nos. N-2750S, N-2930S

Part No.	PART NAME	
1A-93	Flange gasket	
2-221	—Throttle valve (N 2750S)	
2-228	—Throttle valve (N 2930S)	
3-1207S	—Throttle shaft and lever assembly	
7-233	—Choke valve	
12-518	—Nozzle (N 2750S)	
12-527	—Nozzle (N 2930S)	
14-606S	—Choke lever and shaft assembly	
14-607S	—Choke pickup lever and collar assembly	
15-64S	Bowl nut assembly	
15A-11	Packing nut	
20-22	Needle seat gasket	
20-34	Packing nut gasket	
20-110	Bowl nut and high speed packing gasket	(3)
21-163S	Float and lever assembly	

Part No.	PART NAME	
23-47	Bowl	
23A-19	Bowl ring gasket	
24-23	Float lever pin	
25-368S	—Needle and seat assembly (.063")	
30A-85	—Idle adjustment screw	
37-76	High speed adjusting needle	
39-10	Choke and throttle valve attaching screw	(4)
47-11	Idle port welsh plug	
47-31	Idle passage welsh plug	
61-610	Choke return spring	
61-617	—Throttle return spring	
150A-20	Pin spring	
159-168S	Adjustable main metering screw assembly	
163-53	Main metering screw packing	

—Parts so marked are new and listed for the first time

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.

2890S
Limited
Production

SCOTT-ATWATER

60 HP "FLYING SCOTT"

MODELS 332 & 432

(Three Carbureters Per Engine)

Use N-2880S
to replace N-2890S

Horizontal, Model N Type, **Carbureters Nos. N-2684S, N-2880S, N-2890S**

CARBURETER SPECIFICATIONS

For Scott-Atwater Three Cylinder 63 27 Cu In Engine

Dimensions Flange size 1 inch S A E (slotted) Main venturi 15/16 inch I D

Float Level Distance from top of float (at free end) opposite needle seat to outer edge of float chamber cover when needle is seated to be 11/64 inch (gauge T109 166) plus or minus 1/32 inch

Vents Inside None Outside No 50 (070 inch) drill

Low Speed Jet Tube Jet size (N 2684S) No 65 (035 inch) installed permanently outside of nozzle (N 2880S N 2890S) No 60 (040 inch) drill installed permanently inside of nozzle

Idle Port (N 2684S N 2880S) round type 030 inch diameter (N 2880S) slot type length 040 inch width 30 inch (N 2684S only) Idle passage discharge port into bore size No 76 (020 inch) drill

Idle Port Opening With throttle valve tightly closed idle port is wide open above the valve

Set Idle Adjustment Screw 1/4 to 2 turns open For richer mixture turn screw out

Main Nozzle Inside diameter (N 2684S) No 32 (116 inch) (N 2880S N 2890S) No 17 (173 inch) drill Accelerating jets (in side of nozzle) (N 2684S) NONE (N 2880S N 2890S) 6—size No 60 (040 inch) drill

High Speed Adjusting Needle Seat (in body) size (N 2684S) No 50 (070 inch) (N 2880S N 2890S) No 41 (096 inch) drill Setting 1/4 to 3 turns open

Choke Manual butterfly type

MOTOR TUNE-UP

Spark Plug Gap	Breaker Point Setting	Float Setting	High Speed Adj Screw Setting	Idle Adjustment Screw Setting
.032"	.020'	11/64" ± 1/32"	1/4 to 1 1/2 Turns Open	1/2 to 2 Turns Open

SERVICE PROCEDURE

CAUTION REMOVE HIGH SPEED NEEDLE BEFORE REMOVING BOWL

To Disassemble

1 Remove carbureter from engine

2 Remove high speed adjusting needle packing nut and packing (SCRIBE MARK ON BODY AND BOWL)

3 Remove bowl nut gasket and bowl

4 Remove float pin float spring needle and needle seat Check float for dents leaks and wear on float lip or in float pin holes

5 Remove bowl ring gasket

6 Remove idle adjustment screw and spring

7 Remove nozzle DO NOT REMOVE LOW SPEED JET TUBE

8 Remove throttle valve screws valve and shaft and lever assembly

9 Clean all parts with solvent making sure all carbon accumulation is removed from bore especially where throttle valve seats in casting Blow out all passages with compressed air Replace all worn and damaged parts Always use new gaskets

To Assemble

10 Install throttle shaft and valve Valve must be installed with trademark C on side toward idle port when viewing from flange side Alway use new screws With valve screws loose and throttle lever set screw backed out seat valve by tapping lightly with a small screwdriver Hold in place while tightening screws

11 Install nozzle making sure it seats in casting

12 Install needle seat spring needle float and float pin

13 Set float level with carbureter casting inverted float resting lightly against needle in its seat There should be 11/64 inch clearance between outer surface of casting and free end of float (side opposite needle seat) Adjust by bending lip of float

14 Install bowl ring gasket bowl (line up scribe marks) bowl nut gasket and bowl nut Tighten securely

15 Install high speed adjusting needle packing nut and new packing Turn needle in until it just seats in body then back out 1 turn

16 Install idle adjusting screw finger tight Back out approximately 1 1/4 turns Do not use pliers as it may damage idle screw

17 Install carbureter on engine and make idle and high speed adjustment as necessary

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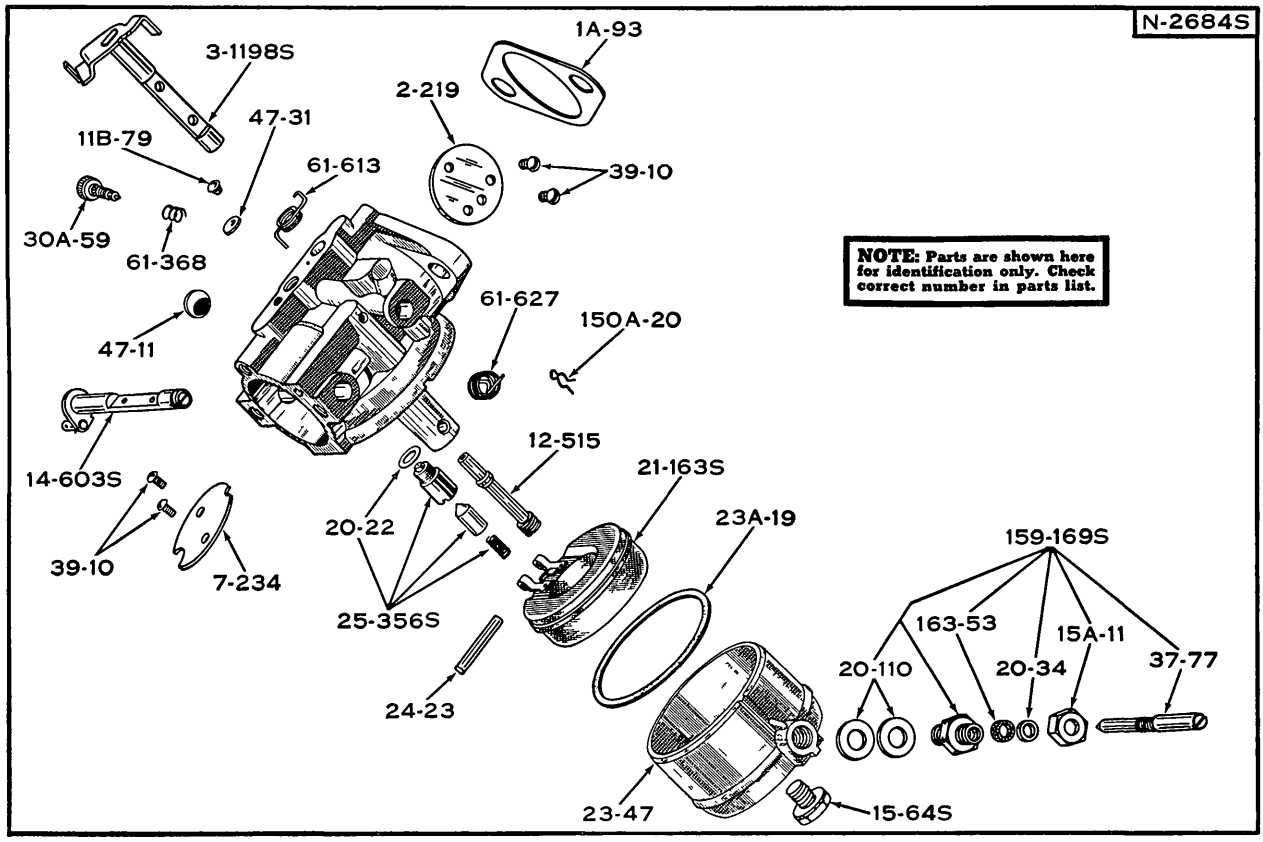
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HIGH SPEED AND IDLE SCREW ADJUSTMENT

After rebuilding and installation on engine is complete the final high speed and idle screw adjustments must be made with the boat in the water Turning the adjustable main metering screw clockwise produces a leaner high speed mixture and turning the idle screw clockwise produces a leaner idle mixture With the high speed needle and idle screw turned approximately 1 turn open from closed position start the engine

With engine at normal operating temperature accelerate engine and check response For best performance—adjust each high speed needle for smoothest wide open performance then set slightly richer Check accelerations from idle and richen each mixture slightly for best acceleration All three adjusting screws are then fastened to the single control rod If the engine misses and backfires the high speed mixture is too lean If the engine loads (heavy exhaust) and is sluggish the mixture is too rich The idle screw should be adjusted intermittently while making the high speed adjustment

DO NOT USE FORCE ON THE HIGH SPEED NEEDLE OR IDLE SCREW AS DAMAGE MAY RESULT



Scott-Atwater—Carbureters Nos. N-2684S, N-2880S, N-2890S

Part No.	PART NAME	
1A-93	Flange gasket	
2-219	—Throttle valve (N 2684S N 2890S)	
2-227	—Throttle valve (N 2880S)	
3-1198S	—Throttle shaft and lever assembly	
7-234	—Choke valve	
11B-79	Idle passage plug	
12-515	—Nozzle (N 2684S)	
12-526	—Nozzle (N 2880S N 2890S)	
14-603S	—Choke lever and shaft assembly	
15-64S	Bowl nut assembly	
15A-11	Packing nut	
20-22	Needle seat gasket	
20-34	Packing nut gasket	
20-110	Bowl nut and high speed packing gasket	(3)
21-163S	Float and lever assembly	
23-47	Bowl	
23A-19	Bowl ring gasket	
24-23	Float lever pin	

Part No.	PART NAME
25-356S	Needle spring and seat assembly (.076") (Use 25 375S)
25-375S	—Needle pin spring and seat assembly (.076")
30A-59	Idle adjustment screw
37-77	—High speed adjusting needle (N 2684S)
37-81	—High speed adjusting needle (N 2880S N 2890S)
39-10	Choke and throttle valve attaching screw (4)
47-11	Idle port welsh plug
47-31	Idle passage welsh plug
61-368	Idle adjustment screw spring
61-613	—Throttle return spring
61-627	—Choke return spring
150A-20	Pin spring
159-169S	—Adjustable main metering screw assembly (N 2684S)
159-172S	—Adjustable main metering screw assembly (N 2880S N 2890S)
163-53	Main metering screw packing

—Parts so marked are new and listed for the first time

NOTE **Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.**

SCOTT-ATWATER

Model 3885 (10 H. P.)
N-2678S—Serial Nos. 3885—1001 to 3885—2200
N-2763S-SA—After SA, Serial No. 3885—2200
Model 3385 (7½ H. P.)
N-2679S

HORIZONTAL, MODEL N TYPE, CARBURETERS Nos. N-2678S, N-2679S, N-2763S-SA

CARBURETER SPECIFICATIONS

For Scott-Atwater Two Cylinder 14.82 Cu. In. Engine (N-2678S, N-2763S-SA)
For Scott-Atwater Two Cylinder 11.0 Cu. In. Engine (N-2679S)

Dimensions: Flange size, ½ inch S. A. E. (Slotted). Venturi size, (N-2678S, N-2763S-SA) ¾ inch; (N-2679S) ⅝ inch.

Float Level: Distance from top of float (at free end) opposite needle seat to outer edge of float chamber cover when needle is seated to be 11/64 inch, plus or minus 1/64 inch.

Vent: Inside, none. Outside size No. 50 (.070 inch) drill.

Gasoline Intake: Size No. 48 (.076 inch) drill.

Low Speed Jet Tube: Jet, size (N-2678S, N-2679S) No. 73 (.024 inch) (N-2763S) No. 64 (.036 inch) (N-2763SA) No. 68 (.031 inch) drill. Auxiliary jet (Idle Bleed), in side of tube, 4—cannot gauge, size No. 75 (.021 inch) drill.

Idle Ports: (N-2678S, N-2763S-SA) one—slot type, round end, length .092 inch, width .030 inch, one—round hole (.051 inch) diameter. (N-2679S) one—slot type, round end, length .066 inch, width .034 inch, one—round hole (.046 inch) diameter.

Idle Port Opening: (N-2678S, N-2763S-SA) Top of slot to be .063 to .067 inch above top edge of valve; (N-2679S) Bottom of slot to be .000 to .004 inch above top edge of valve with valve tightly closed.

Idle Screw Seat: Size .0785 inch diameter.

Set Idle Adjustment Screw: (N-2678S, N-2763S-SA) ¼ to 1¾ turns, (N-2679S) ¼ to 1½ turns open. For richer mixture turn screw out. Do not idle engine below (N-2678S, N-2763S-SA) 500 R.P.M., (N-2679S) 450 R.P.M.

Main Nozzle: Install permanently. DO NOT REMOVE. Nozzle bleed tube to outside size No. 65 (.035 inch) drill.

High Speed Adjusting Needle: ¼ to 1½ turns open. Seat (in body) size No. 47 (.0785 inch) drill.

Choke: Manual—Butterfly type valve.

MOTOR TUNE-UP

Spark Plug Gap	Breaker Point Setting	Float Setting	High Speed Adj. Screw Setting	Idle Adjustment Screw Setting
.035" (N-2678S, N-2763S-SA) .030" (N-2679S)	.020"	11/64" ± 1/64"	¼ to 1½ Turns Open	¼ to 1¾ (N-2678S, N-2763S-SA) ¼ to 1½ (N-2679S) Turns Open

SERVICE PROCEDURE

CAUTION: REMOVE HIGH SPEED NEEDLE BEFORE REMOVING BOWL

To Disassemble

1. Remove carbureter from engine.
2. Remove high speed adjusting needle, packing nut and packing (SCRIBE MARK ON BODY AND BOWL).
3. Remove bowl nut, gasket and bowl.
4. Remove float pin, float, needle and needle seat. Check float for dents, leaks and wear on float lip or float pin holes.
5. Remove bowl ring gasket.
6. Low speed jet assembly installed permanently. DO NOT REMOVE.
7. Remove idle adjustment screw and spring.
8. Nozzle installed permanently. DO NOT REMOVE.
9. Remove throttle valve screw, valve and shaft and lever assembly.
10. Do not remove choke valve and shaft unless replacement of these parts is necessary.
11. Clean all parts with solvent, making sure all carbon accumulation is removed from bore, especially where throttle valve seats in casting. Blow out all passages with compressed air. Replace all worn or damaged parts. Always use new gaskets.

To Assemble

12. Install throttle shaft and valve. Valve must be installed with trademark "C" on side toward idle port when viewing from flange side. Always use new screws. With valve screws loose, seat valve by tapping lightly with small screwdriver. Hold in place while tightening screws.
13. Install needle seat, needle, float and float pin.
14. Set float level with carbureter casting inverted, float resting lightly against needle in its seat. There should be 11/64 inch clearance between outer edge of casting and free end of float (side opposite needle seat). Adjust by bending lip of float.
15. Install high speed needle, packing nut and packing in bowl. Turn needle in until one thread on needle is visible at packing nut. Then install bowl ring gasket, bowl (line up scribe marks), bowl nut gasket and bowl nut. Tighten securely.
16. Turn high speed needle in until it just seats in body, then back out ¾ turn.
17. Install idle adjusting screw finger tight. Back out approximately ¾ turn. Do not use pliers or screwdriver as it may damage idle screw.
18. Install carbureter on engine and make idle and high speed adjustment as necessary.

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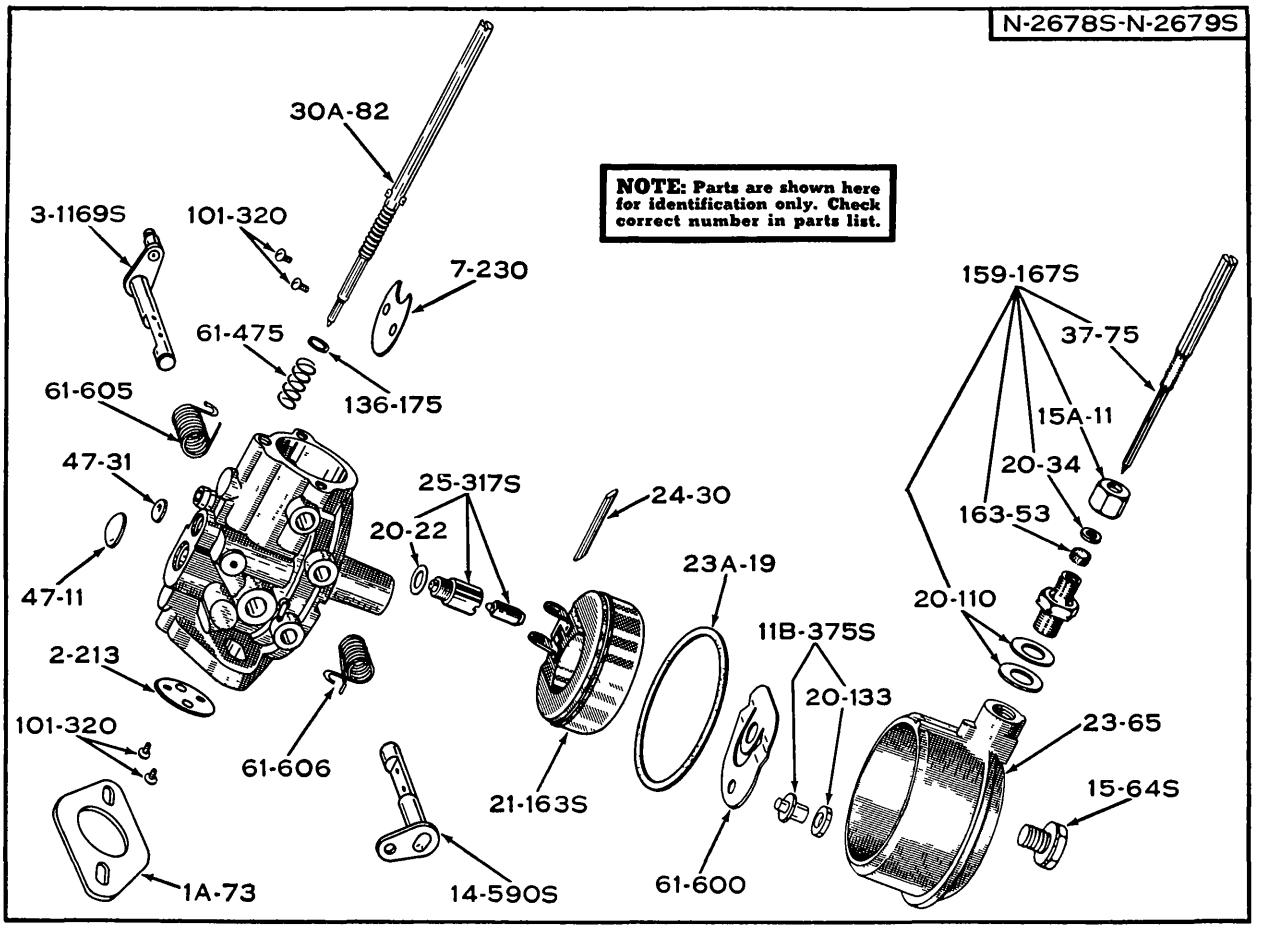
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HIGH SPEED AND IDLE SCREW ADJUSTMENT

After rebuilding and installation on engine is complete, the high speed and idle screw adjustments must be made.
With the high speed needle turned counter clockwise (from closed position) ¾ turn and idle screw turned ¾ turns open, start engine.

With the engine at normal operating temperature, accelerate engine and check response. The high speed needle should be adjusted for the leanest possible mixture which will allow satisfactory acceleration. If the engine misses and backfires, the high speed mixture is too lean and the high speed adjustment needle must be turned counter clockwise 1/10 turn at a time to correct this condition. If the engine loads (heavy exhaust) and is sluggish, the mixture is too rich and the high speed adjustment needle must be turned clockwise 1/10 turn at a time to correct. To make final check of the high speed adjustment, operate the engine under load and adjust.

The idle screw should be adjusted intermittently while making the high speed adjustment. DO NOT USE FORCE ON THE HIGH SPEED NEEDLE OR IDLE SCREW AS DAMAGE MAY RESULT.



Scott-Atwater — Carbureters Nos. N-2678S, N-2679S, N-2763S-SA

Part No.	PART NAME	
1A-73	Flange gasket	
2-213	—Throttle valve (N-2678S, N-2763S)	
2-214	Throttle valve (N-2679S)	
3-1169S	—Throttle shaft and lever assembly	
7-201	Choke valve (N-2679S)	
7-230	—Choke valve (N-2678S, N-2763S)	
11B-375S	—Bowl drain plug assembly	
14-590S	—Choke shaft and lever assembly	
15-64S	Bowl nut assembly	
15A-11	Packing nut	
20-22	Needle seat gasket	
20-34	Packing nut gasket	
20-110	Bowl nut and metering screw gasket	(3)
20-133	—Bowl drain gasket	
21-163S	Float and lever assembly	
23-65	—Bowl	

Part No.	PART NAME	
23A-19	Bowl ring gasket	
24-30	Float lever pin	
25-317S	Needle and seat assembly	
30A-82	—Idle adjustment screw (N-2678S, N-2679S, N-2763S)	
30A-87	—Idle adjustment screw (N-2763SA)	
37-75	—High speed adjusting needle	
47-11	Idle port welsh plug	
47-31	Idle tube passage welsh plug	
61-475	Idle adjustment screw spring	
61-600	—Bowl drain spring	
61-605	—Throttle return spring	
61-606	—Choke return spring	
101-320	Choke and throttle valve attaching screw	(4)
136-175	Idle adjusting screw washer	
159-167S	—Adjustable main metering screw assembly	
163-53	High speed adjusting needle packing	

—Parts so marked are new and listed for the first time.

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

SCOTT-ATWATER

MODELS

135 and (335 ELECTRIC STARTING)

(22 H. P.)

HORIZONTAL, MODEL N TYPE, CARBURETERS Nos. N-2677S, N-2874S

CARBURETER SPECIFICATIONS

For Scott-Atwater Two Cylinder 27.65 Cu. In. Engine

Dimensions: Flange size 1 inch S. A. E. (slotted). Main venturi 1-1/16 inch I. D.

Float Level: Distance from top of float (at free end) opposite needle seat to outer edge of float chamber cover when needle is seated to be 11/64 inch plus or minus 1/32 inch.

Vents: Inside, None. Outside No. 50 (.070 inch) drill.

Gasoline Intake: Size No. 48 (.076 inch) drill in needle seat.

Low Speed Jet Tube: Jet, size No. 64 (.036 inch) drill. Idle bleed, size No. 70 (.028 inch) drill.

Idle Port: Slot type, round ends, length .137 inch, width .030 inch.

Idle Port Opening: Top of slot to be .122 to .126 inch above upper edge of valve with valve tightly closed.

Idle Screw Seat: In low speed passage, size No. 47 (.0785 inch) drill. Discharge into bore, size No. 50 (.070 inch) drill.

Set Idle Adjustment Screw: 1/2 to 1 1/4 turns open. For richer mixture turn screw out.

Main Nozzle: Inside diameter No. 41 (.096 inch) drill. Nozzle bleed, (bore to nozzle, 4 drilled holes) size No. 60 (.040 inch) drill.

High Speed Adjusting Needle: 1/4 to 1 1/4 turns open. Seat (in body), size No. 44 (.086 inch) drill.

Choke: Manual, butterfly type.

MOTOR TUNE-UP

Spark Plug Gap .030"	Breaker Point Setting .020"	Float Setting 11/64" ± 1/32"	High Speed Adj. Screw Setting 1/4 to 1 1/4 Turns Open	Idle Adjustment Screw Setting 1/2 to 1 1/4 Turns Open

SERVICE PROCEDURE

CAUTION: REMOVE HIGH SPEED NEEDLE BEFORE REMOVING BOWL

To Disassemble

1. Remove carbureter from engine.
2. Remove high speed adjusting needle, packing nut and packing. (SCRIBE MARK ON BODY AND BOWL.)
3. Remove bowl nut, gasket and bowl.
4. Remove bowl drain spring, spacer (if any), plug and gasket from inside of bowl.
5. Remove float pin, float, (No float spring) needle spring, needle and needle seat. Check float for dents, leaks and wear on float lip or in float pin holes.
6. Remove bowl ring gasket.
7. Remove idle adjustment screw.
8. Remove nozzle. DO NOT REMOVE LOW SPEED JET TUBE.
9. Remove throttle valve screws, valve and shaft and lever assembly.
10. Clean all parts with solvent, making sure all carbon accumulation is removed from bore, especially where throttle valve seats in casting. Blow out all passages with compressed air. Replace all worn and damaged parts. Always use new gaskets.

To Assemble

11. Install throttle shaft and valve. Valve must be installed with trademark "C" on side toward idle port when viewing from flange side. Always use new screws. With valve screws loose and throttle lever set screw backed out, seat valve by tapping lightly with a small screwdriver. Hold in place while tightening screws.
12. Install nozzle making sure it seats in casting.
13. Install needle seat, needle, needle spring, float and float pin.
14. Set float level with carbureter casting inverted, float resting lightly against needle spring with needle seated. There should be 11/64 inch clearance between outer surface of casting and free end of float (side opposite needle seat). Adjust by bending lip of float.
15. Install bowl drain gasket, plug, spacer (if any) and spring in bottom of bowl. When installing spring make sure the end fitting over drain plug points downward at a slight angle giving maximum tension on plug. Place bowl nut and gasket through bottom of bowl to hold in place.
16. Install bowl ring gasket and bowl (line up scribe marks). Tighten securely.
17. Install high speed adjusting needle, packing nut and new packing. Turn needle in until it just seats in body then back out 3/4 turns.
18. Install idle adjusting screw finger tight. Back out approximately 3/4 turns. Do not use pliers or screwdriver as it may damage idle screw.
19. Install carbureter on engine and make idle and high speed adjustment as necessary.

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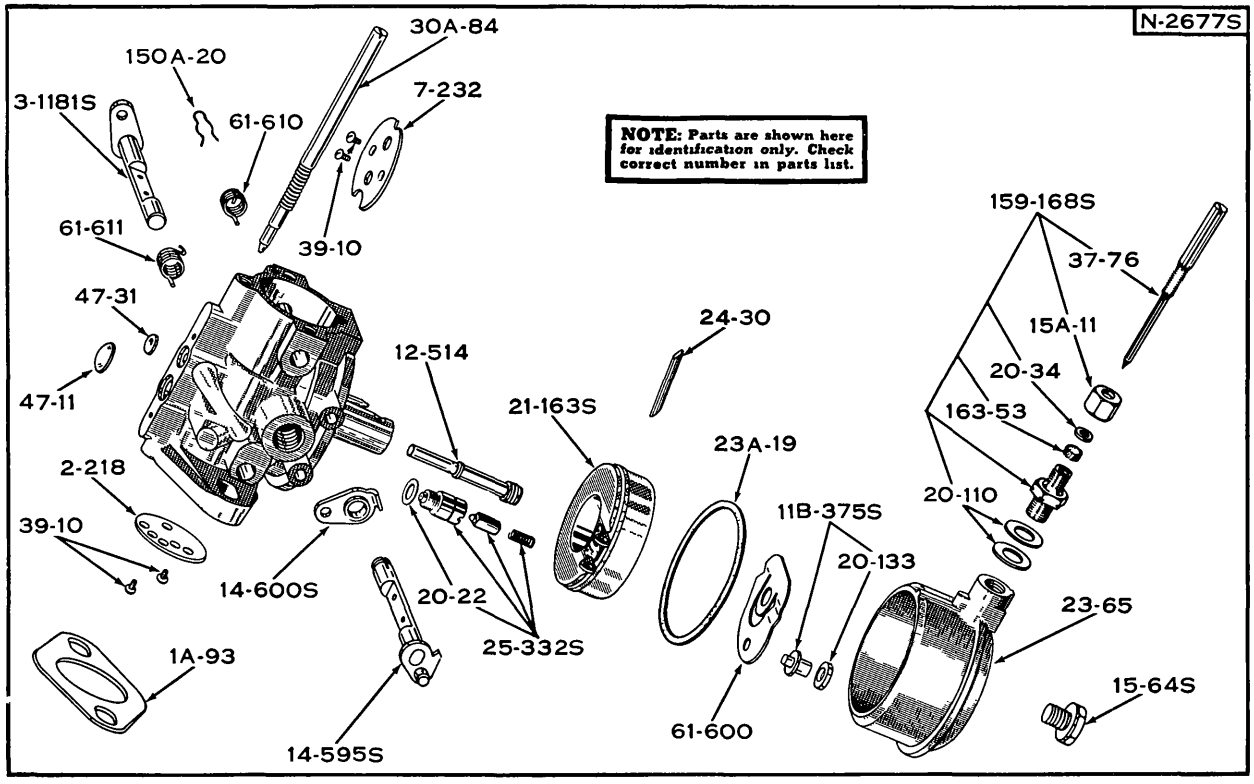
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HIGH SPEED AND IDLE SCREW ADJUSTMENT

After rebuilding and installation on engine is complete the high speed and idle screw adjustments must be made
With the high speed needle turned counter clockwise (from closed position) ¾ turn and idle screw turned ¾ turns open start engine.

With the engine at normal operating temperature, accelerate engine and check response The high speed needle should be adjusted for the leanest possible mixture which will allow satis factory acceleration If the engine misses and backfires, the high speed mixture is too lean and the high speed adjustment needle must be turned counter clockwise 1/10 turn at a time to correct this condition If the engine loads (heavy exhaust) and is slug gish the mixture is too rich and the high speed adjustment needle must be turned clockwise 1/10 turn at a time to correct To make final check of the high speed adjustments, operate the engine under load and adjust

The idle screw should be adjusted intermittently while making the high speed adjustment DO NOT USE FORCE ON THE HIGH SPEED NEEDLE OR IDLE SCREW AS DAMAGE MAY RESULT.



Scott-Atwater — Carbureters Nos. N-2677S, N-2874S

Part No.	PART NAME	
1A-93	Flange gasket	
2-218	Throttle valve	
3-1181S	Throttle shaft and lever assembly	
7-232	Choke valve	
11B-375S	Bowl drain plug assembly	
12-514	Nozzle	
14-595S	Choke shaft and lever assembly (Use 14-617S)	
14-600S	Choke pickup lever and collar assembly (Use 14-618S)	
14-617S	Choke shaft and lever assembly	
14-618S	Choke pickup lever and collar assembly	
15-64S	Bowl nut assembly	
15A-11	Packing nut	
20-22	Needle seat gasket	
20-34	Packing nut gasket	
20-110	Bowl nut and metering screw gasket	(3)
20-133	Bowl drain gasket	

Part No.	PART NAME	
21-163S	Float and lever assembly	
23-65	Bowl	
23A-19	Bowl ring gasket	
24-23	Float lever pin	
24-30	Float lever pin (N-2677S) (Use 24-23)	
25-332S	Needle pin spring and seat assembly (.076")	
30A-84	Idle adjustment screw (N-2677S)	
30A-92	Idle adjustment screw (N-2874S)	
37-76	High speed adjusting needle	
39-10	Choke and throttle valve attaching screw	(4)
47-11	Idle port welsh plug	
47-31	Idle tube passage welsh plug	
61-600	Bowl drain spring	
61-610	Choke return spring	
61-611	Throttle return spring	
150A-20	Pin spring	
159-168S	Adjustable main metering screw assembly	
163-53	High speed adjusting needle packing	

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

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SCOTT-ATWATER

Model 3885 (10 H. P.)
N-2678S—Serial Nos. 3885—1001 to 3885—2200
N-2763S—After SA, Serial No. 3885—2200
Model 3385 (7½ H. P.)
N-2679S

HORIZONTAL, MODEL N TYPE, CARBURETERS Nos. N-2678S, N-2679S, N-2763S

CARBURETER SPECIFICATIONS

For Scott-Atwater Two Cylinder 14.82 Cu. In. Engine (N-2678S, N-2763S)
For Scott-Atwater Two Cylinder 11.0 Cu. In. Engine (N-2679S)

Dimensions: Flange size, ½ inch S A E (Slotted) Venturi size, (N-2678S N-2763S) ¾ inch (N 2679S) 5/8 inch

Float Level: Distance from top of float (at free end) opposite needle seat to outer edge of float chamber cover when needle is seated to be 11/64 inch plus or minus 1/64 inch

Vent: Inside, none Outside size No 50 (.070 inch) drill

Gasoline Intake: Size No 48 (.076 inch) drill

Low Speed Jet Tube: Jet, size (N-2678S) No 73 (.024 inch) (N 2763S) No 64 (.036 inch) drill Auxiliary jet (Idle Bleed) in side of tube 4—cannot gauge size No 75 (.021 inch) drill

Idle Ports: (N 2678S N 2763S) one—slot type round end length .092 inch width .030 inch one—round hole (.051 inch) diameter (N 2679S) one—slot type round end, length .066 inch width .034 inch one—round hole (.046 inch) diameter

Idle Port Opening: (N-2678S, N 2763S) Top of slot to be .063 to .067 inch above top edge of valve, (N-2679S) Bottom of slot to be .000 to .004 inch above top edge of valve with valve tightly closed

Idle Screw Seat: Size .0785 inch diameter

Set Idle Adjustment Screw: (N-2678S N 2763S) ¼ to 1¾ turns, (N 2679S) ¼ to 1½ turns open For richer mixture turn screw out Do not idle engine below (N-2678S, N 2763S) 500 R P M (N 2679S) 450 R P M

Main Nozzle: Install permanently DO NOT REMOVE Nozzle bleed tube to outside size No 65 (.035 inch) drill

High Speed Adjusting Needle: ¼ to 1½ turns open Seat (in body) size No 47 (.0785 inch) drill

Choke: Manual—Butterfly type valve

MOTOR TUNE-UP

Spark Plug Gap	Breaker Point Setting	Float Setting	High Speed Adj. Screw Setting	Idle Adjustment Screw Setting
.035" (N-2678S, N-2763S) .030" (N-2679S)	.020"	11/64" ± 1/64"	¼ to 1½ Turns Open	¼ to 1¾ (N-2678S, N-2763S) ¼ to 1½ (N-2679S) Turns Open

SERVICE PROCEDURE

CAUTION: REMOVE HIGH SPEED NEEDLE BEFORE REMOVING BOWL

To Disassemble

1 Remove carbureter from engine

2 Remove high speed adjusting needle, packing nut and packing (SCRIBE MARK ON BODY AND BOWL)

3. Remove bowl nut gasket and bowl

4 Remove float pin float needle and needle seat Check float for dents leaks and wear on float lip or float pin holes

5 Remove bowl ring gasket

6 Low speed jet assembly installed permanently DO NOT REMOVE

7 Remove idle adjustment screw and spring

8 Nozzle installed permanently DO NOT REMOVE

9 Remove throttle valve screw, valve and shaft and lever assembly

10 Do not remove choke valve and shaft unless replacement of these parts is necessary

11 Clean all parts with solvent, making sure all carbon accumulation is removed from bore, especially where throttle valve seats in casting Blow out all passages with compressed air Replace all worn or damaged parts Always use new gaskets

To Assemble

12 Install throttle shaft and valve Valve must be installed with trademark "C" on side toward idle port when viewing from flange side Always use new screws With valve screws loose, seat valve by tapping lightly with small screwdriver. Hold in place while tightening screws

13 Install needle seat, needle, float and float pin

14 Set float level with carbureter casting inverted, float resting lightly against needle in its seat There should be 11/64 inch clearance between outer edge of casting and free end of float (side opposite needle seat). Adjust by bending lip of float

15 Install high speed needle, packing nut and packing in bowl Turn needle in until one thread on needle is visible at packing nut Then install bowl ring gasket, bowl (line up scribe marks) bowl nut gasket and bowl nut Tighten securely

16 Turn high speed needle in until it just seats in body then back out ¾ turn

17 Install idle adjusting screw finger tight Back out approximately ¾ turn Do not use pliers or screwdriver as it may damage idle screw

18 Install carbureter on engine and make idle and high speed adjustment as necessary

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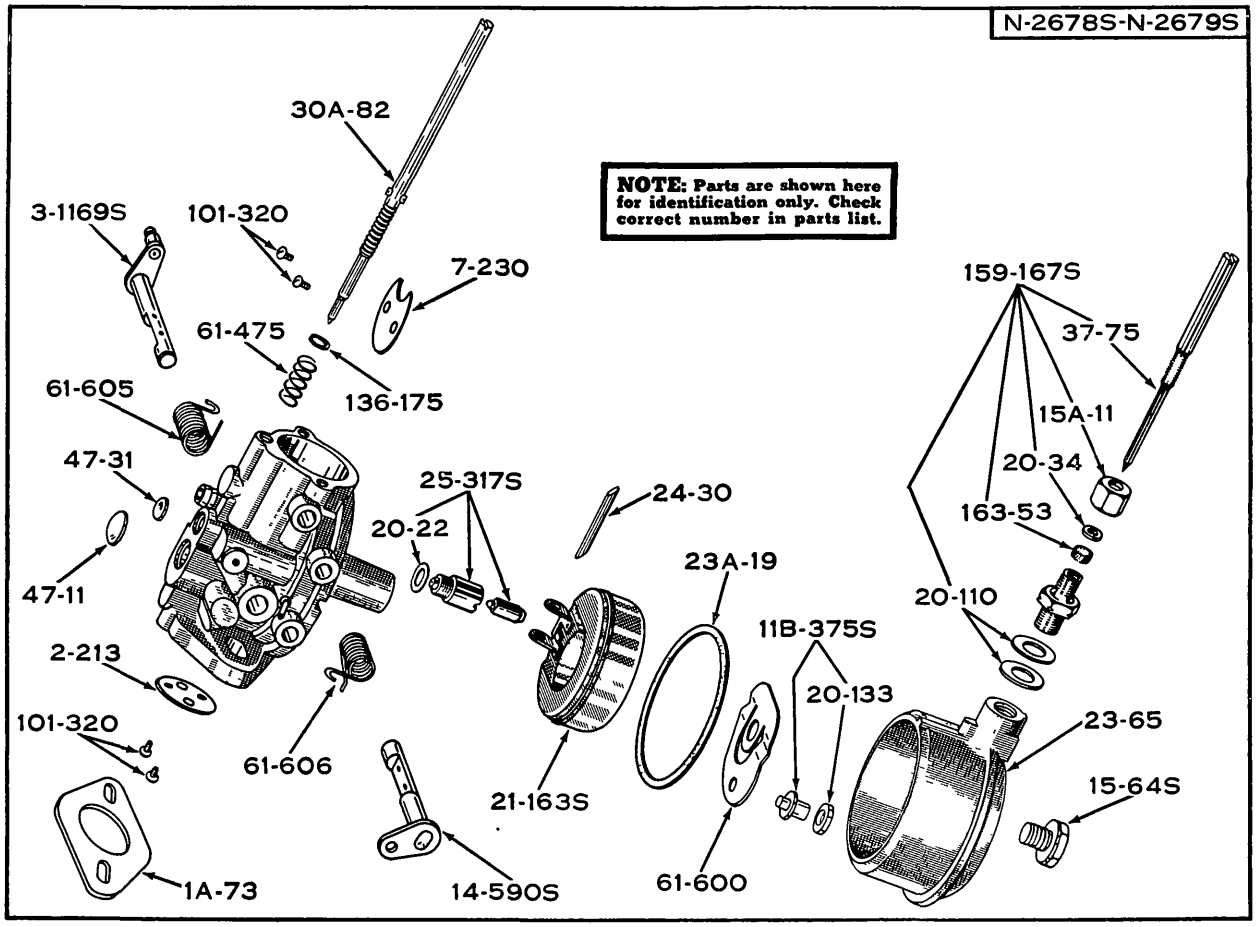
HIGH SPEED AND IDLE SCREW ADJUSTMENT

After rebuilding and installation on engine is complete, the high speed and idle screw adjustments must be made.

With the high speed needle turned counter clockwise (from closed position) ¾ turn and idle screw turned ¾ turns open, start engine.

With the engine at normal operating temperature, accelerate engine and check response. The high speed needle should be adjusted for the leanest possible mixture which will allow satisfactory acceleration. If the engine misses and backfires, the high speed mixture is too lean and the high speed adjustment needle must be turned counter clockwise 1/10 turn at a time to correct this condition. If the engine loads (heavy exhaust) and is sluggish, the mixture is too rich and the high speed adjustment needle must be turned clockwise 1/10 turn at a time to correct. To make final check of the high speed adjustment, operate the engine under load and adjust.

The idle screw should be adjusted intermittently while making the high speed adjustment. DO NOT USE FORCE ON THE HIGH SPEED NEEDLE OR IDLE SCREW AS DAMAGE MAY RESULT.



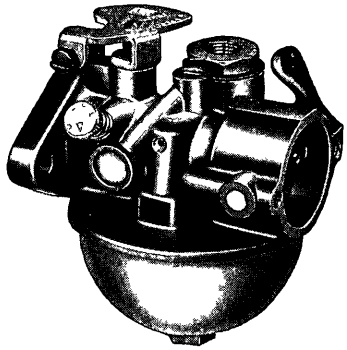
Scott-Atwater — Carbureters Nos. N-2678S, N-2679S, N-2763S

Part No.	PART NAME	
1A-73	Flange gasket	
2-213	—Throttle valve (N-2678S, N-2763S)	
2-214	Throttle valve (N-2679S)	
3-1169S	—Throttle shaft and lever assembly	
7-201	Choke valve (N-2679S)	
7-230	—Choke valve (N-2678S, N-2763S)	
11B-375S	—Bowl drain plug assembly	
14-590S	—Choke shaft and lever assembly	
15-64S	Bowl nut assembly	
15A-11	Packing nut	
20-22	Needle seat gasket	
20-34	Packing nut gasket	
20-110	Bowl nut and metering screw gasket	(3)
20-133	—Bowl drain gasket	
21-163S	Float and lever assembly	

Part No.	PART NAME	
23-65	—Bowl	
23A-19	Bowl ring gasket	
24-30	Float lever pin	
25-317S	Needle and seat assembly	
30A-82	—Idle adjustment screw	
37-75	—High speed adjusting needle	
47-11	Idle port welsh plug	
47-31	Idle tube passage welsh plug	
61-475	Idle adjustment screw spring	
61-600	—Bowl drain spring	
61-605	—Throttle return spring	
61-606	—Choke return spring	
101-320	Choke and throttle valve attaching screw	(4)
136-175	Idle adjusting screw washer	
159-167S	—Adjustable main metering screw assembly	
163-53	High speed adjusting needle packing	

—Parts so marked are new and listed for the first time.

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.



SENSATION MOWER 1948

Horizontal, Model N Type, **Carbureter No. N-697S**

CARBURETER SPECIFICATIONS

For Sensation Mower 1 Cylinder Engine: 2-1/16" Bore, 1⅝" Stroke

Dimensions: Flange Size: ½ inch S. A. E. · Main venturi size: 7/16 inch.

Float Level: Distance from top of float (at free end) opposite needle seat to lower edge of float chamber cover when needle is seated to be 13/64 inch.

Vents: Inside—none. Outside—No. 50 (.070") drill.

Gasoline Intake: Square vertical needle, seat size No. 48 (.076") drill.

Low Speed Jet Tube: Jet size No. 66 (.033") drill.
Auxiliary jets: in side of tube, 4 No. 70 (.028") drill.

Idle Port: Slot type, length .080 inch, width .030 inch.
Idle port opening—Bottom of port to be .0 to .004" above top edge of valve.
Idle adjustment screw seat, tapered 10° included angle. Size: .051" diameter at seat end.

Set Idle Adjustment Screw: 1 to 3 turns open. For richer mixture, turn screw out. Do not idle engine below 1,000 r.p.m.

Main Nozzle: Discharge: through 4—No. 60 (.040") jets.
Accelerating jets 4—No. 62 (.038") drill in side of nozzle, (in nozzle well).
Nozzle passage: (nozzle well to air horn) No. 35 (.110") drill.

Main Metering Jet: Calibrated to flow 65 to 67 c.c. per minute. Do not gauge for size. If in doubt, replace with new part.

Choke: Manual—butterfly type.

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open	Float Setting	Idle Adjustment Screw Setting
.020"	.020"	7° B. T. D. C.	13/64"	1 to 3 Turns Open

SERVICE PROCEDURE

To Disassemble

1. Remove carbureter from engine.
2. Remove bowl nut, gasket and bowl.
3. Remove float pin, float, needle and needle seat. Check float for dents, leaks, and wear on float lip or in float pin holes.
4. Remove bowl ring gasket.
5. Remove main metering jet and gasket assembly.
6. Remove low speed jet, idle adjusting screw and idle adjusting screw spring.
7. Remove strainer nut and gasket assembly and strainer.
8. Remove nozzle.
9. Remove throttle valve screws, valve, and shaft and lever assembly.
10. Do not remove choke valve and shaft unless replacement of these parts is necessary. A spring loaded ball retains choke in wide open position. Be sure to use a new ball and spring when replacing choke shaft and lever assembly.
11. Clean all parts in clean gasoline or solvent, making sure all carbon accumulation is removed from bore, especially where throttle valve seats in casting. Blow out all passages with compressed air. Replace all worn and damaged parts. Always use new gaskets.

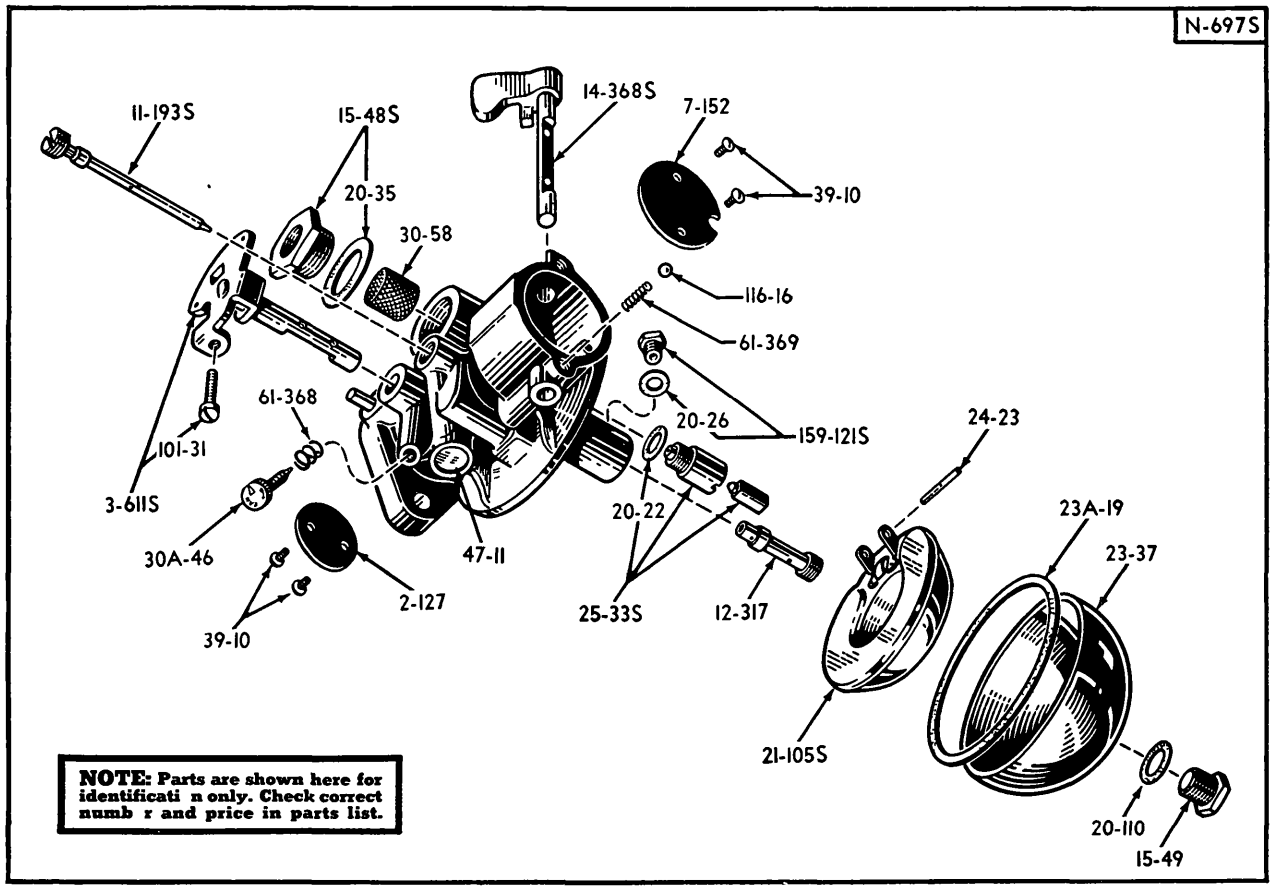
To Assemble

12. Install throttle shaft and valve. Valve must be installed with trademark "c" on side toward idle port when viewing from flange side. Always use new screws. With valve screws loose and throttle lever set screw backed out, seat valve by tapping lightly with a small screw driver. Hold in place while tightening screws.
13. Install nozzle, making sure it seats in casting.
14. Install main metering jet and gasket assembly.
15. Install needle seat, needle, float and float pin.
16. Set float level. With carbureter casting inverted, float resting lightly against needle in its seat, there should be 13/64" clearance between machine surface of casting and free end of float (side opposite needle seat). Adjust by bending lip of float with small screw driver. (Use gauge T109-39).
17. Install bowl ring gasket, bowl nut gasket and bowl nut. Tighten securely after making sure bowl is centered in gasket.
18. Install low speed jet, seating it securely in casting.
19. Install open end of strainer in strainer nut and gasket assembly and install strainer nut assembly.
20. Then install idle adjusting screw, finger tight. Back out 1 to 3 turns. **Do not use pliers or screw driver, as it may damage idle screw.**

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SENSATION CARBURETER No. N-697S

Part No.	Part Name
1A-73	Flange gasket
2-127	Throttle valve
3-611S	Throttle shaft and lever assembly (Sup by 3-774S)
3-774S	Throttle shaft and lever assembly
7-152	Choke valve
11-193S	Low speed jet assembly
12-317	Nozzle
14-368S	Choke lever and shaft assembly
15-48S	Strainer nut assembly
15-49	Bowl nut (Sup by 15-50S)
15-50S	Bowl nut assembly
20-22	Needle seat gasket
20-26	Main metering jet gasket
20-35	Strainer nut gasket
20-110	Bowl nut gasket
21-105S	Float and lever assembly
23-37	Bowl
23A-19	Bowl ring gasket
24-23	Float lever pin
25-33S	Needle and seat assembly
30-58	Strainer
30A-46	Idle adjustment screw
39-10	Valve attaching screw (Sup by 101-320)
61-368	Idle adjustment screw spring
61-369	Choke shaft spring
101-31	Throttle lever adjusting screw
101-320	Valve attaching screw
116-16	Choke shaft ball
159-121S	Main metering jet assembly

CARTER CARBURETOR

DIVISION OF ACF INDUSTRIES
INCORPORATED
ST. LOUIS 7, MO., U.S.A.

GENERAL BULLETIN

ALL CARBURETER ACCOUNTS

BULLETIN NO. 5 Studebaker

DATE March 18, 1959

SUBJECT: 1959 STUDEBAKER LARK 6 - CARTER AS-2876S CARBURETER

SLOW HOT ENGINE STARTING

Under conditions of high underhood temperatures combined with fuel having a relatively low boiling point, the engine may not start as quickly as under more normal conditions. The following changes will help improve starting under these conditions.

The 75-1444S metering rod has had milled flats added to the end of the economy step. The part number of the rod does not change when the flats are added. At closed throttle, the flats are positioned in the orifice of the jet and this provides a larger area for vapor to escape from the high speed passages.

A heat deflecting sheet metal shield installed between the carbureter and manifold has proven helpful. A gasket is used on each side of the shield. Longer carbureter attaching studs are necessary when installing the shield and additional gaskets. The thin metal baffle ring used between the carbureter and manifold is discarded when the heat shield is installed. The shield, studs and gaskets are Studebaker parts.

ROUGH HOT ENGINE IDLE AND STALLING

This condition is usually only found after high speed highway travel during unusually hot weather. In some cases it may appear that the carbureter is flooding. This condition may be relieved by drilling the second vent stack through from the bowl with a #24 drill. A #30 drill outside vent hole is then drilled into this stack 3/4" up from the bowl gasket surface. (See Illustration) A center point for the vent stack hole is cast into the underside of the bowl cover. A 5/32" diameter drill may be substituted for the #24 drill and a 1/8" diameter drill for the #30.

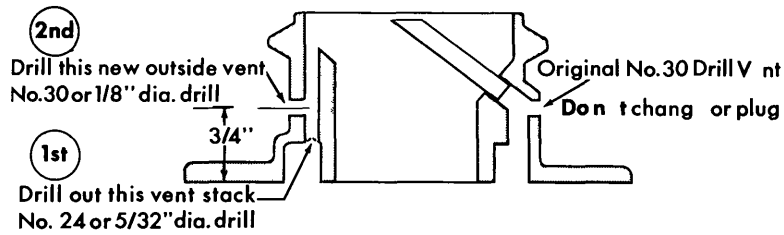


Illustration No. 1

THROTTLE LINKAGE STICKING

Examine the accelerator linkage on the engine and fire wall for excessive friction or binding in the bearing surfaces between the rods and levers. Pay particular attention to the alignment of the accelerator rod in the throttle lever on the carbureter.

Bend the levers slightly and lubricate sparingly, so the linkage operates f

A damaged or misaligned throttle valve or a misaligned metal baffle ring under the carbureter can cause a similar condition.

Studebaker will make available a supplementary pull back spring that is installed between a tab on one of the exhaust pipe to manifold attaching studs and the carbureter throttle lever. This spring provides more closing force to the throttle.

The heat shield, longer carbureter studs, thicker gaskets, new 75-1444S rod, pull back spring and tab will be distributed through Studebaker dealers under part No. 1549029.

Our stock of 75-1444S has been reworked to include the flat, and a small initial shipment of this part will be made to Carter Centrals.

AS-2876S carbureters incorporating the revised metering rods and additional bowl vents will have a red colored identification tag.

PUMP JET ADJUSTMENT CHANGE

The aiming of the pump jet has been changed to improve acceleration and eliminate stumble complaints encountered on some standard transmission equipped cars. The new aiming procedure aligns the pump jet so that it is parallel to the choke shaft and the stream strikes the venturi about 1/8" down from the top. (See Illustration) This change can be made on the car, using a screw driver blade if reasonable care is used not to damage the jet.

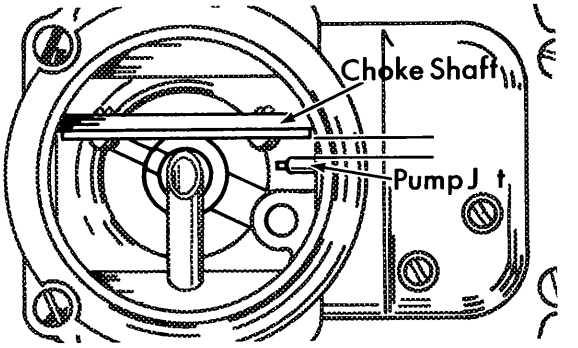


Illustration No. 2

DECELERATION SURGE

A deceleration surge complaint may be encountered with some standard transmission cars. It is not possible to completely remove this surge by any change in carburetion in field service. The following factors should be checked and corrected to minimize the condition:

1. Excessive idle speed.
2. Distributor vacuum or mechanical advance which starts too soon.
3. Intake manifold air leaks.
4. Tight valve or spark plug settings.

R. J. Mullin
Service Supervisor

RJM/dg

cc: Personnel and Extra Copies - U.S.A. and Canada

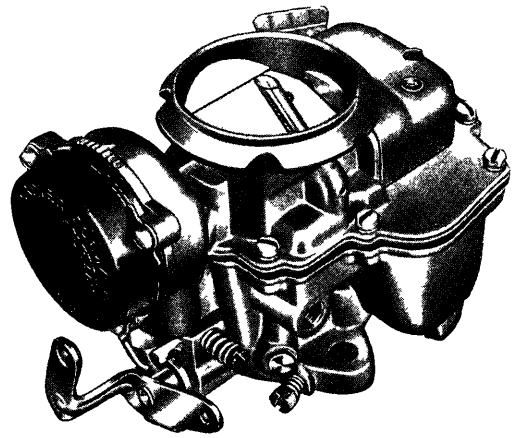
IMPORTANT: THIS BULLETIN CONTAINS INFORMATION OF VALUE TO YOU AND WAS PREPARED AT CONSIDERABLE EXPENSE TO BE OF SERVICE TO YOU. FAILURE TO USE THIS INFORMATION MAY COST YOU MONEY. WE SUGGEST THAT YOU ISSUE COPIES OF IT TO THOSE OF YOUR STAFF INTERESTED, SO THAT THEY CAN BE FILED IN REGULAR CARTER SALES AND SERVICE MANUAL.

M-C-2914E

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MODEL
59S



STUDEBAKER
LARK, SILVER HAWK and TAXI
1959

As Down-Draft Climatic® Control **Carbureter No. 2876S**

CARBURETER SPECIFICATIONS

For Studebaker 6 Cylinder 170 Cu. In. Engine. Vacuum at Idle 17 to 18 Inches

Dimensions: Flange size, 1½ inch S A E
Throttle bore 1-9/16 inch I D
Primary venturi, ⅜ inch I D
Main venturi 1¼ inch I D

Vents· Outside, one in air horn Inside balance vent to air horn above valve.

Low Speed Jet Tube. Jet size No 66 (.033 inch) drill By Pass (2) in idle tube plug size No 58 (.042 inch) drill Econ omizer size No 53 (.0595 inch) drill Idle bleed in body, size (.053 inch) drill.

Idle Port: Upper port slot type length 171 inch, width (early prod.) 030 inch, (late prod.) 040 inch

Idle Port Opening: Top of port 125 to 129 inch above top edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw): Size No 52 (.0635 inch) drill Auxiliary idle feed No 52 (.0635 inch) drill.

Set Idle Adjustment Screw: ¼ to 1¾ turns open For richer mixture turn screw out Do not idle engine below 550 R P M All transmissions in neutral

Main Nozzle Nozzle is installed permanently DO NOT RE MOVE Anti percolator jet tube off center in plug, size No 60 (.040 inch) drill

Accelerating Pump: Pressure type mechanically operated Pump jet size No 74 (.0225 inch) drill Intake disk check seat (in plunger assembly) size No 40 (.098 inch) drill Discharge ball check seat (in body) size No 42 (.0935 inch) drill

Choke: Carter Climatic® Control set on index Offset butter fly type Choke heat suction hole in air horn size No 43 (.089 inch) drill

Vacuum Spark Port: Round type, .076 inch diameter Top of port to be .056 to .066 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION **Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.**

Spark Plug Gap .030"	Breaker Point Setting .020"	Ignition Timing Breaker Points to Open 2° B. T. D. C. At Vibration Damper	Valve Setting (Cold) Intake .017"-.019" Exhaust .017"-.019"	Float Setting ¼ Inch (Use Gauge T109-282)	Idle Adjustment Screw Setting ¼ to 1¾ Idle Engine at 550 R.P.M. In Neutral

CARBURETER ADJUSTMENTS

Adjustments Illustrated on Service Adjustment Procedure Form 3773

Float. ¼" (Gauge T109-282) from top of each float (at free end) to top of casting
To adjust Bend float lip
After float adjustment has been made there should be .010" to .015" clearance between overlapping tangs on float levers
To adjust bend long tang on left hand float

Pump Pump arm on lifter link should parallel top of casting
To adjust Bend pump arm

Metering Rod Rod should just bottom at wide open throttle
To adjust Bend metering rod arm

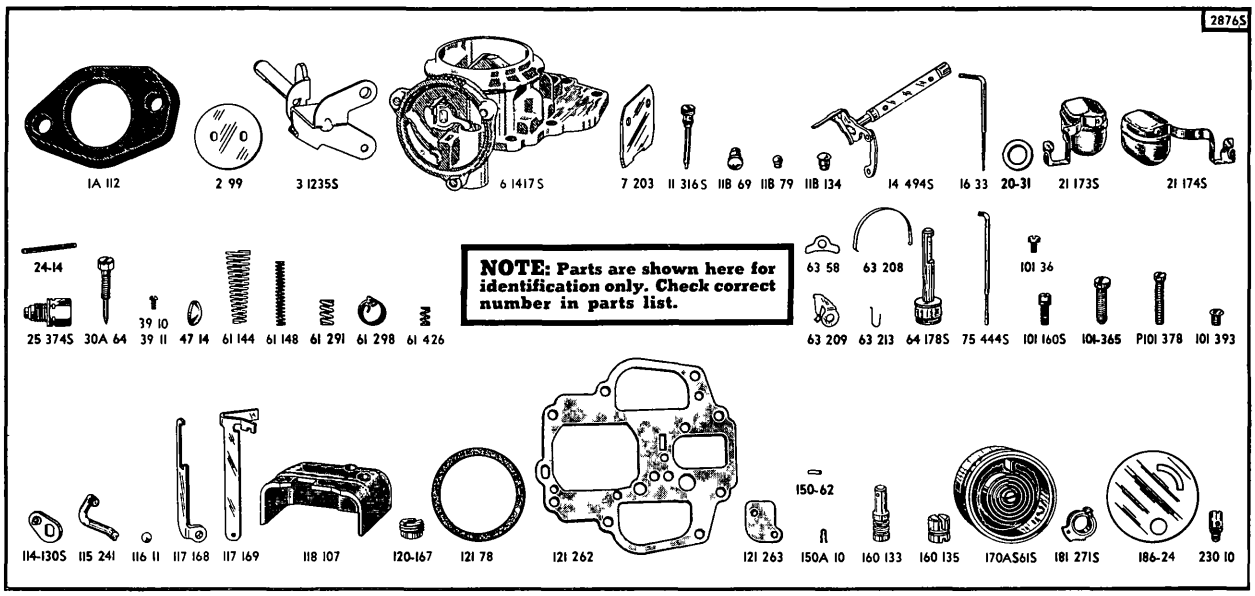
Fast Idle· .045" (Gauge T109-158 may be used) between lower edge of valve and bore with fast idle link on high step of cam
To adjust Bend choke connector rod

Unloader 3/16" (Gauge T109 28) between top edge of valve and inner wall of air horn
To adjust Bend arm on choke trip lever

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Studebaker—1959—Carbureter No. 2876S

WHEN SERVICING, USE GASKET ASSORTMENT No. 330, RE-CARBURETION KIT No. 1981N

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF RE-CARBURETION KIT

Part No.	PART NAME	
1A-112	FLANGE GASKET	
2-99	Throttle valve	
3-1235S	—Throttle shaft and lever assembly	
6-1417S	—Air horn assembly	
7-203	Choke valve	
11-316S	—Low speed jet assembly (.033")	
11B-69	Spark port rivet plug	
11B-79	Rivet plug	(2)
11B-134	Rivet plug	
14-494S	Choke piston lever link and shaft assembly	
16-16	POWER JET ROD .076" x .063"	
16-33	Power jet rod .074" x .068" (Use 16 16)	
20-31	Needle seat gasket	
21-173S	Float and lever assembly (right hand)	
21-174S	Float and lever assembly (left hand)	
24-14	Float lever pin	
25-374S	—NEEDLE AND SEAT ASSEMBLY (.086")	
30A-64	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	Throttle valve attaching screw	(2)
47-14	Welsh plug	
61-144	Pump spring	
61-148	STEP UP PISTON SPRING	
61-291	Throttle lever adjusting screw spring	
61-298	Fast idle cam spring	
61-426	Idle adjustment screw spring	
63-58	Coil housing retainer	(3)
63-208	Float lever pin retainer	
63-209	Metering rod retainer	
63-213	Discharge ball check retainer	

Part No	PART NAME	
64-178S	PUMP PLUNGER ROD AND CHECK ASSEMBLY	
75-1444S	—METERING ROD ASSEMBLY .067" x .062" x .053"—STANDARD	
75-1449S	—Metering rod assembly .06775" x .0635" x .05525"—1 size lean	
75-1450S	—Metering rod assembly .068" x .0655" x .0575"—2 sizes lean	
75-1451S	—Metering rod assembly .06925" x .0675" x .06025"—3 sizes lean	
101-136	Coil housing attaching screw	(3)
101-160S	Air horn attaching screw and washer assembly	(9)
101-365	Throttle lever adjusting screw	
P101-378	Dust cover screw	(2)
101-393	Throttle shaft screw	
114-130S	Throttle shaft arm and pin assembly	
115-241	Choke connector rod	
116-11	Pump discharge check ball	
117-168	Fast idle link	
117-169	Pump lifter link	
118-107	Dust cover	
120-167	METERING ROD JET (.095")	
121-78	COIL HOUSING GASKET	
121-262	BODY GASKET	
121-263	DUST COVER GASKET	
150-62	Choke piston pin	
150A-10	Pin spring	
160-133	Step up piston	
160-135	Choke piston	
170AS-61S	—Thermostatic coil and housing assembly	
181-271S	—Fast idle cam assembly	
186-24	Choke baffle plate	
230-10	POWER JET (.076")	

—Parts so marked are new and listed for the first time

NOTE *Figures in parentheses indicate number of pieces used in one carbuerter Where no figure is shown only one is used*

Form No. 3773
OCTOBER, 1958

CARTER CARBURETOR

DIVISION OF ACF INDUSTRIES INCORPORATED
ST LOUIS, MO., U. S. A.

File Under Studebaker

CARTER MODEL AS CARBURETER FOR STUDEBAKER
SERVICE ADJUSTMENT PROCEDURE

NOTE: The parts and specification pages r f rr d to ar catalog pages. Th s pages can be obtain d from Cart r Carburetor, Catalog Department, St. Louis (7), Missouri. Specify the carbureter number found on the brass identification tag, when requesting speciation pages.

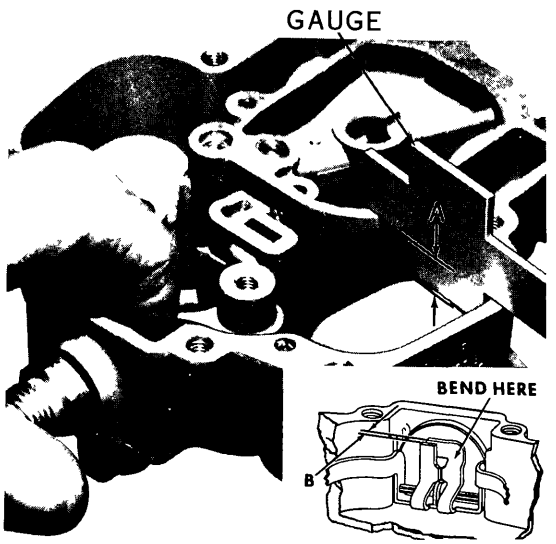


FIGURE No. 1

FLOAT ADJUSTMENT (Fig. 1)

The bowl cover gasket and float pin retainer must be removed. Gauge and adjust each float separately.

1. Hold the lip on float arm against the seated needle making sure the float pin is at the bottom of its guide slots.
2. The distance from the top surface of the body casting to the top of the float (A) should be as listed on carbureter specification page under float adjustment.
3. Adjust by bending lip on float arm. If necessary, bend float arms slightly to provide clearance on all sides of floats.
4. After float adjustment has been made and with both float lips resting against seated needle, there should be the clearance (B) listed on carbureter specification page between overlapping tangs on float levers. This can be checked by installing float pin retainer and turning carbureter upside down allowing floats to drop and make contact against seated needle. Adjust by bending long tang on left hand float.
5. Recheck float level adjustment.

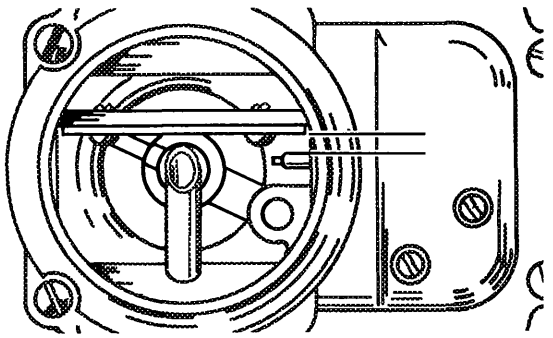


FIGURE No. 2

PUMP JET ADJUSTMENT (Fig. 2)

1. Fill pump cylinder with clean fuel.
2. Operate pump plunger in cylinder while holding finger over discharge passage.
3. With pump jet parallel to choke and throttle shafts the pump stream should hit the side of the small venturi about 1/8" down, as indicated on (Fig. 2).
4. To adjust, bend pump jet tube. Care should be taken to avoid damaging metering end of tube.

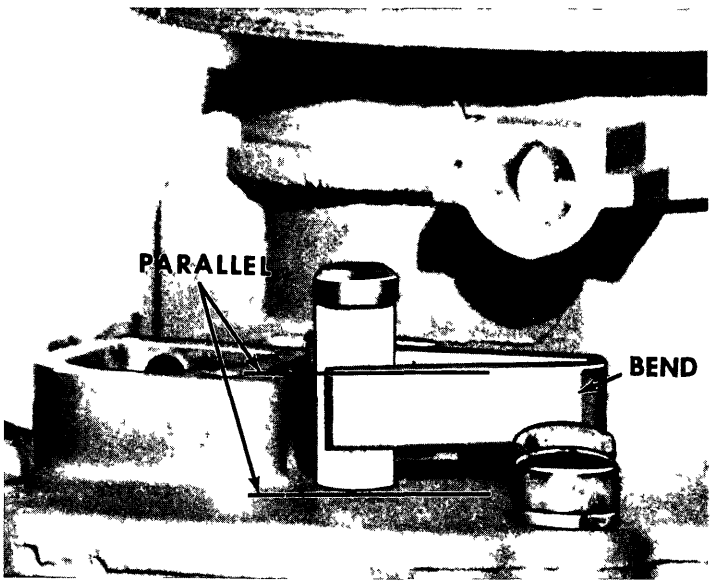


FIGURE No. 3

PUMP ADJUSTMENT (Fig. 3)

1. Open throttle valve to wide open position. Top of pump arm on lifter link should be parallel to top surface of bowl cover.
2. To adjust, bend pump arm.

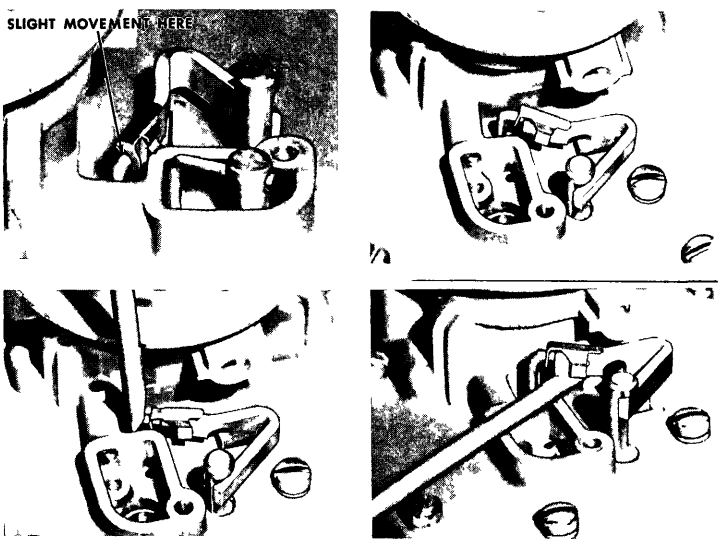


FIGURE No. 4

METERING ROD ADJUSTMENT (Fig. 4)

With throttle valve wide open the metering rod should just bottom in carbureter casting.

1. If the rod is properly adjusted, some movem nt can b noted around rod in the eye of metering rod retain r clip when the throttle is moved slightly from wide open position (Fig. 4A).
2. If the rod is too low it will tend to push the m tering rod r tain r clip up (Fig. 4B).
3. If the rod is too high, it will be possible to push th r d down (Fig. 4C).
4. To adjust bend metering rod arm (Fig. 4D).

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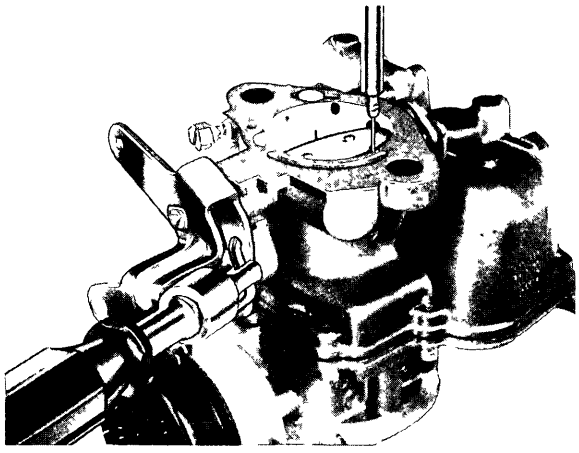
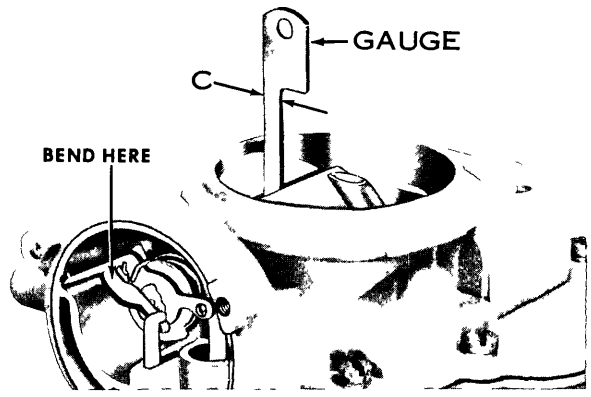


FIGURE No. 5

FAST IDLE ADJUSTMENT (Fig. 5)

1. Remove thermostatic coil housing assembly, gasket and baffle plate.
2. With throttle adjustment screw backed out, crack throttle valve and hold choke valve in fully closed position. Then close throttle. This will allow fast idle cam to revolve to fast idle position.
3. There should now be the clearance listed on carbureter specification page between throttle valve and bore of carbureter (Side opposite idle port).
4. Adjust by bending choke connector rod. (use tool T109-213).



UNLOADER ADJUSTMENT (Fig. 6)

1. Hold throttle valve wide open and close choke valve as far as possible without forcing.
2. There should now be the clearance (C) listed on carbureter specification page between upper edge of choke valve and inner wall of air horn.
3. Adjust by bending arm on choke piston lever. (Use bending tool T109-214).

SERVICE INFORMATION

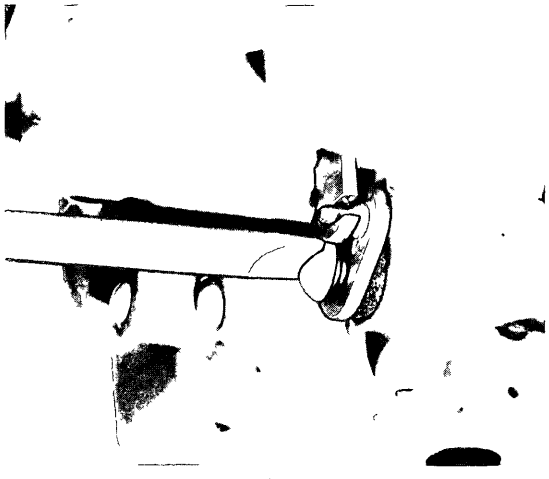


FIGURE No. 1

1. Throttle shaft arm must be removed before carbureter can be disassembled, (Fig. 1).

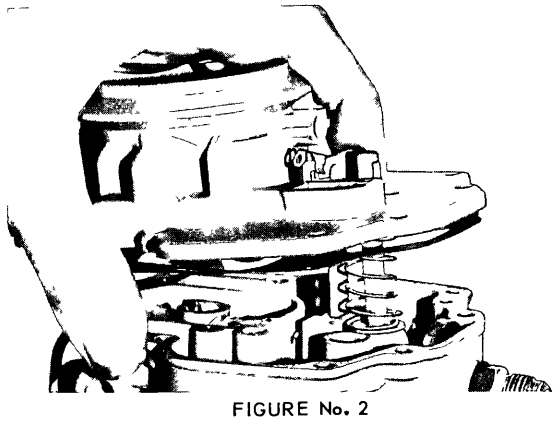


FIGURE No. 2

ASSEMBLING AIR HORN TO BODY(Fig. 2)

1. Place body gasket on air horn.
2. Install metering rod retainer on pump lifter link. (Do not install metering rod at this time.) Insert pump lifter link through operating slot in air horn.
3. Place pump spring over pump plunger and install plunger in air horn.
4. Install fast idle link in choke piston housing.
5. Holding plunger, lifter link and gasket in position, lower bowl cover onto carbureter body (Fig. 2).

INSTALLATION OF METERING ROD (Fig. 3)

1. Place metering rod retainer in position shown in Fig. 3.
2. Lower rod into place until the end of rod enters hole in retainer.
3. Push metering rod and retainer down to operating position. Push retainer toward rod until ears on retainer fit into slot in pump arm on lifter link.

Fill carbureter bowl with clean fuel before installing on manifold. Operation of the float and intake needle and seat may be checked under pressure if the fuel pump is used at the bench to fill the carbureter bowl. Operate the throttle several times and visually check the discharge from the pump jet.

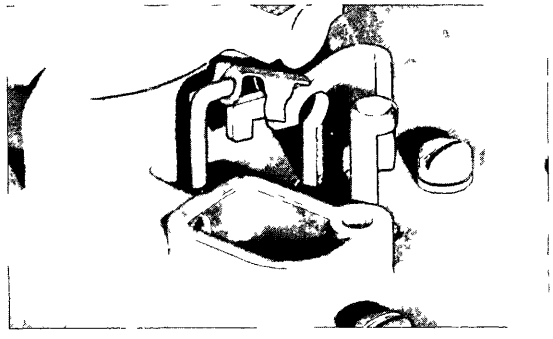


FIGURE 3

STUDEBAKER

TAXI GY1

Optional on SCOTSMAN 58G

1958

BBR1 Down-Draft **Carbureter No. 2808S**

CARBURETER SPECIFICATIONS

For Studebaker Six Cylinder 185 Cu. In. Engine· Vacuum at Idle 17 to 18 Inches

Dimensions: Flange size, 1¼ inch S A E
Throttle bore, 1-5/32 inch
Main venturi, 1-3/32 inch

Float Setting: Top of floats ⅛ inch below top surface of carbureter body casting Plus or minus 1/64 inch.

Vents· Outside none Inside balance vent, Tube in air horn below choke valve

Gasoline Intake Needle: Triangular, horizontal No 44 (086 inch) drill in needle seat

Idle Orifice Tube· Jet size 0256 inch diameter Idle passage air bleed (in body) size No 50 070 inch drill. Restriction, in body, size 0512 inch diameter

Idle Ports: Upper port, keyhole type length 132 inch Top of port located 096 to 100 inch above top of valve with valve closed tight

Set Idle Adjustment Screw: ½ to 1½ turns open For richer mixture turn screw out Do not idle engine below 550 R P M for Std Trans 575 R P M for O D 600 R P M for Automatic Trans in neutral

Main Metering Jet: Calibrated to flow 170 cc per minute (Do not gauge for size If in doubt, replace with new part)

Main Vent: Through diffuser (air bleed inside bowl) size 0315 inch diameter

Main Vent Tube: (Side Holes) 7—0197 inch drill—one side spaced 3/16 inch apart First hole 9/16 inch from end 7—0917 inch drill—opposite side spaced 3/16 inch apart First hole 21/32 inch from end Bottom hole, 1—0236 inch drill

Step-Up Jet: Size No 71 (026 inch) drill.

Accelerating Pump: Type, delayed action Inner hole (short stroke) Intermediate setting (center hole) Outer hole (long stroke)

Pump intake passage ball check seat, size 107 to 112 inch diameter

Pump discharge passage, restriction (under ball check) size 062 to 065 inch diameter in body

Pump (discharge) jet size 0236 inch diameter

Pump Adjustment: 14/64 inch plunger travel, with pump link in inner short stroke hole

Choke: Butterfly type with poppet valve

Vacuum Spark Port 052 inch diameter Bottom of port 011 to 021 inch above top edge of valve

Motor Tune-Up—Be Accurate!

CAUTION· **Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.**

Spark Plug Gap .030"	Breaker Point Setting .020"	Ignition Timing Breaker Points to Open: 2° B. T. C. At Vibration Damper	Valve Setting (Cold) Intake .016" Exhaust .016"	Float Setting (Use Gauge) ⅛ Inch ± 1/64 Inch	Idle Adjustment Screw Setting ½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

If carbureter loads up after considerable service, check float level Wear on lip of float lever will raise float level Before adjusting float, be sure float lever pin is firmly seated Reset float level by bending lip of float lever away from needle to raise level, or bend lip toward needle to lower float level Bend vertical lip of float only

If motor stalls while idling, set throttle lever adjusting screw so motor runs approximately 550 r pm Then set idle adjustment screw to specifications If these adjustments do not correct the trouble, remove idle orifice tube and plug assembly Clean tube and passages with compressed air

If acceleration is not satisfactory, remove pump jet and clean with compressed air However, it is usually advisable to replace the pump jet, as its cost is nominal All jets must be seated gasoline tight Poor acceleration may be due to damaged or worn plunger leather in accelerating pump, sediment in pump cylinder or clogged intake ball check at bottom of pump cylinder and discharge ball check in discharge passage If plunger is removed from cylinder, use care in installing to avoid damage to plunger leather

Correct air fuel ratio is provided by a "balance tube" in the air horn The balance tube should be checked each time

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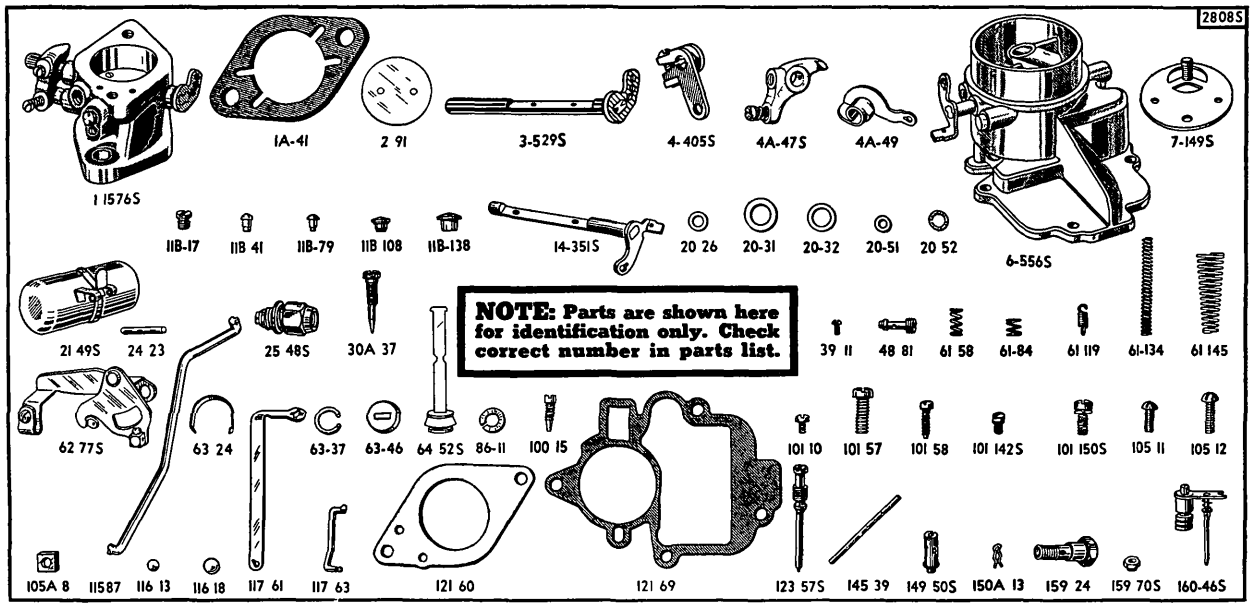
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the carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type, size or condition of air cleaner Should the cleaner become clogged the capacity will be reduced but the air-fuel mixture ratio will not be changed

Excessive richness above 50 miles per hour may be caused by a clogged main vent tube After removal of high speed passage beneath float bowl main vent tube can be removed and a new tube inserted with tool No T109-195 Care must be exercised in inserting new tube which must seat tightly

Pump Adjustment: Remove air horn assembly, back out throttle lever adjustment screw and install pump operating link in inner hole (short stroke of throttle shaft arm) Place base of pump travel gauge T109-117S on upper edge of body casting at pump cylinder. With throttle valve seated, turn gauge until projecting finger contacts top of plunger shaft Note number indicated on gauge Repeat with throttle valve wide open and plunger pressed to bottom of the cylinder The difference between the numbers indicated at wide open and closed throttle positions should be "14" (14/64") pump stroke Adjust by bending horizontal portion of pump lifter link



Studebaker—1958—Carbureter No. 2808S

WHEN SERVICING, USE GASKET ASSORTMENT No. 324

Part No.	PART NAME	
1-1576S	—Body flange assembly	
1A-41	Flange gasket	
2-91	Throttle valve	
3-529S	Throttle shaft and arm assembly	
4-405S	Throttle lever assembly	
4A-47S	—Throttle shaft dog and screw assembly	
4A-49	Fast idle cam	
6-556S	Air horn assembly	
7-149S	Choke valve assembly	
11B-17	Pump discharge passage plug	
11B-41	Rivet plug	
11B-79	Rivet plug	(2)
11B-108	Idle port rivet plug	
11B-138	Pump jet rivet plug	
14-351S	Choke shaft and lever assembly	
20-26	Main metering jet gasket	
20-31	Needle seat gasket	
20-32	High speed passage screw	
20-51	Step up jet gasket	
20-52	Step up piston gasket	
21-49S	Float and lever assembly	
24-23	Float lever pin	
25-48S	Needle and seat assembly	
30A-37	Idle adjustment screw	
39-11	Valve attaching screw	(4)
48-81	Pump jet	
61-58	Throttle lever adjusting screw spring	
61-84	Idle adjustment screw spring	
61-119	Choke pull back spring	
61-134	Step up piston spring	

Part No.	PART NAME	
61-145	Pump spring	
62-77S	Choke tube bracket assembly	
63-24	Float lever pin retainer	
63-37	Intake check ball retaining ring	
63-46	Pump spring retainer	
64-52S	Pump plunger and rod assembly	
86-11	Body flange attaching screw lock washer	(2)
100-15	Throttle shaft dog screw	
101-10	Wire clamp screw	
101-57	Body flange attaching screw	(2)
101-58	Throttle adjusting screw	
101-142S	Choke bracket attaching screw and washer assembly	
101-150S	Air horn attaching screw and washer assembly	(4)
105-11	Choke tube clamp screw	
105-12	Throttle lever clamp screw	
105A-8	Throttle lever and choke tube clamp nut	(2)
115-87	Choke connector rod	
116-13	Pump intake check ball	
116-18	Pump discharge check ball	
117-61	Pump lifter link	
117-63	Pump link	
121-60	Body flange gasket	
121-69	Body gasket	
123-57S	Idle orifice tube and plug assembly	
145-39	Main vent tube	
149-50S	Step up jet assembly	
150A-13	Pin spring	
159-24	—High speed passage screw	
159-68S	Main metering jet assembly (162 cc)—1 size lean	
159-70S	Main metering jet assembly (170 cc)—standard	
160-46S	Step up piston plate and rod assembly	

—Parts so marked are new and listed for the first time

NOTE **Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.**

STUDEBAKER

PRESIDENT

MODEL 58H

1958

Use 2574S and 202-81U to replace 2575S

WCFB Four-Bore Down-Draft Climatic® Control Carbureters Nos. 2574S-2575S

CARBURETER SPECIFICATIONS

For Studebaker 8 Cylinder 289 Cu. In. Engine: Vacuum at Idle 17.5-19 Inches

Dimensions: Flange size, 1¼ inch Four Bore—4 bolt type.
Primary venturi size, 11/32 inch I. D.
Main venturi (primary) size, 1 inch I. D.
Main venturi (secondary) size, 1⅛ inch I. D.

Vents: Inside, 4. Outside, 1 in air horn, 2 in dust cover.

Low Speed Circuit: Primary side only.
Jet, size No. 65 (.035 inch) drill.
By-pass, in body, size No. 52 (.0635 inch) drill.
Economizer, in low speed jet, size (.049 inch) diameter.
Idle bleed, in body, size No. 52 (.0635 inch) drill.
Idle port, slot type, length .174 inch; width .040 inch.

Idle Port Opening: .113 to .119 inch above top edge of valve with valve tightly closed.

Lower Port: (For idle adjustment screw), size No. 53 (.0595 inch) drill.

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture turn screw out. Idle engine at 550-575 R. P. M. for Std. and O. D. Trans., 575-600 R. P. M. for Automatic Trans. in neutral.

Main Nozzle: Installed permanently. DO NOT REMOVE. Anti-percolating bleed (to nozzle well), primary side, size No. 67 (.032 inch) drill. Secondary side, size No. 60 (.040 inch) drill.

Accelerating Pump: Discharge jet (twin) primary side only, size No. 74 (.0225 inch) drill. Intake ball check seat, size .115 to .120 inch diameter. Discharge needle seat, size .070 inch diameter. Relief passage (vent) to fuel chamber No. 42 (.0935 inch) drill.

Choke: Carter Climatic® Control, set one point rich. Butterfly type—offset choke valve, primary side only. Choke heat suction hole, restriction in piston housing, size No. 43 (.089 inch) drill.

Vacuum Spark Port: Round type, .060 inch diameter. Bottom of port .000 to .010 inch above valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .035"	Breaker Point Setting .013"-.018"	Ignition Timing Breaker Points to Open: 4° B. T. D. C. At Vibration Damper	Valve Setting (Cold) Intake .025"-.027" Exhaust .025"-.027"	Float Setting 3/16 Inch (Use Gauge T109-222)	Idle Adjustment Screw Setting ½ to 1½ Std. & O. D. Trans. 550-575 R. P. M. Auto. Trans. (In Neutral) 575-600 R. P. M.

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: Two separate float adjustments must be made—lateral and vertical.

LATERAL ADJUSTMENT: With bowl cover assembly inverted, bowl cover gasket removed and float resting on seated needle, place float gauge (T109-222) directly under floats with notched portion of gauge fitted over edge of casting. Side of floats should just clear the vertical uprights of float gauge. Adjustment should be made by bending arms of floats.

VERTICAL ADJUSTMENT: With float gauge in same position, floats should just clear the horizontal portion of gauge. Vertical distance between top of float and machined surface of casting must be 3/16 inch for both primary and secondary floats (gauge T109-222). Adjust by bending float arms.

FLOAT DROP ADJUSTMENT: With bowl cover held in upright position and measuring from center of float, the distance between top of floats and bowl cover should be 11/16 inch for both primary and secondary floats. Adjust by bending stop tabs on float brackets.

PUMP ADJUSTMENT: Install pump connector link in outer hole (long stroke) of pump arm, with ends extending toward countershaft arm. Back out throttle lever set screw until throttle valves seat in bores of carbureter. Hold straight edge across top of dust cover boss at pump arm. The flat on top of pump arm should be parallel to straight edge. Adjust by bending throttle connector rod at lower angle. (Use tool T109-213.)

METERING ROD ADJUSTMENT: Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows: (1) Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw. (2) With metering rods in place, press down on vacumeter link until metering rods bottom in carbureter body casting. (3) Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link. Hold in place and carefully tighten clamp screw.

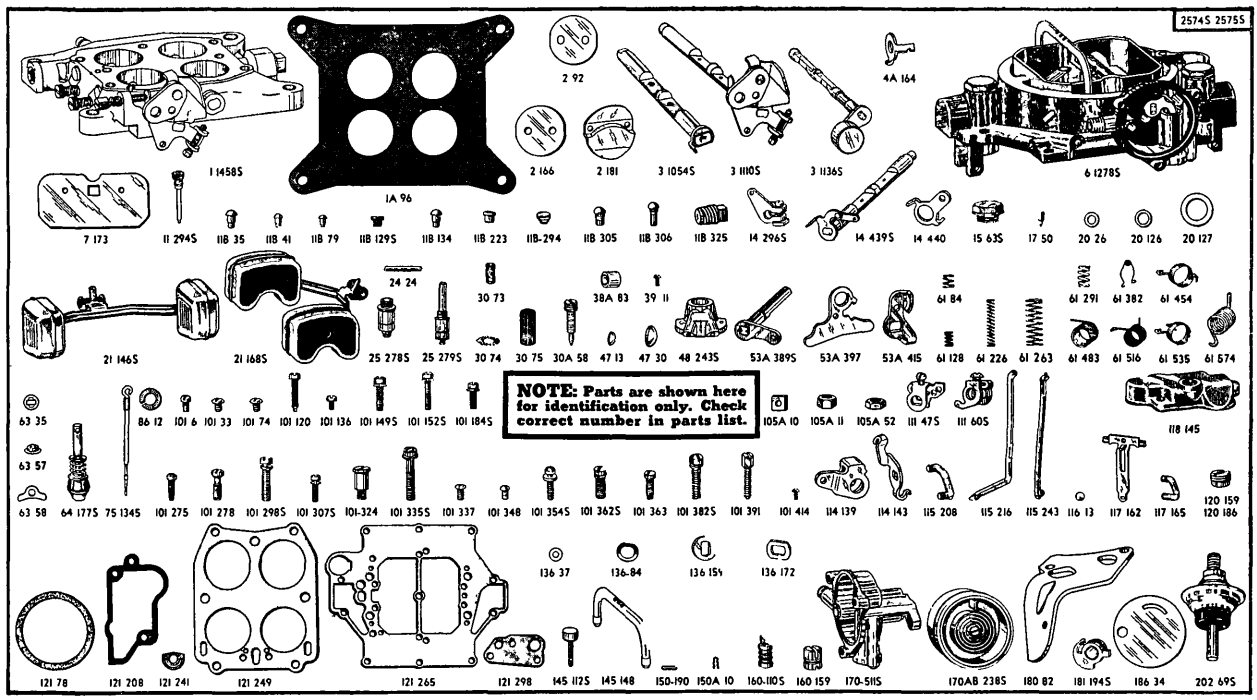
FAST IDLE ADJUSTMENT: (a) Loosen choke lever clamp screw on choke shaft. Insert .020 inch feeler gauge (T109-29) between lip of fast idle cam and boss of flange casting. Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw. (b) With choke valve tightly closed, tighten fast idle adjusting screw until there is .024 inch (gauge T109-189) opening between throttle valve and bore of carbureter, side opposite idle port. Be sure fast idle adjusting screw is on high step of cam while making this adjustment.

UNLOADER ADJUSTMENT: With throttle wide open there should be 1/8 inch (gauge T109-36) clearance between lower edge of choke valve and inner wall of air horn. Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41).

SECONDARY THROTTLE LEVER ADJUSTMENT: Primary and secondary throttle valves should reach wide open position at the same time. To adjust, bend throttle operating rod at upper angle. (Use bending tool T109-213.) With primary and secondary throttle valves in tightly closed position there should be .010-.030 inch (gauge T109-29) clearance between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on secondary lever.

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: This adjustment should be made after completing fast idle and secondary throttle lever adjustments. Crack throttle valves and manually open and close the choke valve. Tang on secondary throttle lever should freely engage in notch of lock-out dog. If necessary to adjust, bend tang on secondary throttle lever.

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Studebaker — 1958 — Carbureters Nos. 2574S-2575S

WHEN SERVICING, USE GASKET ASSORTMENT No. 303; RE-CARBURETION KIT No. 1865N

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF RE-CARBURETION KIT

Part No.	PART NAME	
1-1458S	—Body flange assembly	
1A-96	FLANGE GASKET	
2-92	Primary throttle valve	(2)
2-166	Secondary throttle valve	(2)
2-181	Auxiliary throttle valve	(2)
3-1054S	Secondary throttle shaft and dog assembly	
3-1110S	—Primary throttle shaft and lever assembly	
3-1136S	—Auxiliary throttle shaft, lever and weight assembly	
4A-164	Throttle shaft dog	
6-1278S	—Air horn assembly	
7-173	Choke valve	
11-294S	Low speed jet assembly (.035")	(2)
11B-35	Rivet plug	(4)
11B-41	Rivet plug	
11B-79	Rivet plug (early prod (4) (late prod (1)	
11B-129S	Pump discharge passage plug assembly	
11B-134	Rivet plug	
11B-223	Nozzle passage rivet plug	(4)
11B-294	Idle port rivet plug	(2)
11B-305	Rivet plug	(2)
11B-306	Rivet plug	
11B-325	Pipe plug	
14-296S	Choke lever and screw assembly	
14-439S	Choke piston lever link and shaft assembly	
14-440	Cam trip lever	

Part No.	PART NAME	
15-63S	—Strainer nut assembly	(2)
17-50	Pump check needle	
20-26	Pump discharge passage plug gasket	
20-126	Needle seat gasket	(2)
20-127	Bowl strainer gasket	(2)
21-146S	Float and lever assembly	(2)
21-168S	Float and lever assembly	
24-24	Float lever pin	(2)
25-278S	PRIMARY NEEDLE AND SEAT ASSEMBLY (.0935")	(2)
25-279S	SECONDARY NEEDLE AND SEAT ASSEMBLY (.0935")	(2)
30-73	Primary needle seat strainer	
30-74	Secondary fuel inlet strainer	
30-75	Bowl strainer	
30A-58	Idle adjustment screw	(2)
38A-83	Countershaft bushing	
39-11	Choke valve attaching screw	(2)
47-13	Spark port welsh plug	
47-30	Choke housing welsh plug	
48-243S	—Pump jet and housing assembly	
53A-389S	Pump operating lever and countershaft assembly	
53A-397	Lockout arm	
53A-415	—Secondary operating lever	
61-84	Idle adjustment screw spring	(2)

Part No	PART NAME	
61-128	Connector rod spring	
61-226	VACUUM PISTON SPRING	
61-263	Pump spring (lower)	
61-291	Throttle lever adjusting screw spring	
61-382	Metering rod spring	
61-454	Fast idle cam spring	
61-483	Secondary throttle return spring	
61-516	Countershaft spring	
61-535	Lockout arm spring	
61-574	Throttle flex spring	
63-35	Connector rod spring retainer	
63-57	Intake check ball retainer	
63-58	Coil housing retainer	(3)
64-177S	—PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
75-1345	—METERING ROD—STANDARD (.0705" x .062" x .053")	(2)
75-1377	—Metering rod—1 size lean .071" x .063" x .056"	(2)
75-1378U	—Metering rod and jet unit—2 sizes lean (consists of 1—61-230, 2—75 1380 and 2—120 184)	
75-1379U	—Metering rod and jet unit—3 sizes lean (consists of 1—61 230 2—75 1381 and 2—120 193)	
86-12	Flange stud lock washer	(4)
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	(2)
101-120	Fast idle adjustment screw	
101-136	Coil housing attaching screw	(3)
101-149S	Body flange attaching screw and washer assembly	
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-275	Piston housing attaching screw	
101-278	Pump jet and housing attaching screw	
101-298S	Body flange attaching screw and washer assembly	(2)
101-307S	Air horn attaching screw and washer assembly (2574S (8) (2575S (6)	
101-324	Fast idle cam attaching screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-348	Primary throttle valve attaching screw	(4)
101-354S	Choke lever clamp screw assembly	
101-362S	*Air horn attaching screw and washer assembly	(2)
101-363	Piston housing attaching screw	(2)
101-382S	Body flange attaching screw and washer assembly	(3)

Part No.	PART NAME	
101-391	Throttle lever adjusting screw	
101-414	Auxiliary throttle valve attaching screw	(4)
103-14	Lead shot (late prod.)	(3)
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
105A-52	*Dash pot lock nut	
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
114-139	Throttle shaft arm (inner)	
114-143	Throttle shaft arm (outer)	
115-208	Throttle operating rod	
115-216	Throttle connector rod	
115-243	Choke connector rod	
116-13	Pump intake check ball	
117-162	Vacumeter piston link	
117-165	Pump connector link	
118-145	—Dust cover	
120-159	PRIMARY METERING ROD JET (.089")	(2)
120-186	Secondary metering jet (.061")	(2)
121-78	COIL HOUSING GASKET	
121-208	DUST COVER GASKET	
121-241	PUMP JET HOUSING GASKET	
121-249	BODY FLANGE GASKET (Sup by 121-315)	
121-265	AIR HORN GASKET	
121-298	—Piston housing gasket	
121-315	—Body flange gasket	
136-37	Throttle connector rod and operating rod washer	(5)
136-84	Spring washer	
136-159	Throttle shaft washer	
136-172	Secondary throttle shaft washer	
145-112S	Secondary bleeder tube and plug assembly	(2)
145-148	—Cross over bowl vent tube	
150-190	Choke piston pin	
150A-10	Pin spring	(5)
160-110S	Vacuum piston and pin assembly	
160-159	—Choke piston	
170-511S	—Piston housing and plug assembly	
170AB-238S	Thermostatic coil and housing assembly	
180-82	*—Dash pot bracket	
181-194S	Fast idle cam assembly	
186-34	Choke baffle plate	
202-69S	*Dash pot assembly	
202-81U	Unitized package	

—Parts so marked are new and listed for the first time

*Part of 202 81U Unitized Package

NOTE· Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

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CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST LOUIS, MO, U. S A.

STUDEBAKER 2724S
June, 1957

STUDEBAKER

CHAMPION – SCOTSMAN

1957

(2125S can also be used)

BBR1 DOWNDRAFT **CARBURETER 2724S**

CARBURETER SPECIFICATIONS

For Studebaker Six Cylinder 185 Cu. In. Engine: Vacuum at Idle 17 to 18 Inches

Dimensions Flange size, 1¼ inch S A E
Throttle bore, 1-9/16 inch
Main venturi, 1¼ inch

Float Setting: Top of float 5/64 inch below top surface of carbureter body casting Plus or minus 1/64 inch

Vents Outside, none Inside balance vent Tube in air horn below choke valve

Gasoline Intake Needle: Triangular, horizontal No. 44 (.086 inch) drill in needle seat

Idle Orifice Tube: Jet size .0276 inch diameter Idle passage air bleed (in body) size .067 inch diameter Restriction, in body, size .0545 inch diameter

Idle Ports: Upper port, slot type length, .175 inch width, .040 inch Top of port located .133 to .137 inch above top of valve
Lower port size, .053 to .057 inch diameter (For idle adjustment screw)

Set Idle Adjustment Screw: ½ to 1½ turns open For richer mixture turn screw out Do not idle engine below 550-600 r p m

Main Metering Jet: Calibrated to flow 268 to 272 cc per minute (Do not gauge for size If in doubt, replace with new part)

Main Vent Through diffuser (air bleed inside bowl) size .0315 inch diameter

Main Vent Tube· Side Holes 7—.0197 inch drill side holes—one side spaced 3/16 inch apart First hole 5/16 inch from end 7—.0197 inch drill side holes—opposite side spaced 3/16 inch apart First hole 13/32 inch from end Bottom hole 1—.0197 inch drill.

Step-Up Jet: .037 inch drill size

Accelerating Pump: Type delayed action Stroke summer setting (inner hole short stroke) Intermediate setting (center hole) Winter setting (outer hole, long stroke)

Pump intake passage ball check seat size .107 to .112 inch diameter

Pump discharge passage, restriction (under ball check) size .062 to .065 inch diameter in body

Pump (discharge) jet size .0276 inch diameter

Pump Adjustment: 32/64 inch plunger travel, with pump link in medium stroke hole

Choke. Butterfly type with poppet valve

Vacuum Spark Port .110 x .040 inch Top of port .007 to .013 inch below lower edge of valve

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap .030"	Breaker Point Setting .020"	Ignition Timing Breaker Points to Open: 2° B. T. C. At Vibration Damper	Valve Setting (Cold) Intake .016" Exhaust .016"	Float Setting (Use Gauge) 5/64 Inch ± 1/64 Inch	Idle Adjustment Screw Setting ½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

If carbureter loads up after considerable service, check float level Wear on lip of float lever will raise float level Before adjusting float, be sure float lever pin is firmly seated Reset float level by bending lip of float lever away from needle to raise level, or bend lip toward needle to lower float level Bend vertical lip of float only

If motor stalls while idling, set throttle lever adjusting screw so motor runs approximately 550-600 r p m Then set idle adjustment screw to specifications If these adjustments do not correct the trouble, remove idle orifice tube and plug assembly Clean tube and passages with compressed air.

If acceleration is not satisfactory, remove pump jet and clean with compressed air However, it is usually advisable to replace the pump jet, as its cost is nominal All jets must be seated gasoline tight Poor acceleration may be due to damaged or worn plunger leather in accelerating pump, sediment in pump cylinder or clogged intake ball check at bottom of pump cylinder and discharge ball check in discharge passage If plunger is removed from cylinder, use care in installing to avoid damage to plunger leather

Correct air fuel ratio is provided by a "balance tube" in the air horn The balance tube should be checked each time

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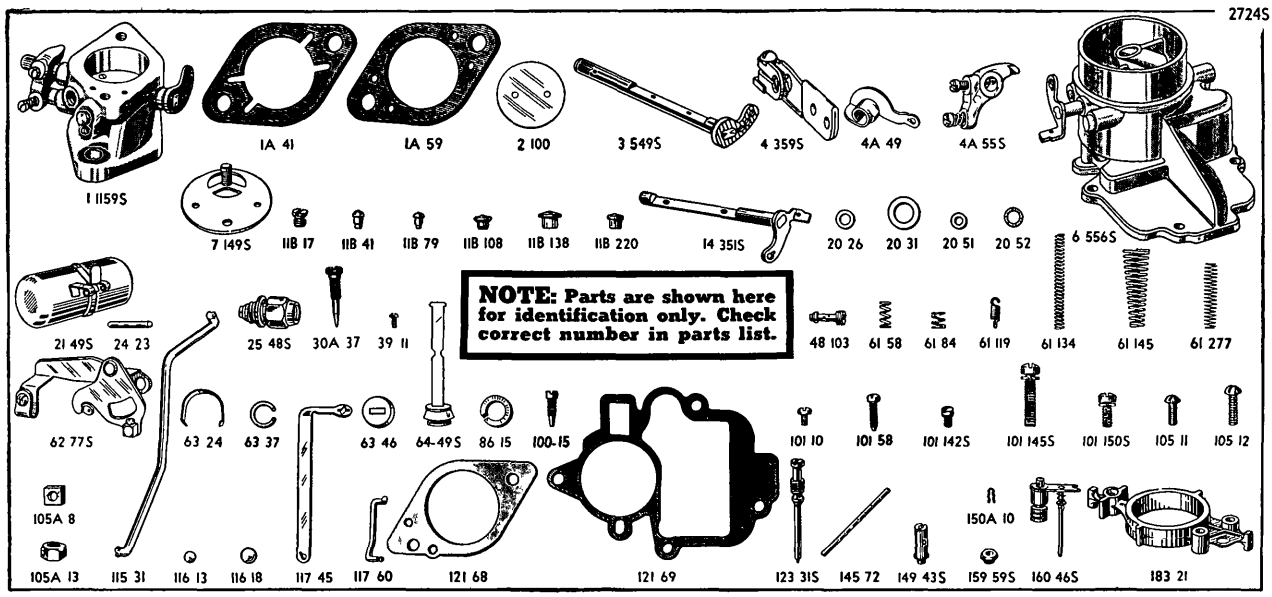
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the carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type, size or condition of air cleaner Should the cleaner become clogged the capacity will be reduced but the air fuel mixture ratio will not be changed

Excessive richness above 50 miles per hour may be caused by a clogged main vent tube After removal of rivet plug beneath float bowl with tool No T109-43, main vent tube can be removed and a new tube inserted with tool No T109 195 Care must be exercised in inserting new tube which must seat tightly Use new rivet to complete the installation

Pump Adjustment Remove air horn assembly, back out throttle lever adjustment screw and install pump operating link in center hole (medium stroke of throttle shaft arm) Place base of pump travel gauge T109-117S on upper edge of body casting at pump cylinder With throttle valve seated, turn gauge until projecting finger contacts top of plunger shaft Note number indicated on gauge Repeat with throttle valve wide open and plunger pressed to bottom of the cylinder The difference between the numbers indicated at wide open and closed throttle positions should be '32' (32/64") pump stroke Adjust by bending horizontal portion of pump lifter link

Pump stroke is adjustable for high or low temperature Set to longest stroke (outer hole) for cold weather, shorter stroke (inner hole) for hot weather driving



Studebaker—1957—Carbureter No. 2724S

WHEN SERVICING, USE GASKET ASSORTMENT No 192, REPAIR PACKAGE No. 1798

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1159S	Body flange assembly	
1A-41	FLANGE GASKET—FOR USE WITHOUT GOVERNOR	
1A-59	Flange gasket—for use with governor	
2-100	Throttle valve	
3-549S	Throttle shaft and arm assembly	
4-359S	Throttle lever assembly	
4A-49	Fast idle cam	
4A-55S	Throttle shaft dog and screw assembly	
6-556S	Air horn assembly	
7-149S	Choke valve assembly	
11B-17	PUMP DISCHARGE PASSAGE PLUG	
11B-41	Rivet plug	
11B-79	Rivet plug	(2)
11B-108	IDLE PORT RIVET PLUG	
11B-138	PUMP JET RIVET PLUG	
11B-220	HIGH SPEED PASSAGE PLUG	
14-351S	Choke shaft and lever assembly	
20-26	Main metering jet gasket	
20-31	Needle seat gasket	
20-51	Step-up jet gasket	
20-52	STEP-UP PISTON GASKET	
21-49S	Float and lever assembly	
24-23	FLOAT LEVER PIN	
25 48S	NEEDLE AND SEAT ASSEMBLY	
30A-37	Idle adjustment screw	
39-11	VALVE ATTACHING SCREW	(4)
48-103	PUMP JET	
61 58	Throttle lever adjusting screw spring	
61-84	Idle adjustment screw spring	
61-119	Choke pull-back spring	
61-134	STEP-UP PISTON SPRING	
61-145	PUMP SPRING	
61-277	PUMP DISCHARGE CHECK BALL SPRING	
62-77S	Choke tube bracket assembly	
63-24	FLOAT LEVER PIN RETAINER	

Part No.	PART NAME	
63-37	INTAKE CHECK BALL RETAINING RING	
63-46	PUMP SPRING RETAINER	
64-49S	PUMP PLUNGER AND ROD ASSEMBLY	
86-15	Flange stud lock washer	(2)
100-15	Throttle shaft dog screw	
101-10	Wire clamp screw	
101-58	Throttle adjusting screw	
101-142S	Choke bracket attaching screw and washer assembly	
101-145S	Body flange attaching screw and washer assembly	(2)
101-150S	Air horn attaching screw and washer assembly	(4)
105-11	Choke tube clamp screw	
105-12	Throttle lever clamp screw	
105A-8	Throttle lever and choke tube clamp nut	(2)
105A-13	Flange stud nut	(2)
115-31	Choke connector rod	
116-13	PUMP INTAKE CHECK BALL	
116-18	PUMP DISCHARGE CHECK BALL	
117-45	PUMP LIFTER LINK	
117-60	PUMP LINK	
121 68	BODY FLANGE GASKET	(2)
121-69	BODY GASKET	
123-31S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
145-72	MAIN VENT TUBE	
149-43S	STEP-UP JET ASSEMBLY	
150A-10	PIN SPRING	
159-59S	MAIN METERING JET ASSEMBLY—STANDARD	
159-61S	Main metering jet assembly—1 size lean	
159 66S	Main metering jet assembly—2 sizes lean	
159-82S	Main metering jet assembly—3 sizes lean	
160-46S	STEP UP PISTON, PLATE AND ROD ASSEMBLY	
183-21	Insulator	

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used

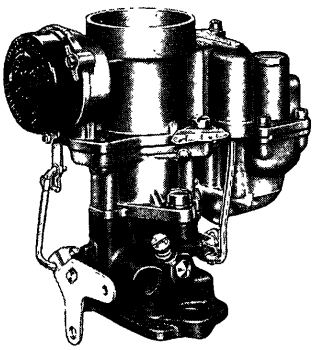
CARTER CARBURETOR STUDEBAKER 989S-989SA-2108S-2190S-2417S
DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.
January, 1953
Revised October, 1957

989S-SA—Model "14G", 1953

2108S—Models "15G"-"16G"-"56G", 1954-56

2190S—Custom Models "W1" and "F1" Only, 1954

2417S—Model "56G", 1956; "57G", 1957; "58G" 1958



STUDEBAKER CHAMPION 1953-1958

(2417S can be used in place of 989S-989SA-2108S-2190S)

WE Down-Draft Climatic® Control—**Carbs. Nos. 989S-989SA-2108S-2190S-2417S**

CARBURETER SPECIFICATIONS

For Studebaker Six Cylinder Engine: 3 Inch Bore, 4 Inch Stroke (14G-15G)

For Studebaker Six Cylinder Engine: 3 Inch Bore, 4⅜ Inch Stroke (16G-56G-57G-58G)

Dimensions: Flange size, 1¼ inch—special.
Primary venturi size, 11/16 inch I. D.
Main venturi size, 1-5/16 inch I. D.

Vent: Inside, none. Outside, size No. 10 (.1935 inch) drill.

Gasoline Intake: Size No. 46 (.081 inch) drill hole in needle seat.

Low Speed Circuit: (989S-SA) Jet, No. 68 (.031 inch); by-pass, No. 54 (.055 inch); economizer, No. 52 (.0635 inch); bleed, No. 54 (.055 inch). (2108S-2190S) Jet, No. 65 (.035 inch); by-pass, (.053 inch); economizer, No. 55 (.052 inch); bleed, (.047 inch). (2417S) Jet, No. 68 (.031 inch); by-pass, No. 54 (.055 inch); economizer, No. 53 (.0595 inch); bleed, No. 55 (.052 inch).

Idle Port: Upper, (989S-SA) slot type; (2108S-2190S-2417S) key hole type, length .165 inch, width .030 inch. (2108S-2190S-2417S) .042 inch diameter hole at top.

Idle Port Opening: Top of port to be .112 to .116 inch above top edge of valve with valve tightly closed.

Lower Port (For Idle Adjustment Screw): Size (989S-SA) No. 46 (.081 inch) drill; (2108S-2190S-2417S) No. 54 (.055 inch) drill.

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture turn screw out. Idle engine 525-550 r.p.m. (Syncro-mesh trans.); 575-600 (Overdrive and Hydra-matic trans.).

Main Nozzle: Inside diameter No. 30 (.1285 inch) drill.
Upper hole, .035 inch diameter.
Lower hole, .089 inch diameter.

Metering Rod (Vacumeter Type): (989S-SA-2108S-2417S) .073 x .064 x .050 inch; (2190S) .074 x .065 x .0545 inch diameter.

Metering Rod Jet: Size .095 inch diameter.

Accelerating Pump: Discharge jet, size No. 74 (.0225 inch) drill.
Intake ball check seat, size No. 40 (.098 inch) drill.
Discharge ball check seat, size No. 32 (.116 inch) drill.
Relief passage (to outside), size No. 42 (.0935 inch) drill.

Choke: Carter Climatic ® Control, set one point lean. Butterfly type, offset valve. Choke heat suction hole in body, size No. 41 (.096 inch) drill.

Vacuum Spark Port: (989S-SA) .100 to .102 inch; (2108S-2190S-2417S) .075 to .077 inch diameter. Top of port to be .060 to .070 inch above top edge of valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open:	Valve Setting Cold	Float Setting	Idle Adjustment Screw Setting
.030"	.020"	2° B. T. D. C. At Vibration Damper	Intake .016" Exhaust .016"	⅜ Inch (Use Gauge T109-80) (Measure from point "A" to top of float seam)	½ to 1½ Syncro-mesh Trans. 525 to 550 R.P.M. O'Dr. & Hydra-matic 575 to 600 R.P.M.

CARBURETER ADJUSTMENTS

Float Adjustment: With bowl cover inverted and float resting on seated needle, the distance from the tip on the edge of the bowl cover to the soldered edge of the seam should be ⅜ inch (gauge T109-80).

Pump Adjustment: With throttle lever set screw backed out and throttle valve seated, place universal pump travel gauge T109-117S on bowl cover with lip of gauge extending over plunger shaft. Hold gauge vertical. The difference between closed and wide open throttle reading at index mark should be 14/64 inch plunger travel.

Adjust by bending throttle connector rod at lower angle. Use tool T109-213.

Metering Rod Adjustment: Metering rod adjustment must be made after pump adjustment or when leaner than standard rods are installed. With throttle lever set screw backed out and throttle valves seated, insert gauge T109-102 in place of metering rod. Press down on metering rod arm until upper lip of arm contacts pin in pump arm. There should now be less than .005 inch between pin and notch in gauge.

Adjust by bending upper lip on metering rod arm.

After adjusting upper lip of metering rod arm, it is necessary to adjust the lower lip. Procedure is as follows: Press down on metering rod arm until upper lip contacts pin in pump arm. Adjust lower lip for 3/16 inch clearance between pin in pump arm and upper surface of lower lip.

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CARBURETER
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MARCA REGISTRADA

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Anti-Percolator Adjustment Crack throttle valve 030 inch by placing gauge T109-29 between throttle valve and bore of carbureter side opposite idle port There should now be 025 inch (T109-189 may be used) clearance between rocker arm lip and pump arm

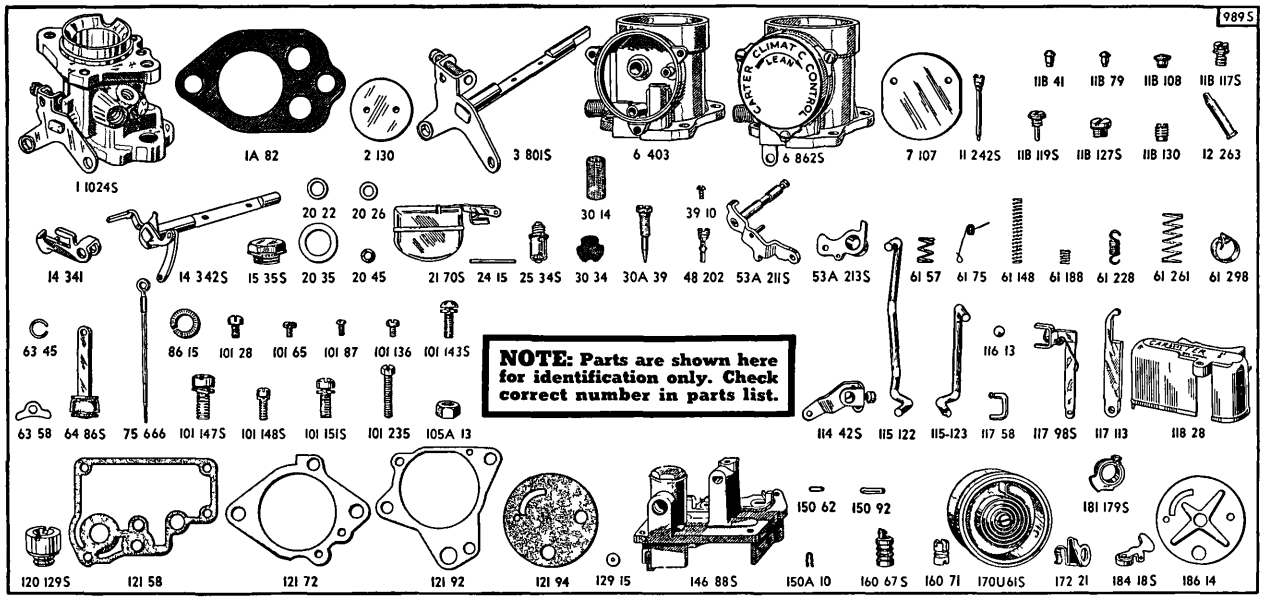
Adjust by bending rocker arm use T109-105

Fast Idle Adjustment With thermostatic coil housing gasket and baffle plate removed, crack throttle valve and hold choke valve closed Then close throttle There should now be 046 inch (T109 158 may be used) between thottle valve and bore of carbureter

Adjust by bending choke connector rod at lower angle use T109-213

Unloader Adjustment Must be made after fast idle adjustment Hold throttle valve wide open and close choke valve as far as possible without forcing There should now be 3/16 inch (gauge T109 28) between lower edge of choke valve and inner wall of air horn

Adjust by bending arm on choke trip lever (use tool T109 214)



Studebaker Champion—1953-1958—Carbureters Nos. 989S-989SA-2108S-2190S-2417S

WHEN SERVICING, USE GASKET ASST No 235 (ALL), REPAIR PKG No 1729 (989S SA), No 1746 (2108S), No 1837 (2417S)

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME
1-1024S	Body flange assembly (989S-SA)
1-1139S	Body flange assembly (2108S-2190S-2417S)
1A-82	FLANGE GASKET
2-130	Throttle valve
3-801S	Throttle shaft and lever assembly
6-403	Air horn
6-862S	Air horn and Climatic ® control assembly
7-107	Choke valve
11-165S	LOW SPEED JET ASSY (2108S-2190S)
11 242S	LOW SPEED JET ASSY (989S-SA-2417S) (Sup by 11-165S on 2108S)
11B-41	Rivet plug
11B-79	Rivet plug (5)
11B-108	IDLE PORT RIVET PLUG
11B-117S	Idle passage plug assembly
11B-119S	Ball retainer screw plug assembly
11B-127S	Nozzle and pump jet passage plug assembly (2)
11B-130	NOZZLE RETAINER PLUG
12-263	Nozzle
14-341	Choke trip lever
14-342S	Choke lever, piston link and shaft assembly
15-35S	Strainer nut assembly
20-22	Needle seat and plug gasket (3)
20-26	Metering rod jet and plug gasket (3)
20-35	BOWL STRAINER GASKET
20-45	NOZZLE GASKET
21-70S	Float and lever assembly
24-15	Float lever pin
25-34S	NEEDLE AND SEAT ASSEMBLY
30-14	BOWL STRAINER GAUZE
30-34	PUMP STRAINER
30A-39	Idle adjustment screw
39-10	Choke valve attaching screw (2)
48-202	PUMP JET
53A-211S	Pump operating lever and countershaft assembly
53A-213S	Pump arm and collar assembly
61-57	Idle adjustment screw spring
61-75	Metering rod spring
61-148	VACUUM PISTON SPRING
61-188	Rocker arm spring
61-228	Pump operating lever spring (989S) (Sup by 61-252)
61-252	Pump operating lever spring
61-261	PUMP SPRING
61 298	Fast idle cam spring
63-45	BALL RETAINER RING
63-58	Coil housing retainer (3)
64-86S	Pump plunger and rod assembly (989S) (Sup by 64-156S)
64-156S	PUMP PLUNGER AND ROD ASSY (989S-SA)
64-157S	PUMP PLUNGER AND ROD ASSEMBLY (2108S 2190S-2417S)
75-666	Metering rod—standard (989S) (Sup by 75-902)
75-902	METERING ROD (Std (989S-SA-2108S-2417S), (1 size rich (2190S)
75-917	Metering rod (Std (2190S), (1 size lean (989S-SA-2108S-2417S)
75-918	Metering rod (2 sizes lean (989S-SA-2108S-2417S), (1 size lean (2190S)
75-919	Metering rod (3 sizes lean (989S SA-2108S-2417S), (2 sizes lean (2190S)
86-15	Flange stud lock washer (2)
101-28	Throttle shaft arm clamp screw
101-65	Choke baffle plate attaching screw
101-87	THROTTLE VALVE ATTACHING SCREW (2)
101-136	Coil housing attaching screw (3)
101-143S	Choke housing attaching screw and washer assembly
101-147S	Body flange attaching screw and washer assembly (2)
101-148S	Bowl and dust cover attaching screw and washer assembly (5)
101-151S	Air horn attaching screw and washer assembly (2)
101-235	Throttle lever adjusting screw
105A-13	Flange stud nut
114-42S	Throttle shaft arm and screw assembly
115-122	THROTTLE CONNECTOR ROD
115-123	Choke connector rod
116-13	INTAKE AND DISCHARGE CHECK BALL (2)
117-58	PUMP CONNECTOR LINK
117-98S	Vacuum piston link and spring assembly
117-113	Fast idle link
118-28	Dust cover
120-17S	Metering rod jet assembly (2108S-2417S) (Rich jet for Cuba)
120-129S	METERING ROD JET ASSEMBLY
121-58	BOWL COVER GASKET
121-72	BODY FLANGE GASKET
121-92	AIR HORN GASKET
121-94	THERMOSTATIC COIL HOUSING GASKET
129-15	Metering rod disk
146-88S	Bowl cover and strainer assembly
150-62	Choke piston pin
150-92	Anti-percolator pin
150A-10	PIN SPRING (2)
160-67S	Vacuum piston and pin assembly
160-71	Choke piston
170U-61S	Thermostatic coil and housing assembly
172-21	Throttle and choke connector rod retainer (2)
181-179S	Fast idle cam and spring assembly
184-18S	ANTI-PERCOLATOR CAP AND ROCKER ARM ASSEMBLY
186-14	Choke baffle plate

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

Form 5250A

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST LOUIS, MO, U. S A

STUDEBAKER 2576S
October, 1956
Revised December, 1956

STUDEBAKER "V-8" TRUCK

½, ¾, 1, 1½ and 2 TON

1957

MODELS: 3E7-3E12-3E13-3E28-3E28B-3E38-3E38B-3E40-3E40B

WCFB Four-Bore Down-Draft Climatic® Control **Carbureter No. 2576S**

CARBURETER SPECIFICATIONS

For Studebaker 8 Cylinder Engine 3-9/16 Inch Bore, 3¼ Inch Stroke (3E7, 3E12, 3E13, 3E28, 3E28B, 3E38, 3E38B)

For Studebaker 8 Cylinder Engine 3-9/16 Inch Bore, 3-5/8 Inch Stroke (3E40, 3E40B).

Dimensions. Flange size 1⅛ inch Four Bore—4 bolt type
Primary venturi size 11/32 inch I D
Main venturi (primary) size 1 inch I D
Main venturi (secondary) size 1⅛ inch I D

Vents Inside 4 Outside 1 in air horn 2 in dust cover

Gasoline Intake Size No 42 (0935 inch) drill hole in needle seat

Low Speed Jet Tube (Primary side only) Jet size No 65 (035 inch) drill By pass in body size No 52 (0635 inch) drill Economizer in low speed jet size 049 inch diameter Idle bleed in body size No 52 (0635 inch) drill

Idle Port. (Upper) slot type Primary length 174 inch width 040 inch Secondary none

Idle Port Opening: Primary 113 to 119 inch above top edge of valve with valve tightly closed Secondary none

Lower Port. Primary (for idle adjustment screw) size No 53 (0595 inch) drill Secondary none

Set Idle Adjustment Screw: ½ to 1½ turns open For richer mixture turn screw out Do not idle engine below 550 r p m

Main Nozzle: Installed permanently DO NOT REMOVE Anti percolating bleed (to nozzle well) primary side size No 67 (032 inch) drill Secondary side size No 60 (040 inch) drill

Metering Rod (Vacumeter type) see parts list for size

Metering Rod Jet Primary, size 089 inch diameter (for metering rod) Secondary size (061 inch) diameter (no metering rod)

Accelerating Pump. Discharge jet (twin) primary side only size No 74 (0225 inch) drill Intake ball check seat size 115 to 120 inch diameter Discharge needle seat size 070 inch diameter Relief passage (vent) to fuel chamber No 42 (0935 inch) drill

Choke Carter Climatic® Control set one point rich Butterfly type—offset choke valve primary side only Choke heat suction hole restriction in piston housing size No 43 (089 inch) drill

Vacuum Spark Port. Round type 060 inch diameter Bottom of port 000 to 010 inch above valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open	Valve Setting (Cold)	Float Setting	Idle Adjustment Screw Setting
035"±.002"	013"-.018"	4° B. T. D. C. At Vibrati n Damper	Intake .025"-.027" Exhaust .025"-.027"	3/16 Inch (Use Gauge T109-222)	½ to 1½ Turns Open Idle Engine at 550 R.P.M.

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: Two separate float adjustments must be made—lateral and vertical.

LATERAL ADJUSTMENT: With bowl cover assembly inverted, bowl cover gasket removed and float resting on seated needle, place float gauge (T109-222) directly under floats with notched portion of gauge fitted over edge of casting. Side of floats should just clear the vertical uprights of float gauge. Adjustment should be made by bending arms of floats.

VERTICAL ADJUSTMENT: With float gauge in same position, floats should just clear the horizontal portion of gauge. Vertical distance between top of float and machined surface of casting must be 3/16 inch for both primary and secondary floats (gauge T109-222). Adjust by bending float arms.

FLOAT DROP ADJUSTMENT: With bowl cover held in upright position and measuring from center of float, the distance between top of floats and bowl cover should be 11/16 inch for both primary and secondary floats. Adjust by bending stop tabs on float brackets.

PUMP ADJUSTMENT: Install pump connector link in outer hole (long stroke) of pump arm, with ends extending toward countershaft arm. Back out throttle lever set screw until throttle valves seat in bores of carbureter. Hold straight edge across top of dust cover boss at pump arm. The flat on top of pump arm should be parallel to straight edge. Adjust by bending throttle connector rod at lower angle. (Use tool T109-213.)

METERING ROD ADJUSTMENT: Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows: (1) Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw. (2) With metering rods in place, press down on vacumeter link until metering rods bottom in carbureter body casting. (3) Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link. Hold in place and carefully tighten clamp screw.

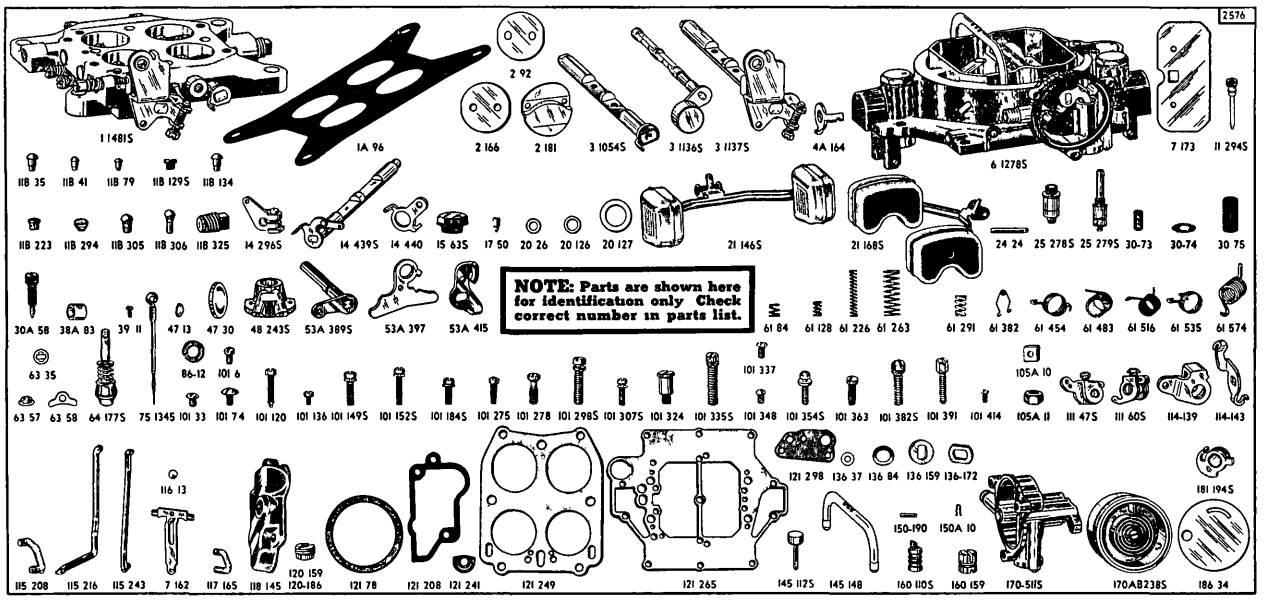
FAST IDLE ADJUSTMENT: (a) Loosen choke lever clamp screw on choke shaft. Insert .020 inch feeler gauge (T109-29) between lip of fast idle cam and boss of flange casting. Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw. (b) With choke valve tightly closed, tighten fast idle adjusting screw until there is .024 inch (gauge T109-189) opening between throttle valve and bore of carbureter, side opposite idle port. Be sure fast idle adjusting screw is on high step of cam while making this adjustment.

UNLOADER ADJUSTMENT: With throttle wide open there should be 1/8 inch (gauge T109-36) clearance between lower edge of choke valve and inner wall of air horn. Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41).

SECONDARY THROTTLE LEVER ADJUSTMENT: Primary and secondary throttle valves should reach wide open position at the same time. To adjust, bend throttle operating rod at upper angle. (Use bending tool T109-213.) With primary and secondary throttle valves in tightly closed position there should be .017-.022 inch (gauge T109-29) clearance between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on primary lever.

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: This adjustment should be made after completing fast idle and secondary throttle lever adjustments. Crack throttle valves and manually open and close the choke valve. Tang on secondary throttle lever should freely engage in notch of lock-out dog. If necessary to adjust, bend tang on secondary throttle lever.

CARBURETER
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Studebaker Truck "V-8"—1957—Carbureter No. 2576S

WHEN SERVICING, USE GASKET ASSORTMENT No 303 REPAIR PACKAGE No. 1865

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-1481S	—Body flange assembly	
1A-96	FLANGE GASKET	
2-92	Primary throttle valve	(2)
2-166	Secondary throttle valve	(2)
2 181	Auxiliary throttle valve	(2)
3-1054S	Secondary throttle shaft and dog assembly	
3-1136S	—Auxiliary throttle shaft lever and weight assembly	
3 1137S	—Primary throttle shaft and lever assembly	
4A-164	Throttle shaft dog	
6-1278S	—Air horn assembly	
7-173	Choke valve	
11-294S	LOW SPEED JET ASSEMBLY	(2)
11B-35	Rivet plug	(4)
11B-41	Rivet plug	
11B-79	Rivet plug	(4)
11B-129S	Pump discharge passage plug assembly	
11B-134	Rivet plug	
11B-223	Nozzle passage rivet plug	(4)
11B-294	Idle port rivet plug	(2)
11B-305	Rivet plug	(2)
11B-306	Rivet plug	
11B-325	Pipe plug	
14-296S	Choke lever and screw assembly	
14-439S	Choke piston lever link and shaft assembly	
14-440	Cam trip lever	
15-63S	—Strainer nut assembly	(2)
17-50	PUMP CHECK NEEDLE	
20-26	PUMP DISCHARGE PASSAGE PLUG GASKET	

Part No	PART NAME	
20-126	Needle seat gasket	(2)
20 127	BOWL STRAINER GASKET	(2)
21-146S	Float and lever assembly	
21-168S	Float and lever assembly	
24-24	Float lever p n	(2)
25-278S	PRIMARY NEEDLE AND SEAT ASSEMBLY	
25 279S	SECONDARY NEEDLE AND SEAT ASSEMBLY	
30-73	PRIMARY NEEDLE SEAT STRAINER	
30-74	SECONDARY FUEL INLET STRAINER	
30-75	BOWL STRAINER	
30A-58	Idle adjustment screw	(2)
38A-83	Countershaft bushing	
39-11	Choke valve attaching screw	(2)
47-13	Spark port welsh plug	
47-30	Choke housing welsh plug	
48-243S	Pump jet and housing assembly	
53A-389S	Pump operating lever and countershaft assembly	
53A-397	Lockout arm	
53A-415	—Secondary operating lever	
61-84	Idle adjustment screw spring	(2)
61-128	Connector rod spring	
61-226	VACUUM PISTON SPRING	
61-263	PUMP SPRING (LOWER)	
61-291	Throttle lever adjusting screw spring	
61-382	METERING ROD SPRING	
61-454	Fast idle cam spring	
61-483	SECONDARY THROTTLE RETURN SPRING	
61-516	Countershaft spring	

Part No	PART NAME	
61 535	Lockout arm spring	
61-574	Throttle flex spring	
63-35	Connector rod spring retainer	
63-57	INTAKE CHECK BALL RETAINER	
63-58	Coil housing retainer	(3)
64-177S	—PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
75 1345	—METERING ROD—STANDARD 0705 x 062 x 053	(2)
75-1377	—Metering rod—1 size lean 071" x 063" x 056"	(2)
75-1378U	—Metering rod and jet unit—2 sizes lean (Consists of 1—61 230 2—75 1380 and 2—120 184)	
75 1379U	—Metering rod and jet unit—3 sizes lean (Consists of 1—61 230 2—75 1381 and 2—120 193)	
86-12	Flange stud lock washer	(4)
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	(2)
101-120	Fast idle adjustment screw	
101-136	Coil housing attaching screw	(3)
101-149S	Body flange attaching screw and washer assembly	
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-275	Piston housing attaching screw	
101-278	Pump jet housing attaching screw	
101-298S	Body flange attaching screw and washer assy	(2)
101-307S	Air horn attaching screw and washer assembly	(8)
101-324	Fast idle cam attaching screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-348	Primary throttle valve attaching screw	(4)
101-354S	Choke lever clamp screw assembly	
101-363	Piston housing attaching screw	(2)
101-382S	Body flange attaching screw and washer assy	(3)
101-391	Throttle lever adjusting screw	
101-414	Auxiliary throttle valve attaching screw	(4)

Part No.	PART NAME	
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
114-139	Throttle shaft arm (inner)	
114-143	Throttle shaft arm (outer)	
115-208	Throttle operating rod	
115-216	THROTTLE CONNECTOR ROD	
115-243	Choke connector rod	
116-13	PUMP INTAKE CHECK BALL	
117-162	Vacumeter piston link	
117-165	Pump connector link	
118-145	—Dust cover	
120-159	PRIMARY METERING ROD JET	(2)
120-186	SECONDARY METERING JET	(2)
121-78	COIL HOUSING GASKET	
121-208	DUST COVER GASKET	
121-241	PUMP JET HOUSING GASKET	
121-249	BODY FLANGE GASKET	
121-265	AIR HORN GASKET	
121-298	—PISTON HOUSING GASKET	
136-37	Throttle connector rod and operating rod washer	(5)
136-84	Spring washer	
136-159	Throttle shaft washer	
136-172	Secondary throttle shaft washer	
145-112S	Secondary bleeder tube and plug assembly	
145-148	—Cross over bowl vent tube	
150-190	Choke piston pin	
150A-10	PIN SPRING	(5)
160-110S	Vacuum piston and pin assembly	
160-159	—Choke piston	
170-511S	—Piston housing and plug assembly	
170AB238S	Thermostatic coil and housing assembly	
181-194S	Fast idle cam assembly	
186-34	Choke baffle plate	

—Parts so marked are new and listed for the first time

NOTE **Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used**

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Form 5096D

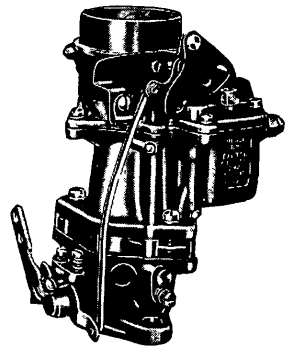
CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST LOUIS, MO, U S A

STUDEBAKER 2125S
January, 1955
Revised October, 1957

MODELS
E5, 2E5 and 3E5—1/2 Ton

E10 and (3E10 Export Only)
3/4 Ton

E15—1 Ton



STUDEBAKER TRUCK
1/2, 3/4 and 1 TON
1955-1958

BBR1 DOWN-DRAFT **CARBURETER 2125S**

CARBURETER SPECIFICATIONS

For Studebaker Six Cylinder Engine 3 Inch Bore, 4 3/8 Inch Stroke

Dimensions Flange size 1 1/4 inch S A E
Throttle bore 1 9/16 inch
Main venturi 1 1/4 inch

Float Setting Top of float 5/64 inch below top surface of carbureter body casting Plus or minus 1/64 inch

Vents Outside none Inside balance vent Tube in air horn below choke valve

Gasoline Intake Needle Triangular horizontal No 44 (.086 inch) drill in needle seat

Idle Orifice Tube Jet size .0276 inch diameter Idle passage air bleed (in body) size .067 inch diameter Restriction in body size .0545 inch diameter

Idle Ports Upper port slot type length .175 inch width .040 inch Top of port located .133 to .137 inch above top of valve
Lower port size .053 to .057 inch diameter (For idle adjustment screw)

Set Idle Adjustment Screw 1/2 to 1 1/2 turns open For richer mixture turn screw out Do not idle engine below 550 600 r p m

Main Metering Jet Calibrated to flow 268 to 272 cc per minute (Do not gauge for size If in doubt replace with new part)

Main Vent Through diffuser (air bleed inside bowl) size .0315 inch diameter

Main Vent Tube Side Holes 7—.0197 inch drill side holes—one side spaced 3/16 inch apart First hole 5/16 inch from end 7—.0197 inch drill side holes—opposite side spaced 3/16 inch apart First hole 13/32 inch from end Bottom hole 1—.0197 inch drill

Step-Up Jet .037 inch drill size.

Accelerating Pump Type delayed action Stroke summer setting (inner hole short stroke) Intermediate setting (center hole) Winter setting (outer hole long stroke)

Pump intake passage ball check seat size .107 to .112 inch diameter

Pump discharge passage restriction (under ball check) size .062 to .065 inch diameter in body

Pump (discharge) jet size .0276 inch diameter

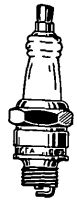
Pump Adjustment 32/64 inch plunger travel with pump link in medium stroke hole

Choke Butterfly type with poppet valve

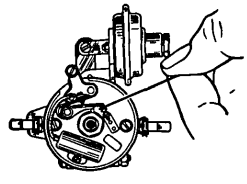
Vacuum Spark Port .110 x .040 inch Top of port .007 to .013 inch below lower edge of valve

Motor Tune-Up—Be Accurate!

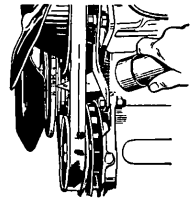
CAUTION **Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter**



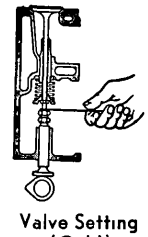
Spark Plug Gap .030"



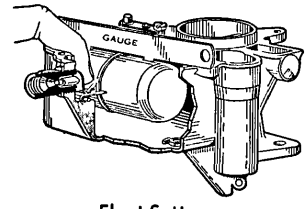
Breaker Point Setting .020"



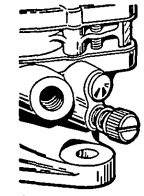
Ignition Timing Breaker Points to Open. 2° B. T. C.



Valve Setting (Cold) Intake .016"-.018" Exhaust .016"-.018"



Float Setting (Use Gauge) 5/64 Inch ± 1/64 Inch



Idle Adjustment Screw Setting 1/2 to 1 1/2 Turns Open

CARBURETER ADJUSTMENTS

If carbureter loads up after considerable service, check float level Wear on lip of float lever will raise float level Before adjusting float, be sure float lever pin is firmly seated Reset float level by bending lip of float lever away from needle to raise level, or bend lip toward needle to lower float level Bend vertical lip of float only

If motor stalls while idling, set throttle lever adjusting screw so motor runs approximately 550-600 r p m Then set idle adjustment screw to specifications If these adjustments do not correct the trouble remove idle orifice tube and plug assembly Clean tube and passages with compressed air

If acceleration is not satisfactory, remove pump jet and clean with compressed air However, it is usually advisable to replace the pump jet, as its cost is nominal All jets must be seated gasoline tight Poor acceleration may be due to

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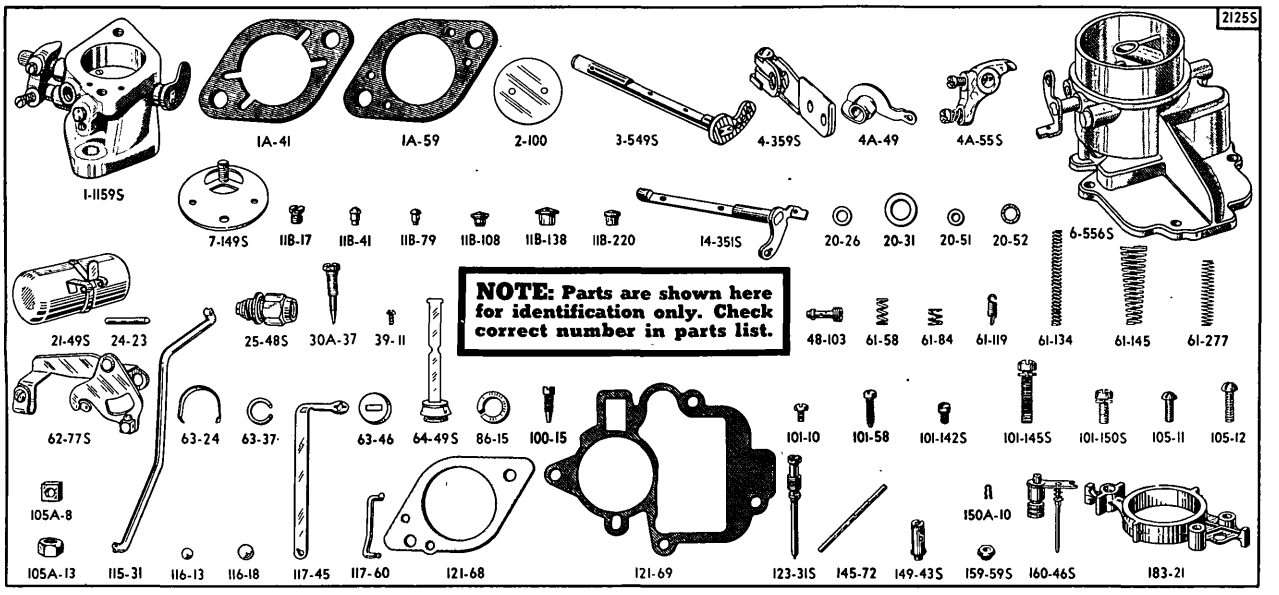
damaged or worn plunger leather in accelerating pump, sediment in pump cylinder or clogged intake ball check at bottom of pump cylinder and discharge ball check in discharge passage. If plunger is removed from cylinder, use care in installing to avoid damage to plunger leather.

Correct air fuel ratio is provided by a "balance tube" in the air horn. The balance tube should be checked each time the carbureter is serviced to see that the passage is open. The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type, size or condition of air cleaner. Should the cleaner become clogged, the capacity will be reduced but the air-fuel mixture ratio will not be changed.

Excessive richness above 50 miles per hour may be caused by a clogged main vent tube. After removal of rivet plug beneath float bowl with tool No. T109-43, main vent tube can be removed and a new tube inserted with tool No. T109-195. Care must be exercised in inserting new tube which must seat tightly. Use new rivet to complete the installation.

Pump Adjustment: Remove air horn assembly, back out throttle lever adjustment screw and install pump operating link in center hole (medium stroke of throttle shaft arm). Place base of pump travel gauge T109-117S on upper edge of body casting at pump cylinder. With throttle valve seated, turn gauge until projecting finger contacts top of plunger shaft. Note number indicated on gauge. Repeat with throttle valve wide open and plunger pressed to bottom of the cylinder. The difference between the numbers indicated at wide open and closed throttle positions should be "32" (32/64") pump stroke. Adjust by bending horizontal portion of pump lifter link.

Pump stroke is adjustable for high or low temperature. Set to longest stroke (outer hole) for cold weather, shorter stroke (inner hole) for hot weather driving.



Studebaker Truck — 1955-58 — Carbureter No. 2125S

WHEN SERVICING, USE GASKET ASSORTMENT No. 192, REPAIR PACKAGE No. 1798

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME
1-1159S	Body flange assembly
1A-41	FLANGE GASKET—FOR USE WITHOUT GOVERNOR
1A-59	Flange gasket—for use with governor
2-100	Throttle valve
3-549S	Throttle shaft and arm assembly
4-359S	Throttle lever assembly
4A-49	Fast idle cam
4A-55S	Throttle shaft dog and screw assembly
6-556S	Air horn assembly
7-149S	Choke valve assembly
11B-17	PUMP DISCHARGE PASSAGE PLUG
11B-41	Rivet plug
11B-79	Rivet plug (2)
11B-108	IDLE PORT RIVET PLUG
11B-138	PUMP JET RIVET PLUG
11B-220	HIGH SPEED PASSAGE PLUG
14-351S	Choke shaft and lever assembly
20-26	Main metering jet gasket
20-31	Needle seat gasket
20-51	Step-up jet gasket
20-52	STEP-UP PISTON GASKET
21-49S	Float and lever assembly
24-23	FLOAT LEVER PIN
25-48S	NEEDLE AND SEAT ASSEMBLY
30A-37	Idle adjustment screw
39-11	VALVE ATTACHING SCREW (4)
48-103	PUMP JET
61-58	Throttle lever adjusting screw spring
61-84	Idle adjustment screw spring
61-119	Choke pull-back spring
61-134	STEP-UP PISTON SPRING
61-145	PUMP SPRING
61-277	PUMP DISCHARGE CHECK BALL SPRING
62-77S	Choke tube bracket assembly

Part No.	PART NAME
63-24	FLOAT LEVER PIN RETAINER
63-37	INTAKE CHECK BALL RETAINING RING
63-46	PUMP SPRING RETAINER
64-49S	PUMP PLUNGER AND ROD ASSEMBLY
86-15	Flange stud lock washer (2)
100-15	Throttle shaft dog screw
101-10	Wire clamp screw
101-58	Throttle adjusting screw
101-142S	Choke bracket attaching screw and washer assembly
101-145S	Body flange attaching screw and washer assembly (2)
101-150S	Air horn attaching screw and washer assembly (4)
105-11	Choke tube clamp screw
105-12	Throttle lever clamp screw
105A-8	Throttle lever and choke tube clamp nut (2)
105A-13	Flange stud nut (2)
115-31	Choke connector rod
116-13	PUMP INTAKE CHECK BALL
116-18	PUMP DISCHARGE CHECK BALL
117-45	PUMP LIFTER LINK
117-60	PUMP LINK
121-68	BODY FLANGE GASKET (2)
121-69	BODY GASKET
123-31S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY
145-72	MAIN VENT TUBE
149-43S	STEP-UP JET ASSEMBLY
150A-10	PIN SPRING
159-59S	MAIN METERING JET ASSEMBLY—STANDARD
159-61S	Main metering jet assembly—1 size lean
159-66S	Main metering jet assembly—2 sizes lean
159-82S	Main metering jet assembly—3 sizes lean
160-46S	STEP-UP PISTON, PLATE AND ROD ASSEMBLY
183-21	Insulator

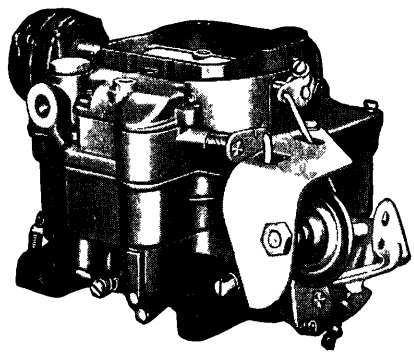
NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

MODELS
"President"
6H, 1955 — 56H, 1956
57H, 1957

"Commander"
16G8, 1955 — 56B, 56H, 1956
57-B, 1957

"Hard Top" K7, 1956

"Regal" 56B, 1956



Cut shows 2214S Carbureter

STUDEBAKER "V-8"

(2214S-SA-SB)
Automatic Transmission
(2219S-SA-SB)
Standard or Overdrive Transmission

1955-1957

(2219SB with 202-81U can be used in place of 2214S-SA-SB)

WCFB Four-Bore Down-Draft Climatic® Control **Carbureters**

Nos. 2214S-2214SA-2214SB-2219S-2219SA-2219SB

NOTE: *When replacing a 2214S or 2219S, use throttle pull back spring, Studebaker No. 537355, and accel. cr ss shaft t carb. actuating spring Studebaker No. 537356 or, remove the throttle lever extension plate by grinding ff attaching rivet and connect existing springs directly to throttle lever.*

CARBURETER SPECIFICATIONS

For Studebaker 8 Cylinder Engine: 3-9/16 Inch Bore, 3-1/4 Inch Stroke (6H, 16G8, 56B)
For Studebaker 8 Cylinder Engine: 3-9/16 Inch Stroke, 3-5/8 Inch Bore (56B, 56H, 57B, 57H, K7)

Dimensions: Flange size, 1⅛ inch Four Bore—4 bolt type.
Primary venturi size, 11/32 inch I. D.
Main venturi (primary) size, 15/16 inch.
Main venturi (secondary) size, 15/16 inch I. D.

Float Level: See adjustments.

Vents: Inside, 4. Outside, 3 in air horn, 1 in dust cover. (2214S-SA-2219S-SA — late production), (2214SB-2219SB) cavity fuel drain holes 4—size No. 53 (.0595 inch) drill.

Gasoline Intake: Size No. 42 (.0935 inch) drill hole in needle seat.

Low Speed Jet Tube: (Primary side only).
Jet, pressed in place (DO NOT REMOVE) size No. 68 (.031 inch drill.
By Pass, in body, size No. 52 (.0635 inch) drill.
Economizer, in screw plug, size .047 inch diameter.
Idle bleed, in body, size No. 52 (.0635 inch) drill.

Idle Port: (Upper) slot type. Primary, length .174 inch; width .040 inch. Secondary, none.

Idle Port Opening: Primary, .113 to .119 inch above top edge of valve with valve tightly closed. Secondary, none.

Lower Port: Primary (for idle adjustment screw), size No. 53 (.0595 inch) drill. Secondary, none.

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture turn screw out. Do not idle engine below 550 r.p.m.

Main Nozzle: Installed permanently. DO NOT REMOVE. Anti-percolating jet (to nozzle well), primary side, size No. 67 (.032 inch) drill. Secondary side, size No. 60 (.040 inch) drill.

Metering Rod: Primary, economy step .072 inch diameter. Middle step tapers to .062 inch diameter. Power step, .060 inch diameter. Secondary, none.

Metering Rod Jet: Primary, size .089 inch diameter (for metering rod). Secondary, size No. 53 (.0595 inch) drill (no metering rod).

Metering Rod Setting: See adjustments.

Accelerating Pump: Discharge jet (twin) primary side only, size No. 73 (.024 inch) drill.
Intake ball check seat, size .115 to .120 inch diameter.
Discharge needle seat, size .070 inch diameter.
Relief passage (vent) to fuel chamber No. 42 (.0935 inch) drill.

Pump Adjustment: See adjustments.

Choke: Carter Climatic® Control, set one point rich. Butt r-fly type—offset choke valve, primary side only. Choke heat suction hole, restriction in piston housing, size No. 44 (.086 inch) drill.

Vacuum Spark Port: Round type, .060 inch diameter. Bottom of port 000 to .010 inch above valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap	Breaker Point Setting	Ignition Timing	Valve Setting (Cold)	Float Setting	Idle Adjustment Screw Setting
.035" ± .002"	.013"-.018"	Breaker Points to Open: 4° B. T. C.	Intake .025"-.027" Exhaust .025"-.027"	See Adjustments	½ to 1½ Turns Open

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CARBURETER ADJUSTMENTS

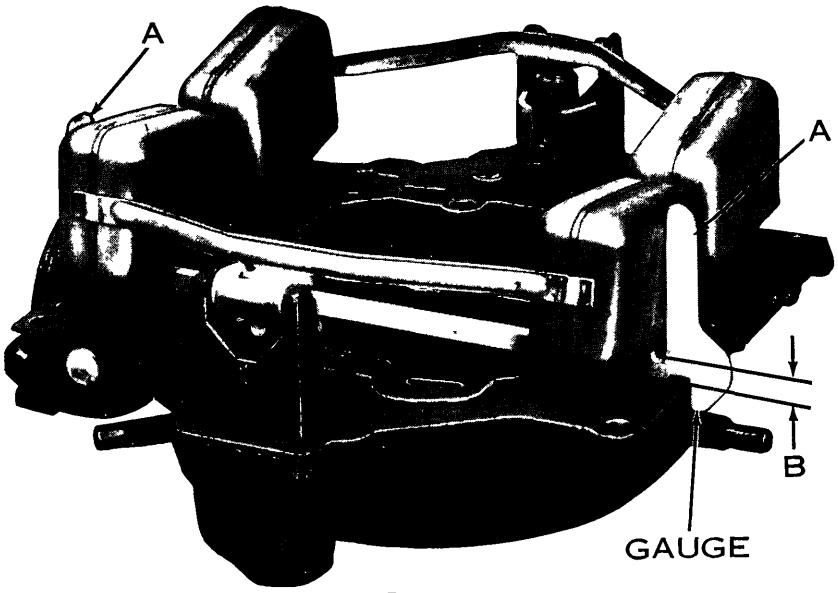


Figure 1
Float Adjustment

FLOAT ADJUSTMENT (Fig. 1):
Two separate float adjustments must be made — lateral and vertical. LATERAL ADJUSTMENT: With bowl cover assembly inverted, bowl cover gasket removed and float resting on seated needle, place float gauge (T109-222) directly under center of floats with notched portion of gauge fitted over edge of casting. Side of floats should just clear the vertical uprights of float gauge (A). Adjustment should be made by bending arms of floats. VERTICAL ADJUSTMENT: With float gauge in same position, floats should just clear the horizontal portion of gauge. Vertical distance (B) between top of float and machined surface of casting must be 3/16 inch for both primary and secondary floats (gauge T109-222). Adjust by bending float arms.

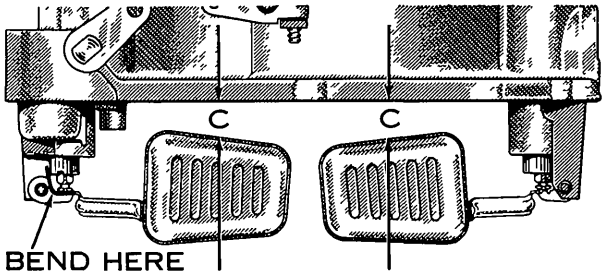


Figure 2
Float Drop Adjustment

FLOAT DROP ADJUSTMENT (Fig. 2):
With bowl cover held in upright position and measuring from center of float, the distance between top of floats (C) and bowl cover should be 11/16 inch for both primary and secondary floats. Adjust by bending stop tabs on float brackets

PUMP ADJUSTMENT (Fig. 3):
Install pump connector link in outer hole (long stroke) of pump arm, with ends extending outward toward countershaft arm. Back out throttle lever set screw until throttle valves seat in bores of carbureter. Hold straight edge across top of dust cover boss at pump arm. The flat on top of pump arm should be parallel to straight edge. Adjust by bending throttle connector rod at lower angle. (Use tool T109-213.) CAUTION: On 2214S-2214SA carbureter, after completing pump adjustment, there should be a minimum of .015 clearance between the lower edge of the countershaft arm (D) and the dash pot bracket. If necessary, correct by bending pump connector rod slightly.

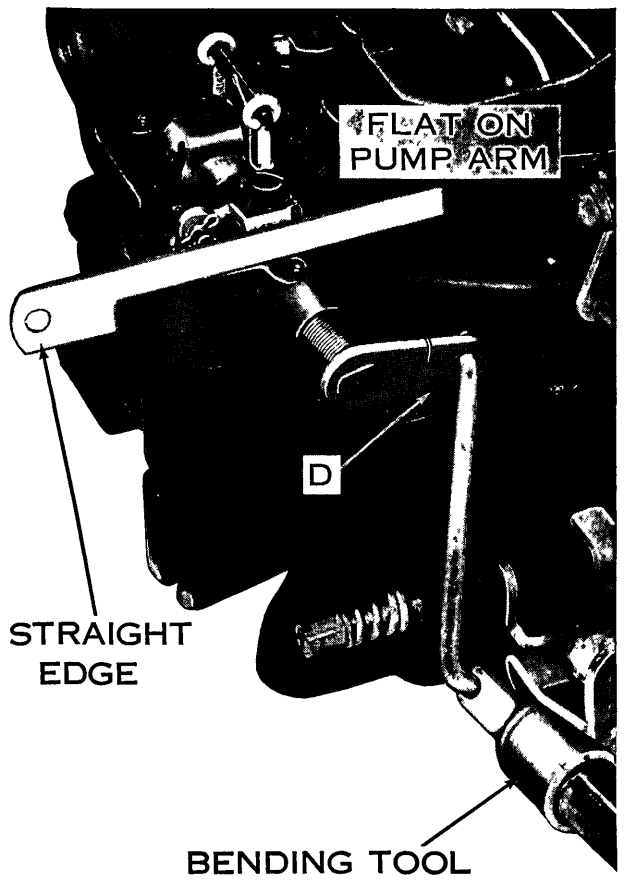


Figure 3
Pump Adjustm nt

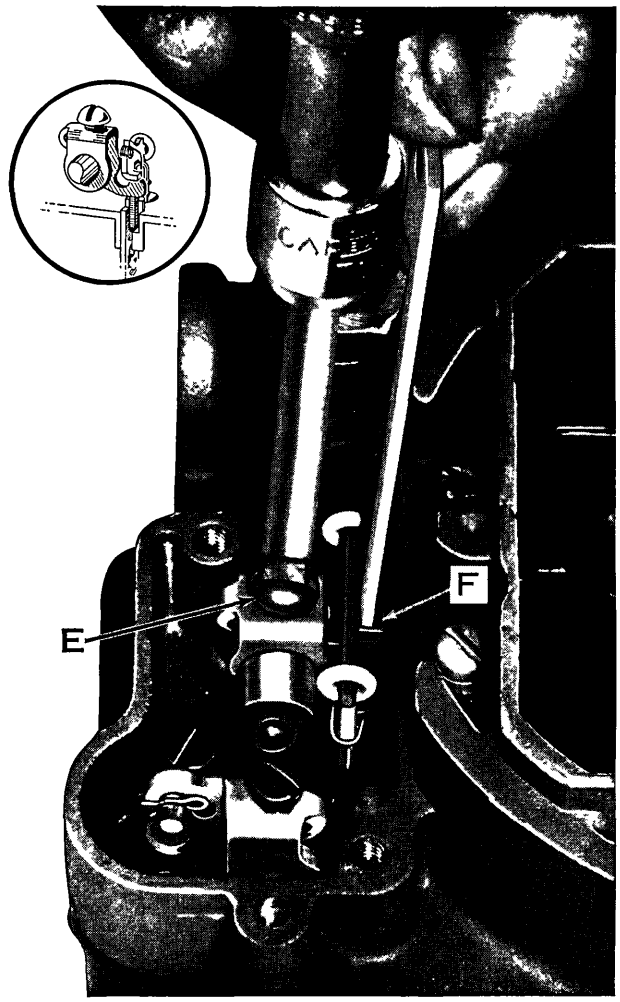


Figure 4
Metering Rod Adjustment

METERING ROD ADJUSTMENT (Fig. 4):

Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows: 1. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw (E). 2. With metering rods in place, press down on vacumeter link until metering rods bottom in carbureter body casting. 3. Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link (F). Hold in place and carefully tighten clamp screw.

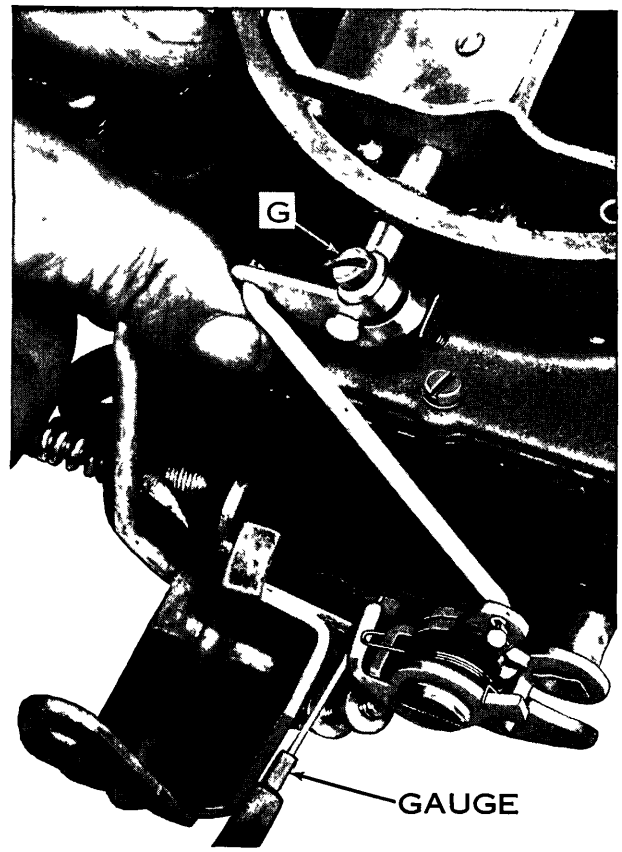


Figure 5A
Fast Idle Adjustment

FAST IDLE ADJUSTMENT (Fig. 5A and 5B):
(Fig. 5A): Loosen choke lever clamp screw (G) on choke shaft. Insert .020 inch feeler gauge (T109-29) between lip of fast idle cam and boss of flange casting. Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw.
(Fig. 5B): With choke valve tightly closed, tighten fast idle adjusting screw (H) until there is .024 inch (gauge T109-189 may be used) opening between throttle valve and bore of carbureter, side opposite idle port. Be sure fast idle adjusting screw is on high step of cam while making this adjustment.

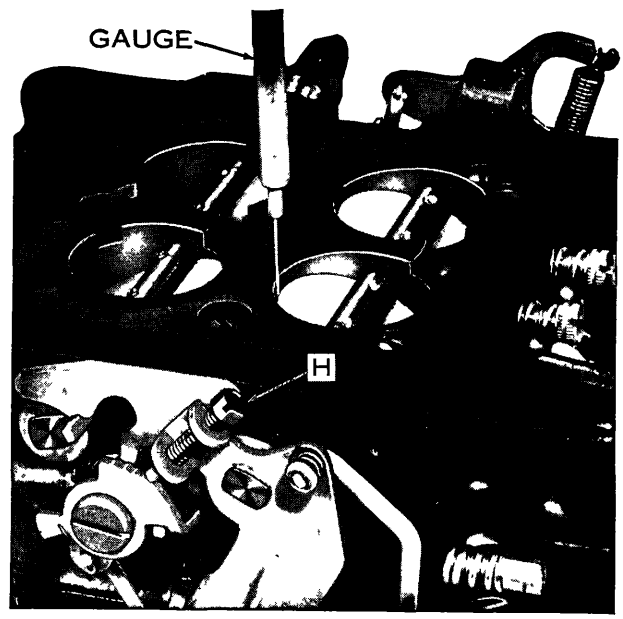


Figure 5B
Fast Idl Adjustment

Part No.	PART NAME	
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	(2)
101-120	Fast idle adjustment screw	
101-136	Coil housing attaching screw	(3)
101-149S	Body flange attaching screw and washer assembly	
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-275	Piston housing attaching screw (2214SB 2219SB)	
101-278	Pump jet and housing attaching screw	
101-284	Piston housing attaching screw (2214S SA 2219S SA)	(2)
101-298S	Body flange attaching screw and washer assembly	(2)
101-307S	Air horn attaching screw and washer assembly 2214S SA SB (6) (2219S SA SB (8)	
101-324	Fast idle cam attaching screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-348	Primary throttle valve attaching screw	(4)
101-354S	Choke lever clamp screw assembly	
101-362S	Air horn attaching screw and washer assembly	(2)
101-363	Piston housing attaching screw (2214S SA 2219S SA (1) (2214SB 2219SB (2)	
101-382S	Body flange attaching screw and washer assembly	(3)
101-391	Throttle lever adjusting screw	
103-14	Lead shot (late prod.)	
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
105A-52	Dash pot lock nut	
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
114-127	Throttle shaft arm (outer)	
114-128	Throttle shaft arm (inner)	
115-208	Throttle operating rod	

Part No.	PART NAME	
115-216	THROTTLE CONNECTOR ROD	
115-243	Choke connector rod	
116-13	PUMP INTAKE CHECK BALL	
117 162	Vacumeter piston link	
117-165	Pump connector link	
118-112	Dust cover	
120-159	PRIMARY METERING ROD JET	(2)
120-196	SECONDARY METERING JET	(2)
121-78	COIL HOUSING GASKET	
121-208	DUST COVER GASKET	
121-232	AIR HORN GASKET	
121-241	PUMP JET HOUSING GASKET	
121-243	PISTON HOUSING GASKET (2214S SA 2219S SA)	
121-249	BODY FLANGE GASKET	
121-283	PISTON HOUSING GASKET (2214SB 2219SB)	
136-37	Throttle connector rod and operating rod washer	(5)
136-84	Spring washer	
136-159	Throttle shaft washer	
136-172	Secondary throttle shaft washer	
145-112S	Secondary bleeder tube and plug assembly	(2)
150-62	Choke piston pin	
150A-10	PIN SPRING	(5)
160-110S	Vacuum piston and pin assembly	
160-135	Choke piston	
170-259S	Piston housing and plug assembly (2214S SA 2219S SA)	
170-447S	Piston housing and plug assembly (2214SB-2219SB)	
170AB238S	Thermostatic coil and housing assembly	
180-83S	*Dash pot bracket assembly	
181-194S	Fast idle cam assembly	
186-34	Choke baffle plate	
202-69S	*Dash pot assembly	
202 81U	Unitized package	

*Part of 202 81U Unitized Package

NOTE **Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used**

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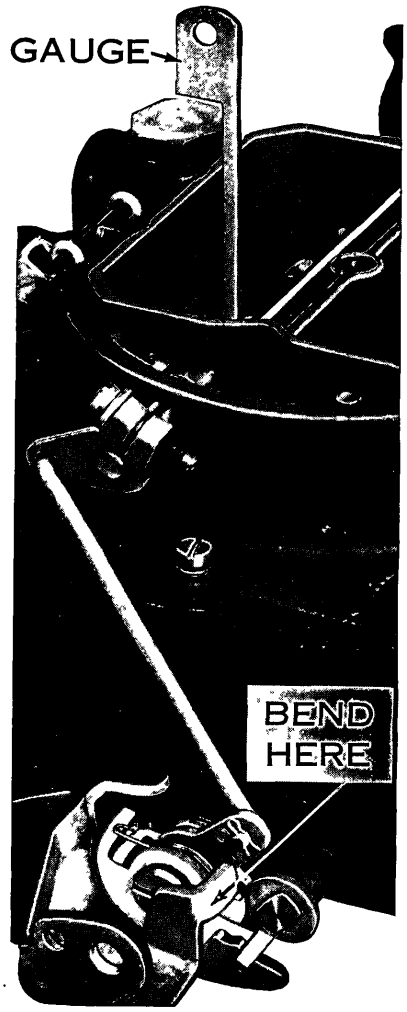


Figure 6
Unloader Adjustment

UNLOADER ADJUSTMENT (Fig. 6):

With throttle wide open there should be 1/8 inch (gauge T109-36) clearance between lower edge of choke valve and inner wall of air horn. Adjust by bending unloader lip on throttle shaft lever (Use bending tool T109-41).

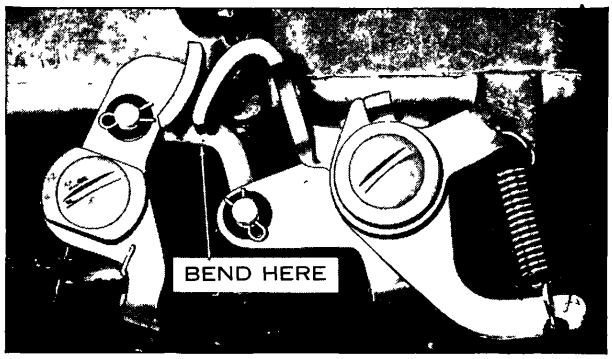


Figure 7
Secondary Throttle Lever Adjustment

SECONDARY THROTTLE LEVER ADJUSTMENT (Fig. 7):

Primary and secondary throttle valves should reach wide open position at the same time. To adjust, bend throttle operating rod at upper angle. (Use bending tool T109-213.)

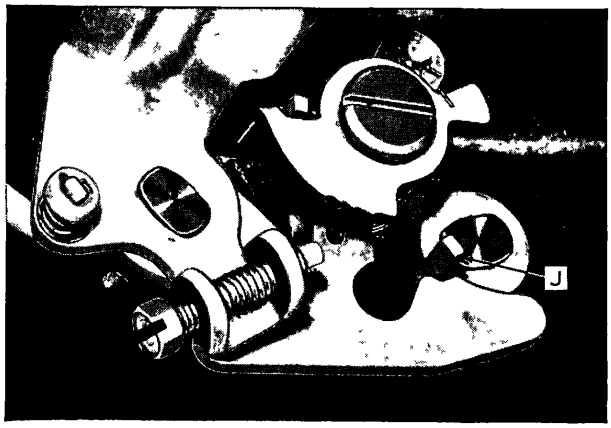


Figure 8
Secondary Throttle Lock-Out Adjustment

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT (Fig. 8):

This adjustment should be made after completing fast idle and secondary throttle lever adjustments. Crack throttle valves and manually open and close the choke valve. Tang on secondary throttle lever (J) should freely engage in notch of lock-out dog. If necessary to adjust, bend tang (J) on secondary throttle lever.

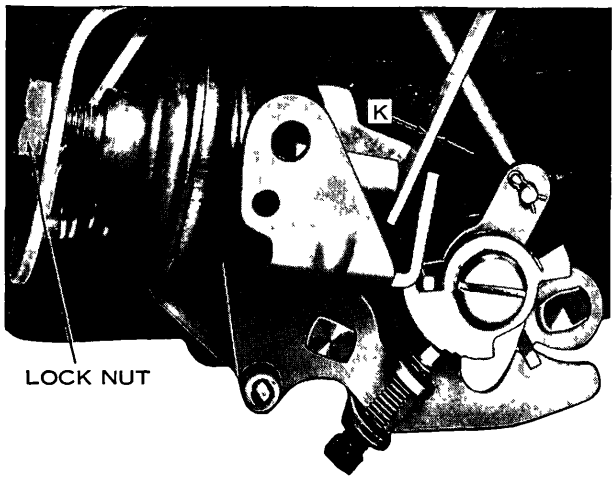
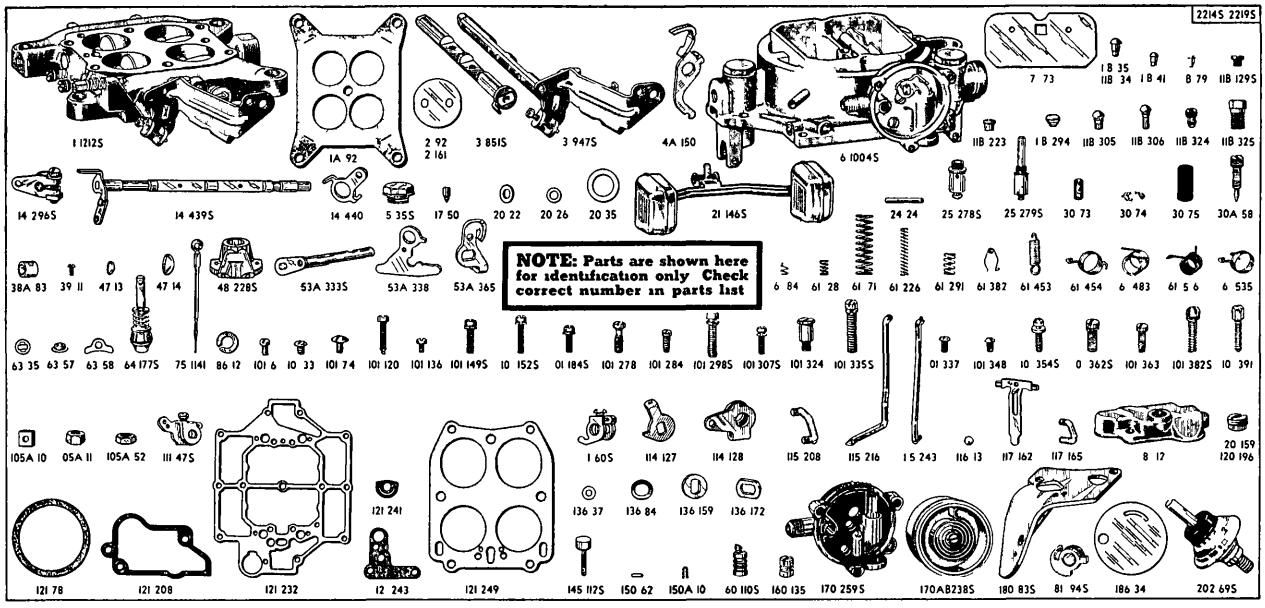


Figure 9
Dash Pot (Slow Closing Throttle) Adjustment

DASH POT (SLOW CLOSING THROTTLE) ADJUSTMENT (Fig. 9):

The purpose of this unit is to prevent the car from stalling when the throttle is released rapidly. To get proper dash pot action this adjustment must be made after the Fast Idle Adjustment. With the choke valve tightly closed and fast idle adjustment screw on the high step of the cam loosen lock-nut and adjust dash pot unit to give 1/16 inch clearance (K) between throttle lever and lower tip of plunger shaft. Then tighten lock-nut.



Studebaker "V8"—1955-1957—Carbs Nos. 2214S-2214SA-2214SB-2219S-2219SA-2219SB

WHEN SERVICING, USE GASKET ASSORTMENT No. 260A, REPAIR PACKAGE No. 1783A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-1212S	Body flange assembly (2214S SA 2219S SA) (Sup by 1 1286S)	
1-1286S	Body flange assembly	
1A-96	FLANGE GASKET	
2-92	Primary throttle valve	(2)
2-161	Secondary throttle valve	(2)
3-851S	Secondary throttle shaft and dog assembly	
3-947S	Primary throttle shaft and lever assembly (2214S SA 2219S SA) (Sup by 3 990S)	
3-990S	Primary throttle shaft and lever assembly	
4A-150	Throttle shaft dog	
6-1004S	Air horn assembly (Casting No 6 1127) (2214S SA 2219S SA) (Sup by 6 1129S)	
6-1129S	Air horn assembly (Casting No 6 1127) 2214S SA 2219S SA) (Sup by 6 1185S)	
6-1185S	Air horn assembly (Casting No 6 1157) (2214SB 2219SB)	
7-173	Choke valve	
11B-35	Rivet plug	(4)
11B-41	Rivet plug (2214S SA 2219S SA (2) 2214SB 2219SB (1)	
11B-79	Rivet plug (early prod (4) (late prod (3)	
11B-129S	PUMP DISCHARGE PASSAGE PLUG ASSEMBLY	
11B-134	Rivet plug	
11B-223	Nozzle passage rivet plug	(4)
11B-294	Idle port rivet plug	(2)
11B-305	Rivet plug (2214S SA 2219S SA (1) (2214SB 2219SB (2)	
11B-306	Rivet plug (2214S SA 2219S SA (2), (2214SB 2219SB (1)	
11B-324	ECONOMIZER SCREW PLUG	(2)
11B-325	Pipe plug	
14-296S	Choke lever and screw assembly	
14-439S	Choke piston lever link and shaft assembly	
14-440	Cam trip lever	
15-35S	Strainer nut assembly	(2)
17-50	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	(2)
20-26	Pump discharge passage plug gasket	
20-35	BOWL STRAINER GASKET	(2)
21-146S	Float and lever assembly	(2)

Part No	PART NAME	
24 24	Float lever pin	(2)
25-278S	PRIMARY NEEDLE AND SEAT ASSEMBLY	
25-279S	SECONDARY NEEDLE AND SEAT ASSEMBLY	
30-73	PRIMARY NEEDLE SEAT STRAINER	
30-74	SECONDARY FUEL INLET STRAINER	
30-75	BOWL STRAINER	
30A-58	Idle adjustment screw	(2)
38A-83	Countershaft bushing	
39-11	Choke valve attaching screw	(2)
47-13	Spark port welsh plug	
47-14	Choke housing welsh plug	
48-228S	Pump jet and housing assembly	
53A-333S	Pump operating lever and countershaft assembly (2214S SA 2219S SA) (Sup by 53A 389S)	
53A-338	Lockout arm	
53A-365	Secondary operating lever	
53A-389S	Pump operating lever and countershaft assembly	
61-84	Idle adjustment screw spring	(2)
61-128	Connector rod spring	
61-171	PUMP SPRING (LOWER)	
61-226	VACUUM PISTON SPRING	
61 291	Throttle lever adjusting screw spring	
61-382	METERING ROD SPRING	
61-453	Throttle flex spring	
61-454	Fast idle cam spring	
61-483	SECONDARY THROTTLE RETURN SPRING	
61-516	Countershaft spring	
61-535	Lockout arm spring	
63-35	Connector rod spring retainer	
63-57	INTAKE CHECK BALL RETAINER	
63-58	Coil housing retainer	(3)
64-177S	PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
75-1141	METERING ROD—STANDARD	(2)
75-1154	Metering rod—1 size lean	(2)
75 1155U	Metering rod and jet unit—2 sizes lean (Consists of 2—75 1164 2—120 174 and 1—61-230)	
75-1156U	Metering rod and jet unit—3 sizes lean (Consists of 2—75 1165 2—120-217 and 1—61 230)	
86-12	Flange stud lock washer	(4)

STUDEBAKER TRUCK – 1950-1957
AND (DESERT PASSENGER)

TRUCK MODELS

2R6-2R11-2R14, 1950-1953
3R6-3R11-3R14, 1954
E6-E11-E14, 1955
2E6-2E11-2E14, 1956
3E6-3E11-3E14, 1957

Desert Passenger Model, S17A

BBR1 DOWN-DRAFT **CARBURETERS Nos. 777S-777SA**

CARBURETER SPECIFICATIONS

For Studebaker 6 Cylinder Engine: 3-5/16 Inch Bore, 4¾ Inch Stroke

Dimensions: Flange size, 1¼ inch S. A. E.
Throttle bore, 1-9/16 inch.
Main venturi, 1-5/16 inch.

Float Setting: Top of float 7/64 inch below top surface of carbureter body casting. Plus or minus 1/64 inch.

Vents: Outside, none. Inside balance vent tube, to air horn above choke valve.

Gasoline Intake Needle: Triangular, horizontal No. 44 (.086) inch drill in needle seat.

Idle Orifice Tube: Jet size, .031 inch. Idle passage air bleed (in body) size, .067 inch diameter. Restriction, in body, size .059 to .060 inch diameter.

Idle Ports: Upper port, slot type, length, .175 inch; width .030 inch. Top of port located .141 to .145 inch above top of valve. Lower port size, .053 to .057 inch diameter. (For idle adjustment screw.)

Set Idle Adjustment Screw: ¾ to 1¼ turns open. For richer mixture, turn screw out. Do not idle engine below 550-600 r.p.m.

Main Metering Jet: Calibrated to flow 328 to 332 cc per minute. (Do not gauge for size. If in doubt, replace with new part.)

Main Vent: Through diffuser (air bleed inside bowl) size, .038 inch drill.

Main Vent Tube: Side holes: 1—No. 68 (.031) inch diameter, ⅜ inch from end.

1—No. 68 (.031) inch diameter, 29/64 inch from end.
1—No. 70 (.028) inch diameter, 9/16 inch from end.
1—No. 70 (.028) inch diameter, 41/64 inch from end.
1—No. 70 (.028) inch diameter, ¾ inch from end.
1—No. 73 (.024) inch diameter, ⅞ inch from end.
1—No. 76 (.020) inch diameter, 1⅜ inch from end.

Step-Up Jet: (777S) No. 63 (.037 inch) drill.
(777SA) No. 65 (.035 inch) drill.

Accelerating Pump: Type, delayed action. Stroke, summer setting (inner hole, short stroke). Intermediate setting (center hole). Winter setting (outer hole, long stroke).

Pump intake passage, ball check seat, size .107 to .112 inch diameter.

Pump discharge passage; restriction (under ball check) size .062 to .065 inch diameter in body.

Pump (discharge) jet size .0315 inch.

Pump Adjustment: 35/64 inch plunger travel, with pump link in medium stroke hole.

Choke: Butterfly type, with poppet valve.

Vacuum Spark Port: Horizontal slot type; size, .040 by .110 inch. Bottom of port: .007 to .013 inch above top edge of valve.

MOTOR TUNE-UP

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open:	Set Valves (Cold)	Float Setting (Use Gauge)	Idle Adjustment Screw Setting
.030"	.020"	2° B. T. D. C.	Intake .016" Exhaust .016"	7/64 Inch ± 1/64 Inch	¾ to 1¼ Turns Open

CARBURETER ADJUSTMENTS

If carbureter loads up after considerable service, check float level. Wear on lip of float lever will raise float level. Before adjusting float, be sure float lever pin is firmly seated. Reset float level by bending lip of float lever away from needle to raise level, or bend lip toward needle to lower float level. Bend vertical lip of float only.

If motor stalls while idling, set throttle lever adjusting screw so motor runs approximately 550 r.p.m. Then set idle adjustment screw to specifications. If these adjustments do not correct the trouble, remove idle orifice tube and plug assembly. Clean tube and passages with compressed air.

If acceleration is not satisfactory, remove pump jet and clean with compressed air. However, it is usually advisable to replace the pump jet, as its cost is nominal. All jets must be seated gasoline tight. Poor acceleration may be due to damaged or worn plunger leather in accelerating pump, sediment in pump cylinder or clogged intake ball check at bottom of pump cylinder and discharge ball check in discharge passage. If plunger is removed from cylinder, use care in installing to avoid damage to plunger leather.

Correct air fuel ratio is provided by a "balance tube" in the air horn. The balance tube should be checked each time the carbureter is serviced to see that the passage is open. The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type, size or condition of air cleaner. Should the cleaner become clogged, the capacity will be reduced but the air-fuel mixture ratio will not be changed.

Excessive richness above 50 miles per hour may be caused by a clogged main vent tube. After removal of rivet plug beneath float bowl with tool No. T109-43, main vent tube can be removed and a new tube inserted with tool No. T109-195. Care must be exercised in inserting new tube which must seat tightly. Use new rivet to complete the installation.

Pump Adjustment: Remove air horn assembly, back out throttle lever adjustment screw and install pump operating link in center hole (medium stroke of throttle shaft arm). Place base of pump travel gauge T109-117S on upper edge of body casting at pump cylinder. With throttle valve seated, turn gauge until projecting finger contacts top of plunger shaft. Note number indicated on gauge. Repeat with throttle valve wide open and plunger pressed to bottom of the cylinder. The difference between the numbers indicated at wide open and closed throttle positions should be "35" (35/64") pump stroke. Adjust by bending horizontal portion of pump lifter link.

Pump stroke is adjustable for high or low temperature. Set to longest stroke (outer hole) for cold weather, shorter stroke (inner hole) for hot weather driving.

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PARTS LIST

WHEN SERVICING USE GASKET ASSORTMENT No 192 REPAIR PACKAGE No 1552A

PART NAMES IN CAPITAL LETTERS LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-801S	Body flange assembly	
1A-41	FLANGE GASKET FOR USE WITHOUT GOVERNOR	
1A-59	Flange gasket for use with governor	
2-100	Throttle valve	
3-549S	Throttle shaft and arm assembly	
4-359S	Throttle lever assembly	
4A-55S	Fast idle cam assembly (Sup by 4A 143S)	
4A-143S	Throttle shaft dog assembly	
6-531S	Air horn assembly	
7-143S	Choke valve assembly	
11B-17	PUMP DISCHARGE PASSAGE PLUG	
11B-41	Rivet plug	
11B-79	Rivet plug	(2)
11B-108	IDLE PORT RIVET PLUG	
11B-138	PUMP JET RIVET PLUG	
11B-220	RIVET PLUG	
14-351S	Choke control lever and shaft assembly	
20-26	Main metering jet gasket	
20-31	Needle seat gasket	
20-51	Step-up jet gasket	
20-52	STEP UP PISTON GASKET	
21-49S	Float and lever assembly	
24-23	FLOAT LEVER PIN	
25-82S	NEEDLE AND SEAT ASSEMBLY	
30A-37	Idle adjustment screw	
39-11	CHOKE AND THROTTLE VALVE ATTACHING SCREW	(4)
48-176S	PUMP JET AND TUBE ASSEMBLY	
61-84	Idle adjustment screw spring	
61-119	Choke pull back spring	
61-134	STEP UP PISTON SPRING	
61-145	PUMP SPRING	
61-157	Plunger spring	
61-277	PUMP CHECK SPRING	

Part No	PART NAME	
62-77S	Choke tube bracket assembly	
63 24	FLOAT LEVER PIN RETAINER	
63-37	INTAKE BALL CHECK RETAINING RING	
63-97	Pump spring retainer	
64-49S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49 104)	
100-15	Fast idle cam set screw	
101-142S	Choke bracket attaching screw and washer assembly	
101-145S	Body flange attaching screw and washer assembly	(2)
101-150S	Air horn attaching screw and washer assembly	(4)
105-11	Choke tube clamp screw	
105-12	Throttle lever clamp screw	
105A-8	Choke tube clamp nut	(2)
116-13	PUMP INTAKE CHECK BALL	
116-18	PUMP DISCHARGE CHECK BALL	
117-45	PUMP LIFTER LINK	
117-60	PUMP LINK	
121-68	BODY FLANGE GASKET	(2)
121-69	BODY GASKET	
123-36S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
145-29	MAIN VENT TUBE	
149-41S	STEP UP JET ASSEMBLY	
149-43S	Step up jet assembly (Sup by 149 41S)	
150A-10	PIN SPRING	
159-63S	Main metering jet assembly 3 sizes lean	
159-87S	Main metering jet assembly, 2 sizes lean	
159-89S	Main metering jet assembly 1 size lean	
159-93S	MAIN METERING JET ASSEMBLY STANDARD	
159-127U	Unitized package (Consists of (1) 159-63S (1) 159 87S and (1) 159 89S)	
160-46S	STEP UP PISTON, PLATE AND ROD ASSEMBLY	
183-21	Insulator	

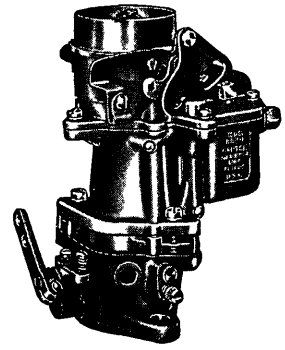
NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

CARBURETER
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MARCA REGISTRADA

CARTER CARBURETOR

DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

MODELS
"2R16", "2R16A",
"2R17", "2R17A"
1949-53
"3R16", "3R17"
1954
"E16", "E17"
1955
"3E16", "3E17"
1957



STUDEBAKER
1½, 2 TON TRUCK
1949-1955, 1957

BBR1 DOWN-DRAFT **CARBURETERS 606S-606SA-606SB**

CARBURETER SPECIFICATIONS

For Studebaker Six Cylinder Engine (2R16-2R17): 3-5/16 Inch Bore, 4⅜ Inch Stroke

For Studebaker Six Cylinder Engine (2R16A-2R17A-3R16-3R17-E16-E17-3E16-3E17): 3-5/16 Inch Bore, 4¾ Inch Stroke

Dimensions: Flange size, 1¼ inch S. A. E.
Throttle bore 1-9/16 inch.
Main venturi, 1-5/16 inch.

Float Setting: Top of float 7/64 inch below top surface of carbureter body casting. Plus or minus 1/64 inch. Float setting for spring loaded needle and seat assembly: See footnote (†) on page two.

Vents: Outside, none. Inside balance vent: .218 inch diameter.

Gasoline Intake Needle: Triangular, horizontal No. 44 (.086) inch drill in needle seat.

Idle Orifice Tube: Jet size, .0276 inch.
Idle passage air bleed (in body) size, .067 inch diameter.
Restriction, in body, size .054 to .055 inch diameter.

Idle Ports: Upper port, slot type, length, .160 inch; width, .030 inch. Top of port located .123 to .127 inch above top of valve.

Lower port size, .053 to .057 inch diameter. (For idle adjustment screw.)

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture, turn screw out. Do not idle engine below 550-600 r.p.m.

Main Metering Jet: Calibrated to flow 328 to 332 cc per minute. (Do not gauge for size. If in doubt, replace with new part.)

Main Vent: Through diffuser (air bleed inside bowl) size, .038 inch drill.

Main Vent Tube: Side holes: 1—No. 68 (.031) inch diameter, ⅜ inch from end.
1—No. 68 (.031 inch) diameter 29/64 inch from end.
1—No. 70 (.028 inch) diameter 9/16 inch from end.
1—No. 70 (.028 inch) diameter 41/64 inch from end.
1—No. 70 (.028 inch) diameter ¾ inch from end.
1—No. 73 (.024 inch) diameter ⅞ inch from end.
1—No. 76 (.020 inch) diameter 1⅜ inch from end.

Step-Up Jet: 1.05 mm (.0413") drill (std.), No. 56 (.0465") drill (1 size rich).

Accelerating Pump: Type, delayed action. Stroke, summer setting (inner hole, short stroke). Intermediate setting (center hole). Winter setting (outer hole, long stroke). Pump intake passage, ball check seat, size .115 to .120 inch diameter. Pump discharge passage; restriction (under ball check) size .062 to 065 inch diameter in body.
Pump (discharge) jet size, .0315 inch.

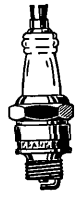
Pump Adjustment: 37/64 inch plunger travel, with pump link in medium stroke hole.

Choke: Butterfly type, with poppet valve.

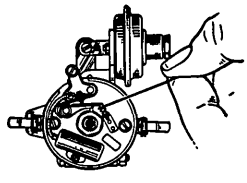
Vacuum Spark Port: Horizontal slot type; size, .040 by .110 inch. Bottom of port: .007 to 013 inch above top edge of valve.

Motor Tune-Up—Be Accurate!

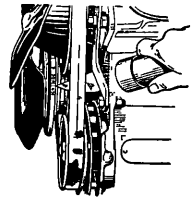
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



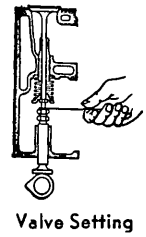
Spark Plug
Gap
.030"



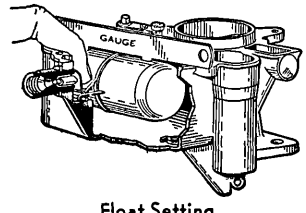
Breaker Point
Setting
.022"



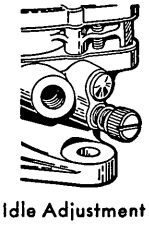
Ignition Timing
Breaker Points to Open
2° B.T.D.C.



Valve Setting
(Cold)
Int. .016"
Exh. .016"



Float Setting
(Use Gauge) 7/64 Inch
Plus or minus 1/64 Inch
When using spring loaded needle and seat assembly, see footnote on page two.



Idle Adjustment
Screw Setting
½ to 1½
Turns Open

CARBURETER ADJUSTMENTS

If carbureter loads up after considerable service, check float level. Wear on lip of float lever will raise float level. Before adjusting float, be sure float lever pin is firmly seated. Reset float level by bending lip of float lever away from needle to raise level, or bend lip toward needle to lower float level. Bend vertical lip of float only.

If motor stalls while idling, set throttle lever adjusting screw so motor runs approximately 550-600 r.p.m. Then set idle adjustment screw to specifications. If these adjustments do not correct the trouble, remove idle orifice tube and plug assembly. Clean tube and passages with compressed air.

If acceleration is not satisfactory, remove pump jet and clean with compressed air. However, it is usually advisable to replace the pump jet, as its cost is nominal. All jets must be seated gasoline tight. Poor acceleration may be due to damaged or worn plunger leather in accelerating pump, sedi-

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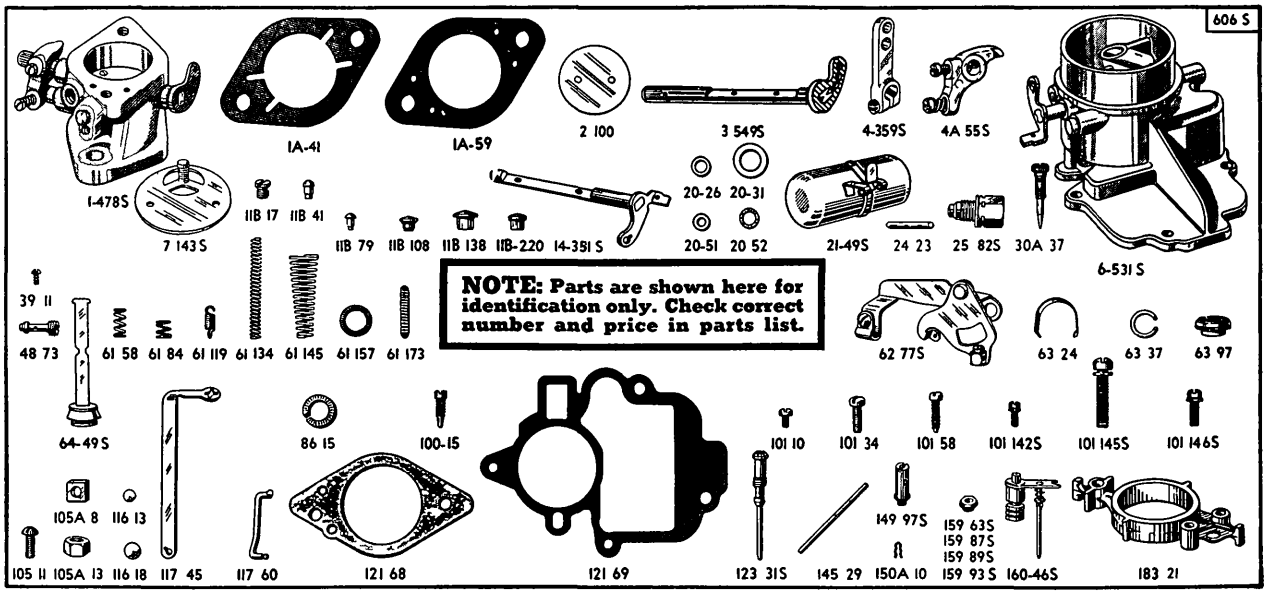
ment in pump cylinder or clogged intake ball check at bottom of pump cylinder and discharge ball check in discharge passage If plunger is removed from cylinder, use care in installing to avoid damage to plunger leather

Correct air fuel ratio is provided by a balance tube' in the air horn The balance tube should be checked each time the carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type size or condition of air cleaner Should the cleaner become clogged, the capacity will be reduced but the air fuel mixture ratio will not be changed

Excessive richness above 50 miles per hour may be caused by a clogged main vent tube After removal of rivet plug beneath float bowl with tool No T109 43 main vent tube can be removed and a new tube inserted with tool No T109-195 Care must be exercised in inserting new tube which must seat tightly Use new rivet to complete the installation

Pump Adjustment Remove air horn assembly, back out throttle lever adjustment screw and install pump operating link in center hole (medium stroke of throttle shaft arm) Place base of pump travel gauge T109 117S on upper edge of body casting at pump cylinder With throttle valve seated turn gauge until projecting finger contacts top of plunger shaft Note number indicated on gauge Repeat with throttle valve wide open and plunger pressed to bottom of the cylinder The difference between the numbers indicated at wide open and closed throttle positions should be '37 (37/64) pump stroke Adjust by bending horizontal portion of pump lifter link

Pump stroke is adjustable for high or low temperature Set to longest stroke (outer hole) for cold weather shorter stroke (inner hole) for hot weather driving



Studebaker Truck—1949-1955-1957—Carbureters Nos. 606S-606SA-606SB

WHEN SERVICING, USE GASKET ASSORTMENT No 192, REPAIR PACKAGE No 1393B

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME
1-478S	Body flange assembly
1A-41	FLANGE GASKET—FOR USE WITHOUT GOVERNOR
1A-59	Flange gasket—for use with governor
2-100	Throttle valve
3-549S	Throttle shaft and arm assembly
4-359S	★Throttle lever assembly
4A-55S	Throttle shaft dog assembly (Sup by 4A-143S)
4A 143S	Throttle shaft dog assembly
6-531S	Air horn assembly
7-143S	Choke valve assembly
11B-17	PUMP DISCHARGE PASSAGE PLUG
11B-41	Rivet plug
11B-79	Rivet plug (2)
11B-108	IDLE PORT RIVET PLUG
11B-138	PUMP JET RIVET PLUG
11B-220	HIGH SPEED PASSAGE RIVET PLUG
14-351S	Choke shaft and lever assembly
20-26	Main metering jet gasket
20 31	Needle seat gasket
20-51	Step-up jet gasket
20 52	STEP-UP PISTON GASKET
21-49S	Float and lever assembly
24 23	FLOAT LEVER PIN
25-82S	Needle and seat assembly (Sup by 25-192S)
25-192S	†NEEDLE PIN, SPRING AND SEAT ASSEMBLY
30A-37	Idle adjustment screw
39-11	CHOKE AND THROTTLE VALVE ATTACHING SCREW (4)
48 73	PUMP JET
61 84	Idle adjustment screw spring
61-119	Choke pull-back spring
61-134	STEP-UP PISTON SPRING
61-145	PUMP SPRING
61-157	Plunger spring
61-173	PUMP DISCHARGE CHECK BALL SPRING
62-77S	Choke tube bracket assembly
63-24	FLOAT LEVER PIN RETAINER
63 37	INTAKE BALL CHECK RETAINING RING
63-97	Pump spring retainer

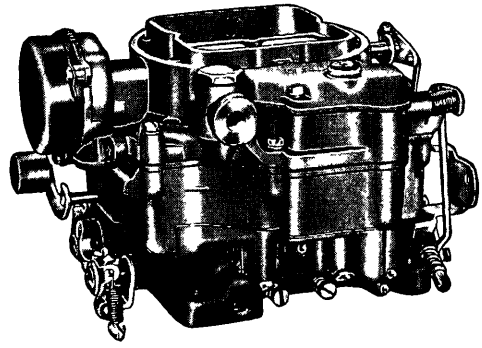
Part No.	PART NAME
64-49S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49-104)
100-15	Fast idle cam set screw
101-10	Wire clamp screw
101-34	★Throttle lever clamp screw
101-142S	Choke bracket attaching screw and washer assembly
101-145S	Body flange attaching screw and washer assembly (2)
101 146S	Air horn attaching screw and washer assembly (Sup by 101-150S)
101-150S	Air horn attaching screw and washer assembly (4)
105-11	Choke tube clamp screw
105-12	★Throttle lever clamp screw
105A-8	★Choke tube and throttle lever clamp screw nut (2)
116-13	PUMP INTAKE CHECK BALL
116-18	PUMP DISCHARGE CHECK BALL
117-45	PUMP LIFTER
117-60	PUMP LINK
121-68	BODY FLANGE GASKET (2)
121-69	BODY GASKET
123-31S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY
145-29	MAIN VENT TUBE
149-56S	STEP-UP JET ASSEMBLY (STANDARD)
149-97S	Step-up jet assembly (1 size rich)
150A-10	PIN SPRING
159-63S	Main metering jet assembly—3 sizes lean
159 87S	Main metering jet assembly—2 sizes lean
159-89S	Main metering jet assembly—1 size lean
159-93S	MAIN METERING JET ASSEMBLY—STANDARD
159-127U	Unitized package—(Consists of 159-89S, 159-87S, 159-63S)
160-46S	STEP-UP PISTON, PLATE AND ROD ASSEMBLY
183-21	Insulator

★Use 101-34 with cast throttle lever (early production) 105-12 and 105A-8 with stamped throttle lever (late production)

†When using spring loaded needle and seat, place a .050" feeler gauge between lip of float and intake needle pin With intake needle spring fully compressed, top of float should be 5/64 inch (gauge T109-50) below top surface of carbureter body casting. Adjust by bending lip on float

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

MODEL
"56-J"
HARDTOP



STUDEBAKER "V-8" PRESIDENT 1956

WCFB Four-Bore Down-Draft Climatic® Control **Carbureter No. 2394S**

CARBURETER SPECIFICATIONS

For Studebaker 8 Cylinder Engine: 4 Inch Bore, 3½ Inch Stroke

Dimensions: Flange size, 1¼ inch Four Bore—4 bolt type.
Primary venturi size, 11/32 inch I. D.
Main venturi (primary) size, 1-1/16 inch I. D.
Main venturi (secondary) size, 1¼ inch I. D.

Vents: Outside, 4. Inside, 5.

Gasoline Intake: Size No. 42 (.0935 inch) drill hole in needle seat.

Low Speed Jet Tube: (Primary side only). Jet, size No. 65 (.035 inch) drill.
By-Pass, in body, size No. 54 (.055 inch) drill.
Economizer, in screw plug, size .0492 inch diameter.
Idle Bleed, in body, size .063 inch diameter.

Idle Port: (Upper) slot type. Primary, length .185 inch; width .030 inch. Secondary, none.

Idle Port Opening: Primary, .130 to 136 inch above top edge of valve with valve tightly closed. Secondary, none.

Lower Port: Primary (for idle adjustment screw), size No. 53 (.0595 inch) drill. Secondary, none.

Set Idle Adjustment Screw: ¾ to 1¾ turns open. For richer mixture turn screw out Do not idle engine below 550 r.p.m. Automatic Trans.—in neutral.

Main Nozzle: Installed permanently. DO NOT REMOVE. Anti-percolating jet, primary and secondary, size No. 70 (.028 inch) drill.

Metering Rod: Primary, economy step .072 inch diameter. Middle step tapers to .055 inch diameter. Power step, .040 inch diameter. Secondary, none.

Metering Rod Jet: Primary size .0935 inch; secondary size .0785 inch diameter.

Accelerating Pump: Discharge jet (Twin) primary side only, size No. 72 (.025 inch) drill. Intake ball check seat, size .115 to .120 diameter. Discharge needle seat, size .070 inch diameter. Pump passage disk check, size No. 55 (.052 inch) drill.

Choke: Carter Climatic® Control, set on index. Butterfly type—offset choke valve, primary side only. Choke heat suction hole, restriction in piston housing, size No. 43 (.089 inch) drill.

Vacuum Spark Port: Horizontal, slot, round end type—.130 x .040 inch. Bottom of port to be .000 to .006 inch above top edge of valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

CAUTION: *Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.*

Spark Plug Gap .035"	Breaker Point Setting .016"	Ignition Timing Breaker Points to Open: 5° B. T. C. At Vibration Damper	Float Setting See Adjustments	Idle Adjustment Screw Setting ¾ to 1¾ Auto. Trans. 550 R.P.M. In Neutral

NOTE: These cars are quipped with hydraulic valve lifters.—NO ADJUSTMENT.

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: Two separate float adjustments must be made—lateral and vertical. LATERAL ADJUSTMENT: With bowl cover assembly inverted, bowl cover gasket removed and float resting on seated needle, place float gauge directly under center of floats with notched portion of gauge fitted over edge of casting. Side of floats should just clear the vertical uprights of float gauge. Adjustment should be made by bending arms of floats. VERTICAL ADJUSTMENT: With float gauge in same position, floats should just clear the horizontal portion of gauge. Vertical distance between top of float and machined surface of casting must be 1/8 inch (gauge T109-232) for primary floats and 3/16 inch (gauge T109-222) for secondary floats. Adjust by bending float arms.

FLOAT DROP ADJUSTMENT: With bowl cover held in upright position and measuring from center of float, the distance between top of floats and bowl cover should be 5/8 inch for primary floats and 11/16 inch for secondary floats. Adjust by bending stop tabs on float brackets.

PUMP ADJUSTMENT: Install pump connector link in outer hole (long stroke) of pump arm, with ends extending toward countershaft arm. Back out throttle lever set screw until throttle valves s at in bores of carbureter. Hold straight edge across top of dust cover boss at pump arm. The flat on top of pump arm should be parallel to straight edge. Adjust by bending throttle connector rod at lower angle. (Use tool T109-213.)

METERING ROD ADJUSTMENT: Metering rod adjustment is important and must be made after completing the pump adjustment. Nc metering rod gauges are necessary. Procedure is as follows: (1) Back out throttle lever set screw to allow throttl valves to seat in bores of carbureter and loosen metering rod arm clamp screw. (2) With metering rods in place, press down on vacumeter link until metering rods bottom in carbureter body casting. (3) Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link. Hold in place and carefully tighten clamp screw.

BOWL VAPOR VENT ADJUSTMENT: This adjustment should be made after completing pump and metering rod adjustments. Install dust cover and dust cover gasket. Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter. There should be 1/16 inch (gauge T109-197) between lower edge of bowl vapor vent valve and dust cover. To adjust, remove dust cover and bend vapor vent arm.

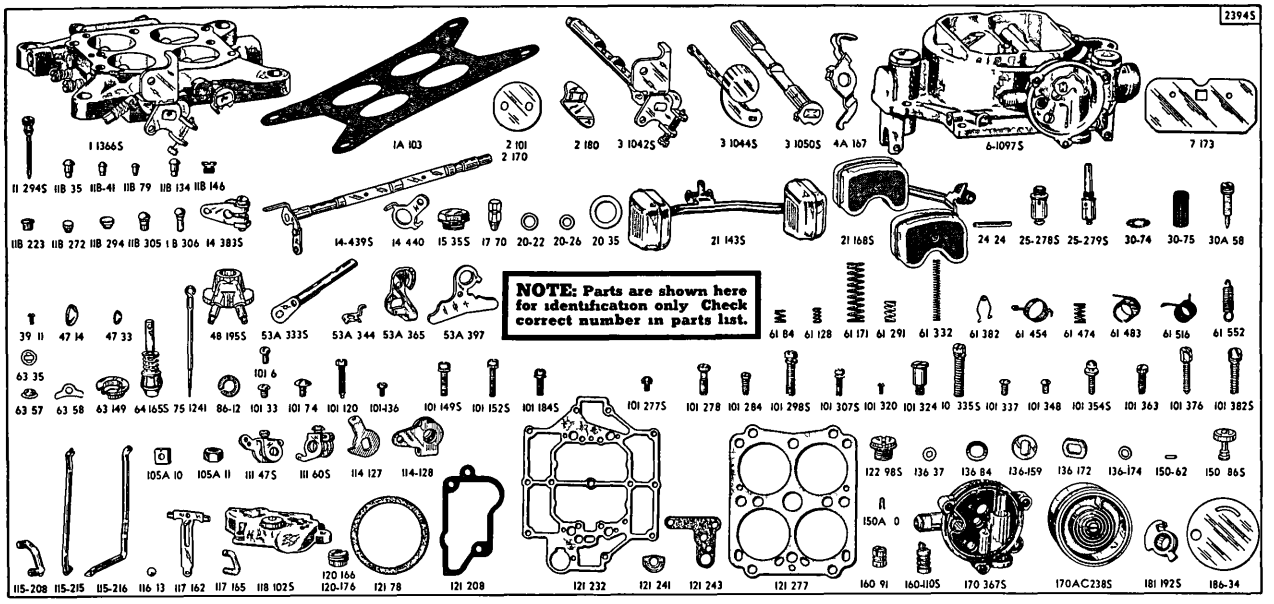
FAST IDLE ADJUSTMENT: (a) Loosen choke lever clamp screw on choke shaft. Insert .025 inch wire gauge (T109-189) between lip of fast idle cam and boss of flange casting. Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw. (b) With choke valve tightly closed tighten fast idle adjusting screw until there is .023 inch (gauge T109-189) opening between throttle valve and bore of carbureter side opposite idle port. Be sure fast idle adjusting screw is on high step of cam while making this adjustment.

UNLOADER ADJUSTMENT: With throttle wide open there should be 9/32 inch (gauge T109-126) clearance between upper edge of choke valve and inner wall of air horn. Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41).

SECONDARY THROTTLE LEVER ADJUSTMENT: Primary and secondary throttle valves should reach wide open position at the same time. To adjust, bend throttle operating rod at upper angle. (Use bending tool T109-213.) With primary and secondary throttle valves in tightly closed position there should be .008-.013 inch (gauge T109-200) clearance between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on primary lever.

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: This adjustment should be made after completing fast idle and secondary throttle lever adjustments. Crack throttle valves and hold choke valve tightly closed. Then close throttle. Tang on secondary throttle lever should freely engage in notch of lockout dog. If necessary to adjust, bend tang on secondary throttle lever.

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Studebaker "V-8"—1956—Carbureter No. 2394S

WHEN SERVICING, USE GASKET ASSORTMENT No. 283, REPAIR PACKAGE No. 1829

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1366S	—Body flange assembly	
1A-103	FLANGE GASKET	
2-101	Primary throttle valve	(2)
2-170	Secondary throttle valve	(2)
2-180	—Auxiliary throttle valve	(2)
3-1042S	—Primary throttle shaft and lever assembly	
3-1044S	—Auxiliary throttle shaft and weight assembly	
3 1050S	—Secondary throttle shaft and dog assembly	
4A-158	Throttle shaft dog (Sup by 4A 167)	
4A-167	—Throttle shaft dog	
6-1097S	—Air horn assembly	
7-173	Choke valve	
11-287S	Low speed jet assembly (Sup by 11 294S)	(2)
11-294S	—LOW SPEED JET ASSEMBLY	(2)
11B-35	Rivet plug	(4)
11B-41	Rivet plug	(2)
11B-79	Rivet plug	(4)
11B-134	Rivet passage plug	
11B-146	Level sight plug	(2)
11B-223	Nozzle passage rivet plug	(4)
11B-272	Rivet plug	(2)
11B-294	Idle port rivet plug	(2)
11B-305	Rivet plug	
11B-306	Rivet plug	(2)
14-383S	Choke lever and screw assembly	
14-439S	Choke piston lever link and shaft assembly	
14-440	Cam trip lever	
15-35S	Strainer nut assembly	(2)
17-70	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	(2)
20-26	Pump relief plug gasket	
20-35	BOWL STRAINER GASKET	(2)

Part No.	PART NAME	
21-143S	Primary float and lever assembly	
21-168S	—Secondary float and lever assembly	
24-24	Float lever pin	(2)
25-278S	PRIMARY NEEDLE AND SEAT ASSEMBLY	
25-279S	SECONDARY NEEDLE AND SEAT ASSEMBLY	
30-74	Secondary fuel inlet strainer	
30-75	BOWL STRAINER	
30A-58	Idle adjustment screw	(2)
39-11	Choke valve attaching screw	(2)
47-14	Welsh plug (choke housing)	
47-33	Welsh plug (spark port)	
48-195S	Pump jet and housing assembly	
53A-333S	Pump operating lever and countershaft assembly	
53A-344	VENT ARM	
53A-365	Secondary operating lever	
53A-397	—Lockout arm	
61-84	Idle adjustment screw spring	(2)
61-128	Connector rod spring	
61-171	PUMP SPRING (LOWER)	
61-291	Throttle lever adjusting screw spring	
61-332	VACUUM PISTON SPRING	
61-382	METERING ROD SPRING	
61-454	Fast idle cam spring	
61-474	Bowl vent spring	
61-483	SECONDARY THROTTLE RETURN SPRING	
61-516	Countershaft spring	
61-552	Throttle flex spring	
63-35	Connector rod spring retainer	
63-57	INTAKE CHECK BALL RETAINER	
63-58	Coil housing retainer	(3)
63-149	Bowl vent spring retainer	

Part N.	PART NAME	
64-165S	PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
75-1230	Metering rod—standard (Sup by 75-1241)	(2)
75-1241	—METERING ROD—STANDARD	(2)
86-12	Flange stud lock washer	(4)
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	(2)
101-120	Fast idle adjustment screw	
101-136	Coil housing attaching screw	(3)
101-149S	Body flange attaching screw and washer assembly	
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-277S	Vent arm attaching screw and washer assembly	
101-278	Pump jet and housing attaching screw	
101-284	Piston housing attaching screw	(2)
101-298S	Body flange attaching screw and washer assembly	(2)
101-307S	Air horn attaching screw and washer assembly	(8)
101-320	Auxiliary throttle valve attaching screw	(4)
101-324	Fast idle cam attaching screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-348	Primary throttle valve attaching screw	(4)
101-354S	Choke lever clamp screw assembly	
101-363	Piston housing attaching screw	
101-376	Throttle lever adjusting screw	
101-382S	Body flange attaching screw and washer assembly	(3)
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
114-127	Throttle shaft arm (outer)	
114-128	Throttle shaft arm (inner)	
115-208	THROTTLE OPERATING ROD	
115-215	Choke connector rod	
115-216	Throttle connector rod	
116-13	PUMP INTAKE CHECK BALL	
117-162	Vacumeter piston link	
117-165	Pump connector link	
118-102S	Dust cover assembly	
120-165	Primary metering rod jet (Sup by 120 166)	(2)
120-166	PRIMARY METERING ROD JET	(2)
120-176	SECONDARY METERING JET	(2)
120-194	Secondary metering jet (Sup by 120 176)	(2)
121-78	COIL HOUSING GASKET	
121-208	DUST COVER GASKET	
121-232	AIR HORN GASKET	
121-241	PUMP JET HOUSING GASKET	
121-243	PISTON HOUSING GASKET	
121-277	—BODY FLANGE GASKET	
122-98S	Pump relief valve plug assembly	
136-37	Throttle connector rod and operating rod washer	(5)
136-84	Spring washer	
136-159	Throttle shaft washer	
136-172	Secondary throttle shaft washer	
136-174	Throttle lever adjusting screw washer	
150-62	Choke piston pin	
150-186S	Pin and valve cap assembly	
150A-10	PIN SPRING	(5)
160-91	Choke piston	
160-110S	Vacuum piston and pin assembly	
170-367S	Piston housing and plug assembly	
170AC238S	Thermostatic coil and housing assembly	
181-192S	Fast idle cam and spring assembly	
186-34	Choke baffle plate	

—Parts so marked are new and listed for the first time

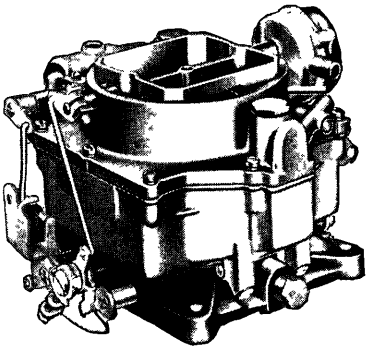
NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.

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CARTER CARBURETOR
DIVISION OF ACF INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

STUDEBAKER 2224S-2224SB
February, 1955
Revised April, 1956

MODELS
(1/2 and 3/4 Ton)
2E7, 2E12—1956
(2 Ton)
E38—1955; 2E38, 2E38B—1956



STUDEBAKER TRUCK
1/2, 3/4 and 2 TON
1955-1956

WCFB Four-Bore Down-Draft Climatic® Control **Carbureters Nos. 2224S-2224SB**

CARBURETER SPECIFICATIONS

For Studebaker 8 Cylinder Engine: 3-9/16 Inch Bore, 3¼ Inch Stroke (E38, 2E38, 2E38B)
For Studebaker 8 Cylinder Engine: 3-9/16 Inch Bore, 2-13/16 Inch Stroke (2E7, 2E12)

Dimensions: Flange size, 1⅛ inch Four Bore—4 bolt type.
Primary venturi size, 11/32 inch I. D.
Main venturi (primary) size, 15/16 inch.
Main venturi (secondary) size, 15/16 inch I. D.

Float Level: See adjustments.

Vents: Inside, 4. Outside, 3 in air horn, 1 in dust cover. (2224SB) Cavity fuel drain holes 4—size No. 53 (.0595 inch) drill.

Gasoline Intake: Size No. 42 (.0935 inch) drill hole in needle seat.

Low Speed Jet Tube: (Primary side only).
Jet, pressed in place (DO NOT REMOVE) size No. 68 (.031 inch) drill.
By-pass, in body, size No. 52 (.0635 inch) drill.
Economizer, in screw plug, size .047 inch diameter.
Idle bleed, in body, size No. 52 (.0635 inch) drill.

Idle Port: (Upper) slot type. Primary, length .174 inch; width .040 inch. Secondary, none.

Idle Port Opening: Primary, .113 to .119 inch above top edge of valve with valve tightly closed. Secondary, none.

Lower Port: Primary (for idle adjustment screw), size No. 53 (.0595 inch) drill.
Secondary, none.

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture turn screw out. Do not idle engine below 550 r.p.m.

Main Nozzle: Installed permanently. DO NOT REMOVE. Anti percolating jet (to nozzle well), primary side, size No. 67 (.032 inch) drill. Secondary side, size No. 60 (.040 inch) drill.

Metering Rod: Primary, economy step .072 inch diameter. Middle step tapers to .062 inch diameter. Power step, .060 inch diameter. Secondary, none.

Metering Rod Jet: Primary, size .089 inch diameter (for metering rod).
Secondary, size No. 53 (.0595 inch) drill (no metering rod).

Metering Rod Setting: See adjustments.

Accelerating Pump: Discharge jet (twin) primary side only, size No. 73 (.024 inch) drill.
Intake ball check seat, size .115 to .120 inch diameter.
Discharge needle seat, size .070 inch diameter.
Relief passage (vent) to fuel chamber No. 42 (.0935 inch) drill.

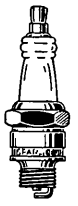
Pump Adjustment: See adjustments.

Choke: Carter Climatic® Control, set one point rich. Butterfly type—offset choke valve, primary side only. Choke heat suction hole, restriction in piston housing, size No. 44 (.086 inch) drill.

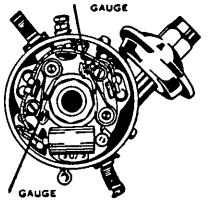
Vacuum Spark Port: Round type, .060 inch diameter. Bottom of port .000 to .010 inch above valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

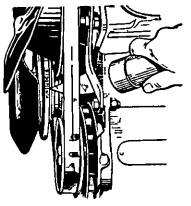
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



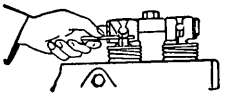
Spark Plug
Gap
.035"



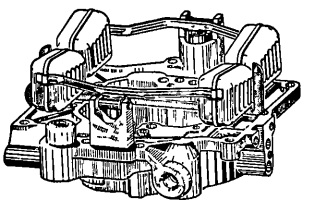
Breaker Point
Setting
.013"-.018"



Ignition Timing
Breaker Points to Open:
4° B. T. C.



Valve Setting
(Cold)
Intake .025"-.027"
Exhaust .025"-.027"



Float Setting
See Adjustments

Idle Adjustment
Screw Setting
½ to 1½
Turns Open
Idle Engine at
550 R.P.M.

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CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: Two separate float adjustments must be made—lateral and vertical.

LATERAL ADJUSTMENT: With bowl cover assembly inverted, bowl cover gasket removed and float resting on seated needle, place float gauge (T109-222) directly under floats with notched portion of gauge fitted over edge of casting. Side of floats should just clear the vertical uprights of float gauge. Adjustment should be made by bending arms of floats.

VERTICAL ADJUSTMENT: With float gauge in same position, floats should just clear the horizontal portion of gauge. Vertical distance between top of float and machined surface of casting must be 3/16 inch for both primary and secondary floats (gauge T109-222). Adjust by bending float arms.

FLOAT DROP ADJUSTMENT: With bowl cover held in upright position and measuring from center of float, the distance between top of floats and bowl cover should be 11/16 inch for both primary and secondary floats. Adjust by bending stop tabs on float brackets.

PUMP ADJUSTMENT: Install pump connector link in outer hole (long stroke) of pump arm, with ends extending toward countershaft arm. Back out throttle lever set screw until throttle valves seat in bores of carbureter. Hold straight edge across top of dust cover boss at pump arm. The flat on top of pump arm should be parallel to straight edge. Adjust by bending throttle connector rod at lower angle. (Use tool T109-213.)

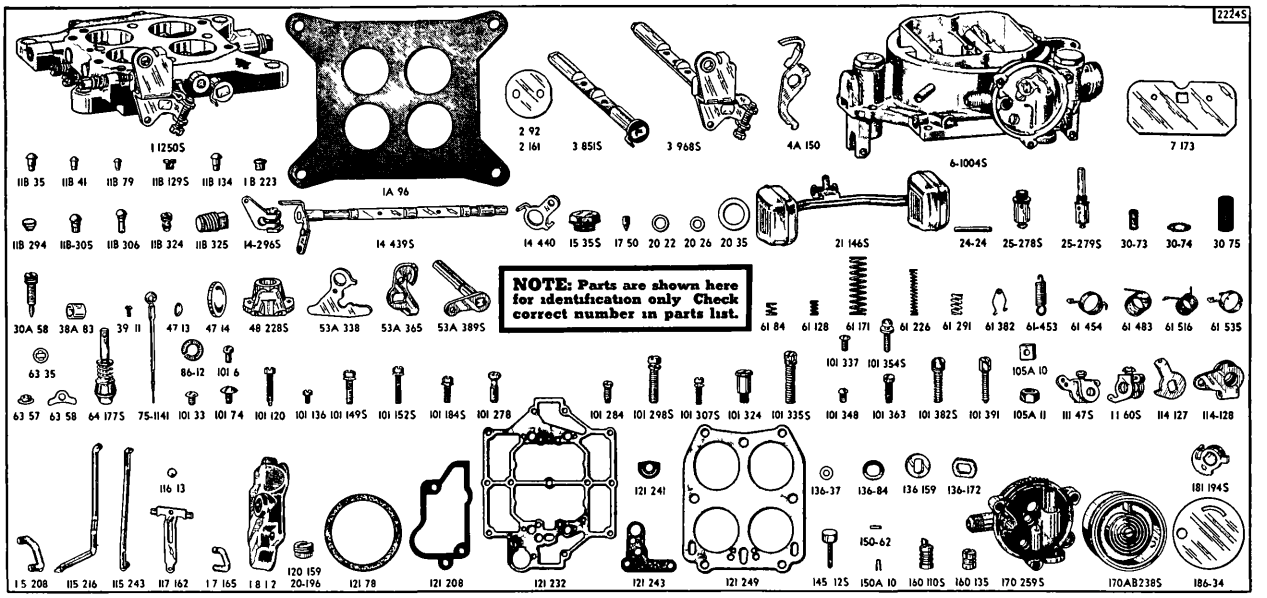
METERING ROD ADJUSTMENT: Metering rod adjustment is important and must be made after completing the pump adjustment. No metering rod gauges are necessary. Procedure is as follows: (1) Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw. (2) With metering rods in place, press down on vacumeter link until metering rods bottom in carbureter body casting. (3) Holding rods in downward position and throttle valves seated, revolve metering rod arm until finger on arm contacts lip of vacumeter link. Hold in place and carefully tighten clamp screw.

FAST IDLE ADJUSTMENT: (a) Loosen choke lever clamp screw on choke shaft. Insert .020 inch feeler gauge (T109-29) between lip of fast idle cam and boss of flange casting. Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw. (b) With choke valve tightly closed, tighten fast idle adjusting screw until there is .024 inch (gauge T109-189) opening between throttle valve and bore of carbureter, side opposite idle port. Be sure fast idle adjusting screw is on high step of cam while making this adjustment.

UNLOADER ADJUSTMENT: With throttle wide open there should be 1/8 inch (gauge T109-36) clearance between upper edge of choke valve and inner wall of air horn. Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41).

SECONDARY THROTTLE LEVER ADJUSTMENT: Primary and secondary throttle valves should reach wide open position at the same time. To adjust, bend throttle operating rod at upper angle. (Use bending tool T109-213.) With primary and secondary throttle valves in tightly closed position there should be .017-.022 inch (gauge T109-29) clearance between positive closing shoes on primary and secondary throttle levers. To adjust, bend shoe on primary lever.

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT: This adjustment should be made after completing fast idle and secondary throttle lever adjustments. Crack throttle valves and manually open and close the choke valve. Tang on secondary throttle lever should freely engage in notch of lock-out dog. If necessary to adjust, bend tang on secondary throttle lever.



Studebaker Truck—1955-1956—Carbureters Nos. 2224S-2224SB

WHEN SERVICING, USE GASKET ASSORTMENT No. 260A; REPAIR PACKAGE No. 1783A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-1250S	Body flange assembly	
1A-96	FLANGE GASKET	
2-92	Primary throttle valve	(2)
2-161	Secondary throttle valve	(2)
3-851S	Secondary throttle shaft and dog assembly	
3-968S	Primary throttle shaft and lever assembly	
4A-150	Throttle shaft dog	
6-1004S	Air horn assembly (Casting No 6 1002) (2224S)	
6-1185S	—Air horn assembly (Casting No 6 1157) (2224SB)	
7-173	Choke valve	
11B-35	Rivet plug	(4)
11B-41	Rivet plug (2224S (2) (2224SB (1)	
11B-79	Rivet plug	(4)
11B-129S	PUMP DISCHARGE PASSAGE PLUG ASSEMBLY	
11B-134	Rivet plug	
11B-223	Nozzle passage rivet plug	(4)
11B-294	Idle port rivet plug	(2)
11B-305	Rivet plug (2224S (1) (2224SB (2)	
11B-306	Rivet plug (2224S (2) (2224SB (1)	
11B-324	ECONOMIZER SCREW PLUG	(2)
11B-325	Pipe plug	
14-296S	Choke lever and screw assembly	
14-439S	Choke piston lever link and shaft assembly	
14-440	Cam trip lever	
15-35S	Strainer nut assembly	(2)
17-50	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	(2)
20-26	Pump discharge passage plug gasket	

Part No.	PART NAME	
20-35	BOWL STRAINER GASKET	(2)
21-146S	Float and lever assembly	(2)
24-24	Float lever pin	(2)
25-278S	PRIMARY NEEDLE AND SEAT ASSEMBLY	
25-279S	SECONDARY NEEDLE AND SEAT ASSEMBLY	
30-73	PRIMARY NEEDLE SEAT STRAINER	
30-74	SECONDARY FUEL INLET STRAINER	
30-75	BOWL STRAINER	
30A-58	Idle adjustment screw	(2)
38A-83	Countershaft bushing	
39-11	Choke valve attaching screw	(2)
47-13	Spark port welsh plug	
47-14	Choke housing welsh plug	
48-228S	Pump jet and housing assembly	
53A-333S	Pump operating lever and countershaft assembly (2224S) (Sup by 53A 389S)	
53A-338	Lockout arm	
53A-365	Secondary operating lever	
53A-389S	Pump operating lever and countershaft assembly	
61-84	Idle adjustment screw spring	(2)
61-128	Connector rod spring	
61-171	PUMP SPRING (LOWER)	
61-226	VACUUM PISTON SPRING	
61-291	Throttle lever adjusting screw spring	
61-382	METERING ROD SPRING	
61-453	Throttle flex spring	
61-454	Fast idle cam spring	
61-483	SECONDARY THROTTLE RETURN SPRING	

Part No	PART NAME	
61-516	Countershaft spring	
61-535	Lockout arm spring	
63-35	Connector rod spring retainer	
63-57	INTAKE CHECK BALL RETAINER	
63-58	Coil housing retainer	(3)
64-177S	PUMP PLUNGER ROD SPRING AND RETAINER ASSEMBLY	
75-1141	METERING ROD—STANDARD	(2)
75-1154	Metering rod—1 size lean	(2)
75-1155U	Metering rod and jet unit (2 sizes lean) (Consists of 2—75 1164 2—120 174 and 1—61 230)	
75 1156U	Metering rod and jet unit (3 sizes lean) (Consists of 2—75 1165 2—120 217 and 1—61 230)	
86 12	Flange stud lock washer	(4)
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	
101-74	Throttle shaft screw	(2)
101-120	Fast idle adjustment screw	
101 136	Coil housing attaching screw	(3)
101 149S	Body flange attaching screw and washer assembly	
101 152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-275	Piston housing attaching screw (2224SB)	
101-278	Pump jet housing attaching screw	
101-284	Piston housing attaching screw (2224S)	(2)
101-298S	Body flange attaching screw and washer assembly	(2)
101-307S	Air horn attaching screw and washer assembly	(8)
101-324	Fast idle cam attaching screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-348	Primary throttle valve attaching screw	(4)
101-354S	Choke lever clamp screw assembly	
101-363	Piston housing attaching screw (2224S (1) (2224SB (2)	
101 382S	Body flange attaching screw and washer assembly	(3)

Part No.	PART NAME	
101-391	Throttle lever adjusting screw	
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
111-47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
114-127	Throttle shaft arm (outer)	
114-128	Throttle shaft arm (inner)	
115-208	Throttle operating rod	
115-216	THROTTLE CONNECTOR ROD	
115-243	Choke connector rod	
116 13	PUMP INTAKE CHECK BALL	
117-162	Vacumeter piston link	
117-165	Pump connector link	
118-112	Dust cover	
120-159	PRIMARY METERING ROD JET	(2)
120-196	SECONDARY METERING JET	(2)
121-78	COIL HOUSING GASKET	
121-208	DUST COVER GASKET	
121 232	AIR HORN GASKET	
121 241	PUMP JET HOUSING GASKET	
121 243	PISTON HOUSING GASKET (2224S)	
121 249	BODY FLANGE GASKET	
121-283	PISTON HOUSING GASKET (2224SB)	
136 37	Throttle connector rod and operating rod washer	(5)
136 84	Spring washer	
136 159	Throttle shaft washer	
136 172	Secondary throttle shaft washer	
145-112S	Secondary bleeder tube and plug assembly	
150 62	Choke piston pin	
150A-10	PIN SPRING	(5)
160-110S	Vacuum piston and pin assembly	
160-135	Choke piston	
170-259S	Piston housing and plug assembly (2224S)	
170-447S	—Piston housing and plug assembly (2224SB)	
170AB238S	Thermostatic coil and housing assembly	
181-194S	Fast idle cam assembly	
186-34	Choke baffle plate	

—Parts so marked are new and listed for the first time

NOTE **Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.**

STUDEBAKER "V-8"

PRESIDENT DELUXE
MODELS 6H & Y4
1955

NOTE: 2330S-SB (Limited Production) same as 2219SB, except with 202-81U Dash Pot and (2) Metering Rods 75-1154.

WCFB Four-Bore Down-Draft Climatic® Control Carbureters **Nos. 2330S-2330SB**

CARBURETER SPECIFICATIONS

For Studebaker 8 Cylinder Engine 3-9/16 Inch Bore, 3¼ Inch Stroke

Dimensions Flange size 1⅛ inch Four Bore—4 bolt type
Primary venturi size 11/32 inch I D
Main venturi (primary) size 15/16 inch
Main venturi (secondary) size 15/16 inch I D

Float Level See adjustments

Vents Inside 4 Outside 3 in air horn 1 in dust cover (2330SB) Cavity fuel drain holes 4—size No 53 (0595 inch) drill

Gasoline Intake Size No 42 (0935 inch) drill hole in needle seat

Low Speed Jet Tube (Primary side only)
Jet pressed in place (DO NOT REMOVE) size No 68 (031 inch) drill
By pass in body size No 52 (0635 inch) drill
Economizer in screw plug size 047 inch diameter
Idle bleed in body size No 52 (0635 inch) drill

Idle Port (Upper) slot type Primary length 174 inch width 040 inch
Secondary none

Idle Port Opening Primary 113 to 119 inch above top edge of valve with valve tightly closed Secondary none

Lower Port Primary (for idle adjustment screw) size No 53 (0595 inch) drill
Secondary none

Set Idle Adjustment Screw ½ to 1½ turns open For richer mixture turn screw out Do not idle engine below 550 r p m in neutral

Main Nozzle Installed permanently DO NOT REMOVE Anti percolating jet (off nozzle well) primary side size No 67 (032 inch) drill
Secondary side size No 60 (040 inch) drill

Metering Rod Primary economy step 0725 inch diameter
Power step 063 inch diameter
Secondary none

Metering Rod Jet Primary size 089 inch diameter (for metering rod)
Secondary size No 53 (0595 inch) drill (no metering rod)

Metering Rod Setting See adjustments

Accelerating Pump Discharge jet (twin) primary side only size No 73 (024 inch) drill
Intake ball check seat size 115 to 120 inch diameter
Discharge needle seat size 070 inch diameter
Relief passage (vent) to fuel chamber No 42 (0935 inch) drill

Pump Adjustment See adjustments

Choke Carter Climatic® Control set one point rich Butterfly type offset choke valve primary side only Choke heat suction hole restriction in piston housing size No 44 (086 inch) drill

Vacuum Spark Port Round type 060 inch diameter Bottom of port 000 to 010 inch above valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.

Spark Plug Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open	Valve Setting (Cold)	Float Setting	Idle Adjustment Screw Setting
.035"	.013"-.018"	4° B T. D C. At Vibration Damper	Intake .025"-.027" Exhaust .025"-.027"	(See Adjustments)	½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT Two separate float adjustments must be made—lateral and vertical

LATERAL ADJUSTMENT With bowl cover assembly inverted, bowl cover gasket removed and float resting on seated needle, place float gauge (T109-222) directly under floats with notched portion of gauge fitted over edge of casting Side of floats should just clear the vertical uprights of float gauge Adjustment should be made by bending arms of floats

VERTICAL ADJUSTMENT With float gauge in same position, floats should just clear the horizontal portion of gauge Vertical distance between top of float and machined surface of casting must be 3/16 inch for both primary and secondary floats (gauge T109-222) Adjust by bending float arms

FLOAT DROP ADJUSTMENT With bowl cover held in upright position and measuring from center of float the distance between top of floats and bowl cover should be 11/16 inch for both primary and secondary floats Adjust by bending stop tabs on float brackets

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PUMP ADJUSTMENT Install pump connector link in outer hole (long stroke) of pump arm, with ends extending toward countershaft arm Back out throttle lever set screw until throttle valves seat in bores of carbureter Hold straight edge across top of dust cover boss at pump arm The flat on top of pump arm should be parallel to straight edge Adjust by bending throttle connector rod at lower angle (Use tool T109-213)

METERING ROD ADJUSTMENT. Metering rod adjustment is important and must be made after completing the pump adjustment No metering rod gauges are necessary Procedure is as follows (1) Back out throttle lever set screw to allow throttle valves to seat in bores of carbureter and loosen metering rod arm clamp screw (2) With metering rods in place, press down on vacumeter link until metering rods bottom in carbureter body casting (3) Holding rods in downward position and throttle valves seated revolve metering rod arm until finger on arm contacts lip of vacumeter link Hold in place and carefully tighten clamp screw

FAST IDLE ADJUSTMENT (a) Loosen choke lever clamp screw on choke shaft Insert 020 inch feeler gauge (T109-29) between lip of fast idle cam and boss of flange casting Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position—hold in place and tighten clamp screw (b) With choke valve tightly closed, tighten fast idle adjusting screw until there is 024 inch (gauge T109-189) opening between throttle valve and bore of carbureter, side opposite idle port Be sure fast idle adjusting screw is on high step of cam while making this adjustment

UNLOADER ADJUSTMENT: With throttle wide open there should be ⅛ inch (gauge T109-36) clearance between upper edge of choke valve and inner wall of air horn Adjust by bending unloader lip on throttle shaft lever (use bending tool T109 41)

SECONDARY THROTTLE LEVER ADJUSTMENT: Primary and secondary throttle valves should reach wide open position at the same time To adjust, bend throttle operating rod at upper angle (Use bending tool T109-213) With primary and secondary throttle valves in tightly closed position there should be 017- 022 inch (gauge T109 29) clearance between positive closing shoes on primary and secondary throttle levers To adjust, bend shoe on primary lever

SECONDARY THROTTLE LOCK-OUT ADJUSTMENT. This adjustment should be made after completing fast idle and secondary throttle lever adjustments Crack throttle valves and manually open and close the choke valve Tang on secondary throttle lever should freely engage in notch of lock-out dog If necessary to adjust, bend tang on secondary throttle lever

DASH POT (SLOW CLOSING THROTTLE) ADJUSTMENT The purpose of this unit is to prevent the car from stalling when the throttle is released rapidly To get proper dash pot action this adjustment must be made after the Fast Idle Adjustment With the choke valve tightly closed and fast idle adjustment screw on the high step of the cam loosen lock-nut and adjust dash pot unit to give 1/16 inch clearance between throttle lever and lower tip of plunger shaft Then tighten lock-nut

Studebaker "V-8"—1955—Carbureters Nos. 2330S-2330SB

WHEN SERVICING, USE GASKET ASSORTMENT No 260A

Part No.	PART NAME	
1-1286S	Body flange assembly	
1A-96	Flange gasket	
2-92	Primary throttle valve	(2)
2-161	Secondary throttle valve	(2)
3-851S	Secondary throttle shaft and dog assembly	
3-990S	Primary throttle shaft and lever assembly	
4A-150	Throttle shaft dog	
6-1004S	Air horn assembly (Casting No 6 1002) (2330S)	
6-1185S	—Air horn assembly (Casting No 6 1157) (2330SB)	
7-173	Choke valve	
11B-35	Rivet plug	(4)
11B-41	Rivet plug (2330S (2), (2330SB (1)	
11B-79	Rivet plug	(4)
11B-129S	Pump discharge passage plug assembly	
11B-134	Rivet plug	
11B-223	Nozzle passage rivet plug	(4)
11B-294	Idle port rivet plug	(2)
11B 305	Rivet plug (2330S (1), (2330SB (2)	
11B 306	Rivet plug (2330S (2) (2330SB (1)	
11B-324	Economizer screw plug	(2)
11B 325	Pipe plug	
14 296S	Choke lever and screw assembly	
14 439S	Choke piston lever link and shaft assembly	
14 440	Cam trip lever	
15-35S	Strainer nut assembly	(2)
17-50	Pump check needle	
20-22	Needle seat gasket	(2)
20-26	Pump discharge passage plug gasket	
20-35	Bowl strainer gasket	(2)
21-146S	Float and lever assembly	(2)
24 24	Float lever pin	(2)
25 278S	Primary needle and seat assembly	
25-279S	Secondary needle and seat assembly	
30-73	Primary needle seat strainer	
30-74	Secondary fuel inlet strainer	
30-75	Bowl strainer	
30A-58	Idle adjustment screw	(2)
38A-83	Countershaft bushing	
39-11	Choke valve attaching screw	(2)
47-13	Spark port welsh plug	
47-14	Choke housing welsh plug	
48-228S	Pump jet and housing assembly	
53A-338	Lockout arm	
53A-365	Secondary operating lever	
53A-389S	Pump operating lever and countershaft assembly	
61-84	Idle adjustment screw spring	(2)
61-128	Connector rod spring	
61-171	Pump spring (lower)	
61-226	Vacuum piston spring	
61-291	Throttle lever adjusting screw spring	
61-382	Metering rod spring	
61-453	Throttle flex spring	
61-454	Fast idle cam spring	
61-483	Secondary throttle return spring	
61-516	Countershaft spring	
61-535	Lockout arm spring	
63-35	Connector rod spring retainer	
63-57	Intake check ball retainer	
63-58	Coil housing retainer	(3)
64-177S	Pump plunger, rod, spring and retainer assembly	
75-1154	Metering rod—standard	(2)
86-12	Flange stud lock washer	(4)
101-6	Pump arm clamp screw	
101-33	Metering rod arm clamp screw	

Part No.	PART NAME	
101-74	Throttle shaft screw	(2)
101-120	Fast idle adjustment screw	
101-136	Coil housing attaching screw	(3)
101-149S	Body flange attaching screw and washer assembly	
101-152S	Air horn attaching screw and washer assembly	
101-184S	Dust cover attaching screw and washer assembly	(2)
101-275	Piston housing attaching screw (2330SB)	
101-278	Pump jet and housing attaching screw	
101-284	Piston housing attaching screw (2330S)	(2)
101-298S	Body flange attaching screw and washer assembly	(2)
101 307S	Air horn attaching screw and washer assembly	(6)
101-324	Fast idle cam attaching screw	
101-335S	Air horn attaching screw and washer assembly	(7)
101-337	Secondary throttle valve attaching screw	(4)
101-348	Primary throttle valve attaching screw	(4)
101-354S	Choke lever clamp screw assembly	
101-362S	Air horn attaching screw and washer assembly	( )
101-363	Piston housing attaching screw (2330S (1) (2330SB (2)	
101-382S	Body flange attaching screw and washer assembly	(3)
101-391	Throttle lever adjusting screw	
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
105A 52	Dash pot lock nut	
111 47S	Pump arm and screw assembly	
111-60S	Metering rod arm and screw assembly	
114-127	Throttle shaft arm (outer)	
114 128	Throttle shaft arm (inner)	
115-208	Throttle operating rod	
115-216	Throttle connector rod	
115-243	Choke connector rod	
116-13	Pump intake check ball	
117-162	Vacumeter piston link	
117-165	Pump connector link	
118-112	Dust cover	
120-159	Primary metering rod jet	(2)
120-196	Secondary metering jet	(2)
121-78	Coil housing gasket	
121-208	Dust cover gasket	
121-232	Air horn gasket	
121-241	Pump jet housing gasket	
121-243	Piston housing gasket (2330S)	
121-249	Body flange gasket	
121-283	Piston housing gasket (2330SB)	
136-37	Throttle connector rod and operating rod washer	(5)
136-84	Spring washer	
136-159	Throttle shaft washer	
136-172	Secondary throttle shaft washer	
145-112S	Secondary bleeder tube and plug assembly	(2)
150-62	Choke piston pin	
150A-10	Pin spring	(5)
160-110S	Vacuum piston and pin assembly	
160-135	Choke piston	
170-259S	Piston housing and plug assembly (2330S)	
170-447S	—Piston housing and plug assembly (2330SB)	
170AB238S	Thermostatic coil and housing assembly	
180-83S	Dash pot bracket assembly	
181-194S	Fast idle cam assembly	
186-34	Choke baffle plate	
202-69S	Dash pot assembly	

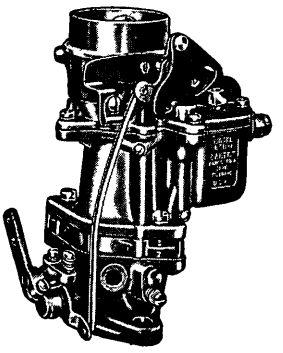
—Parts so marked are new and listed for the first time

NOTE: Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

MODELS

"2R5", "2R10", "2R15"
1949-1953

"3R5", "3R10", "3R15"
1954



STUDEBAKER
½ TON TRUCK
1949-1954

(2125S can also be used)

BBR1 DOWN-DRAFT **CARBURETER 633S**

CARBURETER SPECIFICATIONS

For Studebaker Six Cylinder Engine 3 Inch Bore 4 Inch Stroke

Dimensions Flange size 1¼ inch S A E
Throttle bore 1 7/16 inch
Main venturi 1¼ inch

Float Setting Top of float 5/64 inch below top surface of carbureter body casting Plus or minus 1/64 inch

Vents Outside none Inside balance vent 218 inch diameter

Gasoline Intake Needle Triangular horizontal No 44 (086) inch drill in needle seat

Idle Orifice Tube Jet size 031 inch diameter
Idle passage air bleed (in body) size 067 inch diameter
Restriction in body size 051 to 052 inch diameter

Idle Ports Upper port keyhole type length 180 inch width 032 inch 061 inch diameter hole at top Top of port located 128 to 132 inch above top of valve
Lower port size 053 to 057 inch diameter (For idle adjustment screw)

Set Idle Adjustment Screw ½ to 1½ turns open For richer mixture turn screw out Do not idle engine below 550 600 r p m

Main Metering Jet Calibrated to flow 268 to 272 cc per minute (Do not gauge for size If in doubt replace with new part)

Main Vent Through diffuser (air bleed inside bowl) size 0315 inch drill

Main Vent Tube Side Holes 7—0197 inch drill side holes—one side spaced 3/16 inch apart First hole 5/16 inch from end
7—0197 inch drill side holes—opposite side spaced 3/16 inch apart First hole 13/32 inch from end
Bottom hole 1—0197 inch drill

Step Up Jet 037 inch drill size

Accelerating Pump Type delayed action Stroke summer setting (inner hole short stroke) Intermediate setting (center hole) Winter setting (outer hole long stroke) Pump intake passage ball check seat size 115 to 120 inch diameter
Pump discharge passage restriction (under ball check) size 062 to 065 inch diameter in body
Pump (discharge) jet size 0315 inch

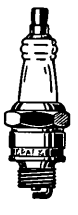
Pump Adjustment 32/64 inch plunger travel with pump link in medium stroke hole

Choke Butterfly type with poppet valve

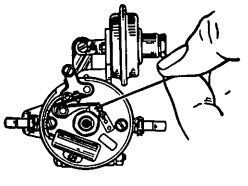
Vacuum Spark Port 099 to 101 inch diameter Top of port 070 to 076 inch above top edge of valve

Motor Tune-Up—Be Accurate!

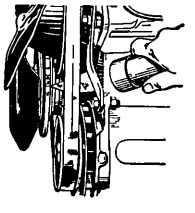
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



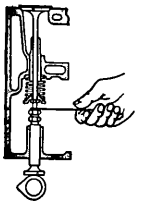
Spark Plug
Gap
030"



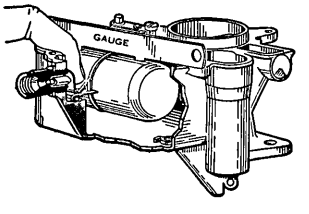
Breaker Point
Setting
020"



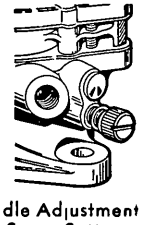
Ignition Timing
Breaker Points to Open
2° B T D C



Valve Setting
(Cold)
Int & Exh 016"



Float Setting
(Use Gauge)
5/64 Inch



Idle Adjustment
Screw Setting
½ to 1½
Turns Open

CARBURETER ADJUSTMENTS

If carbureter loads up after considerable service, check float level Wear on lip of float lever will raise float level Before adjusting float, be sure float lever pin is firmly seated Reset float level by bending lip of float lever away from needle to raise level, or bend lip toward needle to lower float level Bend vertical lip of float only

If motor stalls while idling, set throttle lever adjusting screw so motor runs approximately 550-600 r p m Then set idle adjustment screw to specifications If these adjustments do not correct the trouble remove idle orifice tube and plug assembly Clean tube and passages with compressed air

If acceleration is not satisfactory, remove pump jet and clean with compressed air However it is usually advisable to replace the pump jet as its cost is nominal All jets must be seated gasoline tight Poor acceleration may be due to damaged or worn plunger leather in accelerating pump sedi-

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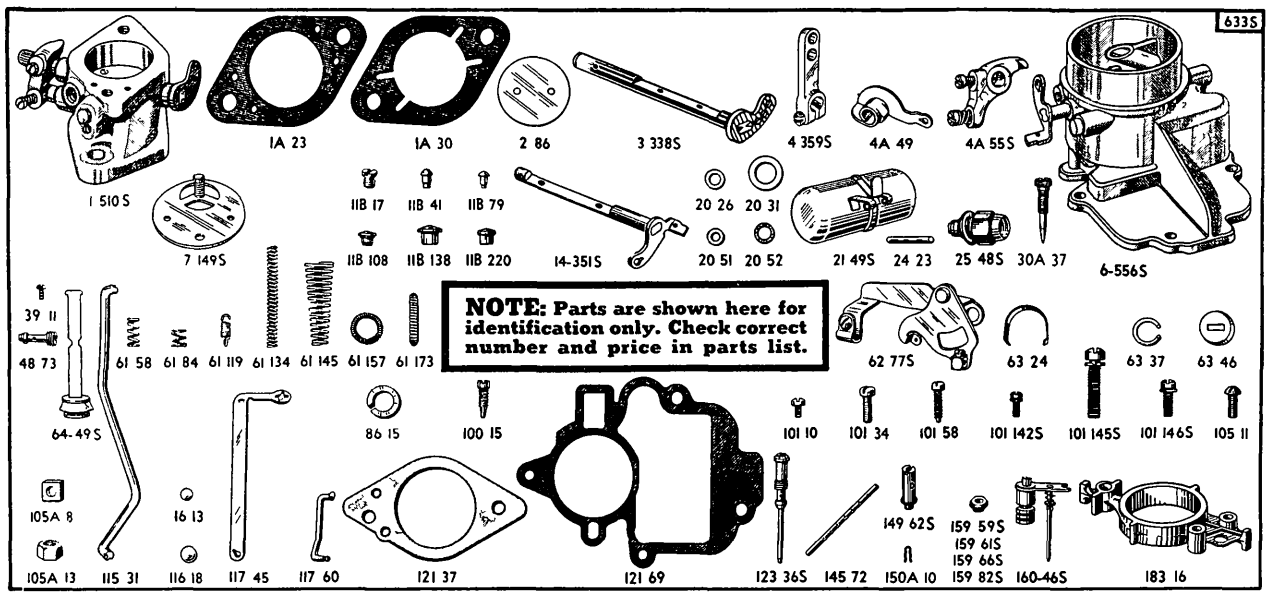
ment in pump cylinder or clogged intake ball check at bottom of pump cylinder and discharge ball check in discharge passage If plunger is removed from cylinder, use care in installing to avoid damage to plunger leather

Correct air fuel ratio is provided by a 'balance tube in the air horn The balance tube should be checked each time the carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type, size or condition of air cleaner Should the cleaner become clogged, the capacity will be reduced but the air-fuel mixture ratio will not be changed

Excessive richness above 50 miles per hour may be caused by a clogged main vent tube After removal of rivet plug beneath float bowl with tool No T109-43, main vent tube can be removed and a new tube inserted with tool No T109-195 Care must be exercised in inserting new tube which must seat tightly Use new rivet to complete the installation

Pump Adjustment: Remove air horn assembly, back out throttle lever adjustment screw and install pump operating link in center hole (medium stroke of throttle shaft arm) Place base of pump travel gauge T109-117S on upper edge of body casting at pump cylinder With throttle valve seated, turn gauge until projecting finger contacts top of plunger shaft Note number indicated on gauge Repcat with throttle valve wide open and plunger pressed to bottom of the cylinder The difference between the numbers indicated at wide open and closed throttle positions should be "32 (32/64') pump stroke Adjust by bending horizontal portion of pump lifter link

Pump stroke is adjustable for high or low temperature Set to longest stroke (outer hole) for cold weather, shorter stroke (inner hole) for hot weather driving



Studebaker Truck—1949-1954—Carbureter No. 633S

WHEN SERVICING, USE GASKET ASSORTMENT No 150A, REPAIR PACKAGE No 1394A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

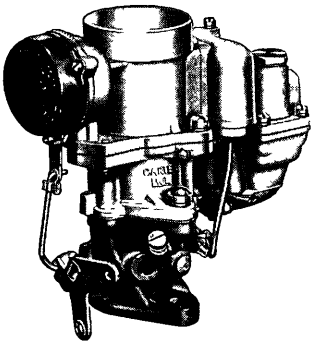
Part No	PART NAME	
1-510S	Body flange assembly	
1A 23	Flange gasket—for use with governor	
1A-30	FLANGE GASKET—FOR USE WITHOUT GOVERNOR	
2-86	Throttle valve	
3 338S	Throttle shaft and arm assembly	
4-359S	Throttle lever assembly	
4A-49	Fast idle cam	
4A-55S	Fast idle cam assembly	
6-556S	Air horn assembly	
7-149S	Choke valve assembly	
11B-17	PUMP DISCHARGE PASSAGE PLUG	
11B-41	Rivet plug	
11B-79	Rivet plug	(2)
11B-108	IDLE PORT RIVET PLUG	
11B-138	PUMP JET RIVET PLUG	
11B-220	HIGH SPEED PASSAGE PLUG	
14-351S	Choke shaft and lever assembly	
20 26	Gasket	
20-31	Needle seat gasket	
20-51	Step-up jet gasket	
20-52	STEP-UP PISTON GASKET	
21-49S	Float and lever assembly	
24-23	FLOAT LEVER PIN	
25-48S	NEEDLE AND SEAT ASSEMBLY	
30A-37	Idle adjustment screw	
39 11	CHOKE AND THROTTLE VALVE ATTACHING SCREW	(4)
48-73	Pump jet (Sup by 48 160S)	
48-160S	PUMP JET	
61-58	Throttle lever adjusting screw spring	
61-84	Idle adjustment screw spring	
61-119	Choke pull-back spring	
61-134	STEP UP PISTON SPRING	
61-145	PUMP SPRING	
61-157	Plunger spring	
61-173	PUMP DISCHARGE CHECK BALL SPRING	
62-77S	Choke tube bracket assembly	
63-24	FLOAT LEVER PIN RETAINER	
63-37	INTAKE BALL CHECK RETAINING RING	
63-46	PUMP SPRING RETAINER	

Part No.	PART NAME	
64-49S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49-104)	
86-15	Flange stud lock washer	(2)
100-15	Fast idle cam set screw	
101-10	Wire clamp screw	
101-34	Throttle lever clamp screw	
101-58	Throttle adjusting screw	
101-142S	Choke bracket attaching screw and washer assembly	
101 145S	Body flange attaching screw and washer assembly	(2)
101-146S	Air horn attaching screw and washer assembly (Sup by 101-150S)	
101-150S	Air horn attaching screw and washer assembly	(4)
105-11	Choke tube clamp screw	
105A-8	Choke tube clamp nut	
105A-13	Flange nut	(2)
115 31	Choke connector rod	
116-13	PUMP INTAKE CHECK BALL	
116-18	PUMP DISCHARGE CHECK BALL	
117-45	PUMP LIFTER	
117-60	PUMP LINK	
121-37	BODY FLANGE GASKET	(2)
121-69	BODY GASKET	
123-36S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
145-72	MAIN VENT TUBE	
149-43S	STEP UP JET ASSEMBLY	
149-62S	Step-up jet assembly (Sup by 149-43S)	
150A-10	PIN SPRING	
159-59S	MAIN METERING JET ASSEMBLY—STANDARD	
159 61S	Main metering jet assembly—1 size lean	
159-66S	Main metering jet assembly—2 sizes lean	
159 82S	Main metering jet assembly—3 sizes lean	
159-128U	Unitized package (Consists of 159 61S 159-66S, 159-82S)	
160-46S	STEP-UP PISTON, PLATE AND ROD ASSEMBLY	
183-16	Insulator	

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used

CAR SERIAL NUMBERS

South Bend — G400501 & higher
Los Angeles — G839701 & higher
Hamilton — G703101 & higher



Casting Number 620 on Face of Flange

STUDEBAKER CHAMPION 8G-1949, 9G-1950, 10G-1951, 12G-1952

WE Down-Draft **Carbureter 715S** With Climatic® Control

CARBURETER SPECIFICATIONS

For Studebaker Six Cylinder Engine, 3 Inch Bore, 4 Inch Stroke

Dimensions: Flange size, 1¼ inch S. A. E.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 11/16 inch I. D.
Main venturi, 1¼ inch I. D.

Float Level: Distance from seam of float (at free end) to tip on lower edge of float chamber cover, when needle is seated, to be ⅜ inch.

Vents: Outside, No. 10 drill. Inside, none.

Gasoline Intake: Square vertical needle. Size No. 46 drill hole in needle seat.

Low Speed Jet Tube: Jet size, .02925 inch diameter.
By-pass, size No. 54 drill.
Economizer, .059-.060 inch diameter.
Idle bleed, size No. 55 drill.

Idle Port: Length, .165 inch; width, .030 inch.

Idle Port Opening: Top of port: .112-.116 inch above top edge of valve with valve tight closed.

Idle Screw Seat: No. 46 drill.

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture turn screw out. Do not idle engine below 525-575 r.p.m.

Main Nozzle: In primary venturi, angle 45°. Closed tip.
Inside diameter No. 30 drill.
Upper hole: .035 inch diameter on 45° angle.
Lower hole: .089 inch diameter on 60° angle.

Metering Rod (Vacumeter Type): Economy step, .072 inch diameter; middle step tapers to .061 inch diameter; power step .042 inch diameter. Length 3-9/64 inches.

Metering Rod Jet: .095 inch diameter.

Metering Rod Setting: Use gauge, part No. T109-102 (2.468 inches).

Accelerating Pump: Pressure type (spring operated lever) with non-adjustable stroke.
Pump discharge jet, size No. 73 drill.
Relief passage (to outside), size No. 42 drill.
Intake ball check seat, size No. 40 drill.
Discharge ball check seat, size No. 32 drill.

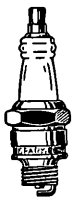
Pump Adjustment: 14/64 inch plunger travel full throttle position. Use gauge No. T109-117S.

Choke: Carter Climatic® Control (early production) 170P-77S set at index; (late production) 170U-61S, set one point lean. Butterfly type, offset valve. Choke heat suction hole in body size No. 36 (.1065") drill.

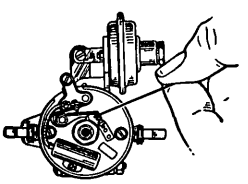
Vacuum Spark Port: .1005 to .1025 inch diameter. Top of port .060 to .070 inch above top edge of valve.

Motor Tune-Up—Be Accurate!

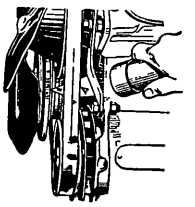
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



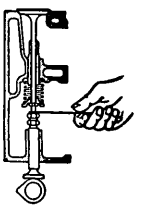
Spark Plug Gap .025"



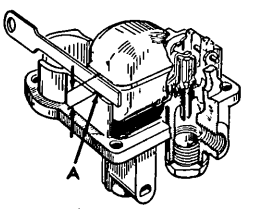
Breaker Point Setting .020"



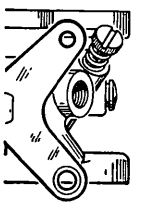
Ignition Timing Breaker Points to Open 2° B. T. D. C.



Valve Setting Cold
Intake .016"
Exhaust .016"



Float Setting (Use Gauge) ⅜ Inch (Measure from point "A" to top of float seam)



Idle Adjustment Screw Setting ½ to 1½ Turns Open

CARBURETER ADJUSTMENTS

Pump Adjustment: With throttle lever set screw backed out and throttle valve seated, place universal pump travel gauge T109-117S on bowl cover with lip of gauge extending over plunger shaft. Hold gauge vertical. The difference between closed and wide open throttle reading at index mark should be 14/64 inch plunger travel.

Adjust by bending throttle connector rod at lower angle.

Metering Rod Adjustment: Metering rod adjustment must be made after pump adjustment or when leaner than standard rods are installed. With throttle lever set screw backed out and throttle valves seated, insert gauge T109-102 in place of metering rod. Press down on metering rod arm until upper lip of arm contacts pin in pump arm. There should now be less than .005 inch between pin and notch in gauge.

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Adjust by bending upper lip on metering rod arm

After adjusting upper lip of metering rod arm, it is necessary to adjust the lower lip Procedure is as follows Press down on metering rod arm until upper lip contacts pin in pump arm Adjust lower lip for 3/16 inch clearance between pin in pump arm and upper surface of lower lip

Anti-Percolator Adjustment Crack throttle valve 030 inch by placing gauge T109-29 between throttle valve and bore of carbureter, side opposite idle port There should now be 025 inch (T109-189 may be used) clearance between rocker arm lip and pump arm

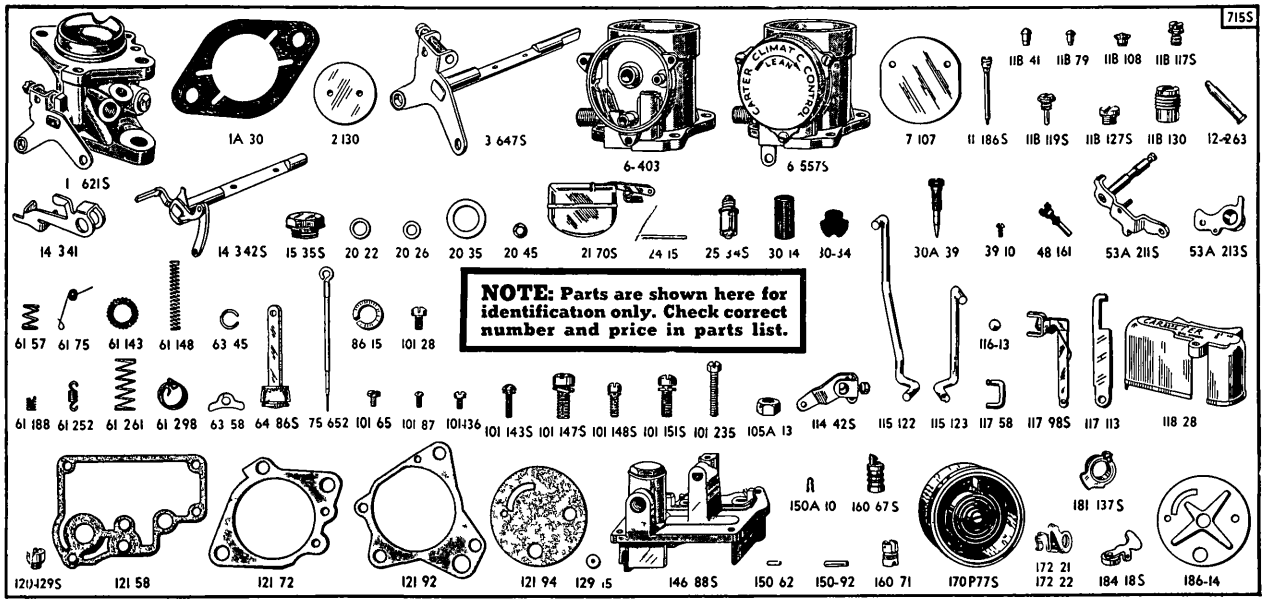
Adjust by bending rocker arm, use T109-105

Fast Idle Adjustment With thermostatic coil housing, gasket and baffle plate removed, crack throttle valve and hold choke valve closed Then close throttle There should now be 046 inch (T109-158 may be used) between throttle valve and bore of carbureter

Adjust by bending choke connector rod at lower angle, use T109-41

Unloader Adjustment Must be made after fast idle adjustment Hold throttle valve wide open and close choke valve as far as possible without forcing There should now be 3/16" between lower edge of choke valve and inner wall of air horn

Adjust by bending arm on choke trip lever (use tool T109-187)



Studebaker Champion—1949-1952—Carbureter No. 715S

WHEN SERVICING, USE GASKET ASSORTMENT No. 186A, REPAIR PACKAGE No 1504

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-621S	Body flange assembly	
1A-41	FLANGE GASKET	
2-130	Throttle valve	
3-647S	Throttle shaft and lever assembly	
6-403	Air horn	
6-557S	Air horn and Climatic ® control assembly (Sup by 6-728S)	
6-728S	Air horn and Climatic ® control assembly	
7-107	Choke valve	
11-186S	LOW SPEED JET ASSEMBLY	
11B-41	Nozzle passage rivet plug	
11B-79	Rivet plug	(5)
11B-108	Idle port rivet passage plug	
11B-117S	Idle passage plug assembly	
11B-119S	Ball retainer screw plug assembly	
11B-127S	Passage plug assembly	(2)
11B-130	Nozzle retainer plug	
12-263	Nozzle	
14-341	Choke trip lever	
14-342S	Choke piston lever and shaft assy	
15-35S	Strainer nut assembly	
20-22	Gasket	(3)
20-26	Gasket	(3)
20 35	Strainer nut gasket	
20 45	NOZZLE GASKET	
21-70S	Float and lever assembly	
24-15	Float lever pin	
25-34S	NEEDLE AND SEAT ASSEMBLY	
30-14	BOWL STRAINER GAUZE	
30-34	PUMP STRAINER	
30A-39	Idle adjustment screw	
39-10	CHOKE VALVE ATTACHING SCREW	(2)
48-161	PUMP JET	
53A 211S	Pump operating lever and countershaft assy	
53A-213S	Pump arm and collar assembly	
61-57	Idle adjustment screw spring	
61-75	Metering rod spring	
61-143	Plunger spring	
61-148	VACUUM PISTON SPRING	
61-188	Rocker arm spring	
61-252	Pump operating lever spring	
61-261	Pump spring	
61-298	Fast idle cam spring	
63-45	Ball retainer ring	
63-58	Coil housing retainer	(3)
64 86S	PUMP PLUNGER AND ROD ASSY (Identify by shaft No 49-123)	
75-652	METERING ROD—STANDARD (072' - 072" to 061"- 042)	
75 666	Metering rod—1 size lean (0735 '- 0735" to 064"- 046")	
75-667	Metering rod—2 sizes lean (074' - 074" to 066"- 050")	
75 672	Metering rod—3 sizes lean (075"- 075' to 068 '- 054")	
75-668U	Unitized package (consists of (1) 75 666 and (1) 75-667)	
86-15	Flange stud lock washer	(2)
101-28	Throttle shaft arm clamp screw	
101-65	Baffle plate attaching screw	
101-87	Throttle valve attaching screw	(2)
101-136	Coil housing attaching screw	(3)
101-143S	Choke housing attaching screw and washer assembly	
101-147S	Body flange attaching screw and washer assembly	(2)
101-148S	Bowl and dust cover attaching screw and washer assembly	(5)
101-151S	Air horn attaching screw and washer assembly	(2)
101-235	Throttle lever adjusting screw	
105A-13	Flange nut	(2)
114 42S	THROTTLE SHAFT ARM AND SCREW ASSEMBLY	
115-122	THROTTLE CONNECTOR ROD	
115-123	Choke connector rod	
116-13	PUMP CHECK BALL	(2)
117-58	PUMP CONNECTOR LINK	
117-98S	Vacuum piston link and spring assy	
117-113	Fast idle link	
118-28	Dust cover	
120-129S	METERING ROD JET ASSEMBLY	
121-58	BOWL COVER GASKET	
121-72	BODY FLANGE GASKET	
121 92	AIR HORN GASKET	
121-94	THERMOSTATIC COIL HOUSING GASKET	
129-15	Metering rod disk	
146-88S	Bowl cover assembly	
150-62	Choke piston pin	
150-92	Anti-percolator pin	
150A 10	PIN SPRING	(2)
160-67S	Vacuum piston and pin assembly	
160 71	Choke piston	
170P-77S	Thermostatic housing and coil assembly (Sup by 170U-61S)	
170U-61S	Thermostatic housing and coil assembly	
172-21	THROTTLE CONNECTOR ROD RETAINER (LOWER) AND CHOKE CONNECTOR ROD RETAINER	(2)
181-137S	Fast idle cam assembly	
184-18S	ANTI-PERCOLATOR CAP AND ROCKER ARM ASSY	
186-14	Coil housing baffle plate	

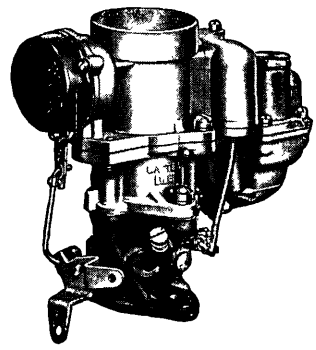
NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

MODELS

5A-6A (217 cu. in. engines)

7A - 8A - 9A - 10A - 11A - 12A - 14A - 15A (226 cu. in. engines)

16A-17A (245 cu. in. engines)



STUDEBAKER COMMANDER-17A 1950

DICTATOR 5A-6A 1935-1937

COMMANDER 8A-16A 1938-1949

Casting Number 511 on Face of Flange

WE Down-Draft **Carbureters 627S-627SA** With Climatic® Control

CARBURETER SPECIFICATIONS

For Studebaker Dictator, Six Cylinder Engine 3¼ Inch Bore 4⅜ Inch Stroke (1935 1937)
For Studebaker Commander Six Cylinder Engine 3 5/16 Inch Bore 4⅜ Inch Stroke (1938 1948)
For Studebaker Commander Six Cylinder Engine 3 5/16 Inch Bore 4¾ Inch Stroke (1949 1950)

Dimensions Flange size 1¼ inch S A E
Primary venturi 11/32 inch I D
Secondary venturi 11/16 inch I D
Main venturi 1 5/16 inch I D

Float Level Distance from seam of float (at free end) to tip on lower edge of float chamber cover when needle is seated to be 7/16 inch

Vents Outside No 10 drill Inside none

Gasoline Intake Square vertical needle Size No 38 drill hole in needle seat

Low Speed Jet Tube Jet size No 67 (032 inch) drill
By pass size No 55 drill
Economizer 059 060 inch diameter
Idle bleed, size No 50 drill

Idle Port Length 165 inch width 030 inch

Idle Port Opening 112 to 116 inch above top edge of valve with valve closed tight

Idle Screw Seat No 46 drill

Set Idle Adjustment Screw ½ to 1½ turns open For richer mixture turn screw out Do not attempt to idle engine below 8 m p h

Main Nozzle In primary venturi angle 45° Closed tip
Inside diameter No 30 drill
Upper hole 035 inch diameter on 45° angle
Lower hole 0945 inch diameter on 60° angle

Metering Rod (Vacumeter Type) Economy step 074 inch diameter middle step tapers to 063 inch diameter power step 040 inch diameter Length 3 9/64 inches

Metering Rod Jet 098 inch diameter

Metering Rod Setting Use gauge part No T109 102 (2 468 inches)

Accelerating Pump High pressure type (spring operated lever) with non adjustable stroke
Pump discharge jet size No 71 drill
Relief passage (to outside) size No 42 drill
Intake ball check seat size No 40 drill
Discharge ball check seat size No 32 drill

Pump Adjustment 20/64 inch plunger travel full throttle position Use gauge No T109 117S

Choke Carter Climatic® control set at index
Butterfly type offset valve
Choke heat suction hole in body size No 36 (1065 inch) drill

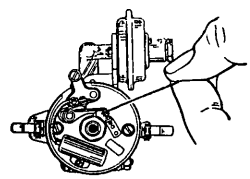
Vacuum Spark Port Slot (round end) type size 032" x 093" top of port 065" 069" (early production) 070" (late production) above top edge of valve

Motor Tune-Up—Be Accurate!

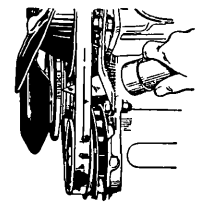
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



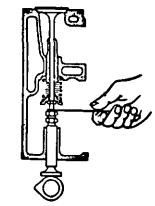
Spark Plug Gap
025" ± 002'



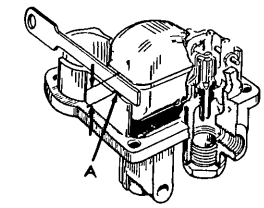
Breaker Point Setting
020" ± 002"



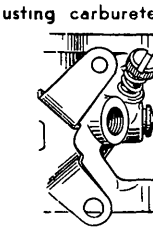
Ignition Timing Breaker Points to Open
2° B T D C



Valve Setting (Cold)
Int & Exh 016"



Float Setting
7/16 Inch
(Use Gauge T109 81)



Idle Adjustment Screw Setting
½ to 1½
Turns Open

CARBURETER ADJUSTMENTS

Pump Adjustment With throttle lever set screw backed out and throttle valve seated place universal pump travel gauge T109 117S on bowl cover with lip of gauge extending over plunger shaft Hold gauge vertical The difference between closed and wide open throttle reading at index mark should be 20 (20/64 inch) plunger travel

Adjust by bending throttle connector rod at lower angle

Metering Rod Adjustment Metering rod adjustment must be made after pump adjustment or when leaner than standard rods are installed With throttle lever set screw backed out and throttle valves seated insert gauge T109 102 in place of metering rod Press down on metering rod arm

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until upper lip of arm contacts pin in pump arm. There should now be less than .005 inch between pin and notch in gauge.

Adjust by bending upper lip on metering rod arm.

After adjusting upper lip of metering rod arm, it is necessary to adjust the lower lip. Procedure is as follows: Press down on metering rod arm until upper lip contacts pin in pump arm. Adjust lower lip for 3/16 inch clearance between pin in pump arm and upper surface of lower lip.

Anti-Percolator Adjustment: Crack throttle valve .030 inch by placing gauge T109-29 between throttle valve and bore of carbureter, side opposite idle port. There should now be .005 inch to .015 inch clearance between rocker arm lip and pump arm.

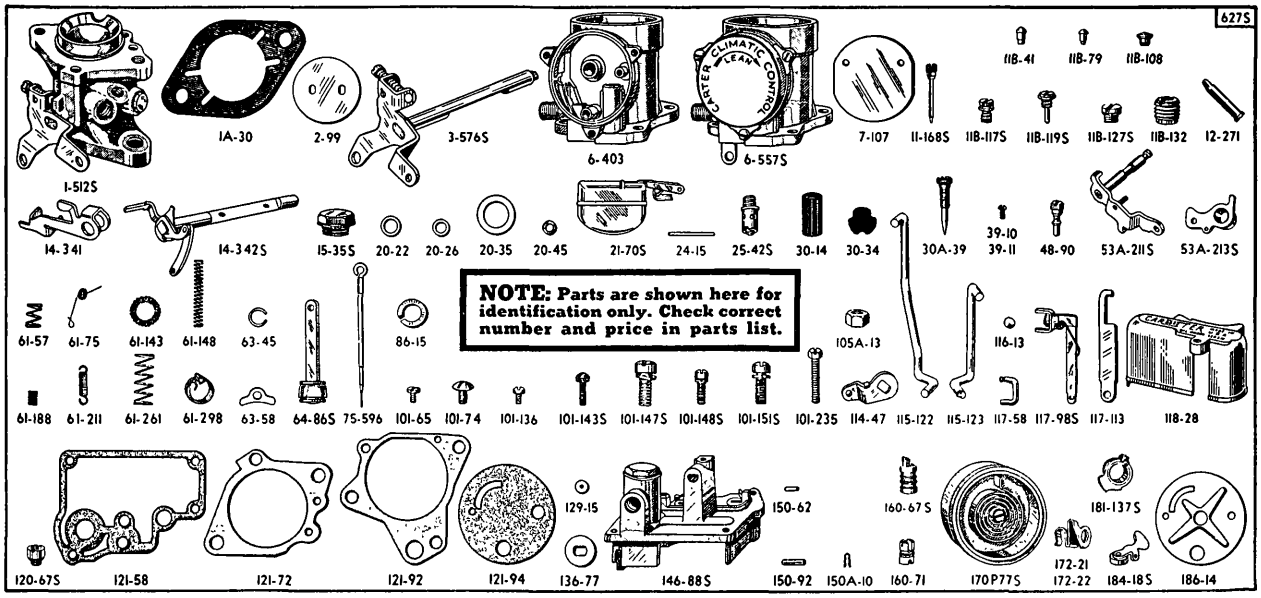
Adjust by bending rocker arm.

Fast Idle Adjustment: With thermostatic coil housing, gasket and baffle plate removed, crack throttle valve and hold choke valve closed. Then close throttle. There should now be .054 inch (T109-193) between throttle valve and bore of carbureter.

Adjust by bending choke connector rod at lower angle.

Unloader Adjustment: Must be made after fast idle adjustment. Hold throttle valve wide open and close choke valve as far as possible without forcing. There should now be 17/64 inch between lower edge of choke valve and inner wall of air horn.

Adjust by bending arm on choke trip lever (use Tool T109-187).



Studebaker—1935-1950—Carbureters Nos. 627S-627SA

WHEN SERVICING, USE GASKET ASSORTMENT No. 186A; REPAIR PACKAGE No. 1520

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

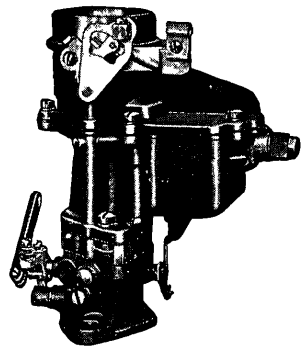
Part No.	PART NAME
1-512S	Body flange assembly
1A-41	FLANGE GASKET
2-99	Throttle valve
3-576S	Throttle shaft and lever assembly
6-403	Air horn
6-557S	Air horn and Climatic® control assembly
7-107	Choke valve
11-168S	LOW SPEED JET ASSEMBLY
11B-41	High speed passage rivet plug
11B-79	Rivet passage plug (5)
11B-108	Idle port rivet passage plug
11B-117S	Idle passage plug assembly
11B-119S	Ball retainer screw plug assembly
11B-127S	Passage plug assembly (2)
11B-132	Nozzle retainer plug
12-271	Nozzle
14-341	Choke trip lever
14-342S	Choke lever, piston link, and shaft assembly
15-35S	Strainer nut assembly
20-22	Gasket (3)
20-26	Gasket (3)
20-35	Strainer nut gasket
20-45	NOZZLE GASKET
21-70S	Float and lever assembly
24-15	Float lever pin
25-42S	NEEDLE AND SEAT ASSEMBLY
30-14	BOWL STRAINER GAUZE
30-34	PUMP STRAINER
30A-39	Idle adjustment screw
39-10	CHOKE VALVE ATTACHING SCREW (2)
39-11	THROTTLE VALVE ATTACHING SCREW (2)
48-90	PUMP JET
53A-211S	Pump operating lever and countershaft assembly
53A-213S	Pump arm and collar assembly
61-57	Idle adjustment screw spring
61-75	Metering rod spring
61-143	Pump plunger spring
61-148	VACUUM PISTON SPRING
61-188	Rocker arm spring
61-211	Pump operating lever spring
61-261	Pump spring
61-298	Fast idle cam spring
63-45	Ball retainer ring
63-58	Coil housing retainer (3)
64-86S	PUMP PLUNGER AND ROD ASSEMBLY
75-596	Metering rod—Standard—.074"-.074" to .063"-.043" (Sup. by 75-698)
75-689	Metering rod—1 size lean (Sup. by 75-725)
75-690	Metering rod—2 sizes lean (Sup. by 75-726)
75-691	Metering rod—3 sizes lean (Sup. by 75-727)
75-692U	Unitized package (Consists of 75-689 and 75-690) (Sup. by 75-728U)
75-698	METERING ROD—STANDARD—.074"-.074" to .063"-.040"
75-725	Metering rod—1 size lean—.076"-.076" to .067"-.044"
75-726	Metering rod—2 sizes lean—.077"-.077" to .070"-.047"
75-727	Metering rod—3 sizes lean—.078"-.078" to .072"-.050"
75-728U	Unitized package (Consists of 1—75-725 and 1—75-726)
86-15	Flange stud lock washer
101-65	Baffle plate attaching screw
101-74	Throttle shaft screw
101-136	Coil housing attaching screw (3)
101-143S	Choke housing attaching screw and washer assembly
101-147S	Body flange attaching screw and washer assembly (2)
101-148S	Bowl and dust cover attaching screw and washer assembly (5)
101-151S	Air horn attaching screw and washer assembly (2)
101-235	Throttle lever adjusting screw
105A-13	Flange nut
114-47	THROTTLE SHAFT ARM
115-122	THROTTLE CONNECTOR ROD
115-123	Choke connector rod
116-13	PUMP CHECK BALL (2)
117-58	PUMP CONNECTOR LINK
117-98S	Vacuum piston link and spring assembly
117-113	Fast idle link
118-28	Dust cover
120-67S	METERING ROD JET ASSEMBLY
121-58	BOWL COVER GASKET
121-72	BODY FLANGE GASKET
121-92	AIR HORN GASKET
121-94	THERMOSTATIC COIL HOUSING GASKET
129-15	Metering rod disk
136-77	Throttle shaft arm washer
146-88S	Bowl cover assembly
150-62	Choke piston pin
150-92	Anti-percolator pin
150A-10	PIN SPRING (2)
160-67S	Vacuum piston and pin assembly
160-71	Choke piston
170P-77S	Thermostatic housing and coil assembly
172-21	THROTTLE AND CHOKE CONNECTOR ROD RETAINER (2)
181-137S	Fast idle cam assembly
184-18S	ANTI-PERCOLATOR CAP AND ROCKER ARM ASSEMBLY
186-14	Coil housing baffle plate

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

MOTOR SERIAL NUMBERS
3M-001 and higher

CAR SERIAL NUMBERS
M16-001 and higher

NOTE When using 514S to supersede 427S and 429S, throttle lever assembly 4-409S must be drilled out with a 17/64 inch drill to accommodate the larger size accelerating rod Use part No 118-33 (1/8 inch pipe plug) to plug vacuum spark port



STUDEBAKER TRUCK K20-K25 1940-1942 M16-M17 1941-1948

BBR1 DOWN-DRAFT **CARBURETER 514S**

CARBURETER SPECIFICATIONS

For Studebaker Six Cylinder Engine 3 5/16 Inch Bore 4 3/8 Inch Stroke

Dimensions Flange size 1 1/4 inch S A E
Throttle bore 1 7/16 inch (36 51 mm)
Main venturi 1 1/4 inch (31 75 mm)

Float Setting Top of float 5/64 inch (1 98 mm) below top surface of carbureter body casting Plus or minus 1/64 inch (397 mm)

Bowl Vent Outside Size 3/16 inch (4 76 mm) diameter

Gasoline Intake Needle Triangular horizontal No 44 (2 18 mm) drill in needle seat

Idle Orifice Tube Jet size 0276 (70 mm)
Idle passage air bleed (in body) size 067 inch (1 70 mm) diameter
Restriction in body size 051 to 052 inch (1 30 to 1 32 mm) diameter

Idle Ports Upper port keyhole type length 160 inch (4 06 mm) width 030 inch (76 mm) 045 inch (1 14 mm) diameter hole at top Top of port located 118 to 122 inch (3 00 to 3 10 mm) above top of valve
Lower port size 053 to 057 inch (1 35 to 1 45 mm) diameter (For idle adjustment screw)

Set Idle Adjustment Screw 1/2 to 1 turn open
For richer mixture turn screw out Do not idle engine below 400 450 r p m or 6 miles per hour

Main Metering Jet Calibrated to flow 248 to 252 cc per minute (Do not gauge for size If in doubt replace with new part)

Main Vent Through diffuser (air bleed inside bowl) size 0315 (80 mm) drill

Main Vent Tube Side Holes
1—No 76 (020 inch) (508 mm) diameter 11/16 inch (17 46 mm) from end
1—No 73 (024 inch) (610 mm) diameter 1 3/16 inch (30 16 mm) from end
1—No 70 (028 inch) (712 mm) diameter 1 5/16 inch (33 34 mm) from end
1—No 70 (028 inch) (712 mm) diameter 1 27/64 inch (38 10 mm) from end
1—No 70 (028 inch) (712 mm) diameter 1 1/2 inch (38 10 mm) from end
1—No 68 (031 inch) (812 mm) diameter 1 39/64 inch (40 88 mm) from end
1—No 68 (031 inch) (812 mm) diameter 1 11/16 inch (42 86 mm) from end

Step up Jet 0394 inch (1 00 mm) drill size

Accelerating Pump Type delayed action Stroke summer setting (inner hole short stroke) Intermediate setting (center hole) Winter setting (outer hole long stroke) Pump intake passage ball check seat size 115 to 120 inch (2 92 to 3 05 mm) diameter
Pump discharge passage restriction (under ball check) size 062 to 065 inch (1 58 to 1 65 mm) diameter in body
Pump (discharge) jet size 0236 inch (60 mm)

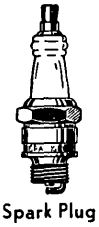
Pump Adjustment 38/64 inch plunger travel with pump link in medium stroke hole

Choke Butterfly type with poppet valve

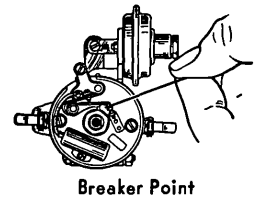
Vacuum Spark Port Horizontal slot type size 040 by 110 (1 016 by 2 794 mm) Top of port 035 to 041 inch (89 to 1 04 mm) above top edge of valve

Motor Tune-Up—Be Accurate! Always Use Feeler Gauges!

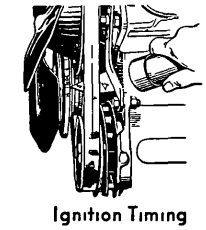
CAUTION Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter



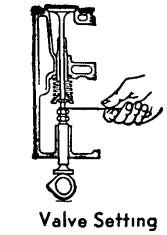
Spark Plug Gap 025"



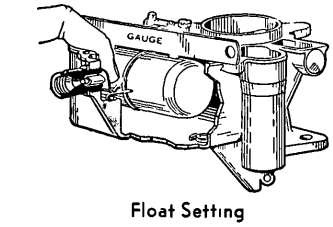
Breaker Point Setting 020"



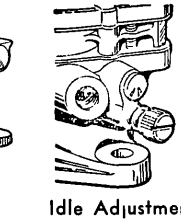
Ignition Timing Breaker Points to Open 2° B T D C



Valve Setting (Cold) Int & Exh 016"



Float Setting (Use Gauge) 5/64 Inch



Idle Adjustment Screw Setting 1/2 to 1 Turns Open

CARBURETER ADJUSTMENTS

If carbureter loads up after considerable service, check float level Wear on lip of float lever will raise float level Before adjusting float be sure float lever pin is firmly seated Reset float level by bending lip of float lever away from needle to raise level or bend lip toward needle to lower float level Bend vertical lip of float only

If motor stalls while idling, set throttle lever adjusting screw so motor runs approximately 400 r p m Then set idle adjustment screw to specifications If these adjustments do not correct the trouble remove idle orifice tube and plug assembly Clean tube and passages with compressed air

If acceleration is not satisfactory, remove pump jet and clean with compressed air However it is usually advisable to replace the pump jet as its cost is nominal All jets must be seated gasoline tight Poor acceleration may be due to damaged or worn plunger leather in accelerating pump sediment in pump cylinder or clogged intake ball check at bottom of pump cylinder and discharge ball check in discharge passage If plunger is removed from cylinder use care in installing to avoid damage to plunger leather

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CARBURETER
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Correct air fuel ratio is provided by a "balance tube" in the air horn The balance tube should be checked each time the carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type, size or condition of air cleaner Should the cleaner become clogged, the capacity will be reduced but the air-fuel mixture ratio will not be changed

Excessive richness above 50 miles per hour may be caused by a clogged main vent tube After removal of rivet plug beneath float bowl with tool No T109-43 main vent tube can be removed and a new tube inserted with tool No. T109-195 Care must be exercised in inserting new tube which must seat tightly Use new rivet to complete the installation

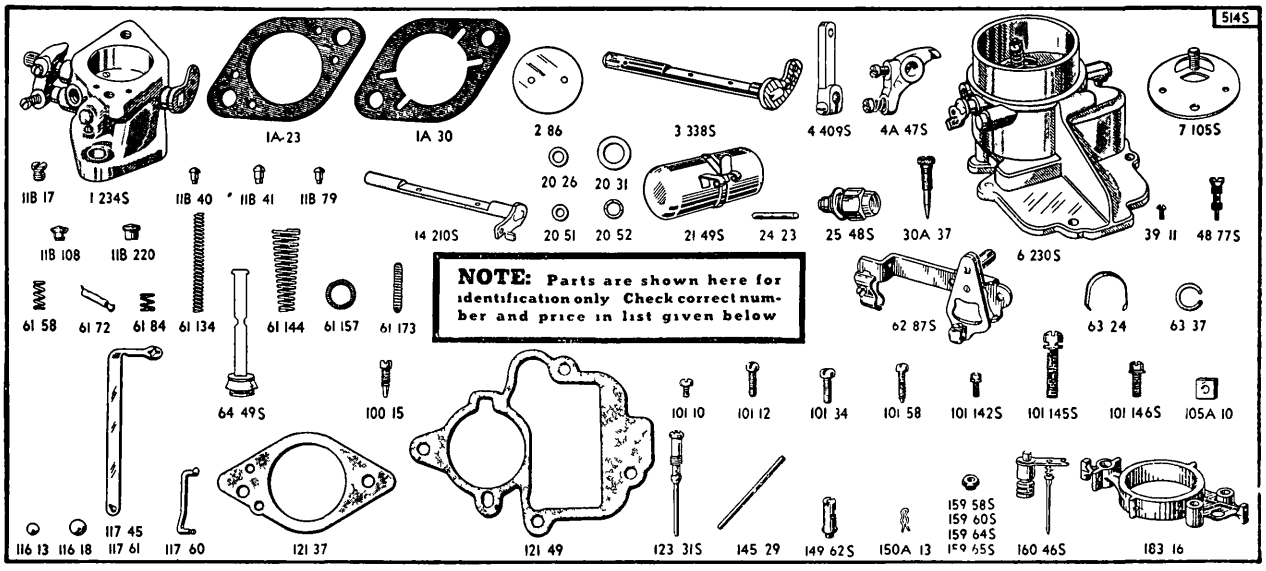
Pump adjustment Remove air horn assembly, back out throttle adjustment screw, and place pump operating link in center hole of throttle shaft arm Adjustment can be made by bending horizontal portion of pump connector link, so that top of pump plunger shaft contacts lip of indicator on pump stroke gauge T109-117S Correct travel is 38/64"

Pump stroke adjustable for high or low temperature Set to longest stroke for cold weather, shorter stroke for hot weather driving

Maximum economy and performance are secured only when breaker points, spark plugs, valves and motor timing are set to manufacturer's specifications After motor is properly tuned, the following should also be done to insure satisfactory performance and economy

(a) Float level must be set as above
(b) Step-up rod in step-up jet must seat and move freely When reassembling, jet must be screwed in tight against seat
(c) Step-up piston in body casting should not bind and must be free of dirt
(d) Main metering jet can be replaced with leaner than standard metering jets for altitude

Caution Do not attempt to gauge metering jets with drills These jets have been flow-tested to insure correct fuel flow



Studebaker Truck—1940-1948—Carbureter No. 514S

WHEN SERVICING, USE GASKET ASSORTMENT No 121, REPAIR PACKAGE No 1386A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-234S	Body flange assembly	
1A 23	★Flange gasket (with governor)	
1A-30	FLANGE GASKET (WITHOUT GOVERNOR)	
2-86	Throttle valve	
3-338S	Throttle shaft and arm assembly	
4-409S	†Throttle lever assembly	
4A-47S	Fast idle cam (Sup by 4A 55S)	
4A-55S	Fast idle cam	
6-230S	Air horn assembly	
7-105S	Choke valve assembly	
11B-17	Pump check plug	
11B-40	Rivet plug (Sup by 11B 79)	(2)
11B 41	Rivet plug	
11B-79	Rivet plug	(2)
11B-108	IDLE PORT RIVET PLUG	
11B-220	MAIN VENT TUBE RIVET PLUG	
14-210S	Choke control lever and shaft assembly	
20-26	Main metering screw gasket	
20-31	Needle seat gasket	
20 51	Step-up jet gasket	
20-52	STEP-UP PISTON GASKET	
21-49S	Float and lever assembly	
24 23	Float lever pin	
25-48S	NEEDLE AND SEAT ASSEMBLY	
30A-37	Idle adjustment screw	
39-11	Valve attaching screw	(4)
48-77S	PUMP JET ASSEMBLY	
61-58	Throttle lever adjusting screw spring	
61-72	Choke pull-back spring	
61-84	Idle adjustment screw spring	
61-134	STEP-UP PISTON SPRING	
61-144	PUMP SPRING (CONICAL)	
61-157	Plunger spring	
61-173	Pump check spring	
62 87S	Choke tube bracket assembly	
63-24	FLOAT LEVER PIN RETAINER	
63 37	PUMP RETAINER RING	
64 49S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49-104)	

Part No.	PART NAME	
100-15	Headless screw	
101-10	Wire clamp screw	
101-12	Choke bracket attaching screw	
101-34	†Throttle lever clamp screw	
101-58	Throttle adjusting screw	
101-142S	Choke bracket attaching screw assembly	
101-145S	Body flange attaching screw assembly	(2)
101-146S	Air horn attaching screw assembly (Sup by 101-150S)	
101-150S	Air horn attaching screw and washer assembly	(4)
105-12	†Throttle lever clamp screw	
105A-8	†Throttle lever clamp screw nut	
105A-10	Choke tube clamp nut	
116-13	PUMP CYLINDER BALL	
116-18	PUMP CHECK BALL	
117-45	Pump lifter link (Sup by 117-61)	
117-60	PUMP LINK	
117-61	PUMP LIFTER LINK	
121-37	BODY FLANGE GASKET	(2)
121-49	BODY GASKET	
123-31S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
145-29	MAIN VENT TUBE	
149-62S	STEP-UP JET ASSEMBLY	
150A-10	PIN SPRING	
150A-13	Pin spring (Sup by 150A-10)	
159-58S	MAIN METERING JET ASSEMBLY—STANDARD	
159-60S	Main metering jet assembly—1 size lean	
159 64S	Main metering jet assembly—2 sizes lean	
159 65S	Main metering jet assembly—3 sizes lean	
159-84U	Unitized package (Consists of 159-60S and 159-64S)	
159 85U	Unitized package (Consists of 159-64S and 159-65S)	
160-46S	STEP-UP PISTON, PLATE AND ROD ASSEMBLY	
183-16	Insulator	

†Use 101-34 with cast throttle lever (early production), 105-12 and 105A-8 with stamped throttle lever (late production)

★This gasket to be installed between carbureter and governor when governor is installed Original flange gasket to remain between governor and manifold

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

MOTOR SERIAL NUMBERS

1946—Champion (5G)—216501 and higher
1947—Champion (6G)—236001 and higher
1946—M5 Truck—1M-5001 and higher
1946—M15 Truck—2M-6401 and higher

CAR SERIAL NUMBERS

1946—Champion (5G)—G193001 and higher
1947—Champion (6G)—South Bend G212501 and higher. Los Angeles G824001 and higher.
1948—Champion (7G)—South Bend G314501 and higher. Los Angeles G827301 and higher.
1946—M-5 Truck—M5-5001 and higher
1946—M15 Truck—M15-6401 and higher

STUDEBAKER CHAMPION-5G-1946 CHAMPION-6G-1947 CHAMPION-7G-1948 AND M5-M15 TRUCKS 1946-1947

(715S can also be used)

WE Down-Draft **Carbureters 532S-661S** With Climatic® Control

CARBURETER SPECIFICATIONS

For Studebaker Six Cylinder Engine: 3 Inch Bore, 4 Inch Stroke

Dimensions: Flange size, 1¼ inch S. A. E.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 11/16 inch I. D.
Main venturi, 1-3/16 inch I. D.

Float Level: Distance from seam of float (at free end) to tip on lower edge of float chamber cover, when needle is seated to be ¼ inch (532S), ⅜ inch (661S).

Vents: Outside, No. 10 drill. Inside, none.

Gasoline Intake: Square vertical needle. Size No. 46 drill hole in needle seat.

Low Speed Jet Tube: Jet size, .036 inch.
By-pass, size No. 50 drill.
Economizer, .0755-.0765 inch diameter.
Idle bleed, size No. 50 drill.

Idle Port: Length, .200 inch; width, .030 inch.

Idle Port Opening: .010 to .014 inch below lower edge of valve with valve closed tight.

Idle Screw Seat: No. 46 drill.

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture turn screw out. Do not attempt to idle engine below 8 m.p.h.

Main Nozzle: In primary venturi, angle 45°. Angled tip. Inside diameter No. 30 drill.
Discharge jet size, .086 inch.

Metering Rod: (Vacumeter Type) Economy step, .068 inch diameter; middle step tapers to .060 inch diameter; power step .043 inch diameter. Length 3-9/64 inches.

Metering Rod Jet: .098 inch diameter.

Metering Rod Setting: Use gauge, part No. T109-102 (2.468 inches).

Accelerating Pump: High pressure type (spring operated lever) with non-adjustable stroke.
Pump discharge jet, size No. 71 drill.
Relief passage (to outside), size No. 42 drill.
Intake ball check seat, size No. 40 drill.
Discharge ball check seat, size No. 32 drill.

Pump Adjustment: 17/64 inch plunger travel full throttle position. Use gauge No. T109-117S

Choke: Carter Climatic® Control, (532S) set at index, (661S) set one point lean. Butterfly type, offset valve.
Choke heat suction hole, in body, (532S) size No. 28 (.1405") drill, (661S) size No. 36 (.1065") drill.

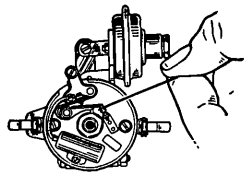
Vacuum Spark Port: .1005 to .1025 inch diameter. Top of port .055-.065 inch above top edge of valve.

Motor Tune-Up—Be Accurate!

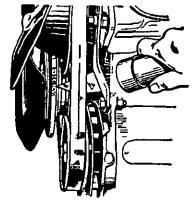
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



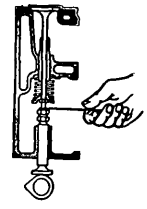
Spark Plug Gap .025"



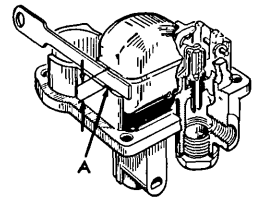
Breaker Point Setting .020"



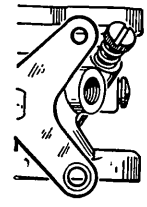
Ignition Timing Breaker Points to Open 2° B. T. D. C.



Valve Setting Cold
Intake .016"
Exhaust .016"



Float Setting (Use Gauge)
¼ Inch (532S)
⅜ Inch (661S)
(Measure from point "A" to top of float seam)



Idle Adjustment Screw Setting ½ to 1½ Turns Open

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THE CARTER CLIMATIC® CONTROL
WE CARBURETER

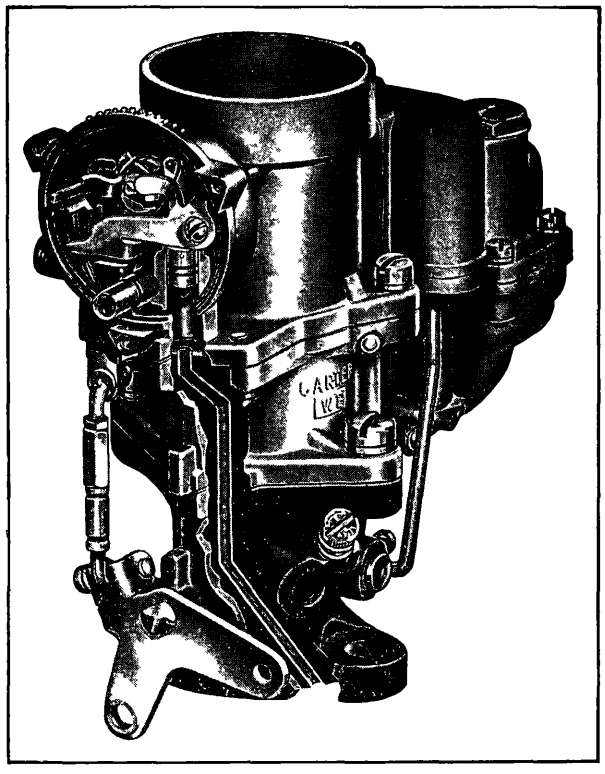


Figure 1

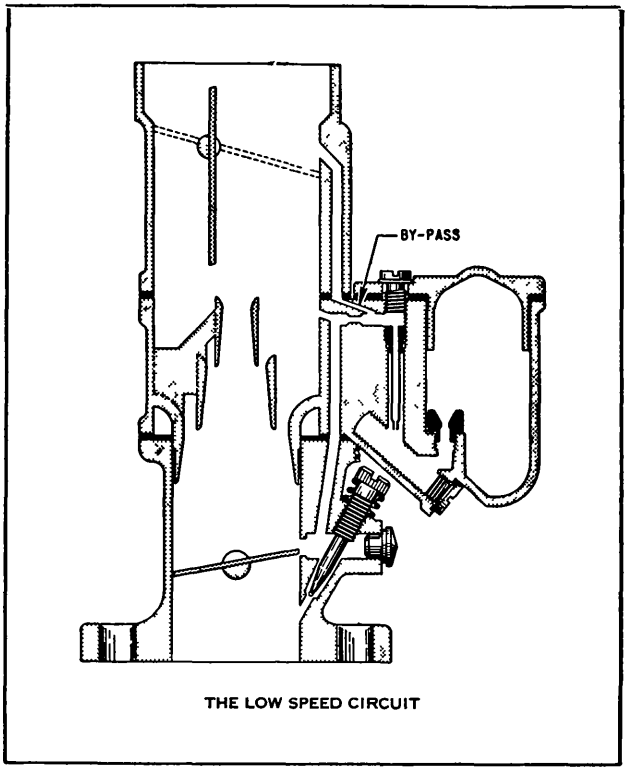


Figure 2

The Carter WE Carbureter is essentially the same as the Carter WA-1. However, there are several changes in the location of parts in the climatic control mechanism. The fast idle cam assembly, choke trip lever, unloader mechanism, etc., are located in the Climatic® control housing In this way all these parts are protected from dirt and other foreign matter (Fig 1)

The by-pass of the low speed circuit is extended to a point above the closed choke valve. This produces a more uniform mixture for part throttle operation while the choke is closed or partly closed. Check to see that the air horn gasket does not leak at this point and the calibrated hole in the upper surface of the body is clean

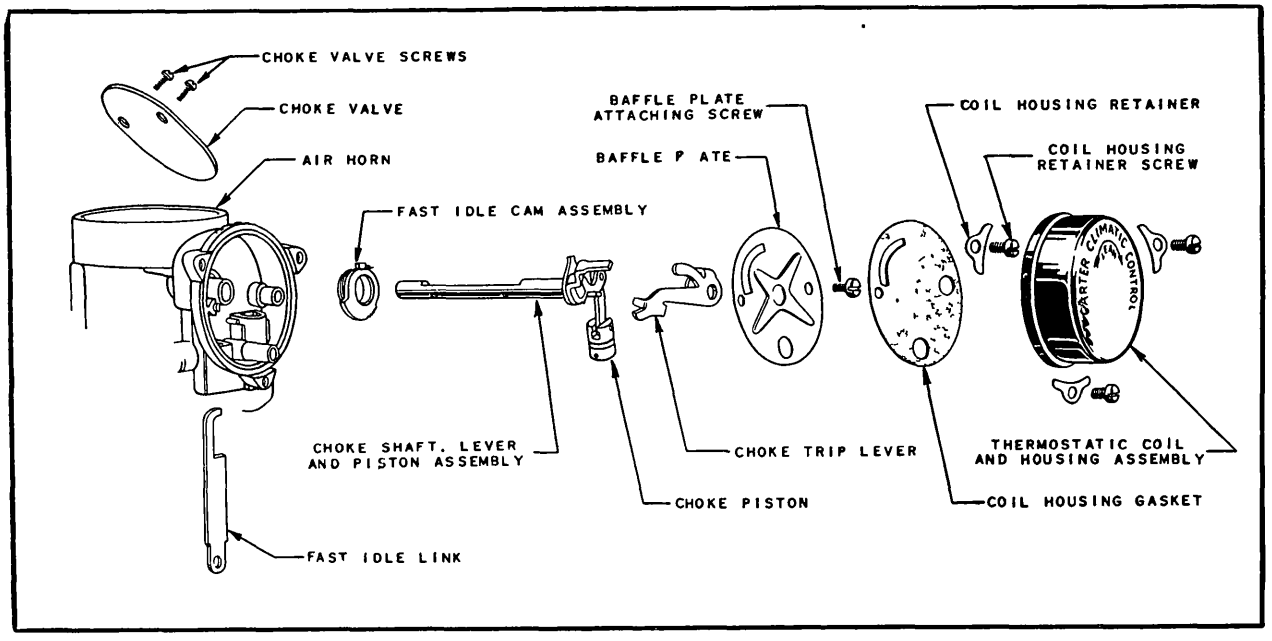


Figure 3

CLIMATIC® CONTROL ASSEMBLY

Slide fast idle cam assembly onto choke shaft. Install choke shaft into air horn and revolve cam to allow piston to slide freely into cylinder. Then lock fast idle cam spring ends around **nib of cam** and **projecting nib of choke shaft assembly.**

Install choke valve with trademark to top, seating valve before tightening screws. Valve must not bind in any position, but fall free of its own weight. Install fast idle link and choke trip lever. Place washer on choke connector rod assembly before attaching to fast idle link. Install spring and retainer.

Fast idle and unloader adjustments should be made at this point before the balance of climatic control is assembled. (Fig. 4)

Install baffle plate and attaching screw. Install coil housing gasket. With choke wide open, hold coil housing with notch revolved one-quarter turn clockwise from index mark on housing. Place against housing and revolve counter clockwise to center index mark (532S), one point lean (661S) Lock in place with screws and retainer.

CARBURETER ADJUSTMENTS

FLOAT SETTING:

With bowl cover inverted and float lip resting on seated needle, distance from soldered seam of float to small projection on machined surface of bowl cover should be 1/4" (532S), 3/8" (661S). Adjustment should be made by bending lip of float lever.

After making float adjustment, adjust stops on float bracket so free end of float can move 1/2" plus or minus 1/32".

PUMP ADJUSTMENT:

Good acceleration is dependent primarily on the amount of gasoline discharged through the pump jet. This quantity of pump discharge is controlled by the distance the pump plunger travels. Pump travel adjustment should be made each time the carbureter is serviced and must be made before metering rod or anti-percolator settings. Procedure is as follows:

(1) Back out throttle lever adjusting screw to allow throttle valve to seat in bore of carbureter.

(2) Place pump travel gauge (tool T109-117S) on bowl cover with lip of gauge extending over top of plunger shaft

(3) Turn knurled nut of gauge until lip rests on top of plunger shaft, **with throttle valve seated.** Read number on gauge indicated by notch in knurled nut.

(4) Repeat operation number 3 with throttle valve wide open.

(5) The difference in the readings obtained at closed and at wide open throttle should be "17" (17/64"). ADJUSTMENT IS MADE BY BENDING THROTTLE CONNECTOR ROD AT LOWER ANGLE.

METERING ROD ADJUSTMENT:

Correct setting of metering rod is important and must be made when reassembling carbureter or when leaner than standard **rods are installed** DO NOT DISTURB PUMP ADJUSTMENT.

Remove metering rod and disc, and install gauge T109-102 in place of metering rod, making sure lower end of gauge seats in metering rod jet. Back out throttle lever set screw so throttle valve seats in bore of carbureter. (Make sure fast idle cam does not hold throttle open. Throttle valve **must** be seated.) Press lightly on top of metering rod arm until **upper** lip of arm contacts pin in pump arm. There should be less than .005" clearance between shoulder in notch of gauge and metering rod pin. Adjust by bending upper lip on metering rod arm. Use tool T109-105.

This carbureter provides an added economy measure by means of the second lip on metering rod arm which extends **below** pin in pump arm and should be adjusted as follows:

With throttle valve seated and finger pressing down on metering rod arm so that upper lip contacts pin on pump arm, adjust lower lip for 3/16" clearance between **bottom** of pump arm pin and **upper** surface of lower lip (use gauge T109-28).

ANTI-PERCOLATOR ADJUSTMENT:

Do not disturb pump or metering rod adjustments. Insert .030" gauge (T109-29) between throttle valve and bore of carbureter, side opposite idle port. Bend anti-percolator rocker arm to allow .005"-.015" clearance between rocker arm lip and pump arm.

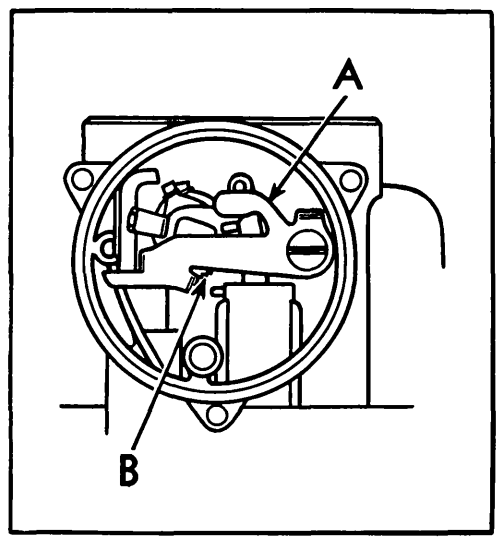
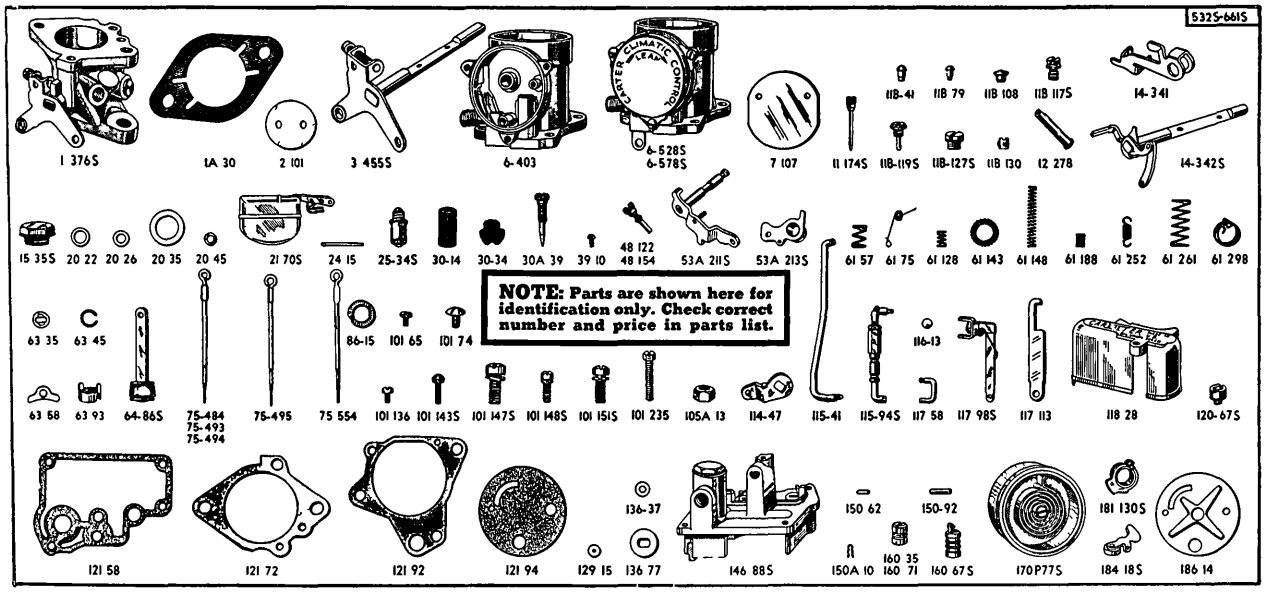


Figure 4

FAST IDLE ADJUSTMENT:

Remove thermostatic coil housing, gasket, and baffle plate. Crack throttle valve, and hold choke valve fully closed, then close throttle. This will allow fast idle cam to revolve to fast idle position ("B"—Fig. 4). With choke valve held tightly closed and slight tension on throttle lever, loosen lock nut on choke connector rod assembly and turn sleeve until there is .054" (gauge T109-193) clearance between throttle valve and bore of carbureter, side opposite idle port. Hold sleeve in position and secure lock nut.

UNLOADER ADJUSTMENT must be made after fast idle adjustment. Hold throttle valve in wide open position and close choke valve as far as possible without forcing. There should be 3/16" clearance between lower edge of choke valve and inner wall of carbureter (gauge T109-28). Adjust by bending arm on choke trip lever ("A"—Fig. 4), use tool T109-187.



Studebaker 1946-47-48—Carbureter Nos. 532S-661S

WHEN SERVICING, USE GASKET ASSORTMENT No 186A; REPAIR PACKAGE No 1356C
PART NAMES IN CAPITAL LETTERS LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME
1-376S	Body flange assembly
1A-30	Flange gasket (Sup by 1A 41)
1A-41	FLANGE GASKET
2-101	Throttle valve
3-455S	Throttle shaft and lever assembly
6-403	Air horn
6-528S	Air horn and Climatic® control assembly (532S)
6-578S	Air horn and Climatic® control assembly (661S)
7-107	Choke valve
11-174S	LOW SPEED JET ASSEMBLY
11B-41	High speed passage rivet plug
11B-79	Rivet passage plug (5)
11B-108	Idle port rivet plug
11B-117S	Idle passage plug assembly
11B-119S	Ball retainer screw plug assembly
11B-127S	Passage plug assembly (2)
11B-130	Nozzle retainer plug
12-278	Nozzle
14-341	Choke trip lever
14-342S	Choke shaft lever and piston assembly
15-35S	Strainer nut assembly
20-22	Gasket (3)
20-26	Gasket (3)
20-35	Strainer nut gasket
20-45	NOZZLE GASKET
21-70S	Float and lever assembly
24-15	Float lever pin
25-34S	NEEDLE AND NEEDLE SEAT ASSEMBLY
30-14	BOWL STRAINER GAUZE
30-34	PUMP STRAINER
30A-39	Idle adjustment screw
39-10	CHOKE AND THROTTLE VALVE ATTACHING SCREW (4)
48-122	Pump jet (Sup by 48 154)
48-154	PUMP JET
53A-211S	Pump operating lever and countershaft assembly
53A-213S	Pump arm and collar assembly
61-57	Idle adjustment screw spring
61-75	Metering rod spring
61-128	Connector rod spring (Use with 115 41) (2)
61-143	Plunger spring
61-148	VACUUM PISTON SPRING
61-188	Rocker arm spring
61-252	Pump operating lever spring
61-261	Pump spring
61-298	Fast idle cam spring
63-35	Spring retainer
63-45	BALL RETAINER RING
63-58	Coil housing retainer (3)
63-93	Spring retainer (Use with 115 41)
64-86S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49-123)
75-484	METERING ROD—STANDARD (.068" .068" to .060" .060" to .043" .043")
75-493	Metering rod—1 size lean (.070" .070" to .063" .063" to .046" .046")
75-494	Metering rod—2 sizes lean (.0715" .0715" to .065" .065" to .050" .050")
75-495	†Metering rod (.073" .073" to .067" .067" to .054"-.054")
75-496U	Unitized package (Consists of 75 493 and 75 494)
86-15	Flange stud lock washer
101-65	Baffle plate attaching screw
101-74	Throttle shaft screw
101-136	Coil housing attaching screw (3)
101-143S	Choke housing attaching screw and washer assembly
101-147S	Body flange attaching screw and washer assembly (2)
101-148S	Bowl and dust cover attaching screw and washer assembly (5)
101-151S	Air horn attaching screw and washer assembly (2)
101-235	Throttle lever adjusting screw
105A-13	Flange nut
114-47	THROTTLE SHAFT ARM
115-41	Throttle connector rod (Sup by 115 122)
115-94S	Choke connector rod assembly (Sup by 115 123)
115-122	THROTTLE CONNECTOR ROD
115-123	Choke connector rod
116-13	PUMP CHECK BALL (2)
117-58	PUMP CONNECTOR LINK
117-98S	Vacuum piston link and spring assembly
117-113	Fast idle link
118-28	Dust cover
120-67S	METERING ROD JET ASSEMBLY
121-58	BOWL COVER GASKET
121-72	BODY FLANGE GASKET
121-92	AIR HORN GASKET
121-94	THERMOSTATIC COIL HOUSING GASKET
129-15	Metering rod disk
136-37	Choke connector rod washer
136-77	Throttle shaft arm washer
146-88S	Bowl cover assembly
150-62	Choke piston pin
150-92	Anti percolator pin
150A-10	PIN SPRING (2)
160-35	Choke piston (661S)
160-67S	Vacuum piston and pin assembly
160-71	Choke piston (532S)
170P-77S	Thermostatic coil and housing assembly
172-21	THROTTLE CONNECTOR ROD RETAINER (Use with 115 122) AND CHOKE CONNECTOR ROD RETAINER (2)
181-130S	Fast idle cam assembly
184-18S	ANTI PERCOLATOR CAP AND ROCKER ARM ASSEMBLY
186-14	Coil housing baffle plate

NOTE TO INSTALL 532S ON 3G-1941 and 4G-1942 STUDEBAKER CHAMPIONS USE ONE 137-58S HEAT TUBE AND COVER ASSEMBLY, ONE 98-10 NUT, AND ONE 99-10 CONE

†For 12 000 ft or higher altitude only

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

MOTOR SERIAL NUMBERS

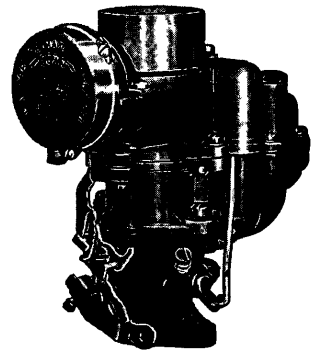
1941-42 Champion—101201 & higher
1945 Champion—2M-2001 & higher

CAR SERIAL NUMBERS

Champion

1941-42 { South Bend —G90101 & higher
Los Angeles—G811201 & higher

1945 M15—2001 & higher



Casting No 356 on Face of Flange

STUDEBAKER CHAMPION AND M5-M15 TRUCKS 1941-1942, M15 TRUCK 1945

(715S can also be used)

WA-1 Down-Draft **Carbureter 496S** With Climatic® Control

CARBURETER SPECIFICATIONS

For Studebaker Six Cylinder Engine 3 Inch Bore 4 Inch Stroke

Dimensions Flange size 1¼ inch S A E
Primary venturi 11/32 inch I D
Secondary venturi 11/16 inch I D
Main venturi 1 3/16 inch I D

Float Level Distance from seam of float (at free end) to tip on lower edge of float chamber cover when needle is seated to be 5/16 inch

Vents Outside No 10 drill Inside none

Gasoline Intake Square vertical needle Size No 38 drill hole in needle seat

Low Speed Jet Tube Jet size No 64 drill
By pass size No 50 drill
Economizer 0755 0765 inch diameter
Idle bleed size No 50 drill

Idle Port Length 200 inch width 030 inch

Idle Port Opening 010 to 014 inch below lower edge of valve with valve closed tight

Idle Screw Seat No 46 drill

Set Idle Adjustment Screw ½ to 1½ turns open For richer mixture turn screw out Do not attempt to idle engine below 8 m p h

Main Nozzle In primary venturi angle 45° Angled tip In side diameter No 30 drill
Discharge jet size No 44 drill

Metering Rod (Vacumeter Type) Economy step 068 inch diameter middle step tapers to 060 inch diameter power step 043 inch diameter Length 3 9/64 inches

Metering Rod Jet 098 inch diameter

Metering Rod Setting Use gauge part No T109 102 (2 468 inches)

Accelerating Pump High pressure type (spring operated lever) with non adjustable stroke
Pump discharge jet size No 72 drill
Relief passage (to outside) size No 42 drill
Intake ball check size No 62 drill
Discharge ball check size No 32 drill

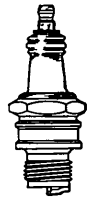
Pump Adjustment 11/64 inch plunger travel full throttle position Use gauge No T109 117S

Choke Carter Climatic® Control set one point lean Butterfly type offset valve
Choke heat suction hole in body size No 28 (1405") drill

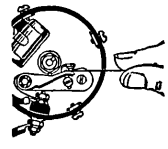
Vacuum Spark Port 1005 to 1025 inch diameter **Early Production** Top of port 045 to 050 inch above top edge of valve **Late Production** Top of port 055 to 060 inch above top eage of valve

Motor Tune-Up—Be Accurate!

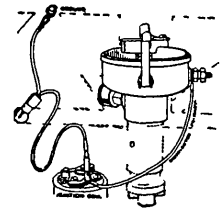
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



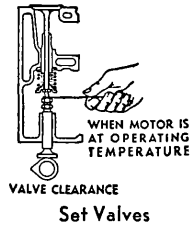
Spark Plug Gap 025"



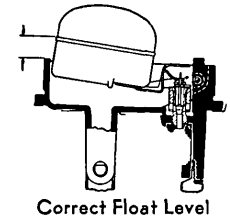
Set Breaker Points 020"



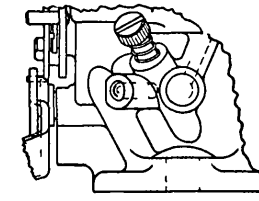
Use Timing Light Breaker Points to Open 2° B T D C



Set Valves COLD
Intake 016"
Exhaust 016"



Correct Float Level (Measure from machined surface of small projection to top of seam) 5/16 Inch



Idle Adjustment Screw Setting ½ to 1½ Turns Open

BRIEF CARBURETER ADJUSTMENTS

Pump Adjustment With throttle valve seated and connector link in place pump plunger should travel 11/64" from closed to wide open position Adjustment should be made by bending throttle connector rod at lower angle Pump travel can be measured by using universal pump stroke gauge T109-117S by placing base of gauge on ridged portions of bowl cover so that projecting portion of pump gauge rests on top surface of connector link at pump shaft Hold gauge vertical The difference between the number shown by index mark on gauge at wide open and closed positions should be 11

Metering Rod Adjustment Correct setting of metering rod is important and must be made after pump adjustment Insert gauge (tool No T109-102) in place of metering rod, seating tapered end in metering rod jet Hold gauge vertical to insure seating With throttle valve seated, press down lightly on piston link directly over piston There should be less than 005 clearance between metering rod pin and shoulder in notch of gauge Gauge must not drag on pin Adjustment can be made by bending lip on piston link so that it contacts pump arm (Use tool T109 105) Remove

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gauge and install metering rod and disk Connect metering rod and spring

Anti-Percolator Adjustment: Crack throttle valve .030" by placing gauge T109-29 between valve and bore of carbureter (side opposite port) Bend rocker arm (use tool T109-105) until there is a clearance of .005" to .015" between rocker arm and pump arm

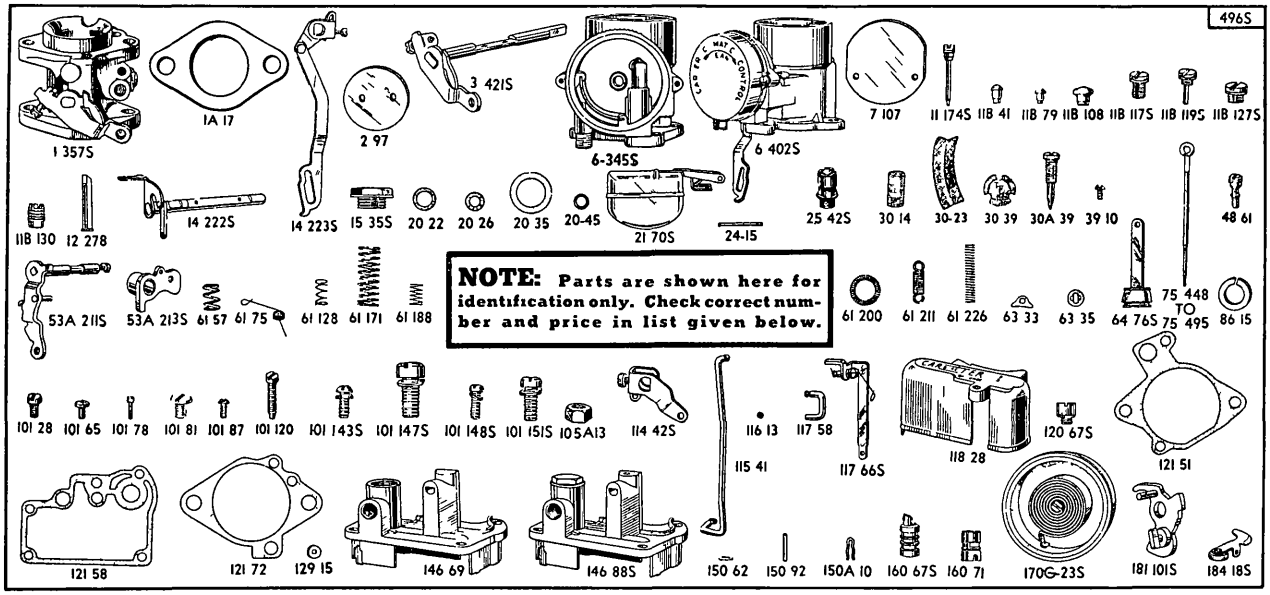
Fast Idle Adjustment. With fast idle cam held in normal idle position, tighten throttle lever adjusting screw until it just seats against cam Hold throttle lever closed and pull cam back until first (or lower) step on cam is against (not on) set screw

There should now be 5/8" clearance between inside wall of air horn and lower edge of choke valve (Use tool T109-85)

Adjustment can be made by bending at offset portion of fast idle link. (Use tool T109-41.)

Unloader Adjustment: With throttle valve wide open there should be 1/4" clearance between lower edge of choke valve and inner wall of air horn (Use tool T109-31) Adjustment should be made by bending cam on throttle lever (Use tool T109-41.)

Lock-Out Adjustment: With throttle and choke valves wide open, choke should lock in wide open position Adjustment should be made by bending lip at lower end of fast idle link to give 1/32" clearance between lip and throttle lever lock, with throttle and choke valves held wide open (Use tool T109-105)



Studebaker Champion—1941-42 and 1945—Carbureter No. 496S

WHEN SERVICING, USE GASKET ASSORTMENT No. 159A; REPAIR PACKAGE No. 1301A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-357S	Body flange assembly	
1A-17	Flange gasket (1¼" S A E) (Sup by 1A-30)	
1A-30	FLANGE GASKET	
2-97	Throttle valve	
3-421S	Throttle shaft and lever assembly	
6-345S	Air horn and piston housing assembly	
6-402S	Air horn and Climatic® control assembly	
7-107	Choke valve	
11-174S	LOW SPEED JET ASSEMBLY	
11B-41	Rivet plug	
11B-79	Rivet plug	(5)
11B-108	Idle port rivet plug	
11B-117S	Idle passage plug assembly	
11B-119S	Ball retainer screw plug assembly	
11B-127S	Passage plug assembly	(2)
11B-130	Nozzle retainer plug	
12-278	Nozzle	
14-222S	Choke piston lever, link and shaft assembly	
14-223S	Choke lever, screw and link assembly	
15-35S	Strainer nut assembly	
20-22	Needle seat and plug gasket	(3)
20-26	Metering rod jet and plug gasket	(3)
20-35	Bowl strainer gasket	
20-45	NOZZLE GASKET	
21-70S	Float and lever assembly	
24-15	Float lever pin	
25-42S	NEEDLE AND SEAT ASSEMBLY	
30-14	Bowl strainer gauze	
30-23	PISTON HOUSING STRAINER	
30-39	PUMP STRAINER	
30A-39	Idle adjustment screw	
39-10	CHOKE VALVE ATTACHING SCREW	(2)
48-61	PUMP JET—No 72 DRILL	
53A-211S	Pump operating lever and countershaft assembly	
53A-213S	Pump arm and collar assembly	
61-57	Idle adjustment screw spring	
61-75	Metering rod spring	
61-128	Connector rod spring (Use with 115-41)	
61-148	VACUUM PISTON SPRING	
61-171	Pump spring	
61-188	Anti-percolator rocker arm spring	
61-200	Plunger spring	
61-211	Pump operating lever spring	
61-226	Vacuum piston spring (Sup by 61-148)	
63-33	Thermostat housing retainer (Use with 170G-23S)	(3)
63-35	Spring retainer (Sup by 63-93)	
63-48	Thermostat housing retainer (Use with 170G-64S)	(3)
63-93	Spring retainer (Use with 115-41)	
64-76S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49-123)	

Part No.	PART NAME	
75-484	METERING ROD—STANDARD— .0685"- .0685' to .060'- .060" to .043"- .043'	
75-493	Metering rod—1 size lean— .070'- .070" to .063"- .063" to .046"- .046'	
75 494	Metering rod—2 sizes lean— .0715"- .0715" to .065"- .065" to .050"- .050'	
75-495	†Metering rod— .073'- .073" to .067"- .067" to .054"- .054"	
86-15	Flange stud lock washer	(2)
101-26	Coil housing attaching screw (Use with 170G-64S)	(3)
101-28	Throttle shaft arm clamp screw	
101-65	Coil housing attaching screw (Use with 170G-23S)	(3)
101-78	Choke lever clamp screw	
101-81	Fast idle cam screw	
101-87	Throttle valve attaching screw	(2)
101-120	Throttle lever adjusting screw	
101-143S	Piston housing screw and washer assembly	
101-147S	Body flange screw and washer assembly	(2)
101-148S	Bowl cover screw and washer assembly	(5)
101-151S	Air horn screw and washer assembly	(2)
105A-13	Flange stud nut	(2)
114-42S	THROTTLE SHAFT ARM AND SCREW ASSEMBLY	
115-41	Throttle connector rod (Sup by 115-122)	
115-122	THROTTLE CONNECTOR ROD	
116-13	PUMP CHECK BALL	(2)
117-58	Pump connector link	
117-66S	Vacuum piston link and spring assembly	
118-28	Dust cover	
120-67S	METERING ROD JET ASSEMBLY	
121-51	AIR HORN GASKET	
121-58	BOWL GASKET	
121-72	BODY FLANGE GASKET	
121-74	COIL HOUSING GASKET	
129-15	Metering rod disk	
146-69	Bowl cover (Not sold separately—Part of 146-88S)	
146-88S	Bowl cover and strainer assembly	
150-62	Choke piston pin	
150-92	Anti-percolator pin	
150A-10	PIN SPRING	(3)
160-67S	Vacuum piston and pin assembly	
160-71	Choke piston	
170G-23S	Thermostatic housing and coil assembly (Sup by 170G-64S)	
170G-64S	Thermostatic coil and housing assembly	
170G-64SU	Unitized package (Consists of 1—170G-64S 3—63-48 3—101-26 1—121-74)	
172-21	THROTTLE CONNECTOR ROD RETAINER (Use with 115-122)	
181-101S	Fast idle cam and pin assembly	
184-18S	ANTI-PERCOLATOR CAP AND ROCKER ARM ASSEMBLY	

†For 12,000 ft altitude only

NOTE: Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

MOTOR SERIAL NUMBERS

1941-42 Champion—101201 & higher

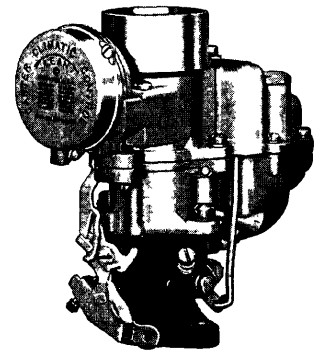
1945 Champion—2M-2001 & higher

CAR SERIAL NUMBERS

Champion

1941-42 { South Bend —G90101 & higher
{ Los Angeles—G811201 & higher

1945 M15—2001 & higher



Casting No 356 on Face of Flange

STUDEBAKER CHAMPION AND M5-M15 TRUCKS 1941-1942, M15 TRUCK 1945

(715S can also be used)

, WA-1 Down-Draft **Carbureter 496S** With Climatic® Control

CARBURETER SPECIFICATIONS

For Studebaker Six Cylinder Engine 3 Inch Bore 4 Inch Stroke

Dimensions Flange size 1¼ inch S A E
Primary venturi 11/32 inch I D
Secondary venturi 11/16 inch I D
Main venturi 1 3/16 inch I D

Float Level Distance from seam of float (at free end) to tip on lower edge of float chamber cover when needle is seated to be 5/16 inch

Vents Outside No 10 drill Inside none

Gasoline Intake Square vertical needle Size No 38 drill hole in needle seat

Low Speed Jet Tube Jet size No 64 drill
By pass size No 50 drill
Economizer 0755 0765 inch diameter
Idle bleed size No 50 drill

Idle Port Length 200 inch width 030 inch

Idle Port Opening 010 to 014 inch below lower edge of valve with valve closed tight

Idle Screw Seat No 46 drill

Set Idle Adjustment Screw ½ to 1½ turns open For richer mixture turn screw out Do not attempt to idle engine below 8 m p h

Main Nozzle In primary venturi angle 45° Angled tip In side diameter No 30 drill
Discharge jet size No 44 drill

Metering Rod (Vacumeter Type) Economy step 068 inch diameter middle step tapers to 060 inch diameter power step 043 inch diameter Length 3 9/64 inches

Metering Rod Jet 098 inch diameter

Metering Rod Setting Use gauge part No T109 102 (2 468 inches)

Accelerating Pump High pressure type (spring operated lever) with non adjustable stroke
Pump discharge jet size No 72 drill
Relief passage (to outside) size No 42 drill
Intake ball check size No 62 drill
Discharge ball check size No 32 drill

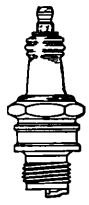
Pump Adjustment 11/64 inch plunger travel full throttle position Use gauge No T109 117S

Choke Carter Climatic® Control set one point lean Butterfly type offset valve
Choke heat suction hole in body size No 28 (1405") drill

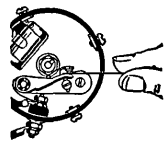
Vacuum Spark Port 1005 to 1025 inch diameter **Early Production** Top of port 045 to 050 inch above top edge of valve **Late Production** Top of port 055 to 060 inch above top edge of valve

Motor Tune-Up—Be Accurate!

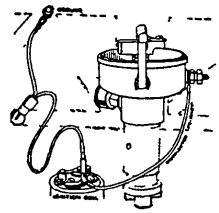
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



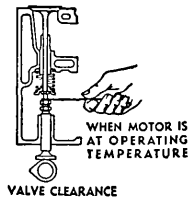
Spark Plug Gap 025"



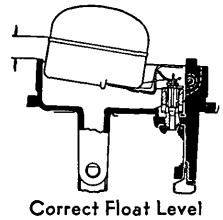
Set Breaker Points 020"



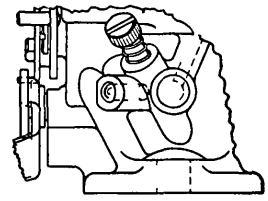
Use Timing Light Breaker Points to Open 2° B T D C



Set Valves COLD
Intake 016"
Exhaust 016"



Correct Float Level (Measure from machined surface of small projection to top of seam) 5/16 Inch



Idle Adjustment Screw Setting ½ to 1½ Turns Open

BRIEF CARBURETER ADJUSTMENTS

Pump Adjustment With throttle valve seated and connector link in place pump plunger should travel 11/64" from closed to wide open position Adjustment should be made by bending throttle connector rod at lower angle Pump travel can be measured by using universal pump stroke gauge T109-117S by placing base of gauge on ridged portions of bowl cover so that projecting portion of pump gauge rests on top surface of connector link at pump shaft Hold gauge vertical The difference between the number shown by index mark on gauge at wide open and closed positions should be 1

Metering Rod Adjustment Correct setting of metering rod is important and must be made after pump adjustment Insert gauge (tool No T109-102) in place of metering rod, seating tapered end in metering rod jet Hold gauge vertical to insure seating With throttle valve seated, press down lightly on piston link directly over piston There should be less than 005 clearance between metering rod pin and shoulder in notch of gauge Gauge must not drag on pin Adjustment can be made by bending lip on piston link so that it contacts pump arm (Use tool T109 105) Remove

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gauge and install metering rod and disk Connect metering rod and spring

Anti-Percolator Adjustment Crack throttle valve 030" by placing gauge T109-29 between valve and bore of carbureter (side opposite port) Bend rocker arm (use tool T109-105) until there is a clearance of 005" to 015" between rocker arm and pump arm

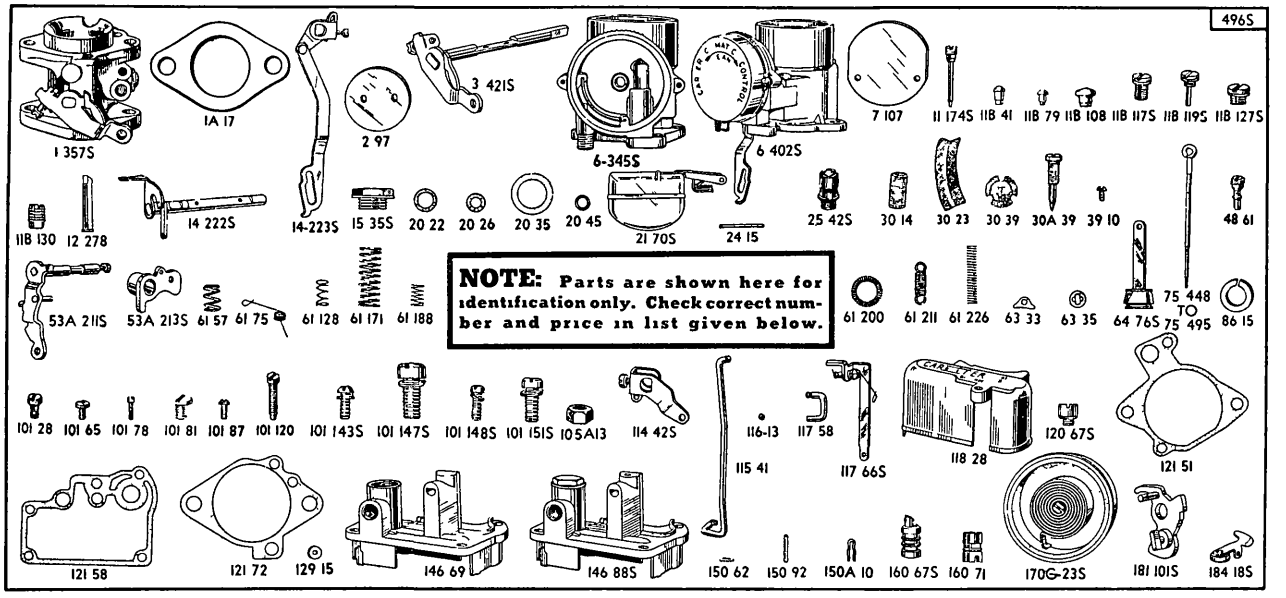
Fast Idle Adjustment With fast idle cam held in normal idle position, tighten throttle lever adjusting screw until it just seats against cam Hold throttle lever closed and pull cam back until first (or lower) step on cam is against (not on) set screw

There should now be 5/8" clearance between inside wall of air horn and lower edge of choke valve (Use tool T109-85)

Adjustment can be made by bending at offset portion of fast idle link (Use tool T109-41)

Unloader Adjustment: With throttle valve wide open there should be 1/4" clearance between lower edge of choke valve and inner wall of air horn (Use tool T109-31) Adjustment should be made by bending cam on throttle lever (Use tool T109-41)

Lock-Out Adjustment With throttle and choke valves wide open, choke should lock in wide open position Adjustment should be made by bending lip at lower end of fast idle link to give 1/32" clearance between lip and throttle lever lock, with throttle and choke valves held wide open (Use tool T109-105)



Studebaker Champion—1941-42 and 1945—Carbureter No. 496S

WHEN SERVICING, USE GASKET ASSORTMENT No. 159A, REPAIR PACKAGE No. 1301A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

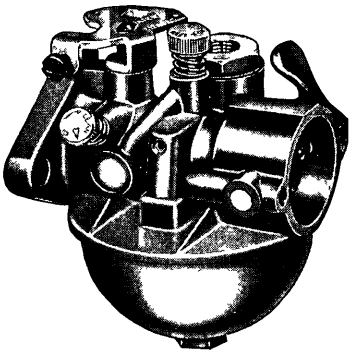
Part No.	PART NAME	
1-357S	Body flange assembly	
1A-17	Flange gasket (1¼" S A E) (Sup by 1A-30)	
1A-30	FLANGE GASKET	
2-97	Throttle valve	
3-421S	Throttle shaft and lever assembly	
6-345S	Air horn and piston housing assembly	
6-402S	Air horn and Climatic® control assembly	
7-107	Choke valve	
11-174S	LOW SPEED JET ASSEMBLY	
11B 41	Rivet plug	
11B-79	Rivet plug	(5)
11B-108	Idle port rivet plug	
11B-117S	Idle passage plug assembly	
11B-119S	Ball retainer screw plug assembly	
11B-127S	Passage plug assembly	(2)
11B-130	Nozzle retainer plug	
12-278	Nozzle	
14-222S	Choke piston lever, link and shaft assembly	
14-223S	Choke lever, screw and link assembly	
15-35S	Strainer nut assembly	
20-22	Needle seat and plug gasket	(3)
20-26	Metering rod jet and plug gasket	(3)
20-35	Bowl strainer gasket	
20-45	NOZZLE GASKET	
21-70S	Float and lever assembly	
24-15	Float lever pin	
25-42S	NEEDLE AND SEAT ASSEMBLY	
30-14	Bowl strainer gauze	
30-23	PISTON HOUSING STRAINER	
30-39	PUMP STRAINER	
30A-39	Idle adjustment screw	
39-10	CHOKE VALVE ATTACHING SCREW	(2)
48-61	PUMP JET—No 72 DRILL	
53A-211S	Pump operating lever and countershaft assembly	
53A-213S	Pump arm and collar assembly	
61-57	Idle adjustment screw spring	
61-75	Metering rod spring	
61-128	Connector rod spring (Use with 115-41)	
61-148	VACUUM PISTON SPRING	
61-171	Pump spring	
61-188	Anti-percolator rocker arm spring	
61-200	Plunger spring	
61-211	Pump operating lever spring	
61-226	Vacuum piston spring (Sup by 61-148)	
63-33	Thermostat housing retainer (Use with 170G-23S)	(3)
63-35	Spring retainer (Sup by 63-93)	
63-48	Thermostat housing retainer (Use with 170G-64S)	(3)
63-93	Spring retainer (Use with 115-41)	
64-76S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49-123)	

Part No.	PART NAME	
75-484	METERING ROD—STANDARD— 0685 - 0685 to 060 - 060' to 043 - 043'	
75-493	Metering rod—1 size lean— 070 - 070' to 063 - 063' to 046'- 046	
75 494	Metering rod—2 sizes lean— 0715 - 0715 to 065"- 065" to 050' - 050'	
75-495	†Metering rod— 073"- 073" to 067"- 067 to 054 - 054	
86-15	Flange stud lock washer	(2)
101-26	Coil housing attaching screw (Use with 170G-64S)	(3)
101-28	Throttle shaft arm clamp screw	
101-65	Coil housing attaching screw (Use with 170G-23S)	(3)
101-78	Choke lever clamp screw	
101-81	Fast idle cam screw	
101-87	Throttle valve attaching screw	(2)
101-120	Throttle lever adjusting screw	
101-143S	Piston housing screw and washer assembly	
101-147S	Body flange screw and washer assembly	(2)
101-148S	Bowl cover screw and washer assembly	(5)
101-151S	Air horn screw and washer assembly	(2)
105A-13	Flange stud nut	(2)
114-42S	THROTTLE SHAFT ARM AND SCREW ASSEMBLY	
115 41	Throttle connector rod (Sup by 115-122)	
115-122	THROTTLE CONNECTOR ROD	
116-13	PUMP CHECK BALL	(2)
117-58	Pump connector link	
117-66S	Vacuum piston link and spring assembly	
118-28	Dust cover	
120-67S	METERING ROD JET ASSEMBLY	
121-51	AIR HORN GASKET	
121-58	BOWL GASKET	
121-72	BODY FLANGE GASKET	
121-74	COIL HOUSING GASKET	
129-15	Metering rod disk	
146 69	Bowl cover (Not sold separately—Part of 146-88S)	
146-88S	Bowl cover and strainer assembly	
150-62	Choke piston pin	
150-92	Anti-percolator pin	
150A 10	PIN SPRING	(3)
160 67S	Vacuum piston and pin assembly	
160-71	Choke piston	
170G 23S	Thermostatic housing and coil assembly (Sup by 170G-64S)	
170G 64S	Thermostatic coil and housing assembly	
170G-64SU	Unitized package (Consists of 1—170G-64S 3—63-48 3—101-26 1—121-74)	
172 21	THROTTLE CONNECTOR ROD RETAINER (Use with 115-122)	
181 101S	Fast idle cam and pin assembly	
184-18S	ANTI-PERCOLATOR CAP AND ROCKER ARM ASSEMBLY	

†For 12 000 ft altitude only

NOTE· Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

WHIZZER MODEL J



WHIZZER MOTOR BIKE 1948-1951

(N-704S can be used in place of N-703S)

Horizontal, Model N Type, **Carbureter Nos. N-703S, N-704S**

CARBURETER SPECIFICATIONS

For Whizzer I Cylinder Engine: 2¼" Bore, 2⅛" Stroke

Dimensions: Flange size: ½ S. A. E. (Special). Main Venturi size 7/16 inch.

Float Level: Distance from top of float (at free end) opposite needle seat to lower edge of float chamber cover when needle is seated to be 13/64 inch.

Vents: Inside—none. Outside—No. 50 (.070") drill.

Gasoline Intake: Square vertical needle, seat size No. 48 (.076") drill. Intake fuel restriction (in needle seat), size No. 65 (.035") drill.

Low Speed Jet Tube: Jet size No. 70 (.028") drill.
Auxiliary jets: (idle bleed) in side of tube, 4 No. 70 (.028") drill.

Idle Port: Slot type, length .080 inch, width .030 inch.
Idle port opening—Bottom of port to be .0 to .004" above top edge of valve.
Idle adjustment screw seat, size .051" drill.

Set Idle Adjustment Screw: 1 to 3 turns open. For richer mixture turn screw out. Do not idle engine below 1,000 r.p.m.

Main Nozzle: Accelerating jets 4—No. 62 (.038") drill in sid of nozzle, (in nozzle well.)
Nozzle passage: (nozzle well to air horn) No. 35 (.110") drill.

High Speed Adjusting Needle: Seat (in base of nozzle) siz : .040 inch diameter.

Choke: Manual—butterfly type.

Spark Plug Gap	Magneto Air Gap	Breaker Point Setting:	Ignition Timing Breaker Points to Open:	Valve Setting (Cold)	Float Setting	Idle Adjustment Screw Setting
.023"-.025"	.012"-.015"	On Light	30° B. T. D. C.	Int. and Exh. .012"	13/64"	1 to 3 Turns Open

SERVICE PROCEDURE

To Disassemble

1. Remove carbureter from engine.
2. Remove bowl nut, gasket and bowl.
3. Remove float pin, float, needle and needle seat. Check float for dents, leaks, and wear on float lip or in float pin holes.
4. Remove bowl ring gasket.
5. Remove low speed jet and high speed needle assembly and spring.
6. Remove idle adjustment screw and spring.
7. Remove strainer nut and gasket assembly and strainer.
8. Remove nozzle.
9. Remove throttle valve screws, valve, and shaft and lever assembly.
10. Do not remove choke valve and shaft unless replacement of these parts is necessary. A spring loaded ball retains choke in wide open position. Be sure to use a new ball and spring when replacing choke shaft and lever assembly. CAUTION: **Hold a screw driver handle or a small piece of wood over threaded hole in air horn (side opposite choke lever) to prevent the ball from flying out when shaft is removed.**
11. Clean all parts in clean gasoline or solvent, making sure all carbon accumulation is removed from bore, especially where throttle valve seats in casting. Blow out all passages with compressed air. Replace all worn and damaged parts. Always use new gaskets.

To Assemble

12. Install throttle shaft and valve. Valve must be installed with trademark "c" on side toward idle port when viewing from flange side. Always use new screws. With valve screws loose and throttle lever set screw backed out, seat valve by tapping lightly with a small screw driver. Hold in place while tightening screws.
13. Install nozzle, making sure it seats in casting.
14. Install needle seat, needle, float and float pin.
15. Set float level. With carbureter casting inverted, float resting lightly against needle in its seat, there should be 13/64" clearance between machine surface of casting and free end of float (side opposite needle seat). Adjust by bending lip of float with small screw driver.
16. Install bowl ring gasket, bowl, bowl nut gasket and bowl nut. Tighten securely after making sure bowl is centered in gasket.
17. Install low speed jet and high speed needle assembly. Turn in until it seats in nozzle, then back out 2 full turns.
18. Install open end of strainer in strainer nut and gasket assembly and install strainer nut assembly.
19. Then install idle adjusting screw, finger tight. Back out 1 to 3 turns. DO NOT USE PLIERS OR SCREW DRIVER AS IT MAY DAMAGE IDLE SCREW.

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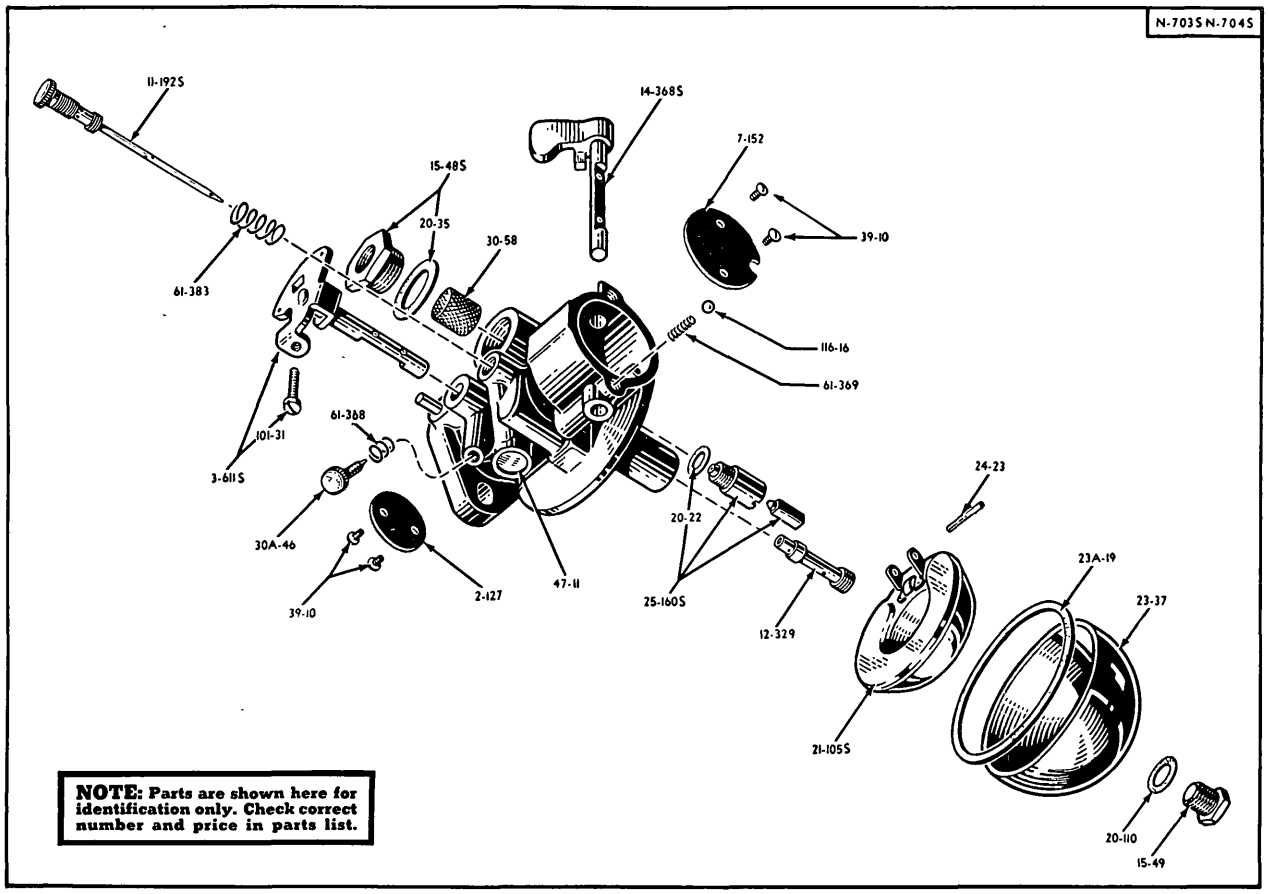
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HIGH SPEED AND IDLE SCREW ADJUSTMENT

After rebuilding and installation on engine is complete, the high speed and idle screw adjustments must be made.

The high speed needle should be adjusted for the leanest possible mixture which will allow satisfactory acceleration. With the high speed needle turned counter clockwise (from closed position) 2 full turns and idle screw turned 1 to 3 turns open, start engine.

Accelerate engine and check response. If the engine misses and backfires, the high speed mixture is too lean and the adjustment screw must be turned counter clockwise to correct this condition. If the engine loads (heavy exhaust) and is sluggish, the mixture is too rich and th adjustment screw must be turned clockwise to correct. To make final check of the high speed adjustment, operate the engine under load and adjust. The idle scr w should be adjust d intermittently whil making the high spe d adjustm nt. Th final idl adjustm nt should be made at approximately 1000-1200 r.p.m. until smoothest possible idle is obtained. This adjustment must not exceed the limits of 1 to 3 turns from closed position. **DO NOT USE EXCESSIVE FORCE ON THE HIGH SPEED NEEDLE OR IDLE SCREW AS DAMAGE MAY RESULT.**



Whizzer Motor Bike—Carbureter Nos. N-703S, N-704S

WHEN SERVICING, USE REPAIR PACKAGE No. 1397B

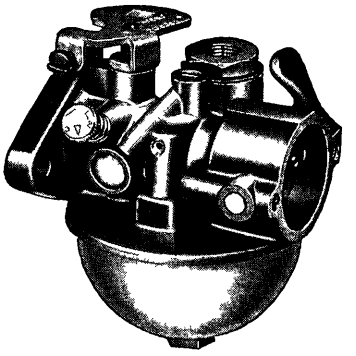
PART NAMES IN CAPITAL LETTERS LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME
1A-73	FLANGE GASKET
2-127	Throttle valve
3-611S	Throttle shaft and lever assembly (Sup. by 3-774S)
3-774S	Throttle shaft and lever assembly
7-152	Choke valve
11-192S	LOW SPEED JET AND HIGH SPEED ADJUSTING NEEDLE ASSEMBLY
12-329	NOZZLE
14-368S	Choke lever and shaft assembly
15-48S	Strainer nut assembly
15-49	Bowl nut (Sup. by 15-50S)
15-50S	Bowl nut assembly
20-22	Needle seat gasket
20-35	Strainer nut gasket
20-110	BOWL NUT GASKET
21-105S	Float and lever assembly

Part No.	PART NAME
23-37	Bowl
23A-19	BOWL RING GASKET
24-23	FLOAT LEVER PIN
25-33S	Needle and seat assembly
25-160S	NEEDLE AND SEAT ASSEMBLY (Sup. by 25-33S)
30-58	STRAINER
30A-46	Idle adjustment screw
39-10	Valve attaching screw (Sup. by 101-320) (4)
47-11	Welsh plug
61-368	Idle adjustment screw spring
61-369	Choke shaft spring
61-383	High speed adjustment needle spring
101-31	Throttle adjusting screw
101-320	VALVE ATTACHING SCREW (4)
116-16	Choke shaft ball

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

WHIZZER MODEL J



WHIZZER MOTOR BIKE 1948

(N-704S can also be used)

Horizontal, Model N Type, **Carbureters Nos. N-655S, N-666S**

CARBURETER SPECIFICATIONS

For Whizzer 1 Cylinder Engine 2¼" Bore, 2⅛" Stroke

Dimensions Flange size ½ inch S A E (N 655S), ½ inch (Special) (N 666S)
Main venturi size 7/16 inch

Float Level Distance from top of float (at free end) opposite needle seat to lower edge of float chamber cover when needle is seated to be ¼ inch

Vents Inside—none Outside—No 50 (070") drill

Gasoline Intake Square vertical needle seat size No 48 (076") drill
Intake fuel restriction (in needle seat) size No 55 (035") drill

Low Speed Jet Tube Jet size No 70 (028") drill
Auxiliary jets in side of tube 4 No 70 (028") drill

Idle Port Slot type length 080 inch width 030 inch
Idle port opening—Bottom of port to be 0 to 004" above top edge of valve
Idle adjustment screw seat size No 58 (042") drill (early production) 051" (late production tapered 10° included angle)

Set Idle Adjustment Screw 1 to 3 turns open For richer mixture turn screw out Do not idle engine below 1 000 r p m

Main Nozzle Discharge through 4—No 60 (040") jets
Accelerating jets 4—No 62 (038") drill in side of nozzle (in nozzle well)
Nozzle passage (nozzle well to air horn) No 35 (110") drill

Main Metering Jet Calibrated to flow 65 to 67 c c per minute Do not gauge for size If in doubt replace with new part

Choke Manual—butterfly type

Spark Plug Gap	Magneto Air Gap	Breaker Point Setting	Ignition Timing Breaker Points to Open	Valve Setting (Cold)	Float Setting	Idle Adjustment Screw Setting
025"	012"-015"	033"	30° B T D C	Int and Exh 012"	¼"	1 to 3 Turns Open

SERVICE PROCEDURE

To Disassemble

1 Remove carbureter from engine
2 Remove bowl nut gasket and bowl
3 Remove float pin float needle and needle seat Check float for dents leaks and wear on float lip or in float pin holes
4 Remove bowl ring gasket
5 Remove main metering jet assembly
6 Remove low speed jet idle adjusting screw and idle adjusting screw spring
7 Remove strainer nut assembly and strainer
8 Remove nozzle
9 Remove throttle valve screws valve and shaft and lever assembly
10 Do not remove choke valve and shaft unless replacement of these parts is necessary A spring loaded ball retains choke in wide open position Be sure to use a new ball and spring when replacing choke shaft and lever assembly
11 Clean all parts in clean gasoline or solvent making sure all carbon accumulation is removed from bore especially where throttle valve seats in casting Blow out all passages with compressed air **Do not attempt to remove welch plug at idle port** Replace all worn and damaged parts Always use new gaskets

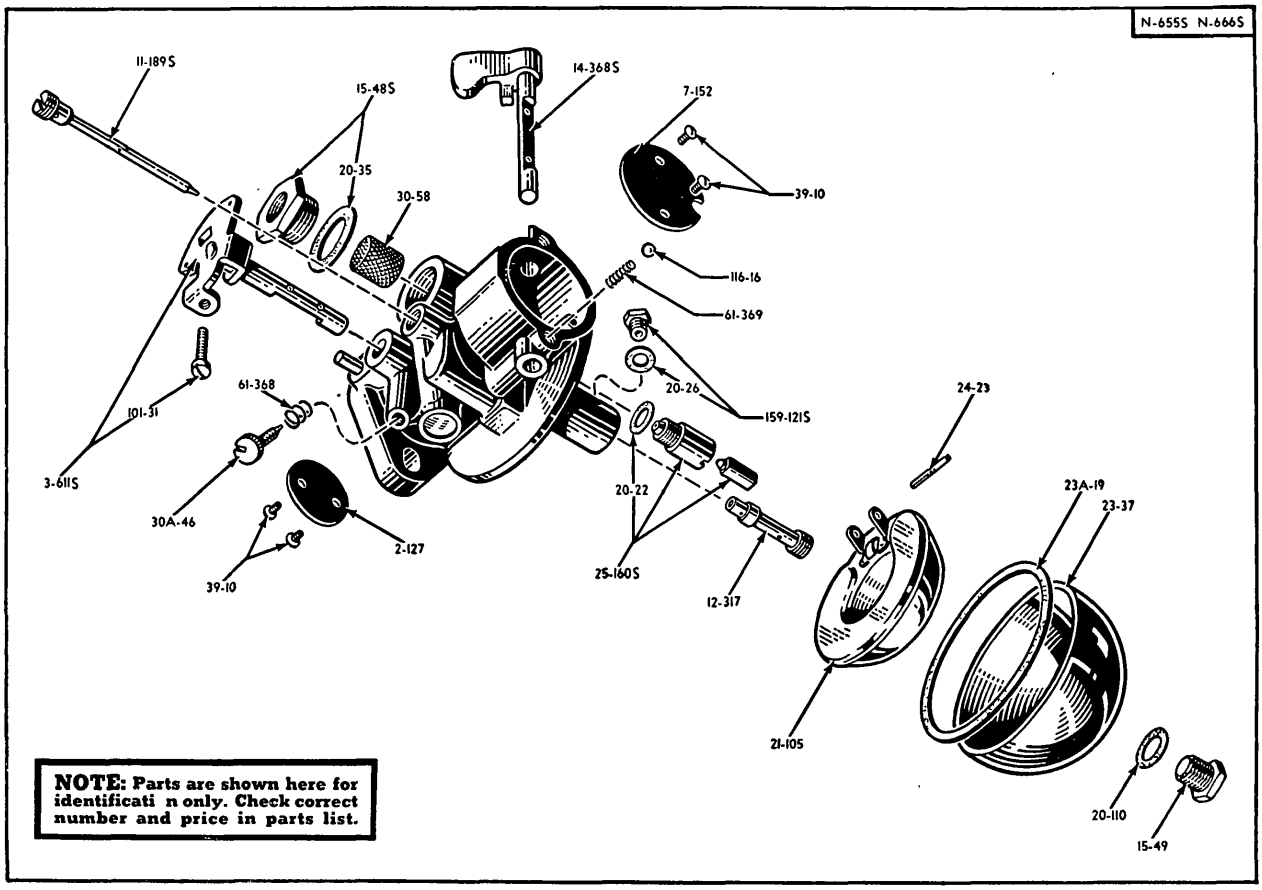
To Assemble

12 Install throttle shaft and valve Valve must be installed with trademark c on side toward idle port when viewing from flange side Always use new screws With valve screws loose and throttle lever set screw backed out seat valve by tapping lightly with a small screw driver Hold in place while tightening screws
13 Install nozzle making sure it seats in casting
14 Install main metering jet assembly
15 Install needle seat needle float and float pin
16 Set float level With carbureter casting inverted float resting lightly against needle in its seat there should be ¼" clearance between machine surface of casting and free end of float (side opposite needle seat) Adjust by bending lip of float with small screw driver
17 Install bowl ring gasket bowl bowl nut gasket and bowl nut Tighten securely after making sure bowl is centered in gasket
18 Install low speed jet seating it securely in casting
19 Install open end of strainer in strainer nut assembly and install strainer nut assembly
20 Then install idle adjusting screw finger tight Back out 1 to 3 turns **Do not use pliers or screw driver as it may damage idle screw**

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WHIZZER MOTOR BIKE—Carbs. Nos. N-655S, N-666S

WHEN SERVICING, USE REPAIR PACKAGE No. 1378B

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	Part Name
1A-73	Flange gasket
2-127	Throttle valve
3-611S	Throttle shaft and lever assembly
7-152	Choke valve
11-189S	LOW SPEED JET ASSEMBLY
12-317	Nozzle (Sup. by 12-328)
12-328	NOZZLE
14-368S	Choke lever and shaft assembly
15-48S	Strainer nut assembly
15-49	Bowl nut (Sup. by 15-50S)
15-50S	Bowl nut assembly
20-22	Needle seat gasket
20-26	Main metering jet gasket
20-35	Strainer nut gasket
20-110	BOWL NUT GASKET
21-105S	Float and lever assembly
23-37	Bowl
23A-19	BOWL RING GASKET
24-23	FLOAT LEVER PIN
25-160S	NEEDLE AND SEAT ASSEMBLY
30-58	STRAINER
30A-46	Idle adjustment screw
39-10	Choke and throttle valve attaching screw (Sup. by 101-320) (4)
61-368	Adjustment screw spring
61-369	Choke shaft spring
101-31	Throttle adjustment screw
101-320	CHOKE AND THROTTLE VALVE ATTACHING SCREW (4)
116-16	Choke shaft ball
159-121S	MAIN METERING JET ASSEMBLY

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

WILLYS

L6-226 ENGINE

(4x2 and 4x4 Utility Wagon, Utility Panel and 4WD Truck)

1956-1957

YF DOWN-DRAFT **CARBURETER No. 2467S**

CARBURETER SPECIFICATIONS

For Willys 6 Cylinder Engine 3-5/16 Inch Bore, 4⅜ Inch Stroke

Dimensions Flange size 1½ inch S A E
Primary Venturi 11/32 inch I D
Secondary venturi 11/16 inch I D
Main venturi 1 5/16 inch I D

Float Setting See Adjustments

Vents Inside balance vent in air horn

Gasoline Intake Spring loaded needle Size No 46 (081 inch) drill in needle seat

Low Speed Jet Tube Jet size No 70 (028 inch) drill By pass in body size No 51 (067 inch) drill Economizer size No 54 (055 inch) drill

Idle Port Upper port slot type length 190 inch width 040 inch

Idle Port Opening Top of port 143 to 147 inch above top edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw) 0615 to 0655 inch diameter

Set Idle Adjustment Screw 1 to 2½ turns open For richer mixture turn screw out Idle engine 525 r p m

Main Nozzle Nozzle is installed permanently DO NOT RE MOVE Ant percolator well vent plug size No 75 (021 inch) drill

Metering Rod See parts list for size

Metering Rod Jet S ze 098 inch diameter

Metering Rod Setting See adjustments

Accelerating Pump Diaphragm type vacuum and mechanically operated Pump jet size No 70 (028 inch) drill Intake ball check seat (in diaphragm housing) size No 40 (098 inch) drill Discharge needle seat (n body) size No 42 (0935 inch) drill Vacuum restriction (in flange) size No 55 (052 inch) drill Vacuum passage (diaphragm bleed) size No 56 (0465 inch) drill Pump bleed into bowl s ze No 75 (021 inch) drill

Pump Adjustments See adjustments

Choke Manual interconnected with throttle Valve offset butterfly type

Vacuum Spark Port Horizontal slot type size 125 by 041 inch Top of port 019 to 029 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter

Spark Plug Gap .030"	Breaker Point Setting .020"	Ignition Timing Breaker Points to Open 5° B T D C ' At Vibration Damper	Valve Setting (Cold) Intake 014" Exhaust 014"	Float Setting 9/32 Inch (Use Gauge T109-126)	Idle Adjustment Screw Setting 1 to 2½ Turns Open Idle Engine at 550 R P M

CARBURETER ADJUSTMENTS

Float Adjustment With bowl cover assembly inverted and float resting on pin in seated needle and with gasket removed the distance from the bowl cover to the top of float should be 9/32 inch (Gauge T109 126) Do not depress float lip against spring loaded pin in needle but let float rest of its own weight Adjust by bending lip of float not float arm Float setting must be checked with the bowl cover held at eye height in a level position

Float Drop With bowl cover assembly held in upright position the d stance between free end of float and bowl cover should be 1¼ inches Adjust by bending stop tabs on float arm

Pump Adjustment This adjustment should be made before the meter ng rod adjustment and should be checked each time the carbureter s reassembled With throttle valve seated in the bore of carbureter press down on upper end of diaphragm shaft until it reaches its bottom pos tion (tool T109 212 may be

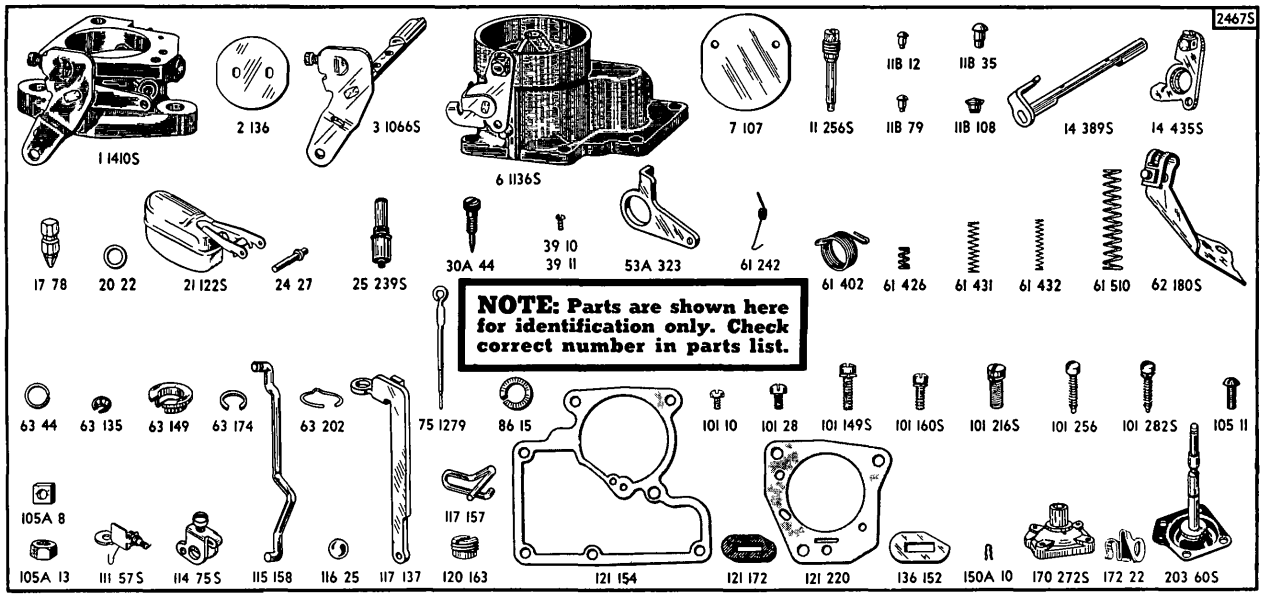
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used to hold diaphragm shaft down while checking pump adjustment) The metering rod arm should now contact the pump lifter link at the outer end nearest the springs Adjust by bending pump connector link at its lower angle Use bending tool T109 213

Caution Bend connector rod only at its lower angle as any other method may cause pump lifter link to bind

Metering Rod Adjustment This adjustment is important and should be checked each time the carbureter is reassembled or lean rods are installed With throttle valve seated in bore of carbureter press down on upper end of diaphragm shaft until diaphragm bottoms in vacuum chamber Tool T109 212 may be used to hold diaphragm shaft down while adjusting metering rod Metering rod should contact bottom of metering rod well and metering rod arm should contact lifter link at the outer end nearest the springs and at supporting lug Adjust by bending lip of metering rod arm to which metering rod is attached up or down

Fast Idle Adjustment With choke held in wide open position lip of fast idle arm should contact boss on body casting Adjust by bending at offset portion of choke connector link



Willys—1956-1957—Carbureter No. 2467S

WHEN SERVICING USE GASKET ASSORTMENT No 241A, REPAIR PACKAGE No 1849

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1410S	—Body flange assembly	
1A-31	Flange gasket	
2-136	Throttle valve	
3-1066S	—Throttle shaft and lever assembly	
6-1136S	—Air horn assembly	
7-107	Choke valve	
11-256S	LOW SPEED JET ASSEMBLY	
11B-12	Rivet plug	
11B-35	Rivet plug	
11B-79	Rivet plug	
11B-108	IDLE PORT RIVET PLUG	
14-389S	Choke shaft and lever assembly	
14-435S	Choke lever assembly	
17-78	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	
21-122S	Float and lever assembly	
24-27	Float lever pin	
25-239S	NEEDLE PIN SPRING AND SEAT ASSEMBLY	
30A-44	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	THROTTLE VALVE ATTACHING SCREW	(2)
53A-323	Fast idle arm	
61-242	Metering rod spring	
61-402	Choke lever spring	
61-426	Idle adjustment screw spring	
61-431	UPPER PUMP SPRING (OUTER)	
61-432	UPPER PUMP SPRING (INNER)	
61-510	PUMP DIAPHRAGM SPRING	
62-180S	Choke tube clamp assembly	
63-44	Choke lever retaining ring	
63-135	UPPER PUMP SPRING RETAINER	
63-149	PUMP DIAPHRAGM SPRING RETAINER	
63-174	Pump stem retaining ring	
63-202	Pump intake check ball retainer ring	
75-1279	—METERING ROD—STANDARD 079" x 069" x 053"	
75-1339	—Metering rod—1 size lean 080" x 0705" x 056'	
75 1340	—Metering rod—2 sizes lean 081" x 0715' x 058'	
86-15	Flange stud lock washer	(2)
101-10	Wire clamp screw	
101-28	Throttle shaft arm attaching screw	
101-149S	Body flange attaching screw and washer assembly	(3)
101-160S	Air horn attaching screw and washer assembly	(5)
101-216S	Air horn attaching screw and washer assembly	(2)
101-256	Throttle lever adjustment screw	
101-282S	Diaphragm housing attaching screw and washer assembly	(4)
105-11	Tube clamp screw	
105A-8	Tube clamp nut	
105A-13	Flange stud nut	(2)
111-57S	Metering rod arm assembly	
114-75S	THROTTLE SHAFT ARM ASSEMBLY	
115-158	Choke connector rod	
116-25	Pump intake check ball	
117-137	PUMP LIFTER LINK	
117-157	PUMP CONNECTOR LINK	
120-163	METERING ROD JET	
121-154	BOWL COVER AND AIR HORN GASKET	
121-172	PUMP LIFTER LINK GASKET	
121-220	BODY FLANGE GASKET	
136-152	Pump lifter link washer	
150A-10	PIN SPRING	
170-272S	Pump diaphragm housing and ball check assembly	
172-22	Choke connector rod retainer	
203-60S	PUMP DIAPHRAGM ASSEMBLY	

—Parts so marked are new and listed for th

NOTE Figures in parenthes s indic s used in one carbureter Where no figure is shown, only one is used

CARTER CARBURETOR

DIVISION OF acf INDUSTRIES
INCORPORATED
ST. LOUIS 7, MO., U.S.A.

GENERAL BULLETIN

ALL CARBURETER ACCOUNTS

BULLETIN NO. 9 - WILLYS
DATE June 1, 1956

SUBJECT: ACCELERATION STUMBLE
YF-938SA CARBURETER

Willys four wheel drive vehicles CJ-3B, CJ-5 and CJ-6 are equipped with the YF-938SA carbureter. There have been reports of an acceleration stumble, just off idle, on some vehicles. This engine has a water heated intake manifold. It is important that the following be observed:

1. The water thermostat must operate at not less than 155°.
2. Ignition timing of 5° B.T.D.C., or road set for light detonation.
3. 600 RPM idle speed is a must.

All other points of engine tune-up should have careful attention.

Starting with production code date E-6, May 1956, all 938SA carbureters produced will have an enlarged pump discharge jet. The jet is a pressed-in part and should not be removed in service. A No. 68 drill (.031") may be used to enlarge the pump jet used prior to May production. This was No. 72 drill (.025") size. The larger jet allows a greater quantity of fuel to be discharged quickly upon acceleration.

1. Float level and metering rod adjustments are rather critical.
2. The accelerator discharge ball check must seat properly to obtain good performance.
3. Metering rod 75-913 (one step rich) may prove helpful in some areas where vehicles are used under unusual conditions.

V. F. Thompson
Service Manager

VFT/rm

cc - Personnel and Extra Copies - Canada and U.S.A.

IMPORTANT: THIS BULLETIN CONTAINS INFORMATION OF VALUE TO YOU AND WAS PREPARED AT CONSIDERABLE EXPENSE TO BE OF SERVICE TO YOU. FAILURE TO USE THIS INFORMATION MAY COST YOU MONEY. WE SUGGEST THAT YOU ISSUE COPIES OF IT TO THOSE OF YOUR STAFF INTERESTED, SO THAT THEY CAN BE FILED IN REGULAR CARTER SALES AND SERVICE MANUAL.

FORM C-2914E

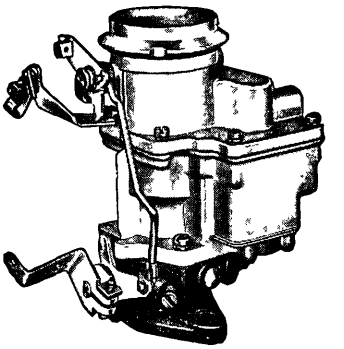
CARBURETER
TRADE MARK REG. U. S. PAT. OFF.
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PRINTED IN U.S.A.

MODELS
CJ-3B, CJ-5, CJ-6
FC-150

4-75
ENGINE

Also used on Export
Model PC 4-75
Passenger Car, 1953



WILLYS
CIVILIAN JEEP AND FORWARD CONTROL JEEP TRUCK
1953-1958

(938SA can be used in place of 938S)

YF Down-Draft Carbureters—**Nos. 938S-938SA**

CARBURETER SPECIFICATIONS

For Willys 4 Cylinder Engine: 3 1/8 Inch Bore, 4 3/8 Inch Stroke

Dimensions: Flange size, 1 1/4 inch S. A. E.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 11/16 inch I. D.
Main venturi, 1 1/4 inch I. D.

Float Setting: See Adjustments.

Vents: Outside, none. Inside balance vent to air horn, above choke valve.

Gasoline Intake: Spring loaded needle. Size No. 48 (.076 inch) drill in needle seat.

Low Speed Jet Tube: Jet, size No. 70 (.028 inch) drill. By-pass in air horn, size No. 56 (.0465 inch) drill. Economizer, size No. 54 (.055 inch) drill. Idle bleed, size No. 56 (.0465 inch) drill. Bleed, idle well to bowl (late production only), size No. 73 (.024 inch) drill.

Idle Port: Upper port, slot type, length .183 to .185 inch; width, .030 inch.

Idle Port Opening: Top of port .168 to .172 inch above top edge of valve with valve tightly closed.

Lower Port (For Idle Adjustment Screw): Size .0615 to .0655 inch diameter.

Set Idle Adjustment Screw: 3/4 to 1 3/4 turns open. For richer mixture turn screw out. Do not idle engine below 600 r.p.m.

Main Nozzle: Nozzle is installed permanently. DO NOT REMOVE. Anti-percolator well vent (plug), size No. 74 (.0225 inch) drill.

Metering Rod (Diaphragm Type): Economy step .074 inch diameter. Middle step tapers to (938S) .068 inch; (938SA) .06775 inch diameter. Power step (938S) .056 inch, (938SA) .047 inch diameter.

Metering Rod Jet: (938S) Size No. 41 (.096 inch) drill. (938SA) Size .091 inch diameter.

Metering Rod Setting: See Adjustments.

Accelerating Pump: Diaphragm type, vacuum and mechanically operated. Pump jet (938S and early 938SA), size No. 72 (.025 inch) drill; (late 938SA) size No. 68 (.031 inch) drill. Intake passage (in diaphragm housing), size No. 72 (.025 inch) drill. Discharge ball check seat (in body), size No. 42 (.0935 inch) drill. Vacuum restriction (in flange), size No. 55 (.052 inch) drill. Vacuum passage (diaphragm bleed), size No. 65 (.035 inch) drill.

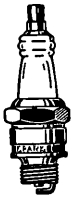
Pump Adjustment: None.

Choke: Manual, interconnected with throttle. Valve, offset butterfly type.

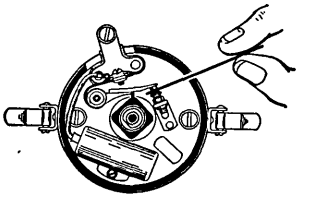
Vacuum Spark Port: .054 to .056 inch diameter. Top of port .035 to .045 inch above top edge of valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

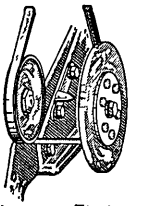
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



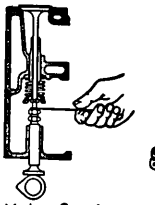
Spark Plug Gap .030"



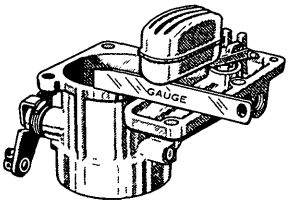
Breaker Point Setting .020"



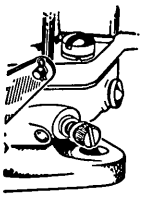
Ignition Timing Breaker Points to Open: 5° B. T. C. at Crank Pulley (or Road Set for Light Detonation)



Valve Setting (Hot or Cold) Intake .018" Exhaust .016"



Float Setting 5/16 Inch (Use Gauge T109-107)



Idle Adjustment Screw Setting 3/4 to 1 3/4 Turns Open

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: With bowl cover assembly inverted and float resting on pin in seated needle, and with gasket removed, the distance from the bowl cover to the top of float should be 5/16 inch (gauge T109-107). Do not depress float lip against spring loaded pin in needle, but let float rest of its own weight. Adjust by bending lip of float, not float arm. Float setting must be checked with the bowl cover held at eye height in a level position.

METERING ROD ADJUSTMENT: This adjustment is important and should be checked each time the carbureter is reassembled or lean rods are installed. With throttle valve seated in bore of carbureter, press down on upper end of diaphragm shaft until diaphragm bottoms in vacuum chamber. (Tool T109-212 may be used to hold diaphragm shaft down while adjusting metering rod.) Metering rod should contact bottom of metering rod well and metering rod arm

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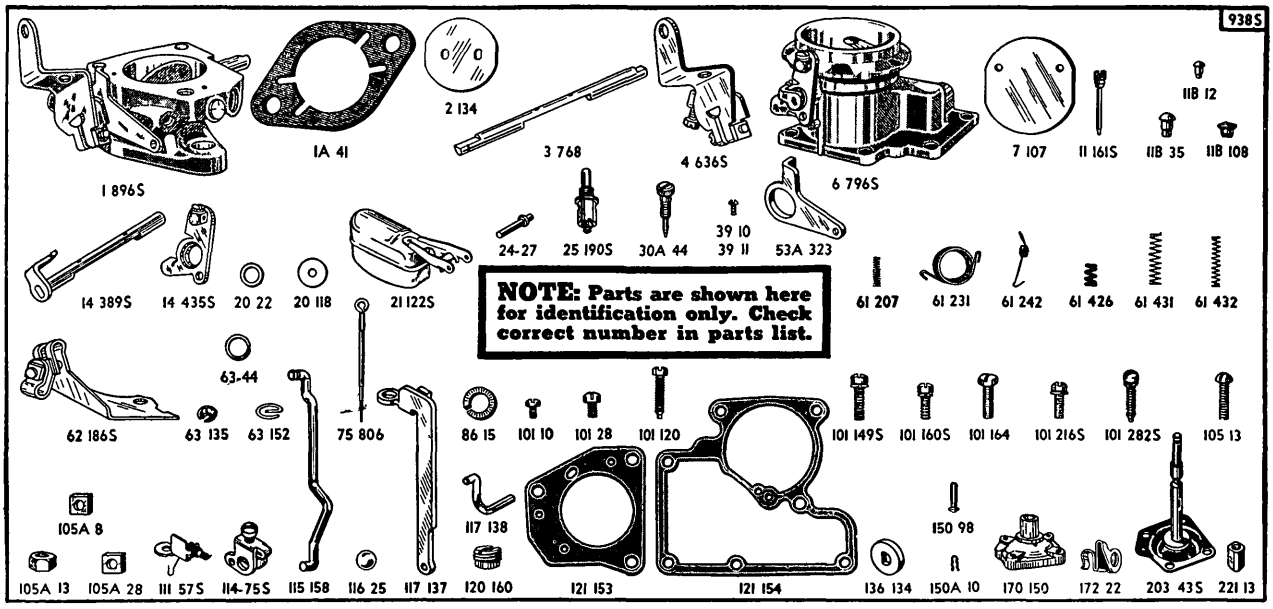
CARBURETER
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should contact lifter link at the outer end nearest the springs and at supporting lug Adjust by bending lip of metering rod arm to which metering rod is attached up or down

ACCELERATING PUMP If acceleration is not satisfactory remove pump discharge ball check retainer ring and aluminum pump discharge check ball Then remove pump diaphragm assembly Check diaphragm for wear or damage Be sure inlet hole in diaphragm housing is not clogged with lint or foreign matter If the discharge ball or seat appear damaged form a new seat by tapping on a ⅛ inch stainless steel ball with 5/32 inch brass drift and light hammer Remove stainless steel ball and install new 116-25 aluminum ball DO NOT TAP ON ALUMINUM BALL Then install retainer ring Inspect and replace all worn or damaged parts and clean and blow out all passages with compressed air Make sure discharge ball check seats in casting as a leak at this point will result in poor acceleration

FAST IDLE ADJUSTMENT With choke held in wide open position lip on fast idle arm should contact boss on body casting Adjust by bending at offset portion of choke connector rod



Willys—1953-1958—Carbureters Nos. 938S-938SA

WHEN SERVICING USE GASKET ASSORTMENT No 206A (938S-SA), REPAIR PACKAGE No 1559C (938S), No 1764N (938SA)

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1 896S	Body flange assembly	
1A 41	FLANGE GASKET	
2 134	Throttle valve	
3 768	Throttle shaft	
4 636S	Throttle lever assembly	
6 796S	Air horn assembly	
7-107	Choke valve	
11-161S	Low speed jet assembly (Sup by 11 163S)	
11-163S	LOW SPEED JET ASSEMBLY	
11B 12	Flange passage plug	
11B 35	Nozzle passage rivet plug	
11B 79	Rivet plug	(2)
11B 108	IDLE PORT RIVET PLUG	
14-389S	Choke shaft and lever assembly	
14 435S	Choke lever assembly	
20-22	Needle seat gasket	
21 122S	Float and lever assembly	
24 27	Float lever pin	
25 190S	NEEDLE SPRING AND SEAT ASSEMBLY	
30A 44	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	THROTTLE VALVE ATTACHING SCREW	(2)
53A 323	Fast idle arm	
61 207	Intake needle spring	
61 231	Choke lever spring	
61-242	Metering rod spring	
61-389	PUMP DIAPHRAGM SPRING	
61 426	Idle adjustment screw spring	
61-431	UPPER PUMP SPRING (OUTER)	
61-432	UPPER PUMP SPRING	
62-134	Tube clamp	
62 180S	Choke tube clamp assembly (Sup by 62 186S)	
62 186S	Choke tube clamp assembly	
63-44	Choke lever retaining ring	
63-92	PUMP DIAPHRAGM SPRING RETAINER	
63 135	UPPER PUMP SPRING RETAINER	
63 152	PUMP DISCHARGE BALL CHECK RETAINER RING	
75 806	METERING ROD—STANDARD (938S)	
75 808	Metering rod—1 size lean (938S)	
75 913	Metering rod—1 size rich (938S)	

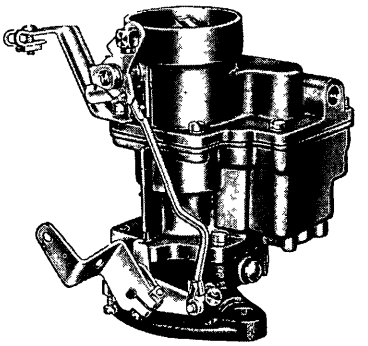
Part No.	PART NAME	
75-960U	★Unitized package (consists of 1—75 959 1—120 155 and 1—150 168) (938S)	
75-996	METERING ROD—STANDARD (938SA)	
75-1114	Metering rod—1 size lean (938SA)	
75-1400	Metering rod—2 sizes lean (938SA)	
86 15	Flange stud lock washer	(2)
101-10	Wire clamp screw	
101-28	Throttle shaft arm attaching screw	
101-120	Throttle lever adjustment screw	
101-149S	Body flange attaching screw and washer assembly	(3)
101-160S	Bowl cover attaching screw and washer assembly	(5)
101-164	Throttle lever clamp screw	
101-216S	Air horn attaching screw and washer assembly	(2)
101 256	Throttle lever adjustment screw (Sup by 101 120)	
101-282S	Diaphragm housing attaching screw and washer assembly	(4)
105 11	Tube clamp screw (Sup by 105 13)	
105-13	Tube clamp screw	
105A-8	Tube clamp nut	
105A 13	Flange nut	(2)
105A 28	Throttle lever nut	
111 57S	Metering rod arm assembly	
114-75S	THROTTLE SHAFT ARM ASSEMBLY	
115-158	Choke connector rod	
116-25	PUMP DISCHARGE BALL CHECK	
117-137	PUMP LIFTER LINK	
117-138	PUMP CONNECTOR LINK	
120-155	METERING ROD JET (938SA)	
120 160	METERING ROD JET (938S)	
121-153	BODY FLANGE GASKET	
121-154	BOWL COVER AND AIR HORN GASKET	
121-172	PUMP LIFTER LINK GASKET	
136-134	Throttle shaft washer	
136-152	Pump lifter link washer	
150 98	Intake needle pin	
150A-10	PIN SPRING	
170-150	Pump diaphragm housing	
172-22	Throttle connector rod retainer	
186-77	Pump baffle plate (used to prevent fuel dripping from lifter link)	
203-43S	PUMP DIAPHRAGM ASSEMBLY	
221-13	BALL CHECK WEIGHT	

★To be used on 938S only to improve steep angle idle operation

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used.

4-75 ENGINE

EXPORT ONLY
"AERO-LARK"
1954



Casting No. 630 on face of flange

WILLYS JEEP STATION WAGON SEDAN DELIVERY 4WD TR.–2WD TR. AND UTILITY WAGON— UTILITY PANEL 1952-1957

YF DOWN-DRAFT CARBURETER **No. 951S**

CARBURETER SPECIFICATIONS

For Willys 4 Cylinder Engine: 3⅛ Inch Bore, 4⅜ Inch Stroke

Dimensions: Flange size, 1¼ inch S. A. E.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 11/16 inch I. D.
Main venturi, 1¼ inch I. D.

Float Setting: See adjustments.

Vents: Outside, none. Inside balance vent to air horn, above choke valve.

Gasoline Intake: Square vertical (spring loaded) needle. Size No. 48 (.076 inch) drill, in needle seat.

Low Speed Jet Tube: Jet size, No. 70 (.028 inch) drill. By-pass in air horn, size No. 56 (.0465 inch) drill. Idle bleed size, No. 56 (.0465 inch) drill. Economizer, size No. 54 (.055 inch) drill. Bleed, idle well to bowl (late production), size No. 73 (.024 inch) drill.

Idle Port: Upper port, slot type; length .183-.185 inch. Width, .030 inch.

Idle Port Opening: Top of port: .168 to .172 inch, above top edge of valve with valve tight closed.

Lower Port (For Idle Adjustment Screw): Size, .0615 to .0655 diameter.

Set Idle Adjustment Screw: ¾ to 1¾ turns open. For richer mixture, turn screw out. Do not idle engine below 600 r.p.m.

Main Nozzle: In primary venturi, angle 40° off vertical. Nozzle is installed permanently. Do not remove. Anti-percolator well vent (plug). Size: No. 74 (.0225 inch) drill.

Metering Rod (Diaphragm Type): Economy step, .070 inch diameter; middle step tapers to .068 inch diameter; power step, .056 inch diameter. Length 2-13/16 inches.

Metering Rod Jet: .096 inch diameter.

Metering Rod Setting: See Adjustments.

Accelerating Pump: Diaphragm type, vacuum and mechanically operated. (Non-adjustable.) Discharge (pump) jet size No. 72 (.025 inch) drill. Intake passage (in diaphragm housing) size No. 72 (.025 inch) drill. Vacuum restriction (in flange) size No. 55 (.052 inch) drill. Vacuum passage (diaphragm bleed) size No. 65 (.035 inch) drill.

Pump Adjustment: See adjustments.

Choke: Manual, interconnected with throttle. Valve offset butterfly type.

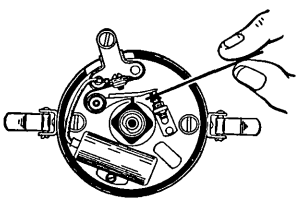
Vacuum Spark Port: .054-.056 inch diameter. Top of port .035 to .045 inch above top edge of valve in closed position.

Motor Tune-Up—Be Accurate!

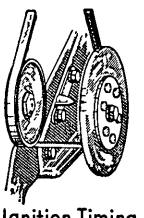
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



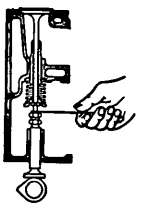
Spark Plug
Gap
.030"



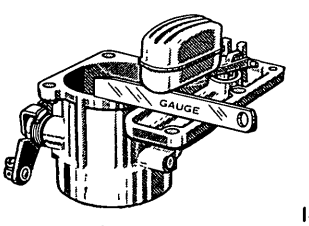
Breaker Point
Setting
.020"



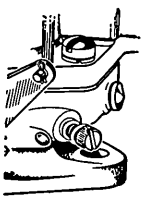
Ignition Timing
Breaker Points to Open:
5° B. T. D. C.
at Vibration Damper
(or Road-Set for
Light Detonation)



Valve Setting
(Hot or Cold)
Intake .018"
Exhaust .016"



Float Setting
5/16 Inch
(Use Gauge T109-107)



Idle Adjustment
Screw Setting
¾ to 1¾
Turns Open

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: With bowl cover assembly inverted and float resting on pin in seated needle, and with gasket removed, the distance from the bowl cover to the top of float should be 5/16". (Use gauge No. T109-107.) Do not depress float lip against spring loaded pin in needle, but let float rest of its own weight. Adjust by bending lip of float, not float arm. Float setting must be checked with the bowl cover held at eye height in a level position.

METERING ROD ADJUSTMENT: This adjustment is important and should be checked each time the carbureter is reassembled or lean rods are installed. With throttle valve seated in bore of carbureter, press down on upper end of

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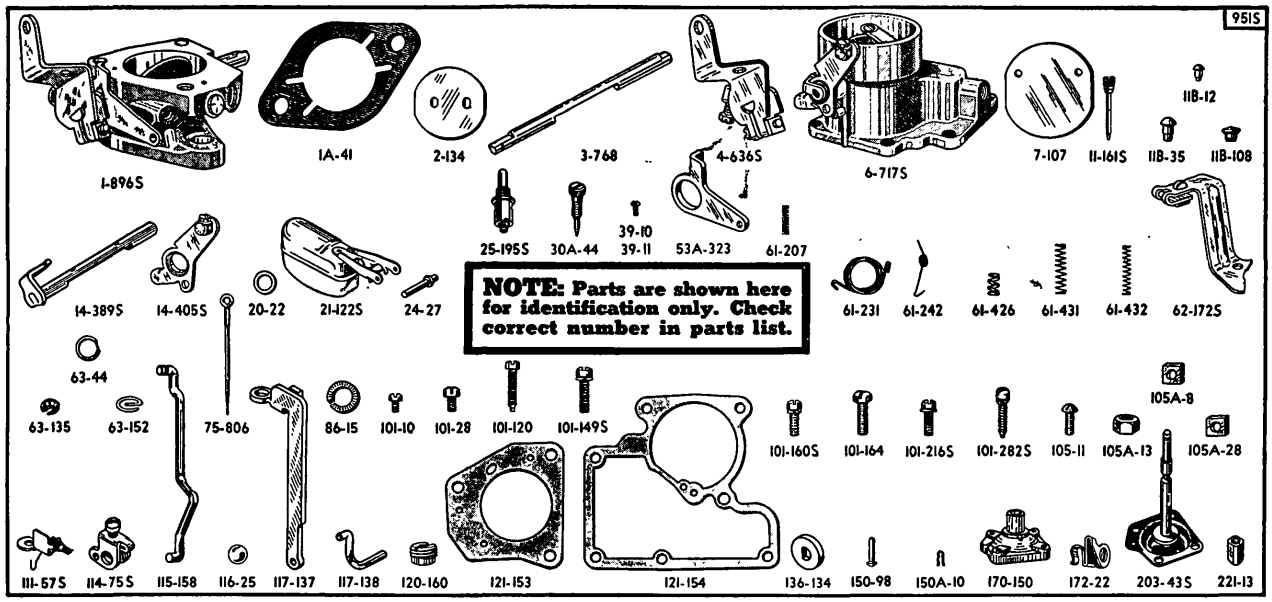
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diaphragm shaft until diaphragm bottoms in vacuum chamber. (Tool T109-212 may be used to hold diaphragm shaft down while adjusting metering rod.) Metering rod should contact bottom of metering rod well, and metering rod arm should contact lifter link between springs and at supporting lug. Adjust by bending lip of metering rod arm to which metering rod is attached, up or down.

ACCELERATING PUMP: If acceleration is not satisfactory remove ball check weight and aluminum pump discharge check ball. Then remove pump diaphragm assembly. Check diaphragm for wear or damage. Be sure inlet hole in diaphragm housing is not clogged with lint or foreign matter. If the discharge ball or seat appear damaged, form a new seat by tapping on a 1/8" stainless steel ball (116-11) with 5/32" brass drift and light hammer. Remove stainless steel ball and install new 116-25 aluminum ball. Do not tap on aluminum ball. Then install weight and retainer ring. Inspect and replace all worn or damaged parts and clean and blow out all passages with compressed air. Make sure discharge check seats in casting as a leak at this point will result in poor acceleration.

FAST IDLE ADJUSTMENT: With choke held in wide open postion, lip on fast idle arm should contact boss on body casting. Adjust by bending at offset of fast idle link.



Willys—1952-1957—Carbureter No. 951S

WHEN SERVICING, USE GASKET ASSORTMENT No. 206A; REPAIR PACKAGE No. 1559C

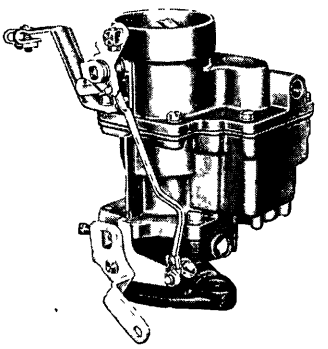
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME
1-896S	Body flange assembly
1A-41	FLANGE GASKET
2-134	Throttle valve
3-768	Throttle shaft
4-636S	Throttle lever assembly
6-717S	Air horn assembly
7-107	Choke valve
11-161S	Low speed jet assembly (Sup. by 11-163S)
11-163S	LOW SPEED JET ASSEMBLY
11B-12	Flange passage plug
11B-35	Nozzle passage rivet plug
11B-79	Rivet plug (2)
11B-108	IDLE PORT RIVET PLUG
14-389S	Choke shaft and lever assembly
14-405S	Choke lever assembly
20-22	Needle seat gasket
21-122S	Float and lever assembly
24-27	Float lever pin
25-190S	NEEDLE, SPRING AND SEAT ASSEMBLY
30A-44	Idle adjustment screw
39-10	Choke valve attaching screw (2)
39-11	THROTTLE VALVE ATTACHING SCREW (2)
53A-323	Fast idle arm
61-207	Intake needle spring
61-231	Choke lever spring
61-242	Metering rod spring
61-389	PUMP DIAPHRAGM SPRING
61-426	Idle screw spring
61-431	UPPER PUMP SPRING (OUTER)
61-432	UPPER PUMP SPRING (INNER)
62-172S	Choke tube clamp assembly
63-44	Choke lever retaining ring
63-92	PUMP DIAPHRAGM SPRING RETAINER
63-135	UPPER PUMP SPRING RETAINER
63-152	PUMP DISCHARGE BALL CHECK RETAINER RING

Part No.	PART NAME
75-806	METERING ROD—STANDARD
75-808	Metering rod—1 size lean
75-913	Metering rod—1 size rich
86-15	Flange stud lock washer (2)
101-10	Wire clamp screw
101-28	Throttle shaft arm attaching screw
101-120	Throttle lever adjustment screw
101-149S	Body flange attaching screw and washer assembly (3)
101-160S	Air horn attaching screw and washer assembly (5)
101-164	Throttle lever clamp screw
101-216S	Air horn attaching screw and washer assembly (2)
101-256	Throttle lever adjustment screw (Sup. by 101-120)
101-282S	Diaphragm attaching screw and washer assembly (4)
105-11	Tube clamp screw
105A-8	Tube clamp nut
105A-13	Flange nut (2)
105A-28	Throttle lever clamp nut
111-57S	Metering rod arm assembly
114-75S	THROTTLE SHAFT ARM ASSEMBLY
115-158	Fast idle connector rod
116-25	PUMP DISCHARGE BALL CHECK
117-137	PUMP LIFTER LINK
117-138	PUMP CONNECTOR LINK
120-160	METERING ROD JET
121-153	BODY FLANGE GASKET
121-154	BOWL COVER AND AIR HORN GASKET
121-172	Lifter link seal gasket
136-134	Throttle lever washer
136-152	Lifter link seal washer
150-98	Intake needle pin
150A-10	PIN SPRING
170-150	Pump diaphragm housing
172-22	Throttle connector rod retainer
203-43S	DIAPHRAGM ASSEMBLY
221-13	BALL CHECK WEIGHT

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, nly ne is used.

MODEL "DJ-3A"



WILLYS JEEP DISPATCHER 1956-1958

YF DOWN-DRAFT **CARBURETER No. 2392S**

CARBURETER SPECIFICATIONS

For Willys 4 Cylinder Engine: 3 1/8 Inch Bore, 4 3/8 Inch Stroke

Dimensions: Flange size, 1 1/4 inch S. A. E.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 11/16 inch I. D.
Main venturi, 1 1/4 inch I. D.

Float Setting: Distance from float (at free end) to float chamber cover, with free weight of float on needle and spring to be 9/32 inch.

Vents: Outside, none. Inside balance vent to air horn above choke valve.

Gasoline Intake: Square vertical, spring loaded needle. Size No. 48 drill, in needle seat.

Low Speed Jet Tube: Jet size, No. 68 (.031 inch) drill. By-pass in air horn, size No. 56 drill. Bleed in body, size No. 56 drill. Economizer in body, size No. 54 (.055 inch) drill.

Idle Ports: Upper port, slot type; length .170 inch. Width, .030 inch.

Idle Port Opening: Top of port: .168 to .172 inch, above top edge of valve with valve tight closed. Lower port size: .053 to .057 inch diameter. (For idle adjusting screw.)

Set Idle Adjustment Screw: 1/2 to 2 turns open. For richer mixture, turn screw out. Do not idle engine below 600 r.p.m

Main Nozzle: Nozzle is installed permanently. **DO NOT REMOVE.** Anti-percolator air bleed .0276 inch diameter in plug

Metering Rod (Diaphragm Type): Economy step, .0735 inch diameter; middle step tapers to .062 inch diameter; power step, .044 inch diameter.

Metering Rod Jet: .096 inch diameter.

Metering Rod Setting: See Adjustments.

Accelerating Pump: Diaphragm type, vacuum operated.
Discharge (pump) jet size, No. 72 drill, relief to bowl .093".
Intake passage (in diaphragm housing) size No. 72 drill.
Vacuum restriction (in flange) size No. 55 drill.
Vacuum passage (diaphragm bleed) size No. 65 drill.

Pump Adjustment: None.

Choke: Manual, interconnected with throttle. Valve, offset butterfly type.

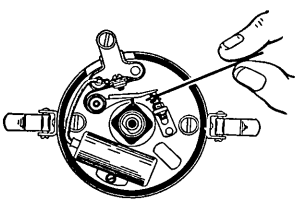
Vacuum Spark Port: 054 to .056 inch diameter. Top of port .035 to .045 inch above top edge of valve in closed position.

Motor Tune-Up—Be Accurate!

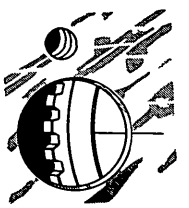
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



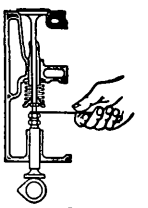
Spark Plug Gap .030"



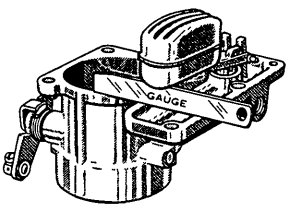
Breaker Point Setting .020"



Ignition Timing Breaker Points to Open: 5° B. T. D. C. At Vibration Damper



Valve Setting (Hot or Cold) Intake .016" Exhaust .016"



Float Setting 9/32 (Use Gauge T109-126)

Idle Adjustment Screw Setting 1/2 to 2 Turns Open Idle Engine at 600 R.P.M.

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: With bowl cover assembly inverted and float resting on pin in seated needle, and with gasket removed, the distance from the bowl cover to the top of float should be 9/32 inch (gauge T109-126). Do not depress float lip against spring loaded pin in needle, but let float rest of its own weight. Adjust by bending lip of float, not float arm. Float setting must be checked with the bowl cover held at eye height in a level position.

METERING ROD ADJUSTMENT: This adjustment is important and should be checked each time the carbureter is reassembled or lean rods are installed. With throttle valve seated in bore of carbureter, press down on upper end of diaphragm shaft until diaphragm bottoms in vacuum chamber. (Tool T109-212 may be used to hold diaphragm shaft down while adjusting metering rod.) Metering rod should contact bottom of metering rod well and metering rod arm

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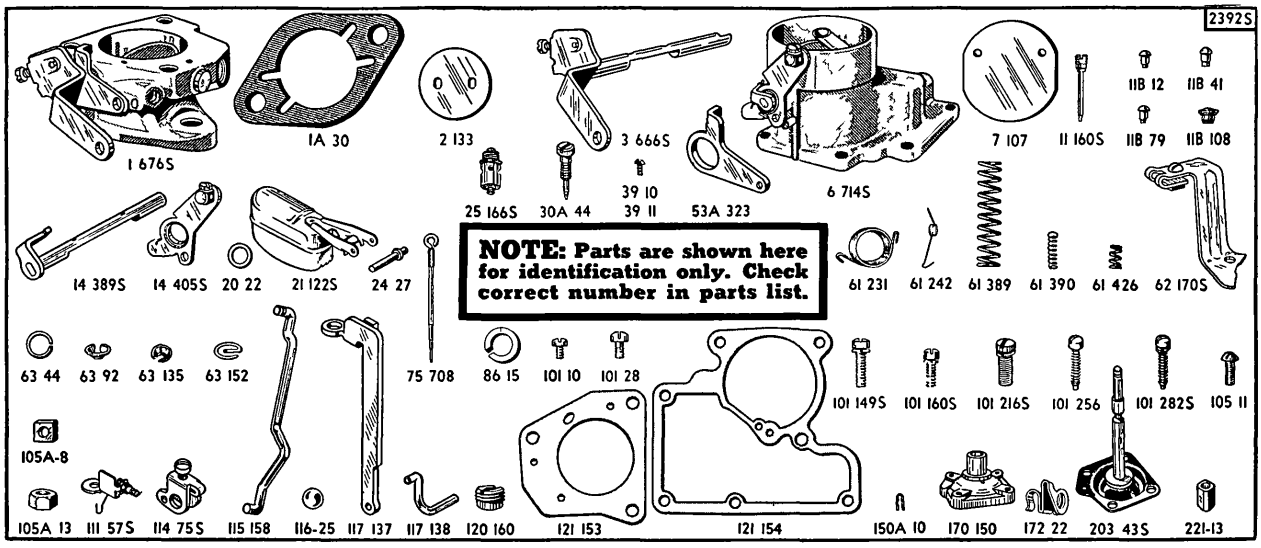
CARBURETER
TRADE MARK REG. U. S. PAT. FF.
MARCA REGISTRADA

PRINTED IN U.S.A.

should contact lifter link at the outer end nearest the spring and at supporting lug Adjust by bending lip of metering rod arm to which metering rod is attached, up or down

ACCELERATING PUMP If acceleration is not satisfactory remove pump discharge ball check retainer ring and aluminum pump discharge check ball Then remove pump diaphragm assembly Check diaphragm for wear or damage Be sure inlet hole in diaphragm housing is not clogged with lint or foreign matter If the discharge ball or seat appear damaged form a new seat by tapping on a ⅛ inch stainless steel ball with 5/32 inch brass drift and light hammer Remove stainless steel ball and install new 116 25 aluminum ball DO NOT TAP ON ALUMINUM BALL Then install retainer ring Inspect and replace all worn or damaged parts and clean and blow out all passages with compressed air Make sure discharge ball check seats in casting as a leak at this point will result in poor acceleration

FAST IDLE ADJUSTMENT With choke held in wide open position, lip on fast idle arm should contact boss on body casting Adjust by bending at offset portion of choke connector rod



Willys—1956-1958—Carbureter No. 2392S

WHEN SERVICING, USE GASKET ASSORTMENT No 200 RE-CARBURETION KIT No 1546N

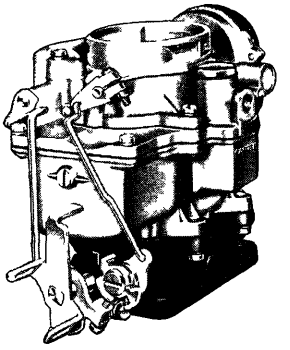
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF RE-CARBURETION KIT

Part No.	PART NAME	
1-676S	Body flange assembly	
1A-30	FLANGE GASKET	
2-133	Throttle valve	
3-666S	Throttle shaft and lever assembly	
6-714S	Air horn assembly	
7-107	Choke valve	
11-160S	Low speed jet assembly	
11B-12	Flange passage plug	
11B-41	Nozzle passage rivet plug	
11B-79	Rivet plug	(2)
11B-108	Idle port rivet plug	
14-389S	Choke shaft and lever assembly	
14-405S	Choke lever assembly	
20-22	Needle seat gasket	
21-122S	Float and lever assembly	
24-27	Float lever pin	
25-166S	NEEDLE SPRING AND SEAT ASSEMBLY	
30A-44	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	Throttle valve attaching screw	(2)
53A-323	Fast idle arm	
61-231	Choke lever spring	
61-242	Metering rod spring	
61-389	Pump diaphragm spring	
61-390	Upper pump spring	
61-426	Idle adjustment screw spring	
62-170S	Choke tube clamp assembly	
63-44	Choke lever retaining ring	
63-92	Pump diaphragm spring retainer	
63-135	Upper pump spring retainer	

Part No.	PART NAME	
63-152	Pump discharge ball check retainer ring	
75-708	METERING ROD—STANDARD	
75-720	Metering rod—1 size lean	
86-15	Flange stud lock washer	(2)
101-10	Wire clamp screw	
101-28	Throttle shaft arm attaching screw	
101-149S	Body flange attaching screw and washer assembly	(3)
101-160S	Bowl cover attaching screw and washer assembly	(5)
101-216S	Air horn attaching screw and washer assembly	(2)
101-256	Throttle lever adjustment screw	
101-282S	Diaphragm housing attaching screw and washer assembly	(4)
105-11	Tube clamp screw	
105A-8	Tube clamp nut	
105A-13	Flange nut	(2)
111-57S	Metering rod arm assembly	
114-75S	Throttle shaft arm assembly	
115-158	Choke connector rod	
116-25	Pump discharge ball check	
117-137	Pump lifter link	
117-138	Pump connector link	
120-160	METERING ROD JET	
121-153	BODY FLANGE GASKET	
121-154	BOWL COVER AND AIR HORN GASKET	
150A-10	Pin spring	
170-150	Pump diaphragm housing	
172-22	Throttle connector rod retainer	
186-77	Pump baffle plate (used to prevent fuel dripping from lifter link)	
203-43S	PUMP DIAPHRAGM ASSEMBLY	
221-13	Ball check weight	

NOTE: Figures in parentheses indicate number f pieces used in one carbureter. Where no figure is shown, only one is used.

6-226 ENGINE
(4 Wheel Drive)



WILLYS STATION WAGON AND TRUCK 1954-1956

Casting No 1213 on Face of Flange

WCD Dual Down-Draft Climatic® Control Carbureter—**No. 2204S**

CARBURETER SPECIFICATIONS

For Willys 6 Cylinder Engine 3 5/16 Inch Bore, 4⅜ Inch Stroke

Dimensions Flange size 1¼ inch dual 4 bolt type
Primary venturi size 11/32 inch I D
Secondary venturi size 21/32 inch I D
Main venturi size 1⅛ inch I D

Float Level See adjustments

Vents Inside 2—size No 40 (.098 inch) drill Outside in air horn 2—size No 12 (.189 inch) drill

Gasoline Intake Square vertical spring loaded needle Size No 42 (.0935 inch) drill n needle seat

Low Speed Jet Tube Jet size No 68 (.031 inch) drill By pass in air horn size No 56 (.0465 inch) drill
Economizer in air horn size No 60 (.040 inch) drill
Idle bleed in air horn No 55 (.052 inch) drill

Idle Port Upper port slot type length .156 inch width .030 inch

Idle Port Opening Top of port to be .125 to .131 inch above top edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw) Size .0615 to .0655 inch diameter

Set Idle Adjustment Screw 1 to 2 turns open For richer mixture turn screw out Do not idle engine below 550 r p m

Main Nozzle Nozzle is installed permanently DO NOT REMOVE Anti percolating jet size No 72 (.025 inch) drill

Metering Rod (Vacumeter Type) Economy step .069 inch
Middle step tapers to .0615 inch diameter
Power step .057 inch diameter

Metering Rod Jet Size .086 inch diameter

Metering Rod Setting See adjustments

Accelerating Pump Discharge jet (twin) size No 72 (.025 inch) drill Intake ball check seat size .115 .120 inch diameter Discharge needle seat size No 50 (.070 inch) drill

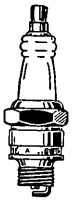
Pump Adjustment See adjustments

Choke Carter Climatic® Control set on index Butterfly type offset valve Choke heat suction hole in bowl cover, size No 42 (.0935 inch) drill

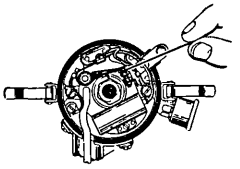
Vacuum Spark Port Round type — .063 inch diameter top of port to be .027 to .037 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

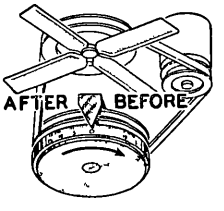
CAUTION Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



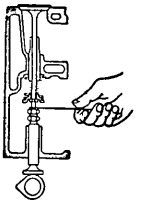
Spark Plug
Gap
.032"



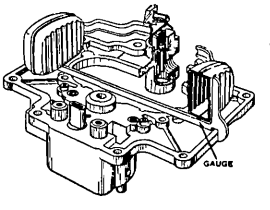
Breaker Point
Setting
.022"



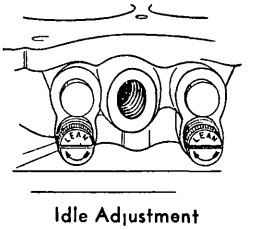
Ignition Timing
Breaker Points to Open
4° B T. C.



Valve Setting
(Cold)
Intake .014"
Exhaust .014"



Float Setting
See Adjustments



Idle Adjustment
Screw Setting
1 to 2
Turns Open

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT Two separate float adjustments must be made—lateral and vertical **LATERAL ADJUSTMENT** With bowl cover assembly inverted bowl cover gasket removed and float lip resting on seated needle place float gauge directly under float with notched portions of gauge fitted over edges of casting Sides of floats should barely touch the vertical uprights of float gauge Adjustment should be made by bending arms of floats

VERTICAL ADJUSTMENT With float gauge in same position floats should just clear the horizontal portion of gauge Vertical distance between top of float and machined surface of casting must be 3/16 inch (gauge T109-28 may be used) Adjust by bending float arms Remove float, install bowl cover gasket and then reinstall float

PUMP ADJUSTMENT Install pump connector link in outer hole (long stroke) of pump arm with ends extending away

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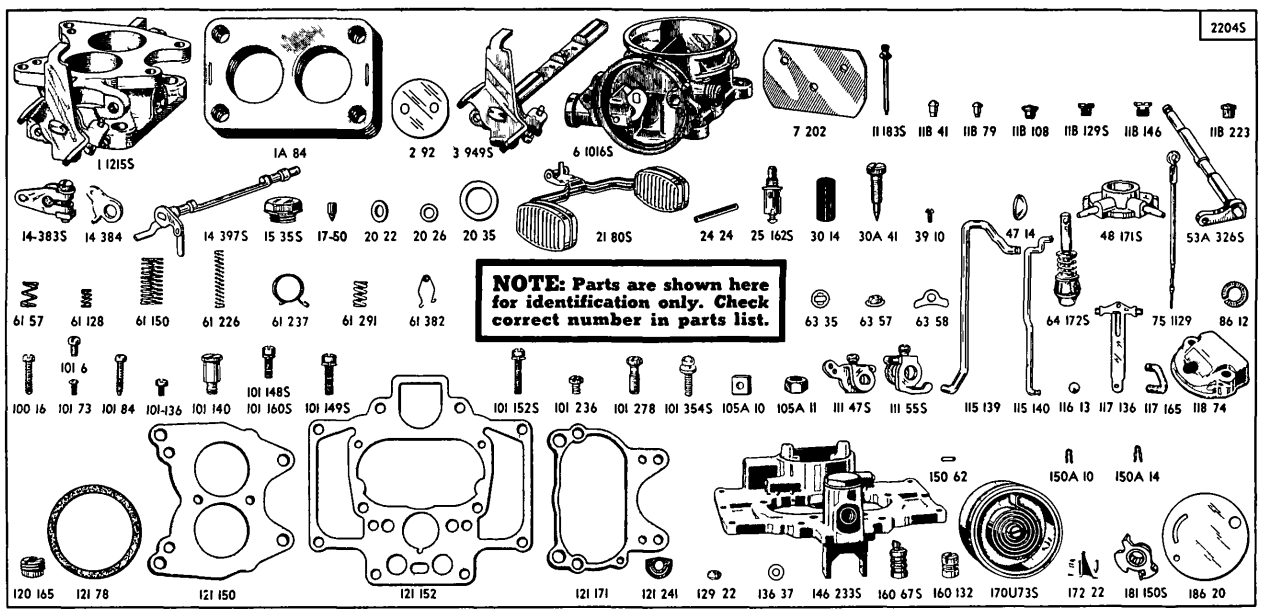
CARBURETER
TRADE MARK REG U S PAT OFF.
MARCA REGISTRADA

from countershaft arm Back out throttle lever set screw until throttle valves seat in bores of carbureter Be sure fast idle adjusting screw does not hold throttle open Place universal pump travel gauge T109 117S, inverted on edge of dust cover boss of bowl cover Turn knurled nut of gauge until finger just touches upper end of plunger shaft Number indicated on gauge should be '33 Hold the gauge vertical to insure correct reading Adjust by bending the throttle connector rod at upper angle, use tool T109-213 Optional Adjustment With throttle valves seated in bores of carbureter, the distance from the top of the plunger shaft to the top of the dust cover boss should be 22/64 inch Adjust as mentioned above

METERING ROD ADJUSTMENT The metering rods must be adjusted after the pump adjustment No metering rod gauges are necessary Procedure is as follows With the throttle lever set screw backed out and throttle valves seated in bores of carbureter, press down on vacumeter link until metering rods bottom With rods held in this position, revolve metering rod arm until lip contacts vacumeter link Hold in place and carefully tighten metering rod arm set screw

FAST IDLE ADJUSTMENT. (A) Loosen choke lever clamp screw on choke shaft Insert 040 inch feeler gauge (T109-193) between lip of fast idle cam and boss of flange casting Hold choke valve tightly closed and take slack out of linkage by pressing choke lever towards closed position Hold in place and tighten clamp screw (B) With choke valve tightly closed tighten fast idle adjusting screw until there is 016 inch opening (gauge T109-29 may be used) between throttle valve and bore of carbureter (side opposite idle port) Be sure fast idle adjusting screw is on high step of cam while making this adjustment

UNLOADER ADJUSTMENT With throttle wide open there should be ⅛ inch (gauge T109-36) clearance between upper edge of choke valve and inner wall of air horn Adjust by bending unloader lip on throttle shaft lever (use bending tool T109-41)



Willys—1954-1956—Carbureter No. 2204S

WHEN SERVICING, USE GASKET ASSORTMENT No 258, REPAIR PACKAGE No. 1788

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

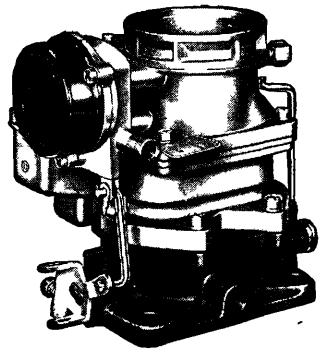
Part No.	PART NAME	
1-1215S	Body flange assembly	
1A-84	FLANGE GASKET	
2-92	Throttle valve	(2)
3-949S	Throttle shaft and lever assembly	
6-1016S	Air horn and plug assembly	
7-202	Choke valve	
11-183S	LOW SPEED JET ASSEMBLY	(2)
11B-41	Rivet plug	(2)
11B-79	Rivet plug	(7)
11B-108	Idle port rivet plug	(2)
11B-129S	Pump discharge passage plug assembly	
11B-146	Level sight plug	
11B-223	Nozzle passage rivet plug	(2)
14-383S	Choke lever and screw assembly	
14-384	Cam trip lever	
14-397S	Choke piston lever, link and shaft assembly	
15-35S	Strainer nut assembly	
17-50	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	
20-26	Pump passage plug gasket	
20-35	BOWL STRAINER GASKET	
21-80S	Float and lever assembly	
24-24	Float lever pin	
25-162S	NEEDLE AND SEAT ASSEMBLY	
30-14	BOWL COVER STRAINER	
30A-41	Idle adjustment screw	(2)
39-10	Choke valve attaching screw	(2)
47-14	Welsh plug	
48-171S	Pump jet and housing assembly	
53A-326S	Pump operating lever and countershaft assembly	
61-57	Idle adjustment screw spring	(2)
61-128	Connector rod spring	
61-150	PUMP SPRING (LOWER)	
61-226	VACUUM PISTON SPRING	
61-237	Fast idle cam spring	
61-291	Throttle lever adjusting screw spring	
61-382	METERING ROD SPRING	
63-35	Connector rod spring retainer	
63-57	INTAKE CHECK BALL RETAINER	
63-58	Coil housing retainer	(2)
64-172S	PUMP PLUNGER, ROD SPRING AND RETAINER ASSEMBLY	
75-1129	METERING ROD	(2)
75-1142	Metering rod (1 size lean)	(2)
75-1190	Metering rod (2 sizes lean)	(2)

Part No.	PART NAME	
86-12	Flange stud lock washer	(4)
100-16	Throttle lever adjusting screw	
101-6	Pump arm clamp screw	
101-73	Throttle valve attaching screw	(4)
101-84	Fast idle adjustment screw	
101-136	Coil housing attaching screw	(2)
101-140	Fast idle cam attaching screw	
101-148S	Dust cover attaching screw and washer assembly	(2)
101-149S	Body flange attaching screw and washer assembly	(4)
101-152S	Air horn attaching screw and washer assembly	(4)
101-160S	Bowl cover attaching screw and washer assembly	(6)
101-236	Metering rod arm clamp screw	
101-278	Pump jet housing attaching screw	
101-354S	Choke lever clamp screw assembly	
105A-10	Choke lever clamp screw nut	
105A-11	Flange stud nut	(4)
111-47S	Pump arm and screw assembly	
111-55S	Metering rod arm and screw assembly	
115-139	THROTTLE CONNECTOR ROD	
115-140	Choke connector rod	
116-13	INTAKE CHECK BALL	
117-136	Vacumeter piston link	
117-165	Pump connector link	
118-74	Dust cover	
120-165	METERING ROD JET	(2)
121-78	COIL HOUSING GASKET	
121-150	BODY FLANGE GASKET	
121-152	BOWL COVER GASKET	
121-171	AIR HORN GASKET	
121-241	PUMP JET HOUSING GASKET	
129-22	Metering rod disc	(2)
136-37	Connector rod washer	
146-233S	Bowl cover assembly	
150-62	Choke piston pin	
150A-10	Pin spring	(2)
160-67S	Vacuum piston and pin assembly	
160-132	Choke piston	
170U73S	Thermostatic coil and housing assembly	
172-22	Throttle connector rod retainer	
181-150S	Fast idle cam assembly	
186-20	Choke baffle plate	

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used

(1954)
"ACE", "EAGLE" and
"SCOUT CRUISER"
4 W. D. Station Wagon
and Truck

(1955)
"BERMUDA" and "CUSTOM"



WILLYS
6-226 ENGINE
1954-1955

WDG Dual Down-Draft Climatic® Control Carbureters—**Nos. 2052S-2052SA**

CARBURETER SPECIFICATIONS

For Willys 6 Cylinder Engine: 3-5/16 Inch Bore, 4⅜ Inch Stroke

Dimensions: Flange size, 1¼ inch dual, 4 bolt type.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 21/32 inch I. D
Main venturi, 1-1/16 inch I. D

Float Level: See Adjustments

Vents: Outside: .156 inch diameter. Inside: No. 32 (.116 inch) drill.

Gasoline Intake: Size No. 42 (.0935 inch) drill in needle seat.

Low Speed Jet Tube: Jet, size No. 70 (.028 inch) drill. By-pass, in air horn, size No. 56 (.0465 inch) drill. Economizer, in air horn, size No. 55 (.052 inch) drill. Idle bleed, in air horn, size No. 54 (.055 inch) drill. Idle restriction, in body, size No. 52 (.0635 inch) drill.

Idle Port: Upper port, slot type, length .160 inch; width, .030 inch.

Idle Port Opening: .117 to .123 inch above upper edge of valve with valve tightly closed.

Lower Port (For Idle Adjustment Screw): .068 to .072 inch diameter.

Set Idle Adjustment Screw: ½ to 1½ turns open. For richer mixture turn screw out. Idle engine at 450 R.P.M. on Hydra matic transmission and 500 on Standard and Overdrive transmissions.

Main Nozzle: Nozzle is installed permanently DO NOT REMOVE.

Metering Rod (Vacumeter Type): Economy step .065 inch diameter. Middle step tapers to .0485 inch diameter. Power step .041 inch diameter. (These rods designed with stabilizing flats on economy step.)

Metering Rod Jet: No. 44 (.086 inch) drill.

Metering Rod Setting: See Adjustments.

Accelerating Pump: Discharge jet (twin) size, No. 74 (.0225 inch) drill. Intake ball check seat size No. 40 (.098 inch) drill. Discharge needle seat size No. 50 (.070 inch) drill.

Pump Adjustment: See Adjustments.

Choke: Carter Climatic® Control set (2052S) 2 points rich; (2052SA) Index. Offset butterfly type. Choke heat suction hole in piston housing, size No. 42 (.0935 inch) drill.

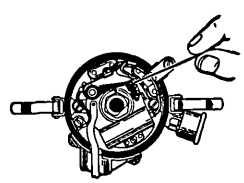
Vacuum Spark Port: Horizontal slot (round end) size 045 by .110 inch. Top of port .020 inch above top edge of valve with valve tightly closed.

Motor Tune-Up—Be Accurate!

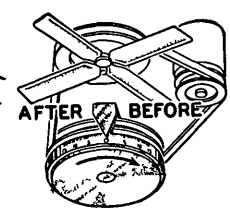
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter



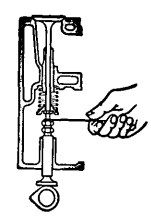
Spark Plug
Gap
.030"



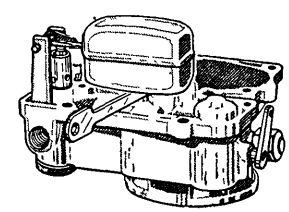
Breaker Point
Setting
.020"



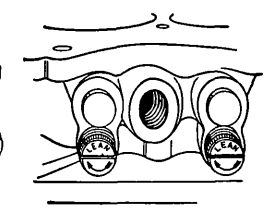
Ignition Timing
Breaker Points to Open:
4° B. T. C.



Valve Setting
(Cold)
Intake .014"
Exhaust .014"



Float Setting
See Adjustments



Idle Adjustment
Screw Setting
½ to 1½
Turns Open

CARBURETER ADJUSTMENTS

FLOAT ADJUSTMENT: With bowl cover gasket removed, bowl cover inverted and float resting on seated needle the distance from the bowl cover to the top of the float should be (solid needle) 9/32 inch (gauge T109-126), (spring loaded needle) 7/32 inch (gauge T109-106) adjust by bending float arm

PUMP ADJUSTMENT: Back out throttle lever set screw until throttle valves seat in bores of carbureter. Place Universal pump travel gauge T109-117S inverted on edge of dust cover boss of bowl cover. Turn knurled nut of gauge until

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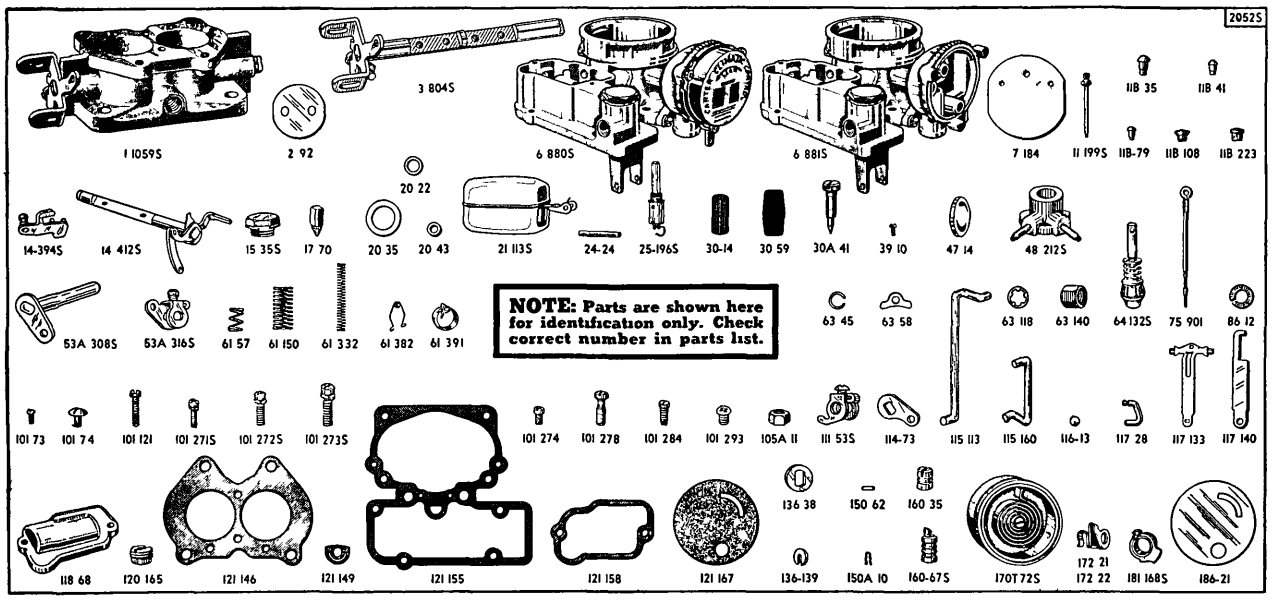
CARBURETER
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finger on gauge just touches top of plunger shaft The distance from the dust cover boss to the top of the plunger shaft should be ½ inch (distance from base to tip of finger on gauge) Adjust by bending throttle connector rod at upper angle

METERING ROD ADJUSTMENT. The metering rods must be adjusted after the pump adjustment or when leaner than standard rods are installed No metering rod gauges are necessary Procedure is as follows With the throttle lever set screw backed out and throttle valves seated in bores of carbureter, press down on vacumeter link until metering rods bottom With rods held in this position revolve metering rod arm until lip contacts vacumeter link Hold in place and carefully tighten metering rod arm set screw

FAST IDLE ADJUSTMENT. With the thermostatic coil housing, gasket and baffle plate removed, crack throttle valve and hold choke valve closed Then close throttle There should now be .018"-.023" clearance (gauge T109-29) between throttle valve and bore of carbureter (side opposite idle port) Adjust by bending the choke connector rod at lower angle

UNLOADER ADJUSTMENT. Must be made after fast idle adjustment Hold throttle valve wide open and close choke valve as far as possible without forcing, there should now be 9/64 inch (gauge T109-34) clearance between upper edge of choke valve and inner wall of air horn Adjust by bending arm on choke trip lever



Willys—1954-1955—Carbureters Nos. 2052S-2052SA

WHEN SERVICING, USE GASKET ASSORTMENT No. 196; REPAIR PACKAGE No 1759

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-1059S	Body flange assembly	
2-92	Throttle valve	(2)
3-804S	Throttle shaft and lever assembly	
6-880S	*Air horn and Climatic® control assembly (Sup by 6-997S) (2052S)	
6-881S	*Air horn assembly (Sup by 6-997S) (2052S)	
6 997S	**Air horn and Climatic® control assembly	
7-184	Choke valve	
11-199S	LOW SPEED JET ASSEMBLY	(2)
11B-35	Rivet passage plug	(3)
11B-41	Rivet passage plug	(3)
11B-79	Rivet passage plug	
11B-108	IDLE PORT RIVET PLUG	(2)
11B-223	Nozzle rivet plug	(2)
14-394S	Choke trip lever and pin assembly	
14-412S	Choke piston lever, link and shaft assembly	
15-35S	Strainer nut assembly	
17-70	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	-
20-35	BOWL STRAINER GASKET	
20-43	PISTON HOUSING GASKET	
21-113S	Float and lever assembly (Sup by 21-172S)	
21-172S	Float and lever assembly	
24-24	Float lever pin	
25 173S	†Needle, spring and seat assembly	
25-196S	NEEDLE AND SEAT ASSEMBLY	
30 14	BOWL COVER STRAINER	
30-59	STRAINER	
30A-41	Idle adjustment screw	(2)
39 10	Choke valve attaching screw	(2)
47-14	CHOKE PISTON WELSH PLUG	
48-212S	Pump jet and housing assembly	
53A-308S	Pump operating lever and countershaft assembly	
53A-316S	Pump arm and screw assembly	
61-57	Idle adjustment screw lock spring	(2)
61-150	LOWER PUMP SPRING	
61-332	VACUUM PISTON SPRING	
61-382	METERING ROD SPRING	
61-391	Fast idle cam spring	
63-45	PUMP CHECK BALL RETAINER RING	
63-58	Coil housing retainer	(3)
63-118	Throttle shaft retaining ring	
63-140	Choke shaft retainer	
64-132S	PLUNGER, ROD, SPRING AND RETAINER ASSEMBLY	
75-901	METERING ROD—STANDARD	(2)
75-948	Metering rod—1 size lean	
75-949	Metering rod—2 sizes lean	
86-12	Flange stud lock washer	(4)
101-73	THROTTLE VALVE ATTACHING SCREW	(4)
101-74	Throttle shaft arm attaching screw	
101-121	Throttle lever adjustment screw	
101-271S	Dust cover attaching screw and washer assembly	(2)
101-272S	Air horn attaching screw and washer assembly	(8)
101-273S	Body flange attaching screw and washer assembly	(4)
101-274	Coil housing attaching screw	(3)
101-278	Pump jet housing attaching screw	
101-284	Piston housing attaching screw	(3)
101-293	Metering rod arm clamp screw	(2)
105A-11	Flange stud nut	(4)
111-53S	Metering rod arm and screw assembly	
114-73	THROTTLE SHAFT ARM	
115-113	THROTTLE CONNECTOR ROD	
115-160	Choke connector rod	
116-13	PUMP INTAKE CHECK BALL	
117-28	PUMP CONNECTOR LINK	
117-133	Vacumeter piston link	
117-140	Fast idle link	-
118 68	Dust cover	
120-165	METERING ROD JET	(2)
121 146	BODY FLANGE GASKET	
121-155	AIR HORN GASKET	
121-158	DUST COVER GASKET	
121-167	COIL HOUSING GASKET	
121-241	PUMP JET GASKET	
136-38	Throttle shaft washer	-
136-139	Choke shaft retainer washer	-
150-62	Choke piston pin	
150A-10	PIN SPRING	
160-35	Choke piston (2052S)	
160-67S	Vacuum piston and pin assembly	
160-130	Choke piston (2052SA)	
170P-72S	Thermostatic coil and housing assembly (2052SA)	
170T72S	Thermostatic coil and housing assembly (2052S)	
172-21	Choke connector rod retainer	
172-22	Throttle connector rod retainer	(2)
181-168S	Fast idle cam assembly	-
186-21	Choke baffle plate	

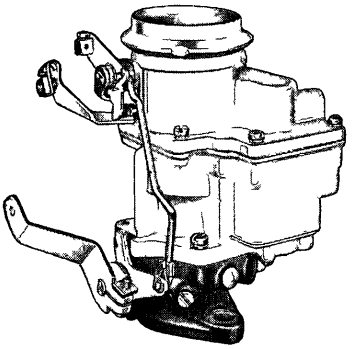
†Available for service to use on Willys (4) Wheel Drive Trucks and Station Wagon for rough road operation

*Identified by casting No 170-283 or 170-291 on piston housing

**Identified by casting No 170-171 on piston housing Used to convert 2052S to SA

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used

6-85 ENGINE



Cut shows 924S Carbureter

WILLYS
"AERO WING", DELUXE STATION WAGON 1952-1953
"AERO ACE" 1952-1954
"AERO EAGLE" 1953-1954
"AERO LARK" 1954 STATION WAGON AND SEDAN DELIVERY 1955

(2071S can be used in place of 924S)

YF Down-Draft Carbureters—**Nos. 924S-2071S**

CARBURETER SPECIFICATIONS

For Willys 6 Cylinder Engine: 3⅛ Inch Bore, 3½ Inch Stroke

Dimensions: Flange size, 1¼ inch S A E
Primary venturi, 11/32 inch I D
Secondary venturi, 11/16 inch I D
Main venturi 1-5/16 inch I. D

Float Setting: See adjustments

Vents: Outside none. Inside balance vent to air horn above choke valve

Gasoline Intake: Spring loaded needle Size No 48 (076 inch) drill in needle seat

Low Speed Jet Tube Jet size No 70 (028 inch) drill By pass in air horn, size No 57 (043 inch) drill. Economizer, size No 55 (052 inch) drill Idle bleed, size No 53 (0595 inch) drill

Idle Port: Upper port slot type length 159 to 161 inch, width 030 inch

Idle Port Opening: Top of port 148 to 152 inch above top edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw): Size 0615 to 0655 inch diameter

Set Idle Adjustment Screw 1 to 2 turns open For richer mixture turn screw out Do not idle engine below 600 r p m

Main Nozzle. Nozzle is installed permanently DO NOT REMOVE Anti percolator well vent (plug) size No 75 (021 inch) drill

Metering Rod (Diaphragm Type). Economy step 076 inch diameter middle step tapers to 064 inch diameter power step, 047 inch diameter

Metering Rod Jet: Size No 40 (098 inch) drill

Metering Rod Setting: See adjustments

Accelerating Pump: Diaphragm type, vacuum and mechanically operated Pump jet, size No 72 (025 inch) drill Intake passage (in diaphragm housing), size No 75 (021 inch) drill Discharge ball check seat (in body), size No 42 (0935 inch) drill Vacuum restriction (in flange), size No 55 (052 inch) drill Vacuum passage diaphragm bleed, size No 65 (035 inch) drill

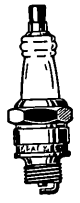
Pump Adjustment· None

Choke: Manual, interconnected with throttle Valve offset butterfly type

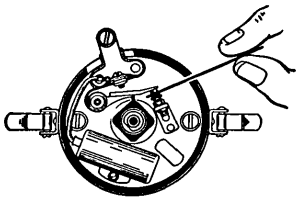
Vacuum Spark Port: 054 to 056 inch diameter Top of port 035 to 045 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

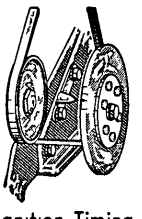
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



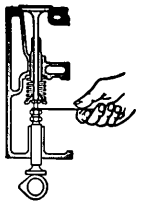
Spark Plug Gap .030"



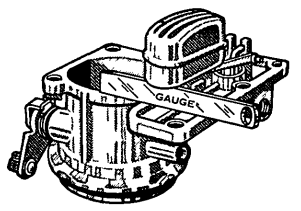
Breaker Point Setting .020"



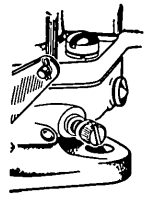
Ignition Timing Breaker Points to Open: 5° B.T.D.C. (or road-set for light detonation)



Valve Setting (Hot or Cold) Intake .018" Exhaust .016"



Float Setting See Adjustments



Idle Adjustment Screw Setting 1 to 2 Turns Open

CARBURETER ADJUSTMENTS

Float Adjustment. With bowl cover assembly inverted and float resting on pin in seated needle, and with gasket removed, the distance from the bowl cover to the top of float should be 9/32 inch (gauge T109-126) Do not depress float lip against spring loaded pin in needle, but let float rest of its own weight Adjust by bending lip of float, not float arm Float setting must be checked with the bowl cover held at eye height in a level position

Metering Rod Adjustment: This adjustment is important and should be checked each time the carbureter is reassembled or lean rods are installed. With throttle valve seated in bore of carbureter, press down on upper end of diaphragm shaft until diaphragm bottoms in vacuum chamber (Tool T109-212 may be used to hold diaphragm shaft down while adjusting metering rod) Metering rod should contact bottom of metering rod well and metering rod arm

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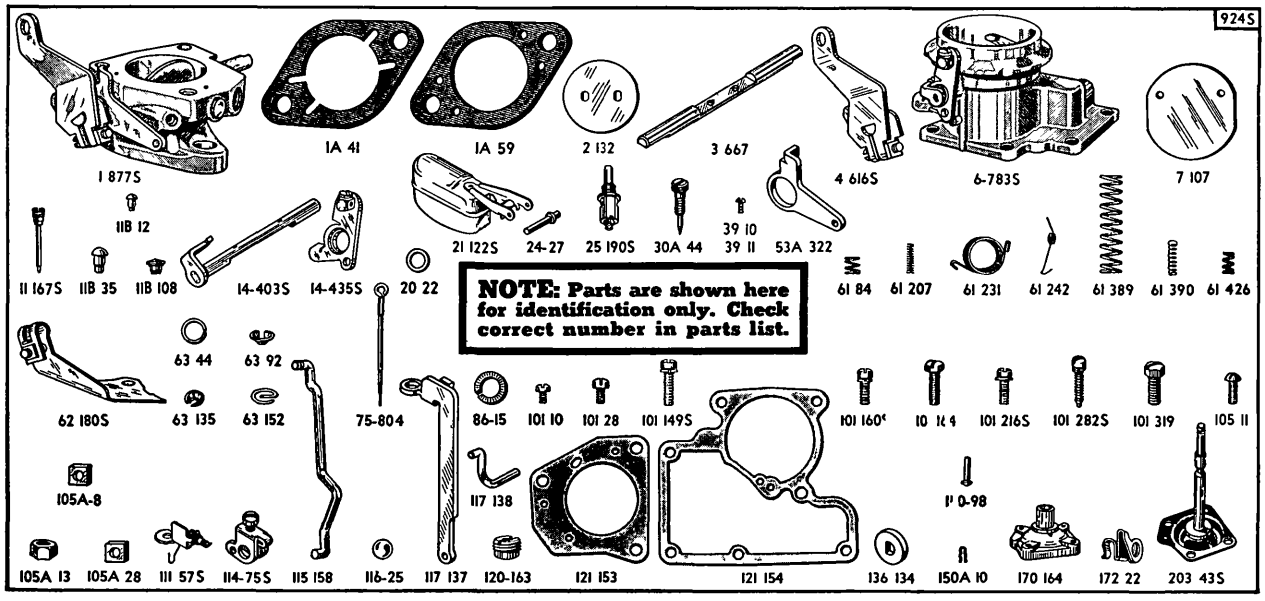
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should contact lifter link at the outer end nearest the springs and at supporting lug Adjust by bending lip of metering rod arm, to which metering rod is attached up or down

Accelerating Pump If acceleration is not satisfactory remove pump discharge ball check retainer ring and aluminum pump discharge check ball Then remove pump diaphragm assembly Check diaphragm for wear or damage Be sure inlet hole in diaphragm housing is not clogged with lint or foreign matter Inspect and replace all worn or damaged parts and clean and blow out all passages with compressed air Make sure discharge ball check seats in casting as a leak at this point will result in poor acceleration

Fast Idle Adjustment With choke held in wide open position lip on fast idle arm should contact boss on body casting Adjust by bending at offset portion of choke connector rod



Willys—1952-55—Carbureters Nos. 924S-2071S

WHEN SERVICING, USE GASKET ASSORTMENT No 206A, REPAIR PARTS PACKAGE No 1715

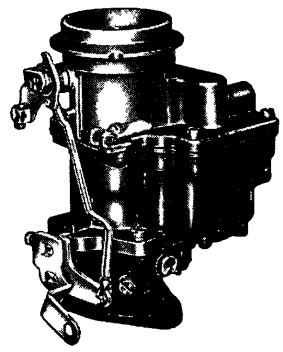
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-877S	Body flange assembly	
IA 41	FLANGE GASKET— FOR USE WITHOUT GOVERNOR	
IA-59	Flange gasket—for use with governor	
2 132	Throttle valve	
3 667	Throttle shaft	
4-616S	Throttle lever assembly	
6 783S	Air horn assembly (924S)	
6-904S	Air horn assembly (2071S)	
7-107	Choke valve	
11-163S	LOW SPEED JET ASSEMBLY	
11-167S	Low speed jet assembly (924S) (Sup by 11 163S)	
IIB-12	Flange passage plug	
IIB-35	Nozzle passage rivet plug	
IIB-79	Rivet plug (2071S)	(2)
IIB 108	IDLE PORT RIVET PLUG	
14-403S	Choke shaft and lever assembly	
14-435S	Choke lever assembly (924S)	
14-456S	Choke lever assembly (2071S)	
20-22	Needle seat gasket	
21-122S	Float and lever assembly	
24 27	Float lever pin	
25 190S	NEEDLE SPRING AND SEAT ASSEMBLY	
30A-44	Idle adjustment screw	
39 10	Choke valve attaching screw	(2)
39-11	THROTTLE VALVE ATTACHING SCREW	(2)
52-44	Choke cable sleeve (2071S)	
53A 322	Fast idle arm	
61-84	Throttle lever adjusting screw spring	
61-231	Choke lever spring	
61 242	Metering rod spring	
61 389	PUMP DIAPHRAGM SPRING	
61-390	UPPER PUMP SPRING	
61-426	Idle adjustment screw spring	
62-180S	Choke tube clamp assembly (924S)	
62-188S	Choke tube clamp assembly (2071S)	
63-44	Choke lever retaining ring	

Part No	PART NAME	
63-92	DIAPHRAGM SPRING RETAINER	
63-135	UPPER PUMP SPRING RETAINER	
63-152	PUMP DISCHARGE BALL CHECK RETAINER RING	
75 804	METERING ROD—STANDARD	
75 840	Metering rod—1 size lean	
86-15	Flange stud lock washer	(2)
101-10	Wire clamp screw	
101-28	Throttle shaft arm attaching screw	
101-149S	Body flange attaching screw and washer assembly	(3)
101-160S	Air horn attaching screw and washer assembly	(5)
101-164	Throttle lever clamp screw	
101-216S	Air horn attaching screw and washer assembly	(2)
101-282S	Diaphragm housing attaching screw and washer assembly	(4)
101-319	Throttle lever adjustment screw	
105-11	Tube clamp screw (924S)	
105-12	Tube clamp screw (2071S)	
105A-8	Tube clamp nut	
105A-13	Flange nut	(2)
105A-28	Throttle lever nut	
111-57S	Metering rod arm assembly	
114-75S	THROTTLE SHAFT ARM ASSEMBLY	
115-158	Fast idle connector rod	
116-25	PUMP DISCHARGE BALL CHECK	
117-137	PUMP LIFTER LINK	
117-138	PUMP CONNECTOR LINK	
120-163	METERING ROD JET	
121-153	BODY FLANGE GASKET	
121-154	BOWL COVER AND AIR HORN GASKET	
121-172	Lifter link seal gasket	
136-134	Throttle shaft washer	
136-152	Lifter link seal washer	
150A-10	PIN SPRING	
170-164	Pump diaphragm housing	
172-22	Throttle connector rod retainer	
203-43S	PUMP DIAPHRAGM ASSEMBLY	
221-13	Ball check weight	

NOTE· Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used

MODEL 6-75 PC



WILLYS "AERO LARK" 1952-53 "AERO FALCON" 1953

Casting No 648 on face of flange

YF Down-Draft Carbureter—**No. 937S**

CARBURETER SPECIFICATIONS

For Willys 6 Cylinder Eng ne 3⅛ Inch Bore, 3½ Inch Stroke

Dimensions Flange size 1¼ inch S A E
Primary venturi 11/32 inch I D
Secondary venturi 11/16 inch I D
Main venturi 1¼ inch I D

Float Level Distance from top of float (at free end) to float chamber cover when needle is seated 9/32 inch (Gauge No T109 126)

Vents Outside none Inside balance vent to air horn above choke valve

Gasoline Intake Square vertical (spring loaded) needle Size No 48 (076 inch) drill in needle seat

Low Speed Jet Tube Jet size No 70 (028 inch) drill By pass in air horn size No 56 (0465 inch) drill Economizer size No 57 (043 inch) drill Idle bleed size No 56 (0465 inch) drill

Idle Ports Upper port slot type length 169 171 inch Width 030 inch

Idle Port Opening Top of port 126 to 130 inch above top edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw) Size 053 to 057 inch diameter

Set Idle Adjustment Screw 1 to 2 turns open For richer mix ture turn screw out Do not idle engine below 550 r p m

Main Nozzle Nozzle is installed permanently DO NOT RE MOVE Anti percolator well vent (in body) size No 66 (033 inch) drill Passage from anti percolator well to nozzle re striction s ze No 70 (028 inch) drill

Metering Rod (Diaphragm Type) Economy step 0715 inch diameter middle step tapers to 062 inch diameter power step 045 inch diameter Length 2 13/32 inches

Metering Rod Jet 0935 inch d ameter

Metering Rod Setting See Adjustments

Accelerating Pump Diaphragm type vacuum operated (non adjustable)
Discharge (pump) jet size No 75 (021 inch) drill Dis charge needle seat size 092 inch diameter
Intake passage (in diaphragm housing) size No 72 (025 inch) drill
Vacuum restriction (in flange) size No 55 (052 inch) drill
Vacuum passage (diaphragm bleed) size No 65 (035 inch) drill

Pump Adjustment None

Choke Manual interconnected with throttle Valve offset but terfly type

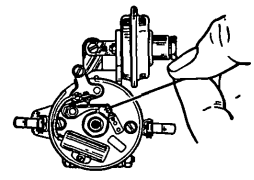
Vacuum Spark Port Slot type Size 125 by 040 inch Top of port 035 to 045 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

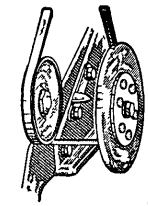
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



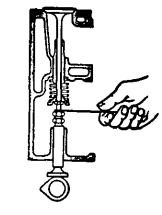
Spark Plug Gap 030'



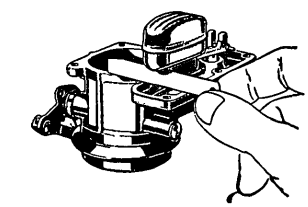
Breaker Point Setting 020'



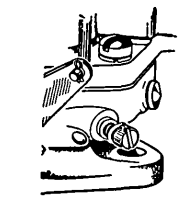
Ignition Timing Breaker Points to Open 5° B T D C at Vibration Damper (or Road Set for Light Detonation)



Valve Setting (Hot or Cold) Intake 016' Exhaust 016"



Float Setting 9/32 Inch (Use Gauge T109 126)



Idle Adjustment Screw Setting 1 to 2 Turns Open

CARBURETER ADJUSTMENTS

Float Adjustment With bowl cover assembly inverted and float resting on pin in seated needle, and with gasket removed the distance from the bowl cover to the top of float should be 9/32' (Gauge T109-126) Do not depress float lip against spring loaded pin in needle, but let float rest of its own weight Adjust by bending lip of float not float arm

Float setting must be checked with the bowl cover held at eye height in a level position

Metering Rod Adjustment This adjustment is important and should be checked each time the carbureter is reassembled or lean rods are installed With throttle valve seated

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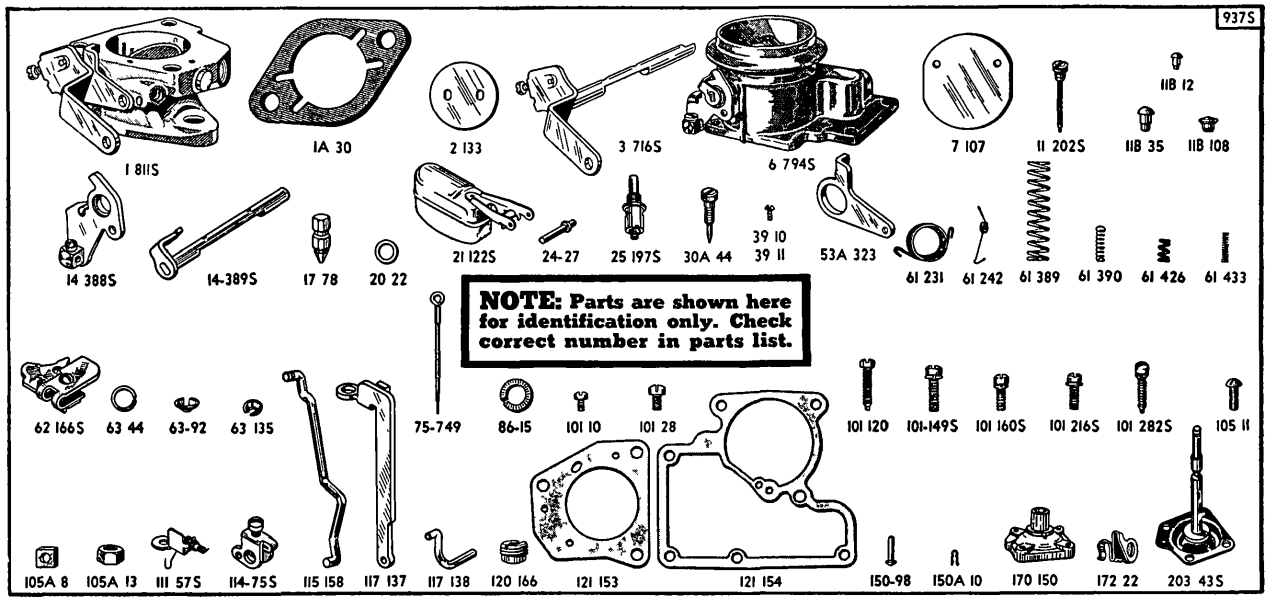
CARBURETER
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in bore of carbureter press down on upper end of diaphragm shaft until diaphragm bottoms in vacuum chamber (Tool T109-212 may be used to hold diaphragm shaft down while adjusting metering rod) Metering rod should contact bottom of metering rod well and metering rod arm should contact lifter link between springs and at supporting lug Adjust by bending lip up or down

Accelerating Pump If acceleration is not satisfactory, remove pump discharge check needle and pump diaphragm assembly Examine needle and seat (in casting) and diaphragm for wear or damage Be sure inlet hole is not clogged with lint or foreign matter Inspect and replace all worn or damaged parts Clean and blow out all passages with compressed air Pump discharge check needle must seat, as a leak at this point will result in poor acceleration

Fast Idle Adjustment: With choke held in wide open position lip on fast idle arm should contact boss of body casting Adjust by bending at offset portion of fast idle connector rod



Willys—1952-53—Carbureter No. 937S

WHEN SERVICING USE GASKET ASSORTMENT No 200, REPAIR PACKAGE No 1571

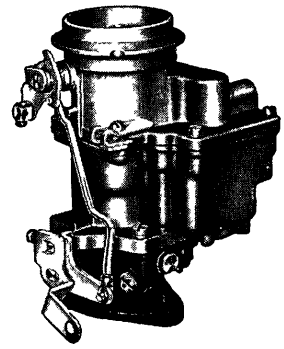
PART NAMES IN CAPITAL LETTERS, LISTED BELOW INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1 811S	Body fla ge assembly	
1A-30	FLANGE GASKET	
2-133	Throttle valve	
3-716S	Throttle shaft and lever assembly	
6-794S	Air horn assembly	
7-107	Chc ke valve	
11-202S	LOW SPEED JET ASSEMBLY	
11B-12	Flange passage plug	
11B-35	Nozzle passage rivet plug	
11B-79	Rivet plug (late prod)	(2)
11B 108	Idle port rivet plug	
14-388S	Choke lever assembly	
14-389S	Choke shaft and lever assembly	
17-78	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	
21-122S	Float and lever assembly	
24-27	Float lever pin	
25-197S	NEEDLE SPRING AND SEAT ASSEMBLY	
30A-44	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	THROTTLE VALVE ATTACHING SCREW	(2)
53A-323	Fast idle arm	
61-231	Choke lever spring	
61-242	Metering rod spring	
61-389	PUMP DIAPHRAGM SPRING	
61-390	Upper pump spring	
61-426	Idle adjustment screw spring	
61-433	Intake needle spring	
62-166S	Choke tube clamp assembly	
63-44	Choke lever retainer ring	
63-92	DIAPHRAGM SPRING RETAINER	

Part No	PART NAME	
63-135	UPPER PUMP SPRING RETAINER	
75 749	METERING ROD—STANDARD	
75 783	Metering rod—1 size lean	
75 784	Metering rod—2 sizes lean	
86 15	Flange stud lock washer	(2)
101-10	Wire clamp screw	
101 28	Throttle shaft arm attaching screw	
101-120	Throttle lever adjustment screw	
101-149S	Body flange attaching screw and washer assembly	(3)
101-160S	A r horn attaching screw and washer assembly	(5)
101-216S	A r horn attaching screw and washer assembly	(2)
101-256	Throttle lever adjustment screw (Sup by 101 120)	
101 282S	Diaphragm housing attaching screw and washer assembly	(4)
105-11	Tube clamp screw	
105A 8	Tube clamp nut	
105A-13	Flange nut	(2)
111 57S	Metering rod arm assembly	
114-75S	THROTTLE SHAFT ARM ASSEMBLY	
115-158	Fast idle connector rod	
117-137	PUMP LIFTER LINK	
117-138	PUMP CONNECTOR LINK	
120-166	METERING ROD JET	
121-153	BODY FLANGE GASKET	
121-154	BOWL COVER AND AIR HORN GASKET	
150-98	Intake needle pin	
150A-10	PIN SPRING	
170-150	Pump diaphragm housing	
172-22	Throttle connector rod retainer	
203-43S	PUMP DIAPHRAGM ASSEMBLY	

NOTE Figures in parentheses indicate number of pieces used in ne carbureter. Where no figure is shown only one is used

MODEL 6-75 PC



WILLYS "AERO LARK" 1952-53 "AERO FALCON" 1953

Casting No 648 on face of flange

YF Down-Draft Carbureter—**No. 937S**

CARBURETER SPECIFICATIONS

For Willys 6 Cylinder Eng ne 3 1/8 Inch Bore, 3 1/2 Inch Stroke

Dimensions Flange size 1 1/4 inch S A E
Primary venturi 11/32 inch I D
Secondary venturi 11/16 inch I D
Main venturi 1 1/4 inch I D

Float Level Distance from top of float (at free end) to float chamber cover when needle is seated 9/32 inch (Gauge No T109 126)

Vents Outside none Inside balance vent to air horn above choke valve

Gasoline Intake Square vertical (spring loaded) needle S ze No 48 (076 inch) drill in needle seat

Low Speed Jet Tube Jet size No 70 (028 inch) drill By pass in air horn size No 56 (0465 inch) drill Economizer size No 57 (043 inch) drill Idle bleed size No 56 (0465 inch) drill

Idle Ports Upper port slot type length 169 171 nch Width 030 inch

Idle Port Opening Top of port 126 to 130 inch above top edge of valve with valve tightly closed

Lower Port (For Idle Adjustment Screw) Size 053 to 057 inch diameter

Set Idle Adjustment Screw 1 to 2 turns open For r cher mix ture turn screw out Do not idle engine below 550 r p m

Main Nozzle Nozzle s nstalled permanently DO NOT RE MOVE Anti percolator well vent (in body) size No 66 (033 inch) drill Passage from anti percolator well to nozzle re striction size No 70 (028 inch) drill

Metering Rod (Diaphragm Type) Economy step 0715 inch diameter middle step tapers to 062 inch diameter power step 045 inch diameter Length 2 13/32 inches

Metering Rod Jet 0935 inch diameter

Metering Rod Setting See Adjustments

Accelerating Pump Diaphragm type vacuum operated (non adjustable)
Discharge (pump) jet size No 75 (021 inch) drill Dis charge needle seat size 092 inch diameter
Intake passage (in diaphragm housing) size No 72 (025 inch) drill
Vacuum restr ction (in flange) size No 55 (052 inch) drill
Vacuum passage (diaphragm bleed) size No 65 (035 inch) drill

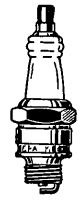
Pump Adjustment None

Choke Manual interconnected with throttle Valve offset but terfly type

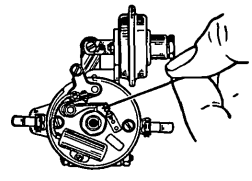
Vacuum Spark Port Slot type Size 125 by 040 inch Top of port 035 to 045 inch above top edge of valve with valve tightly closed

Motor Tune-Up—Be Accurate!

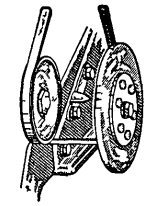
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



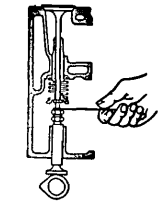
Spark Plug Gap 030"



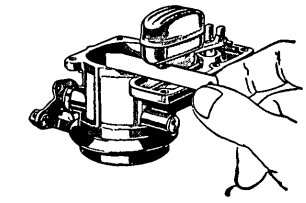
Breaker Point Setting 020"



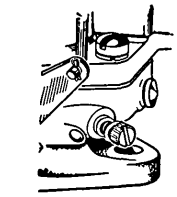
Ignition Timing Breaker Points to Open 5° B T D C at Vibration Damper (or Road Set for Light Detonation)



Valve Setting (Hot or Cold) Intake 016" Exhaust 016"



Float Setting 9/32 Inch (Use Gauge T109 126)



Idle Adjustment Screw Setting 1 to 2 Turns Open

CARBURETER ADJUSTMENTS

Float Adjustment With bowl cover assembly inverted and float resting on pin in seated needle and with gasket removed the distance from the bowl cover to the top of float should be 9/32" (Gauge T109-126) Do not depress float lip against spring loaded pin in needle, but let float rest of its own weight Adjust by bending lip of float not float arm Float setting must be checked with the bowl cover held at eye height in a level position

Metering Rod Adjustment This adjustment is important and should be checked each time the carbureter is reassembled or lean rods are installed With throttle valve seated

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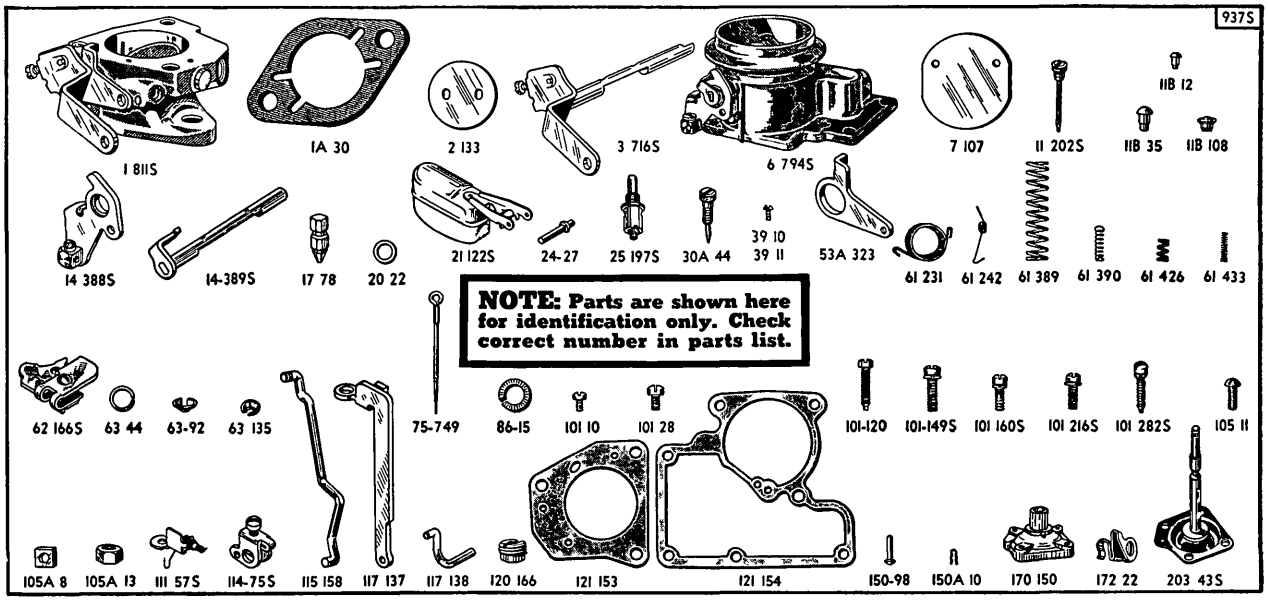
CARBURETER
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in bore of carbureter press down on upper end of diaphragm shaft until diaphragm bottoms in vacuum chamber (Tool T109-212 may be used to hold diaphragm shaft down while adjusting metering rod) Metering rod should contact bottom of metering rod well and metering rod arm should contact lifter link between springs and at supporting lug Adjust by bending lip up or down

Accelerating Pump If acceleration is not satisfactory, remove pump discharge check needle and pump diaphragm assembly Examine needle and seat (in casting) and diaphragm for wear or damage Be sure inlet hole is not clogged with lint or foreign matter Inspect and replace all worn or damaged parts Clean and blow out all passages with compressed air Pump discharge check needle must seat, as a leak at this point will result in poor acceleration

Fast Idle Adjustment With choke held in wide open position lip on fast idle arm should contact boss of body casting Adjust by bending at offset portion of fast idle connector rod



Willys—1952-53—Carbureter No. 937S

WHEN SERVICING, USE GASKET ASSORTMENT No 200, REPAIR PACKAGE No 1571

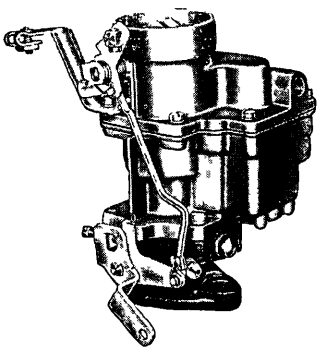
PART NAMES IN CAPITAL LETTERS, LISTED BELOW INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1 811S	Body flange assembly	
1A-30	FLANGE GASKET	
2-133	Throttle valve	
3-716S	Throttle shaft and lever assembly	
6-794S	Air horn assembly	
7-107	Choke valve	
11-202S	LOW SPEED JET ASSEMBLY	
11B-12	Flange passage plug	
11B-35	Nozzle passage rivet plug	
11B-79	Rivet plug (late prod)	(2)
11B-108	Idle port rivet plug	
14-388S	Choke lever assembly	
14-389S	Choke shaft and lever assembly	
17-78	PUMP CHECK NEEDLE	
20-22	Needle seat gasket	
21-122S	Float and lever assembly	
24-27	Float lever pin	
25-197S	NEEDLE SPRING AND SEAT ASSEMBLY	
30A-44	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	THROTTLE VALVE ATTACHING SCREW	(2)
53A-323	Fast idle arm	
61-231	Choke lever spring	
61-242	Metering rod spring	
61-389	PUMP DIAPHRAGM SPRING	
61-390	Upper pump spring	
61-426	Idle adjustment screw spring	
61-433	Intake needle spring	
62-166S	Choke tube clamp assembly	
63-44	Choke lever retainer ring	
63-92	DIAPHRAGM SPRING RETAINER	

Part No	PART NAME	
63 135	UPPER PUMP SPRING RETAINER	
75 749	METERING ROD—STANDARD	
75 783	Metering rod—1 size lean	
75 784	Metering rod—2 sizes lean	
86 15	Flange stud lock washer	(2)
101-10	Wire clamp screw	
101-28	Throttle shaft arm attaching screw	
101-120	Throttle lever adjustment screw	
101-149S	Body flange attaching screw and washer assembly	(3)
101-160S	Air horn attaching screw and washer assembly	(5)
101-216S	Air horn attaching screw and washer assembly	(2)
101-256	Throttle lever adjustment screw (Sup by 101 120)	
101 282S	Diaphragm housing attaching screw and washer assembly	(4)
105 11	Tube clamp screw	
105A 8	Tube clamp nut	
105A-13	Flange nut	(2)
111 57S	Metering rod arm assembly	
114 75S	THROTTLE SHAFT ARM ASSEMBLY	
115-158	Fast idle connector rod	
117 137	PUMP LIFTER LINK	
117-138	PUMP CONNECTOR LINK	
120-166	METERING ROD JET	
121-153	BODY FLANGE GASKET	
121-154	BOWL COVER AND AIR HORN GASKET	
150-98	Intake needle pin	
150A-10	PIN SPRING	
170-150	Pump diaphragm housing	
172-22	Throttle connector rod retainer	
203-43S	PUMP DIAPHRAGM ASSEMBLY	

NOTE Figures in parentheses indicate number of pieces used in ne carbureter Where no figure is shown, only one is used

4-73 ENGINE



WILLYS STATION WAGON JEEPSTER, PANEL DELIVERY 4WD TR.–2WD TR. 1950-51

Casting No. 630 on face of flange

YF Down-Draft Carbureters—**Nos. 832S-832SA-832SB**

CARBURETER SPECIFICATIONS

For Willys 4 Cylinder Engine: 3⅛ Inch Bore, 4⅜ Inch Stroke

Dimensions: Flange size 1¼ inch S A E
Primary venturi, 11/32 inch I D
Secondary venturi, 11/16 inch I D
Main venturi 1¼ inch I D

Float Setting. Distance from top of float (at free end) to float chamber cover when needle is seated 5/16 inch (Use gauge No T109-107)

Vents: Outside none Inside balance vent to air horn above choke valve

Gasoline Intake: Square vertical (spring loaded) needle Size No 48 drill in needle seat

Low Speed Jet Tube: Jet size No 70 (.028 inch) drill By-pass in air horn, size No 56 (.0465 inch) drill Idle bleed size, No 56 (.0465 inch) drill Economizer size No 54 (.055 inch) drill Bleed idle well to bowl (late production), size No 73 (.024 inch) drill

Idle Ports: Upper port slot type length 183-185 inch Width, .030 inch

Idle Port Opening: Top of port 168 to 172 inch, above top edge of valve with valve tightly closed Lower port size 0615 to 0655 inch diameter (for idle adjusting screw)

Set Idle Adjustment Screw: ¾ to 1¾ turns open For richer mixture turn screw out Do not idle engine below 600 r p m

Main Nozzle: In primary venturi, angle 40° off vertical Nozzle is installed permanently **Do not remove.** Anti percolator well vent (plug) Size No 74 (.0225 inch) drill

Metering Rod (Diaphragm Type): Economy step .070 inch diameter middle step tapers to .068 inch diameter, power step, .056 inch diameter Length 2-13/16 inches

Metering Rod Jet: .096 inch diameter

Metering Rod Setting: See Adjustments

Accelerating Pump: Diaphragm type vacuum operated (Non-adjustable) Discharge (pump) jet size No 72 drill Intake passage (in diaphragm housing) size No 72 drill Vacuum restriction (in flange) size No 55 drill Vacuum passage (diaphragm bleed) size No 65 drill

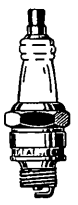
Pump Adjustment: See Adjustments

Choke: Manual interconnected with throttle Valve offset butterfly type

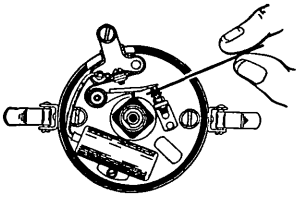
Vacuum Spark Port: .054-.056 inch diameter Top of port .035 to .045 inch above top edge of valve in closed position

Motor Tune-Up—Be Accurate!

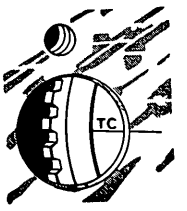
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



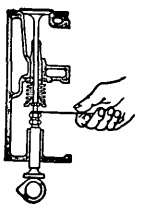
Spark Plug Gap .030"



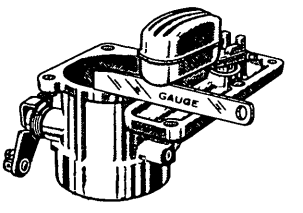
Breaker Point Setting .020"



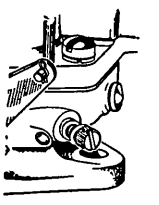
Ignition Timing Breaker Points to Open: T. D. C. (Road set for light detonation)



Valve Setting (Cold) Intake .018" Exhaust .016"



Float Setting 5/16 Inch (Use Gauge T109-107)



Idle Adjustment Screw Setting ¾ to 1¾ Turns Open

CARBURETER ADJUSTMENTS

Float Adjustment: With bowl cover assembly inverted and float resting on pin in seated needle, and with gasket removed, the distance from the bowl cover to the top of float should be 5/16" (Use gauge No T109-107) Do not depress float lip against spring loaded pin in needle, but let float rest of its own weight Adjust by bending lip of float, not float arm Float setting must be checked with the bowl cover held at eye height in a level position

Metering Rod Adjustment: This adjustment is important and should be checked each time the carbureter is reassembled or lean rods are installed With throttle valve seated in bore of carbureter, press down on upper end of diaphragm shaft until diaphragm bottoms in vacuum chamber (Tool T109-212 may be used to hold diaphragm shaft down while adjusting metering rod)
Metering rod should contact bottom of metering rod well and metering rod arm should contact lifter link between

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springs and at supporting lug Adjust by bending lip of metering rod arm, to which metering rod is attached, up or down

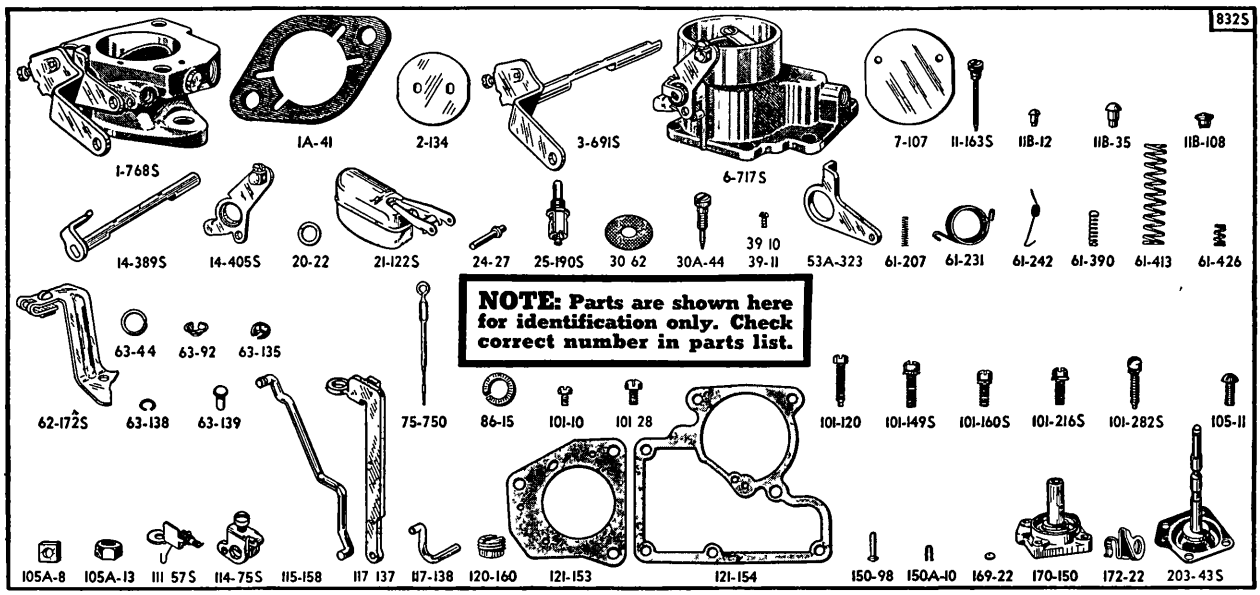
Accelerating Pump: If acceleration is not satisfactory remove pump check retainer and pump discharge check disk (832S), or ball check weight and aluminum pump discharge check ball (832SA) Then remove pump diaphragm assembly. Check diaphragm for wear or damage Be sure inlet hole in diaphragm housing is not clogged with lint or foreign matter. Intake screen (if so equipped) should be removed in service

If carbureter is equipped with disk type pump discharge check, replace with aluminum ball check and weight Unitized package (Part No 116-27U), consisting of (1) ⅛" steel ball, (1) ⅛" aluminum ball, (1) 63-152 retainer and (1) 221-13 ball check weight should be used Complete instructions for this conversion are contained in the package

If the discharge ball or seat, in carbureters equipped with aluminum ball check and weight, appear damaged, form a new seat by tapping on a ⅛" stainless steel ball (116-11) with 5/32" brass drift and light hammer Remove stainless steel ball and install new 116-25 aluminum ball **Do not tap on aluminum ball.** Then install weight and retainer ring

Inspect and replace all worn or damaged parts and clean and blow out all passages with compressed air Make sure discharge check seats in casting as a leak at this point will result in poor acceleration

Fast Idle Adjustment With choke held in wide open position, lip on fast idle arm should contact boss on body casting Adjust by bending at offset of fast idle link



WILLYS CARBURETERS Nos. 832S-832SA-832SB

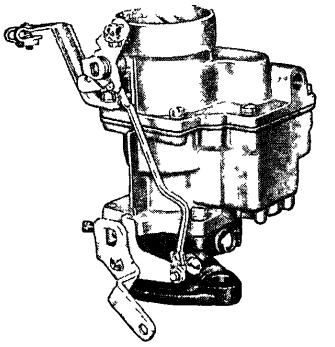
WHEN SERVICING, USE GASKET ASSORTMENT No. 206A; REPAIR PACKAGE No. 1559C

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-768S	Body flange assembly	
1A-41	FLANGE GASKET	
2-134	Throttle valve	
3-691S	Throttle shaft and lever assembly	
6-717S	Air horn assembly	
7-107	Choke valve	
11-161S	Low speed jet assembly (Sup by 11 163S)	
11-163S	LOW SPEED JET ASSEMBLY	
11B-12	Flange passage plug	
11B-35	Nozzle passage rivet plug	
11B-79	Rivet plug (832SB—late prod)	(2)
11B-108	IDLE PORT RIVET PLUG	
14-389S	Choke shaft and lever assembly	
14-405S	Choke lever assembly	
20-22	Needle seat gasket	
21-122S	Float and lever assembly	
24-27	Float lever pin	
25-190S	NEEDLE SPRING AND SEAT ASSEMBLY	
30-62	Pump intake strainer (832S) (Discontinued)	
30A-44	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	THROTTLE VALVE ATTACHING SCREW	(2)
53A-323	Fast idle arm	
61-207	Intake needle spring	
61-231	Choke lever spring	
61-242	Metering rod spring	
61-389	PUMP DIAPHRAGM SPRING	
61-390	Upper pump spring (Sup by 61 432)	
61-413	Pump diaphragm spring (Sup by 61 389)	
61-426	Idle screw spring	
61-431	UPPER PUMP SPRING (OUTER)	
61-432	UPPER PUMP SPRING	
62-172S	Choke tube clamp assembly	
63-44	Choke lever retaining ring	
63-92	DIAPHRAGM SPRING RETAINER	
63-135	UPPER PUMP SPRING RETAINER	
63-138	Pump disk retainer ring (832S) (Sup by 63-152)	
63-139	Pump disk retainer (832S) (Sup by 116 27U)	
63-152	Pump discharge ball check retainer ring	
75-735	Metering rod 1 size lean (Sup by 75-808)	
75-750	Metering rod standard (Sup by 75 806)	
75-806	METERING ROD, STANDARD	
75-808	Metering rod 1 size lean	
75-913	Metering rod—1 size rich	
86-15	Flange stud lock washer	(2)
101-10	Wire clamp screw	
101-28	Throttle shaft arm attaching screw	
101-120	Throttle lever adjustment screw	
101-149S	Body flange attaching screw and washer assembly	(3)
101-160S	Air horn attaching screw and washer assembly	(5)
101-216S	Air horn attaching screw and washer assembly	(2)
101-282S	Diaphragm housing attaching screw and washer assembly	(4)
105-11	Tube clamp screw	
105A-8	Tube clamp nut	
105A-13	Flange nut	(2)
111-57S	Metering rod arm assembly	
114-75S	THROTTLE SHAFT ARM ASSEMBLY	
115-158	Fast idle connector rod	
116-25	Pump discharge ball check	
116-27U	UNITIZED PACKAGE (CONSISTS OF 1—116-11 1—116 25 1—63-152 AND 1—221 13)	
117-137	PUMP LIFTER LINK	
117-138	PUMP CONNECTOR LINK	
120-160	METERING ROD JET	
121-153	BODY FLANGE GASKET	
121-154	BOWL COVER AND AIR HORN GASKET	
150-98	Intake needle pin	
150A-10	PIN SPRING	(2)
169-22	Pump check disk (832S) (Sup by 116 27U)	
170-150	Pump diaphragm housing	
172-22	Throttle connector rod retainer	
203-43S	DIAPHRAGM ASSEMBLY	
221-13	Ball check weight	

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

4-73 ENGINE



WILLYS STATION WAGON JEEPSTER, PANEL DELIVERY 4WD TR.–2WD TR. 1950-51

Casting No. 630 on face of flange

YF Down-Draft Carbureters—**Nos. 832S-832SA-832SB**

CARBURETER SPECIFICATIONS

For Willys 4 Cylinder Engine: 3 1/8 Inch Bore, 4 3/8 Inch Stroke

Dimensions: Flange size 1 1/4 inch S A E
Primary venturi 11/32 inch I D
Secondary venturi 11/16 inch I D
Main venturi, 1 1/4 inch I D

Float Setting. Distance from top of float (at free end) to float chamber cover when needle is seated 5/16 inch (Use gauge No T109 107)

Vents: Outside none Inside balance vent to air horn, above choke valve

Gasoline Intake: Square vertical (spring loaded) needle Size No 48 drill, in needle seat

Low Speed Jet Tube: Jet size, No 70 (028 inch) drill By-pass in air horn size No 56 (0465 inch) drill Idle bleed size No 56 (0465 inch) drill Economizer, size No 54 (055 inch) drill Bleed idle well to bowl (late production) size No 73 (024 inch) drill

Idle Ports: Upper port slot type, length 183- 185 inch Width 030 inch

Idle Port Opening: Top of port 168 to 172 inch above top edge of valve with valve tightly closed Lower port size 0615 to 0655 inch diameter (for idle adjusting screw)

Set Idle Adjustment Screw: 3/4 to 1 3/4 turns open For richer mixture, turn screw out Do not idle engine below 600 r p m

Main Nozzle: In primary venturi angle 40° off vertical Nozzle is installed permanently **Do not remove.** Anti percolator well vent (plug) Size No 74 (0225 inch) drill

Metering Rod (Diaphragm Type): Economy step 070 inch diameter middle step tapers to 068 inch diameter, power step 056 inch diameter Length, 2 13/16 inches

Metering Rod Jet: 096 inch diameter

Metering Rod Setting: See Adjustments

Accelerating Pump: Diaphragm type vacuum operated (Non adjustable) Discharge (pump) jet size, No 72 drill Intake passage (in diaphragm housing) size No 72 drill Vacuum restriction (in flange) size No 55 drill Vacuum passage (diaphragm bleed) size No 65 drill

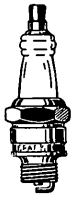
Pump Adjustment: See Adjustments

Choke: Manual, interconnected with throttle Valve offset butterfly type

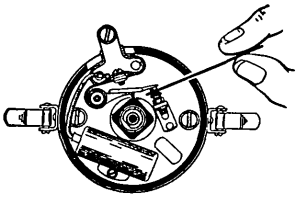
Vacuum Spark Port: 054- 056 inch diameter Top of port 035 to 045 inch above top edge of valve in closed position

Motor Tune-Up—Be Accurate!

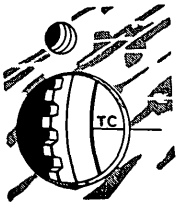
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



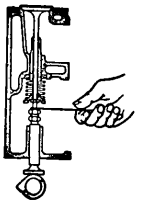
Spark Plug Gap .030"



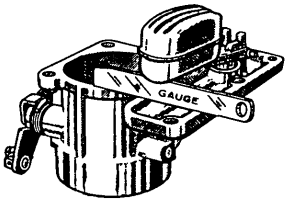
Breaker Point Setting .020"



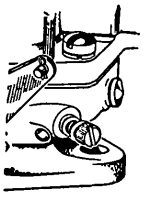
Ignition Timing Breaker Points to Open: T. D. C. (Road set for light detonation)



Valve Setting (Cold) Intake .018" Exhaust .016"



Float Setting 5/16 Inch (Use Gauge T109-107)



Idle Adjustment Screw Setting 3/4 to 1 3/4 Turns Open

CARBURETER ADJUSTMENTS

Float Adjustment: With bowl cover assembly inverted and float resting on pin in seated needle, and with gasket removed, the distance from the bowl cover to the top of float should be 5/16" (Use gauge No T109-107) Do not depress float lip against spring loaded pin in needle, but let float rest of its own weight Adjust by bending lip of float, not float arm Float setting must be checked with the bowl cover held at eye height in a level position

Metering Rod Adjustment: This adjustment is important and should be checked each time the carbureter is reassembled or lean rods are installed With throttle valve seated in bore of carbureter, press down on upper end of diaphragm shaft until diaphragm bottoms in vacuum chamber (Tool T109-212 may be used to hold diaphragm shaft down while adjusting metering rod)
Metering rod should contact bottom of metering rod well, and metering rod arm should contact lifter link between

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springs and at supporting lug Adjust by bending lip of metering rod arm, to which metering rod is attached, up or down

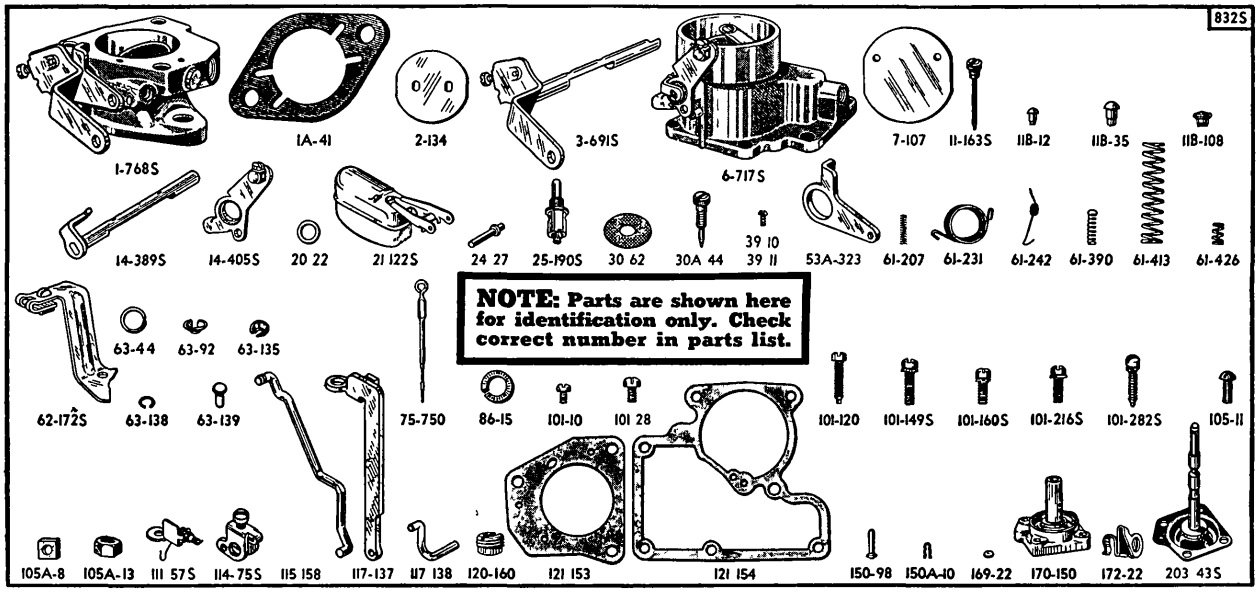
Accelerating Pump: If acceleration is not satisfactory remove pump check retainer and pump discharge check disk (832S), or ball check weight and aluminum pump discharge check ball (832SA) Then remove pump diaphragm assembly Check diaphragm for wear or damage Be sure inlet hole in diaphragm housing is not clogged with lint or foreign matter Intake screen (if so equipped) should be removed in service

If carbureter is equipped with disk type pump discharge check, replace with aluminum ball check and weight Unitized package (Part No 116-27U), consisting of (1) ⅛" steel ball (1) ⅛" aluminum ball, (1) 63-152 retainer and (1) 221-13 ball check weight should be used Complete instructions for this conversion are contained in the package

If the discharge ball or seat, in carbureters equipped with aluminum ball check and weight, appear damaged, form a new seat by tapping on a ⅛" stainless steel ball (116-11) with 5/32" brass drift and light hammer Remove stainless steel ball and install new 116-25 aluminum ball **Do not tap on aluminum ball** Then install weight and retainer ring

Inspect and replace all worn or damaged parts and clean and blow out all passages with compressed air Make sure discharge check seats in casting as a leak at this point will result in poor acceleration

Fast Idle Adjustment With choke held in wide open position, lip on fast idle arm should contact boss on body casting Adjust by bending at offset of fast idle link



WILLYS CARBURETERS Nos. 832S-832SA-832SB

WHEN SERVICING, USE GASKET ASSORTMENT No. 206A; REPAIR PACKAGE No. 1559C

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-768S	Body flange assembly	
1A-41	FLANGE GASKET	
2-134	Throttle valve	
3-691S	Throttle shaft and lever assembly	
6-717S	Air horn assembly	
7-107	Choke valve	
11-161S	Low speed jet assembly (Sup by 11 163S)	
11-163S	LOW SPEED JET ASSEMBLY	
11B-12	Flange passage plug	
11B-35	Nozzle passage rivet plug	
11B-79	Rivet plug (832SB—late prod)	(2)
11B-108	IDLE PORT RIVET PLUG	
14-389S	Choke shaft and lever assembly	
14-405S	Choke lever assembly	
20-22	Needle seat gasket	
21-122S	Float and lever assembly	
24-27	Float lever pin	
25-190S	NEEDLE SPRING AND SEAT ASSEMBLY	
30-62	Pump intake strainer (832S) (Discontinued)	
30A-44	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	THROTTLE VALVE ATTACHING SCREW	(2)
53A-323	Fast idle arm	
61-207	Intake needle spring	
61-231	Choke lever spring	
61-242	Metering rod spring	
61-389	PUMP DIAPHRAGM SPRING	
61-390	Upper pump spring (Sup by 61 432)	
61-413	Pump diaphragm spring (Sup by 61 389)	
61-426	Idle screw spring	
61-431	UPPER PUMP SPRING (OUTER)	
61-432	UPPER PUMP SPRING	
62-172S	Choke tube clamp assembly	
63-44	Choke lever retaining ring	
63-92	DIAPHRAGM SPRING RETAINER	
63-135	UPPER PUMP SPRING RETAINER	
63-138	Pump disk retainer ring (832S) (Sup by 63 152)	
63-139	Pump disk retainer (832S) (Sup by 116 27U)	

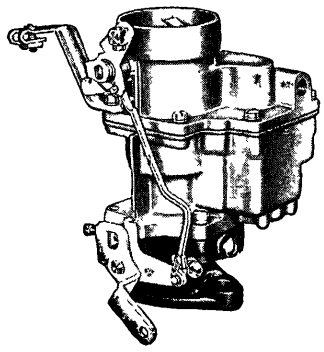
Part No.	PART NAME	
63-152	Pump discharge ball check retainer ring	
75-735	Metering rod 1 size lean (Sup by 75 808)	
75-750	Metering rod standard (Sup by 75 806)	
75-806	METERING ROD STANDARD	
75-808	Metering rod 1 size lean	
75-913	Metering rod—1 size rich	
86-15	Flange stud lock washer	(2)
101-10	Wire clamp screw	
101-28	Throttle shaft arm attaching screw	
101-120	Throttle lever adjustment screw	
101-149S	Body flange attaching screw and washer assembly	(3)
101-160S	Air horn attaching screw and washer assembly	(5)
101-216S	Air horn attaching screw and washer assembly	(2)
101-282S	Diaphragm housing attaching screw and washer assembly	(4)
105-11	Tube clamp screw	
105A-8	Tube clamp nut	
105A-13	Flange nut	(2)
111-57S	Metering rod arm assembly	
114-75S	THROTTLE SHAFT ARM ASSEMBLY	
115-158	Fast idle connector rod	
116-25	Pump discharge ball check	
116-27U	UNITIZED PACKAGE (CONSISTS OF 1—116-11, 1—116 25 1—63 152 AND 1—221 13)	
117-137	PUMP LIFTER LINK	
117-138	PUMP CONNECTOR LINK	
120-160	METERING ROD JET	
121-153	BODY FLANGE GASKET	
121-154	BOWL COVER AND AIR HORN GASKET	
150-98	Intake needle pin	
150A-10	PIN SPRING	(2)
169-22	Pump check disk (832S) (Sup by 116 27U)	
170-150	Pump diaphragm housing	
172-22	Throttle connector rod retainer	
203-43S	DIAPHRAGM ASSEMBLY	
221-13	Ball check weight	

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

WILLYS 768S-768SA-768SB
June, 1950
Revised December, 1952

4-73 ENGINE



Casting No. 630 on face of flange.

WILLYS STATION WAGON, JEEPSTER, PANEL DELIVERY, 4WD TR.–2WD TR. 1950

(832SB can also be used)

YF Down-Draft Carbs.—**Nos. YF-768S, YF-768SA, YF-768SB**

CARBURETER SPECIFICATIONS

For Willys 4 Cylinder Engine: 3⅛ Inch Bore, 4⅜ Inch Stroke

Dimensions: Flange size, 1¼ inch S. A. E.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 11/16 inch I. D.
Main venturi, 1¼ inch I. D.

Float Setting: Distance from float (at free end) to float chamber cover, with free weight of float on needle and spring to be 5/16 inch.

Vents: Outside, none. Inside balance vent to air horn above choke valve.

Gasoline Intake: Square vertical, spring loaded needle. Size No. 48 drill, in needle seat.

Low Speed Jet Tube: Jet size, No. 70 (.028 inch) drill. By-pass in air horn, size No. 56 drill. Bleed in body, size No. 56 drill. Economizer in body, size No. 54 (.055 inch) drill.

Idle Ports: Upper port, slot type; length .184 inch. Width, .030 inch.

Idle Port Opening: Top of port: .168 to .172 inch, above top edge of valve with valve tightly closed. Lower port size: .053 to .057 inch diameter. (For idle adjusting screw.)

Set Idle Adjustment Screw: 1 to 2 turns open. For richer mixture, turn screw out. Do not idle engine below 600 r.p.m

Main Nozzle: In primary venturi, angle 40° off vertical. Nozzle is installed permanently. DO NOT REMOVE. Anti-Percolator air bleed .0223 inch diameter in plug.

Metering Rod (Diaphragm Type): Economy step, .070 inch diameter; middle step tapers to .068 inch diameter; power step, .056 inch diameter.

Metering Rod Jet: .096 inch diameter.

Metering Rod Setting: See Adjustments.

Accelerating Pump: Diaphragm type, vacuum operated. Discharge (pump) jet size, No. 72 drill, relief to bowl .093 inch. Intake (disk check) size, No. 40 (.098 inch) drill. Vacuum restriction (in flange) size No. 55 drill. Vacuum passage (diaphragm bleed) size No. 65 drill.

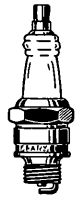
Pump Adjustment: None.

Choke: Manual, interconnected with throttle. Valve, offset butterfly type.

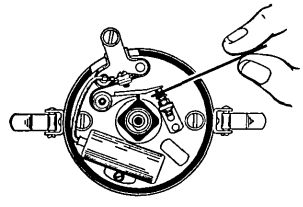
Vacuum Spark Port: .054 to .056 inch diameter. Top of port .035 to .045 inch above top edge of valve in closed position.

Motor Tune-Up—Be Accurate!

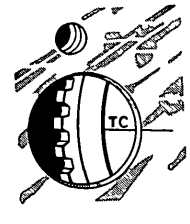
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



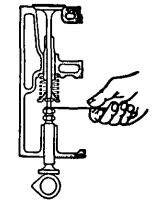
Spark Plug Gap .030"



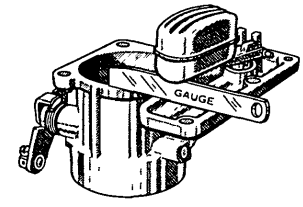
Breaker Point Setting .020"



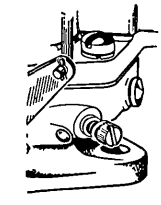
Ignition Timing Breaker Points to Open: T. D. C. (or road-set for light detonation)



Valve Setting (Cold) Intake .018" Exhaust .016"



Float Setting 5/16 Inch (Use Gauge T109-107)



Idle Adjustment Screw Setting 1 to 2 Turns Open

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CARBURETER ADJUSTMENTS

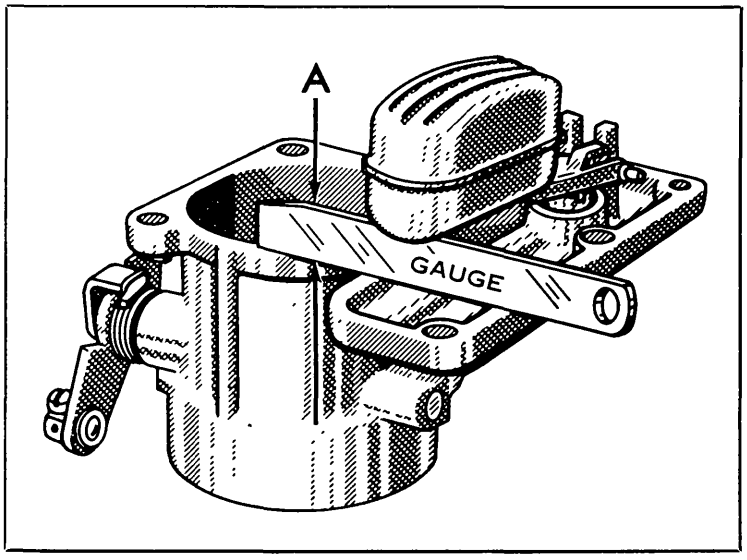


Figure 1
Float Adjustment

FLOAT ADJUSTMENT (Fig. 1):

With bowl cover assembly inverted and float resting on pin in seated needle, and with gasket removed, the distance (A) from the bowl cover to the top of float should be 5/16" (gauge T109-107). Do not depress float lip against spring loaded pin in needle, but let float rest of its own weight. Adjust by bending lip of float, not float arm.

Float setting must be checked with the bowl cover held at eye height in a level position.

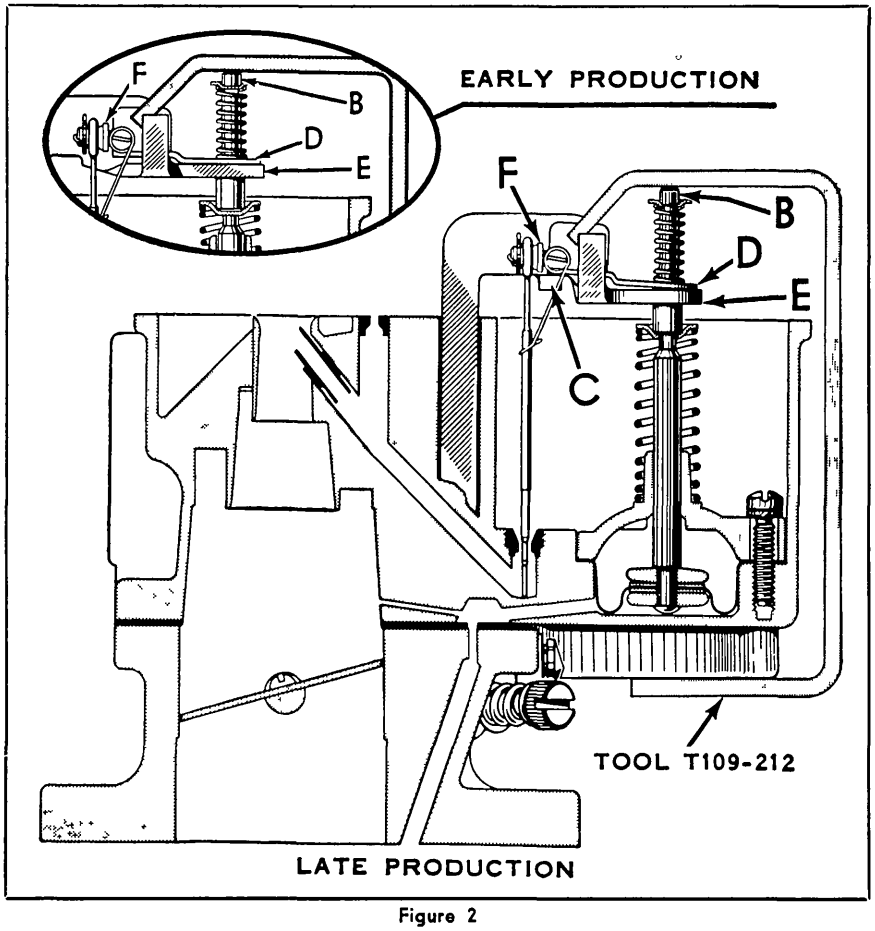


Figure 2
Metering R d Adjustment

METERING ROD ADJUSTMENT (Fig 2):

This adjustment is important and should be checked each time the carbureter is reassembled or lean rods are installed. With throttle valve seated in bore of carbureter press down on upper end of diaphragm shaft (B) until diaphragm bottoms in vacuum chamber. (Tool T109-212 may be used to hold diaphragm shaft down while adjusting metering rod.)

On late production carbureters which have projection (C) on pump lifter link, metering rod should contact bottom of metering rod well, and metering rod arm (D) should contact lifter link (E) between springs and at supporting lug (C). Adjust by bending lip (F) up or down.

On early production carbureters which do not have projection (C) on pump lifter link, metering rod should bottom in metering rod well and flat of metering rod arm (D) should make parallel contact with flat of pump lifter link (E). Adjust by bending lip (F) up or down.

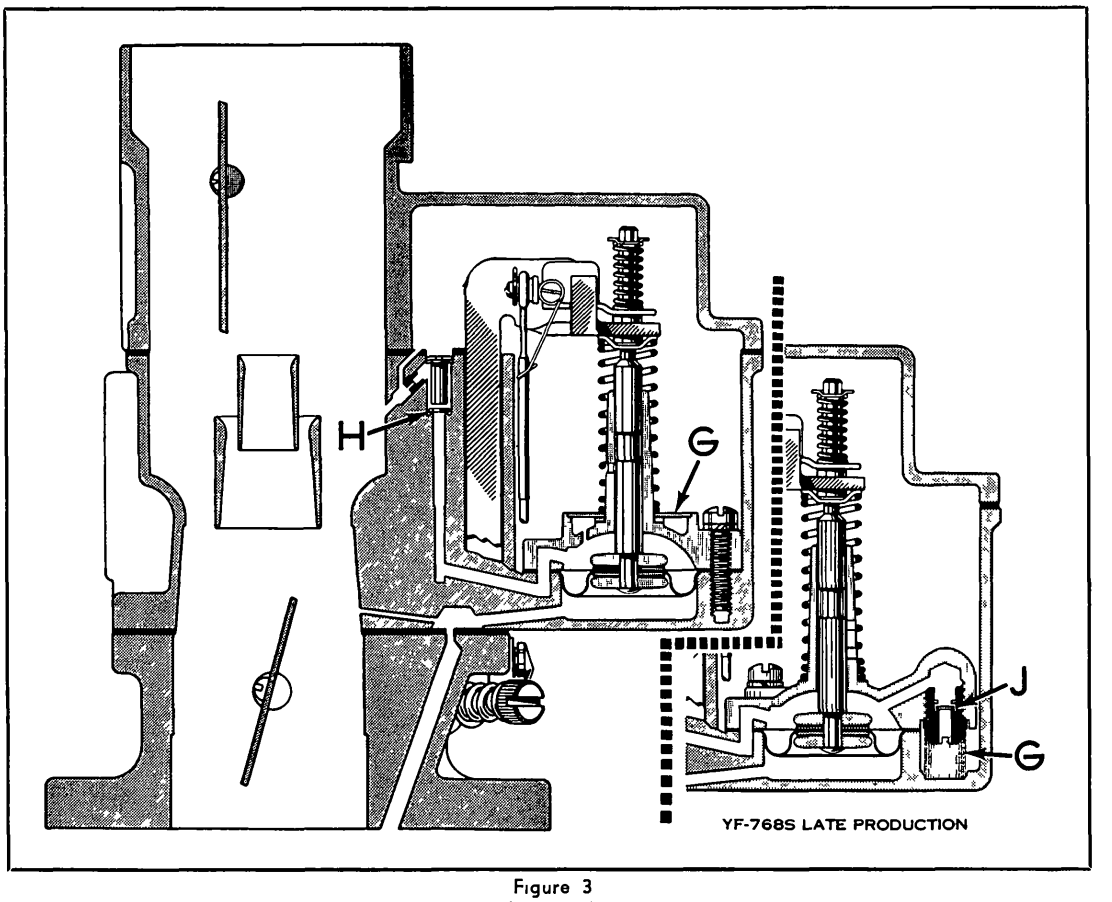


Figure 3
Accelerating Pump

ACCELERATING PUMP.

If acceleration is not satisfactory remove pump check retainer and pump discharge check disk or ball check weight and aluminum pump discharge check ball Then remove pump diaphragm assembly Check diaphragm for wear or damage Be sure inlet hole in diaphragm housing is not clogged with lint or foreign matter Flat intake screen (G) if so equipped should be removed in service on units without intake check valve (J) Tubular intake screen (G) is **not** to be removed on units using intake check valve (J) If carbureter is equipped with disk type pump discharge check (H) replace with aluminum ball check and weight Unitized package (Part No 116 27U), consisting of (1) 1/8" steel ball (1) 1/8" aluminum ball, (1) 63 152 retainer and (1) 221 13 ball check weight should be used Complete instructions for this conversion are contained in the package Inspect and replace all worn or damaged parts and clean and blow out all passages with compressed air Make sure discharge ball check seats in cast ing as leak at this point will result in poor acceleration

NOTE Insert (Fig 3) shows pump diaphragm housing which has an intake check valve (J) This was used only on YF768S late production YF768S early production and YF768SA use pump diaphragm housing shown in main illustration of Fig 3 See unit ized package note at bottom of page 4

FAST IDLE ADJUSTMENT (Fig. 4):

With choke held in wide open position lip (K) on fast idle arm should contact boss on body casting Adjust by bend ing at offset of fast idle link (L)

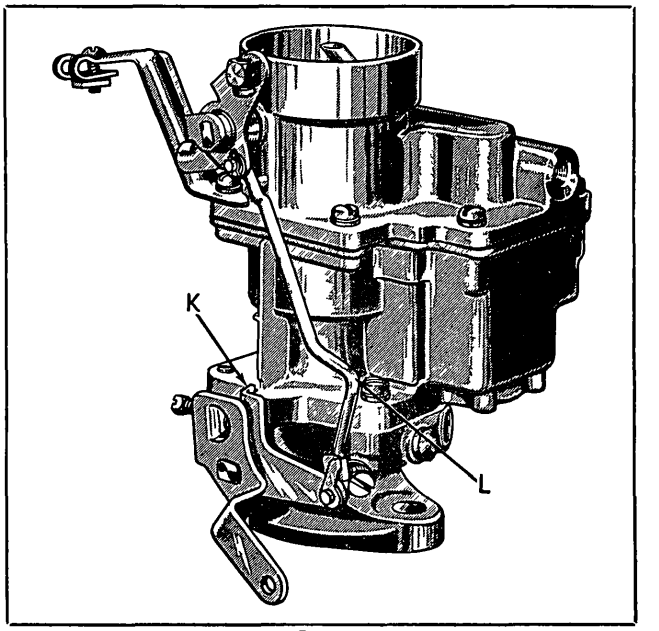
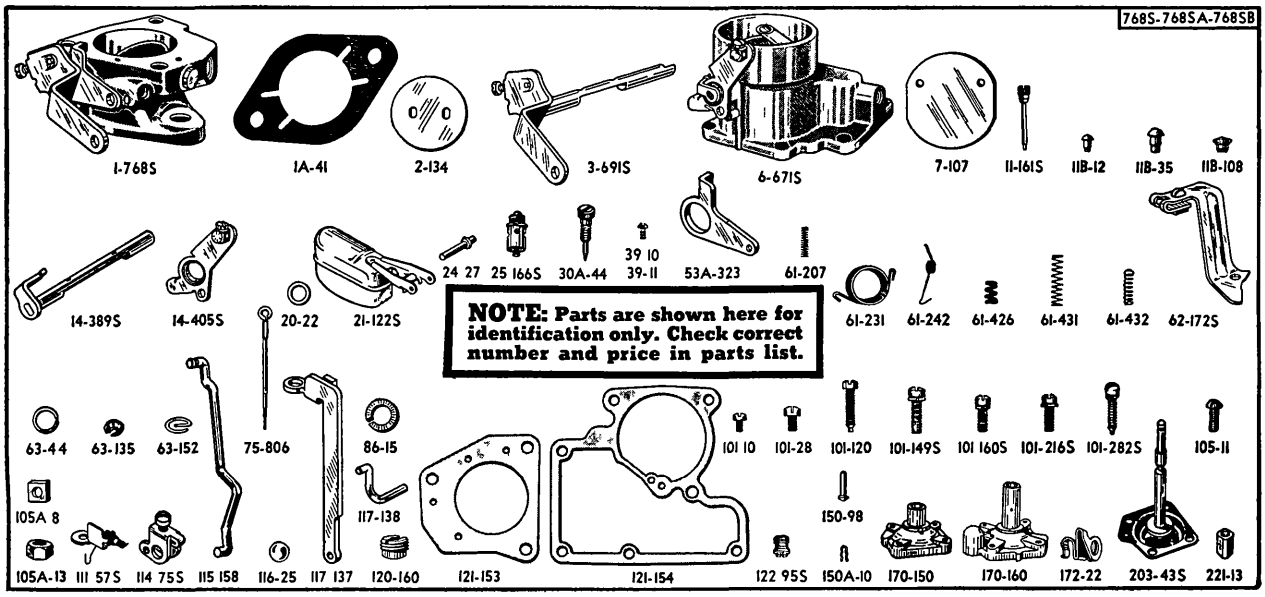


Figure 4
Fast Idle Adjustment



WILLYS CARBURETERS Nos. YF-768S, YF-768SA, YF-768SB

WHEN SERVICING, USE GASKET ASSORTMENT No. 206A; REPAIR PACKAGE No. 1557A

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-768S	Body flange assembly	
1A-41	FLANGE GASKET	
2-134	Throttle valve	
3-691S	Throttle shaft and lever assembly	
6-671S	Air horn assembly (Sup. by 6 717S)	
6-717S	Air horn assembly	
7-107	Choke valve	
11-161S	LOW SPEED JET ASSEMBLY	
11-163S	Low speed jet assembly (Sup by 11-161S)	
11B-12	Flange passage plug	
11B-35	Nozzle passage rivet plug	
11B-108	IDLE PORT RIVET PLUG	
14-389S	Choke shaft and lever assembly	
14-405S	Choke lever assembly	
20-22	Needle seat gasket	
21-122S	Float and lever assembly	
24-27	Float lever pin	
25-166S	NEEDLE, SPRING AND SEAT ASSEMBLY	
30-20	Pump intake strainer (768S—late prod.)	
30-62	Pump intake strainer (768S—early prod. and 768SA) (Discontinued)	
30A-44	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	THROTTLE VALVE ATTACHING SCREW	(2)
53A-323	Fast idle arm	
61-84	Idle screw spring (Sup. by 61 426)	
61-207	Intake needle spring	
61-231	Choke lever spring	
61-242	Metering rod spring	
61-390	Upper pump spring (Sup. by 61-432)	
61-412	Upper pump spring (Sup. by 61 390)	
61-413	Pump diaphragm spring (Discontinued)	
61-426	Idle screw spring	
61-431	UPPER PUMP SPRING (OUTER)	
61-432	UPPER PUMP SPRING	
62-172S	Choke tube clamp assembly	
63-44	Choke lever retaining ring	
63-92	Diaphragm spring retainer (Discontinued)	
63-134	Pump disk retainer (Sup. by 63 139)	
63-135	UPPER PUMP SPRING RETAINER	
63-138	Pump disk retainer ring (Sup. by 63 152)	
63-139	Pump disk retainer (Sup. by 116 27U)	
63-152	Pump discharge ball check retainer	
75-733	Metering rod, standard (Sup. by 75-750)	
75-735	Metering rod, 1 size lean (Sup. by 75-808)	
75-750	Metering rod standard (Sup. by 75-806)	
75-806	METERING ROD, STANDARD	
75-807U	†Unitized package	
75-808	Metering rod, 1 size lean	
86-15	Flange stud lock washer	(2)
101-10	Wire clamp screw	
101-28	Throttle shaft arm attaching screw	
101-120	Throttle lever adjustment screw	
101-149S	Body flange attaching screw and washer assembly	(3)
101-160S	Air horn attaching screw and washer assembly	(5)
101-216S	Air horn attaching screw and washer assembly	(2)
101-282S	Diaphragm housing attaching screw and washer assembly	(4)
105-11	Tube clamp screw	
105A-8	Tube clamp nut	
105A-13	Flange nut	(2)
111-57S	Metering rod arm assembly	
114-75S	THROTTLE SHAFT ARM ASSEMBLY	
115-158	Fast idle connector rod	
116-25	Pump discharge ball check	
116-27U	UNITIZED PACKAGE (Consists of 1—116-11, 1—116-25 1—63-152 and 1—221 13)	
117-137	PUMP LIFTER LINK	
117-138	PUMP CONNECTOR LINK	
120-160	METERING ROD JET	
121-153	BODY FLANGE GASKET	
121-154	BOWL COVER AND AIR HORN GASKET	
122-95S	Intake disk check assembly	
150-98	Intake needle pin	
150A-10	PIN SPRING	(2)
169-22	Pump check disk (Sup. by 116 27U)	
170-150	†Pump diaphragm housing	
170-160	Pump diaphragm housing (Sup. by 170 150 and 75 807U)	
172-22	Throttle connector rod retainer	
203-43S	PUMP DIAPHRAGM ASSEMBLY	
221-13	Ball check weight	

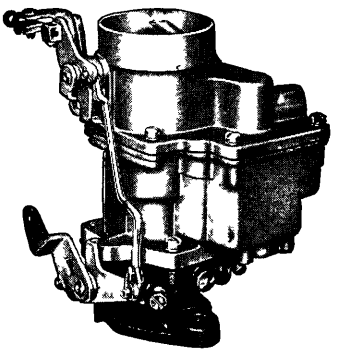
†To convert 768S to 768SB use 170-150 and 75-807U. To convert 768SA to 768SB use only 75-807U. 75-807U consists of (1) 11-161S (1) 61-431, (1) 61-432, (1) 75-806, (1) 107-38, (1) 107-39 and (1) 121-154

NOTE: Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used.

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

WILLYS 738S-738SA
April, 1950
Revised June, 1953

463 Series



WILLYS STATION WAGON, JEEPSTER AND PANEL DELIVERY 1950

YF DOWN-DRAFT **CARBURETERS Nos. YF-738S-738SA**

CARBURETER SPECIFICATIONS

For Willys 4 Cylinder Engine: 3⅛ Inch Bore, 4⅜ Inch Stroke

Dimensions: Flange size, 1¼ inch S. A. E.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 11/16 inch I. D.
Main venturi, 1¼ inch I. D.

Float Setting: Distance from float (at free end) to float chamber cover, with free weight of float on needle and spring to be 9/32 inch.

Vents: Outside, none. Inside balance vent to air horn above choke valve.

Gasoline Intake: Square vertical, spring loaded needle. Size No. 48 drill, in needle seat.

Low Speed Jet Tube: Jet size, No. 68 (.031 inch) drill. By-pass in air horn, size No. 56 drill. Bleed in body, size No. 56 drill. Economizer in body, size No. 54 (.055 inch) drill.

Idle Ports: Upper port, slot type; length .170 inch. Width, .030 inch.

Idle Port Opening: Top of port: .168 to .172 inch, above top edge of valve with valve tight closed. Lower port size: .053 to .057 inch diameter. (For idle adjusting screw.)

Set Idle Adjustment Screw: ¾ to 1¾ turns open. For richer mixture, turn screw out. Do not idle engine below 600 r.p.m.

Main Nozzle: Nozzle is installed permanently. **DO NOT REMOVE.** Anti-percolator air bleed .0276 inch diameter in plug.

Metering Rod (Diaphragm Type): Economy step, .0735 inch diameter; middle step tapers to .062 inch diameter; power step, .044 inch diameter.

Metering Rod Jet: .096 inch diameter.

Metering Rod Setting: See Adjustments.

Accelerating Pump: Diaphragm type, vacuum operated.
Discharge (pump) jet size, No. 72 drill, relief to bowl .093".
Intake passage (in diaphragm housing) size No. 72 drill.
Vacuum restriction (in flange) size No. 55 drill.
Vacuum passage (diaphragm bleed) size No. 65 drill

Pump Adjustment: None.

Choke: Manual, interconnected with throttle. Valve, offset butterfly type.

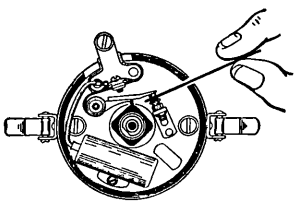
Vacuum Spark Port: .054 to .056 inch diameter. Top of port .035 to .045 inch above top edge of valve in closed position.

Motor Tune-Up—Be Accurate!

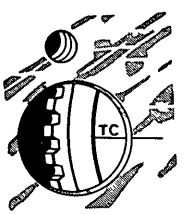
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



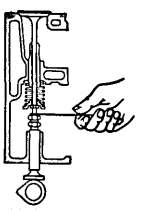
Spark Plug
Gap
.030"



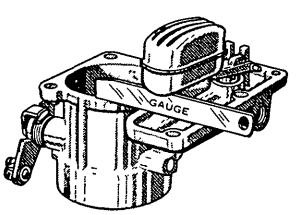
Breaker Point
Setting
.020"



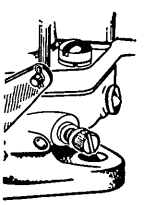
Ignition Timing
Breaker Points to Open:
5° B. T. C.



Valve Setting
(Cold)
Intake .016"
Exhaust .016"



Float Setting
(Use Gauge)
9/32 Inch



Idle Adjustment
Screw Setting
¾ to 1¾
Turns Open

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CARBURETER
TRADE MARK REG U. S PAT. OFF.
MARCA REGISTRADA

PRINTED IN U.S.A.

CARBURETER ADJUSTMENTS

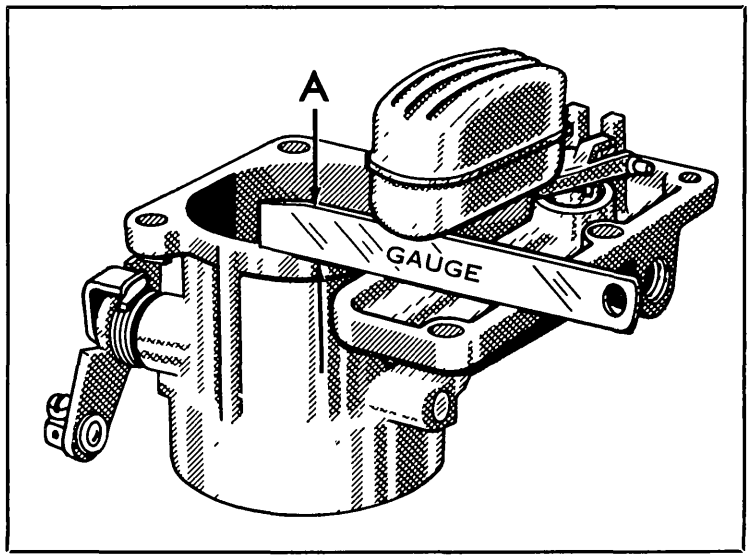


Figure 1
Float Adjustment

FLOAT ADJUSTMENT (Fig 1)

With bowl cover assembly inverted and float resting on pin in seated needle and with gasket removed the distance (A) from the bowl cover to the top of float should be 9/32" (gauge T109 126) Do not depress float lip against spring in needle but let float rest of its own weight Adjust by bending lip of float not float arm

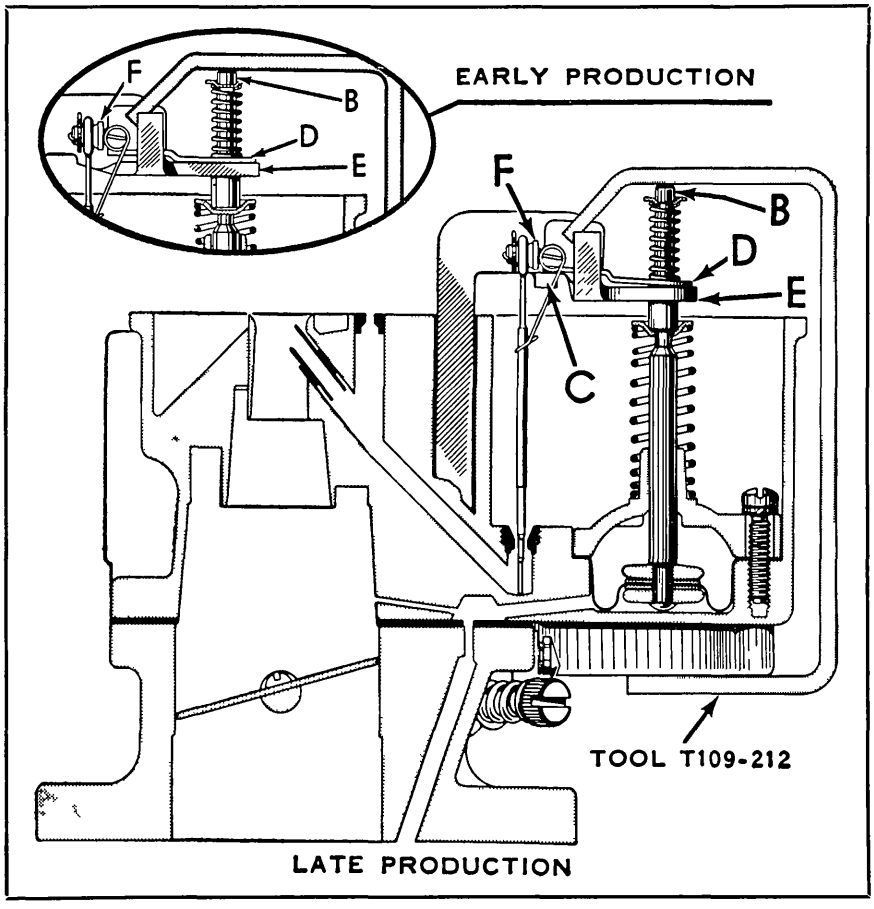


Figure 2
Metering Rod Adjustment

METERING ROD ADJUSTMENT
(Fig 2)

This adjustment is important and should be checked each time the carbureter is reassembled or lean rods are installed With throttle valve seated in bore of carbureter press down on upper end of diaphragm shaft (B) until diaphragm bottoms in vacuum chamber (Tool T109 212 may be used to hold diaphragm shaft down while adjusting metering rod)

On late production carbureters which have projection (C) on pump lifter link metering rod should contact bottom of metering rod well and metering rod arm (D) should contact lifter link (E) between spring and at supporting lug (C) Adjust by bending lip (F) up or down

On early production carbureters which do not have projection (C) on pump lifter link metering rod should bottom in metering rod well and flat of metering rod arm (D) should make parallel contact with flat of pump lifter link (E) Adjust by bending lip (F) up or down

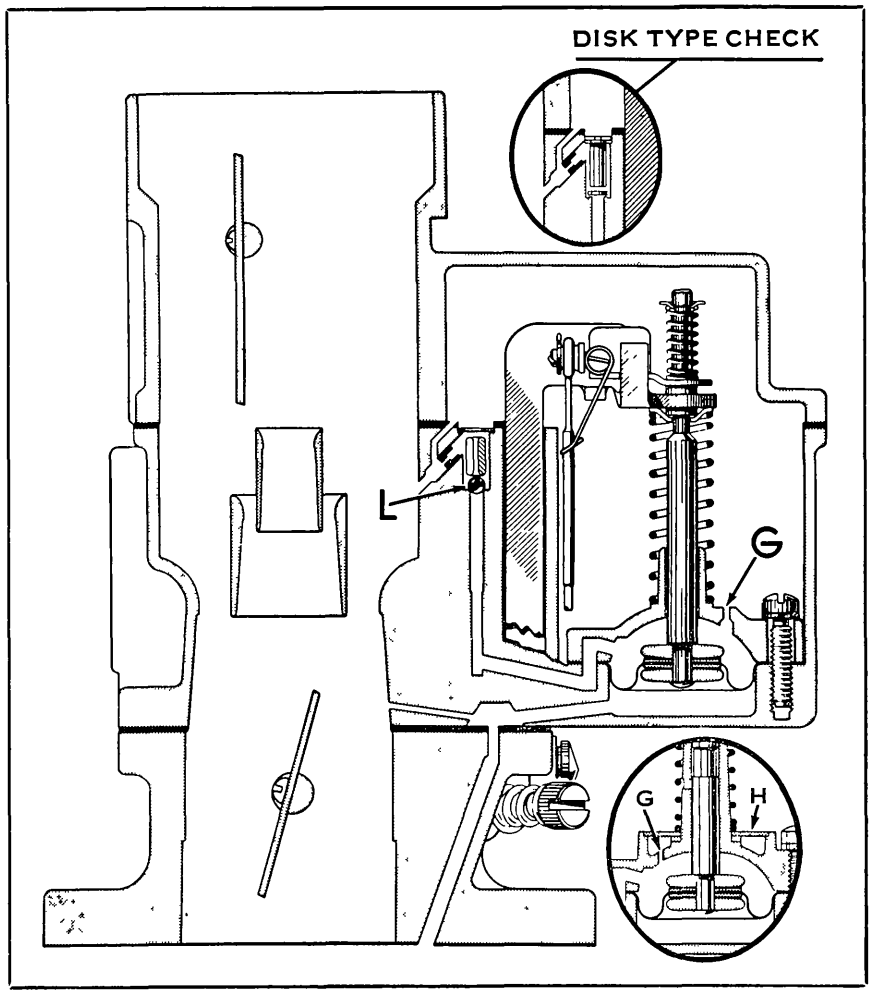


Figure 3
Accelerating Pump

ACCELERATING PUMP (Fig. 3):

If acceleration is not satisfactory, remove pump check retainer and pump discharge check disk (738S), or ball check weight and aluminum pump discharge check ball (738SA). Then remove pump diaphragm assembly Check diaphragm for wear or damage. Be sure inlet hole in diaphragm housing is not clogged with lint or foreign matter. Intake screen (if so equipped) should be removed in service. If carbureter is equipped with disk type pump discharge check, replace with aluminum ball check and weight. Unitized package (Part No. 116-27U), consisting of (1) 1/8" steel ball, (1) 1/8" aluminum ball, (1) 63-152 retainer and (1) 221-13 ball check weight should be used. Complete instructions for this conversion are contained in the package.

If the discharge ball or seat, in carbureters equipped with aluminum ball check and weight, appear damaged, form a new seat by tapping on a 1/8" stainless steel ball (116-11) with 5/32" brass drift and light hammer. Remove stainless steel ball and install new 116-25 aluminum ball. **Do not tap on aluminum ball.** Then install weight and retainer ring.

Inspect and replace all worn or damaged parts and clean and blow out all passages with compressed air. Make sure discharge check seats in casting, as a leak at this point will result in poor acceleration.

FAST IDLE ADJUSTMENT (Fig. 4):

With choke held in wide open position, lip (J) on fast idle arm should contact boss on body casting Adjust by bending at offset of fast idle link (K).

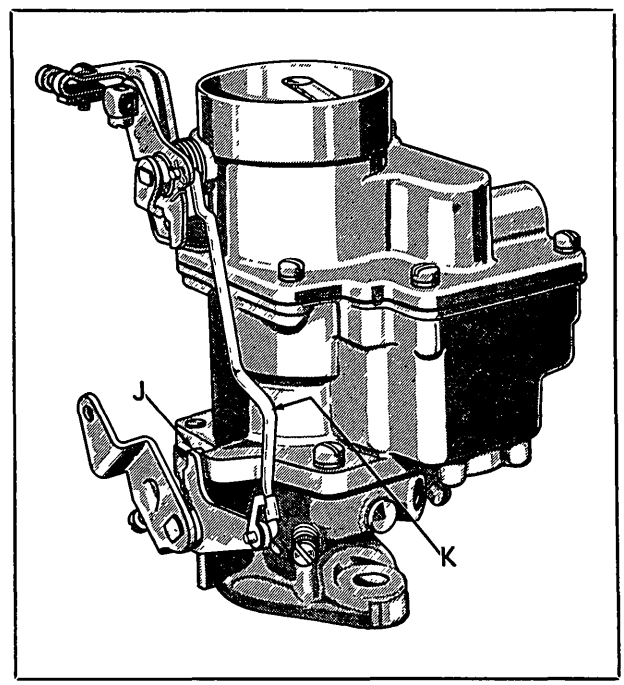
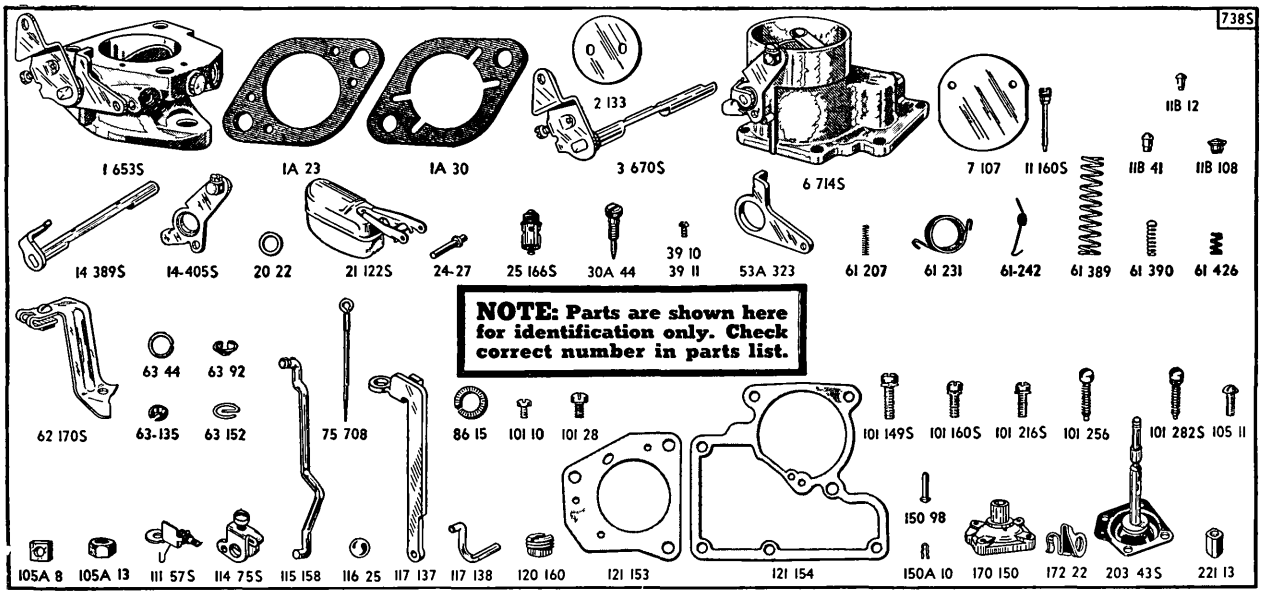


Figure 4
Fast Idle Adjustment



Willys Carbureters Nos. YF-738S-738SA

WHEN SERVICING, USE GASKET ASSORTMENT No 200; REPAIR PACKAGE No 1546B

PART NAMES IN CAPITAL LETTERS LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-653S	Body flange assembly	
1A 23	Flange gasket (for use with governor)	
1A-30	FLANGE GASKET (FOR USE WITHOUT GOVERNOR)	
2-133	Throttle valve	
3-670S	Throttle shaft and lever assembly	
6-653S	Air horn assembly (Sup by 6 714S)	
6-714S	Air horn assembly	
7-107	Choke valve	
11-160S	LOW SPEED JET ASSEMBLY	
11B-12	Flange passage plug	
11B-41	Nozzle passage rivet plug	
11B-79	Rivet plug (738SA late prod)	(2)
11B-108	IDLE PORT RIVET PLUG	
14-389S	Choke shaft and lever assembly	
14 405S	Choke lever assembly	
20 22	Needle seat gasket	
21-122S	Float and lever assembly	
24-27	Float lever pin	
25-166S	NEEDLE SPRING AND SEAT ASSEMBLY	
30 62	Pump intake strainer (Discontinued)	
30A-44	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	THROTTLE VALVE ATTACHING SCREW	(2)
53A 323	Fast dle arm	
61-84	Idle screw spring (Sup by 61 426)	
61-207	Needle spring	
61-231	Choke lever spring	
61-242	Metering rod spring	
61-389	PUMP DIAPHRAGM SPRING	
61-390	Pump spring (upper)	
61-426	Idle screw spring	
62-170S	Choke tube clamp assembly	
63-44	Choke lever retaining ring	
63-92	DIAPHRAGM SPRING RETAINER	
63-134	Pump disk retainer (Sup by 63-139)	
63-135	SPRING RETAINER	

Part No	PART NAME	
63-138	Pump disk retainer ring (Sup by 63 152)	
63-139	Pump disk retainer (Sup by 116 27U)	
63-152	Pump discharge ball check retainer ring	
75-708	METERING ROD (STANDARD) 0735" 0735" to 062" 044"	
75-720	Metering rod (1 size lean) 075"-075" to 065" 049"	
86-15	Flange stud lock washer	(2)
101-10	Wire clamp screw	
101-28	Throttle shaft arm attaching screw	
101-149S	Body flange attaching screw and washer assembly	(3)
101-160S	Air horn attaching screw and washer assembly	(5)
101-216S	Air horn attaching screw and washer assembly	(2)
101-256	Throttle lever adjustment screw	
101-282S	Diaphragm housing attaching screw and washer assembly	(4)
105 11	Tube clamp screw	
105A-8	Tube clamp nut	
105A-13	Flange nut	(2)
111 57S	Metering rod arm assembly	
114-75S	THROTTLE SHAFT ARM ASSEMBLY	
115 158	Fast idle connector rod	
116-25	Pump discharge ball check	
116 27U	UNITIZED PACKAGE (Consists of 1—116-11 1—116 25 1—63 152 and 1—221 13)	
117 137	PUMP LIFTER LINK	
117-138	CONNECTOR LINK	
120-160	METERING ROD JET	
121-153	BODY FLANGE GASKET	
121-154	BOWL COVER AND AIR HORN GASKET	
150-98	Intake needle pin	
150A 10	PIN SPRING	
169-22	Pump check disk (Sup by 116 27U)	
170-150	Pump diaphragm housing	
172-22	Throttle connector rod retainer	
203-43S	DIAPHRAGM ASSEMBLY	
221-13	Ball check weight	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

CARTER CARBURETOR

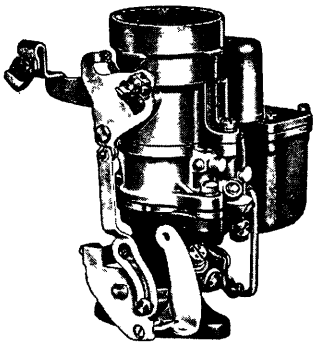
DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

CAR SERIAL NUMBERS

Agri-Jeep—69589 and Higher

Jeep Trucks—10,001 and Higher

Station Wagon (4 Wheel Drive)—
10,001 and Higher



Cut shows 596S

Casting No. 458 on face of flange (596S)
Casting No. 505 on face of flange (636S-SA)

WILLYS AGRI-JEEP

MODELS CJ-2A—1945-48
CJ-3A—1949-52
2T (¾ Ton), 4T (1 Ton)
JEEP TRUCKS - 1947-1950
Station Wagon (4 Wheel Drive)
Model GSW 4x463 (Gov. Us)
Model CSW 4x463 (Civ. Us)
1949-1950
(636SA can be used in place of 596S-636S)

W-O DOWN-DRAFT **CARBURETERS 596S-636S-636SA**

CARBURETER SPECIFICATIONS

For Willys 4 Cylinder Engine: 3⅛ Inch Bore; 4⅜ Inch Stroke

Dimensions: Flange size, 1 inch S. A. E.
Primary venturi 11/32 inch I. D.
Main venturi, 1.0 inch I. D.

Float Setting: Distance from float (at free end) to float chamber cover to be ⅜ inch with free weight of float on needle and spring.

Vents: Outside, No. 10 drill size.

Gasoline Intake: Square vertical needle. No. 53 drill size in needle seat.

Low Speed Jet Tube: Jet size, .026 inch diameter (early production), .029 inch diameter (later production). Idle well jet, No. 61 drill.
By-pass in body, .059 to .060 inch diameter.
Economizer in body, .0425-.0435 inch diameter.
Idle bleed, size No. 52 drill.

Idle Port: Length, .140 inch. Width .030 inch.

Idle Port Opening: .086 to .090 inch above upper edge of valve with valve closed tight.

Idle Screw Seat: No. 46 drill.

Set Idle Adjustment Screw: 1 to 2 turns open. For richer mixture, turn screw out. Do not attempt to idle engine below 8 miles per hour.

Main Nozzle: (Flush type) in primary venturi, angle 30°. Discharge jet size, .096 inch diameter.

Metering Rod: Economy step, .060 inch, tapers to .048 inch diameter. Power step .047 inch diameter. Length 3-23/64 inches.

Metering Rod Jet: Size, .070 inch diameter.

Metering Rod Setting: Use gauge, part No. T109-26 (2.718 inches).

Accelerating Pump: High pressure type, spring operated.
Discharge jet size, No. 73 drill.
Relief passage to outside, size No. 42 drill.
Intake ball check size, No. 40 drill.
Discharge disk check size, No. 40 drill.

Pump Adjustment: 17/64 inch plunger travel at full throttle position. Use gauge T109-117S.

Choke: Manual—Offset, butterfly type with pressure relief poppet valve. Inter-connected to open throttle valve to fast idle position when choke is used.

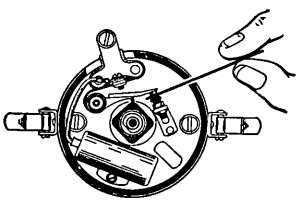
Vacuum Spark Port: (636S) Size, .062 to .064 inch diameter. Top of port .056 to .062 inch above top edge of valve.

Motor Tune-Up—Be Accurate!

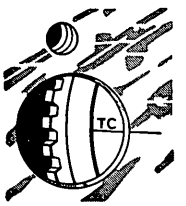
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



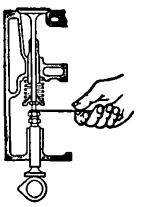
Spark Plug
Gap
.030"



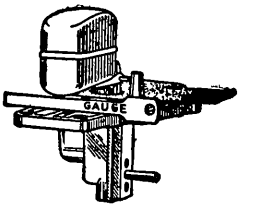
Breaker Point
Setting
.020"



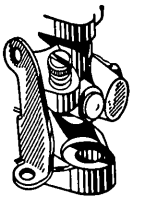
Ignition Timing
Breaker Points to Open:
5° B. T. D. C. at
IGN Mark on Flywheel



Valve Setting
(Cold)
Intake .016"
Exhaust .016"



Float Setting
(Measure from machined surface of casting)
⅜"



Idle Adjustment
Screw Setting
1 to 2
Turns Open

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CARBURETER
TRADE MARK REG U S PAT. OFF
MARCA REGISTRADA

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SERVICE INSTRUCTIONS

TO DISASSEMBLE

Remove carbureter from motor. Use Carter Tool Kit.

1. Remove choke link pin spring, choke connector link and spring.
2. Remove air horn assembly with all parts attached.
3. Remove low speed jet plug assembly.
4. Remove low speed jet.
5. Remove throttle shaft arm and screw assembly and throttle connector rod.
6. Remove bowl cover with all parts attached.
7. Remove pump spring from pump cylinder in body.
8. Remove idle well plug assembly.
9. Remove idle well jet.
10. Remove idle adjusting screw and spring.
11. Remove metering rod jet assembly.
12. Remove nozzle passage plug assembly.

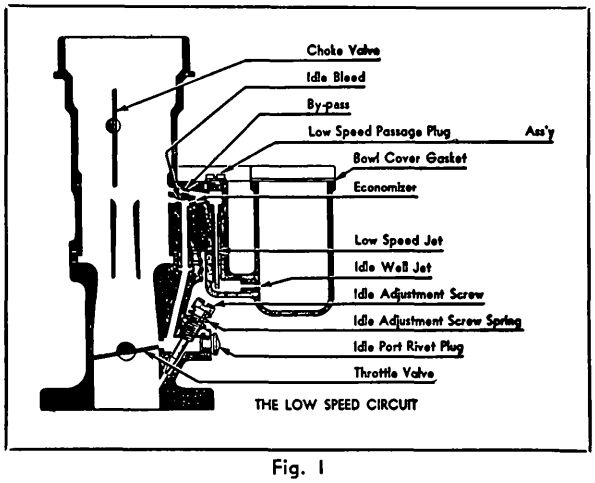


Fig. 1

13. Remove nozzle retainer plug.
14. Remove nozzle and nozzle gasket, using tool T109-178.
15. Remove body flange attaching screws and then remove flange from body.
16. **Remove strainer passage plug assembly and strainer.**
17. Remove intake ball check assembly.
18. Remove discharge disk check assembly.
19. Remove pump jet passage plug assembly.
20. Remove pump jet.
21. Remove throttle valve screws, throttle valve, retainer plate and throttle shaft and lever assembly.
22. Remove idle port rivet plug.
23. Remove choke tube bracket assembly.
24. Remove choke valve screws, choke valve and choke shaft and lever assembly.
25. Disassemble all parts from bowl cover.

Clean all castings thoroughly inside and out with a small brush and clean gasoline, or suitable solvent cleaner. Then blow all passages out with compressed air.

A. Group all parts controlling the gasoline level.
B. Group all low speed circuit parts.
C. Group all high speed circuit parts.

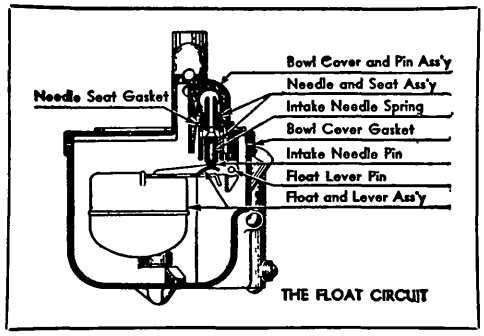


Fig. 2

D. Group all pump circuit parts.
E. Group all choke system parts.

Examine each part in each group and replace those parts that show sign of wear or damage. Clean all parts in gasoline and blow off with compressed air. If any carbon is in the bore of the flange, remove it by scraping or with sandpaper (do not use emery cloth). Install all parts tight.

TO REASSEMBLE

Assemble parts in group "A"

26. Install needle seat in bowl cover. Install bowl cover gasket. Put pin and spring into needle and install in seat; then install float and lever assembly.
27. Set float level. Turn gasket around so gauge can be placed on machined surface of casting. Correct setting is $\frac{3}{8}$". (Use tool T109-80.) Do not depress float lip against spring in needle, **but let float rest of its own weight.** Gauge should then be placed between free end of float and machined surface of bowl cover. Float should be set so it barely touches gauge. Adjustment is obtained by bending the lip on float which contacts pin in needle. Do not bend on front of float in adjusting, as damage will result.

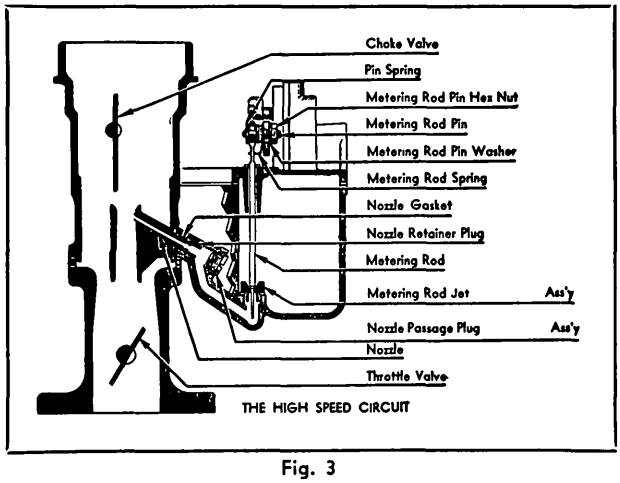


Fig. 3

CONVERSION FROM MANUAL TO GOVERNOR OPERATION (596S)

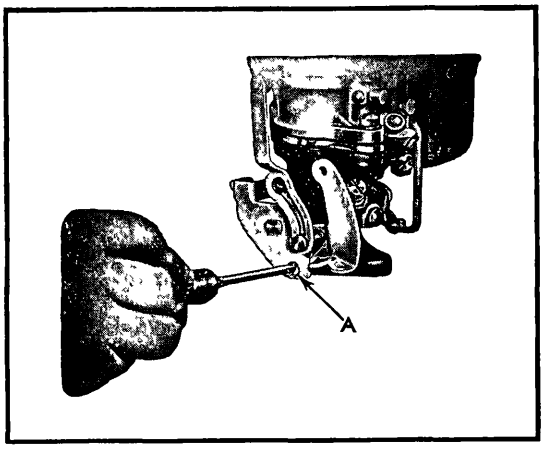


Fig. 7

The conversion from manual to governor control is very simple. Procedure is as follows:

1. Remove screw "A," Fig. 7.
2. Connect governor control rod to ball connector "B," Fig. 8.
3. Pull hand throttle control to wide open position. Governor can be made inoperative by closing hand throttle.

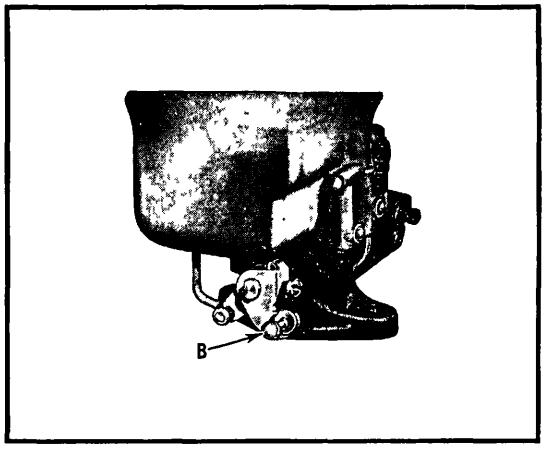


Fig. 8

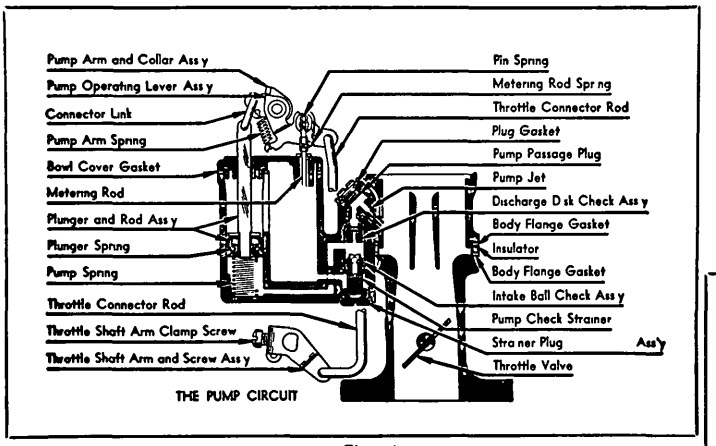


Fig 4

Assemble parts in group "D"

28 Install pump jet and pump jet plug assembly

29 Install discharge disk check assembly

30 Install intake ball check assembly

31 Install pump check strainer and strainer plug assembly

32 Install pump spring

33 Install pump plunger and rod assembly

Assemble parts in group "B"

34 Install loose lever and retainer plate and throttle shaft and lever assembly back out throttle lever adjusting screw, then install throttle valve and throttle valve screws (be sure trade mark on valve is toward the idle port when viewed from manifold side of flange) With valve screws loose tap throttle lightly to cen tralize it in bore of carbureter Hold valve in place with fingers and securely tighten screws (New screws are recommended)

35 Install idle port rivet plug

36 Install idle adjustment screw and idle adjustment screw spring

37 Install insulator and new gaskets then install body on flange tightening screws evenly and securely

38 Install idle well jet and idle well jet plug assembly

39 Install low speed jet Work jet well into seat by moving back and forth then install low speed jet plug assembly

Assemble parts in group "C"

40 Install metering rod jet assembly

41 Install bowl cover as assembled tightening screws down evenly and securely

42 Install pump arm and collar and pump operating lever assembly and spring on pin in bowl cover

43 Install pump connector link (ends away from bore and pin spring at top)

44 Install throttle shaft arm and screw assembly on throttle shaft

45 Install throttle connector rod in throttle shaft arm using spring and retainer at lower end and pin spring at top end

46 **Pump Adjustment**· Back out throttle lever set screw With throttle valve seated pump plunger should travel 17/64" from closed to wide open throttle Adjustment can be made by bending throttle connector rod at lower angle with tool T109 41 Pump travel can be measured by using universal pump stroke gauge T109 117S by placing base of gauge on raised portion of bowl cover so that projecting ear of pump gauge rests on top of pump shaft (See Fig 6) Hold gauge vertical The differ ence between the number shown by indext mark on gauge at wide open and closed throttle positions should be 17

47 **Metering Rod Adjustment** With shoulder on metering rod seated in metering rod jet metering rod pin must be adjusted to lightly contact top of metering rod eyelet with 015" to 018" opening between edge of throttle valve and bore of carbureter (side opposite idle port) Use gauge T109 44

47A **Optional Adjustment:** (See Fig 5) Correct setting of meter ing rod is important and must be made **after** pump adjust ment Install metering pin and spring assembly washer and nut loosely on pump operating lever Insert gauge (T109 26) in place of metering rod seating tapered end in metering rod jet With throttle valve **seated,** push metering rod pin downward until pin rests on shoulder of notch in gauge and tighten nut Remove gauge and install metering rod disc and pin spring Connect metering rod spring (end of spring through hole in metering rod)

48 **After adjustment,** metering rod should seat in metering rod jet when throttle is adjusted for normal curb idle Metering rod spring must exert slight downward pressure on metering rod Bend lower end of spring downward where necessary

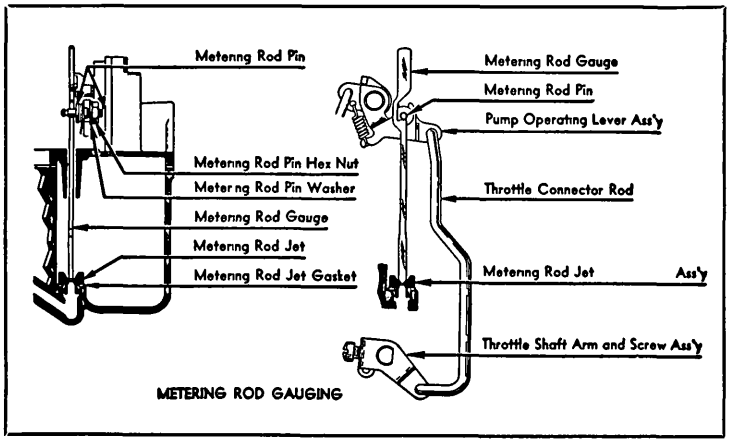


Fig 5

49 Install nozzle and nozzle gasket using tool No T109 55 Be sure that flat side of nozzle faces up

50 Install nozzle retainer plug and nozzle plug assembly

Assemble parts in group "E"

51 Install air horn on body

52 Install choke shaft and lever assembly and choke pull back spring

53 Install choke valve and screws centralizing the valve in air horn before tightening screws

54 Install choke operating lever assembly and hook pull back spring in place

55 Install choke connector link connector link spring and pin spring

OTHER CARBURETER ADJUSTMENTS

If carbureter loads up after considerable service float level should be checked Wear on lip of float lever will raise float level Float level may be reset by bending lip of float lever down to raise float level or bending lever up to lower float level Only a very slight bend is needed

If motor stalls while idling reset throttle adjusting screw and idle adjustment screw to specifications If these adjustments do not cor rect the trouble (1) Remove idle well plug assembly allowing gaso line from the bowl to flush out idle well jet Remove low speed jet and blow out with compressed air (2) Remove idle well jet and clean thor oughly with compressed air Examine and see that jets seat gasoline tight at shoulder If not replace with new jets of identical specifications (3) Clean carbon accumulation from bore of car bureter around throttle valve

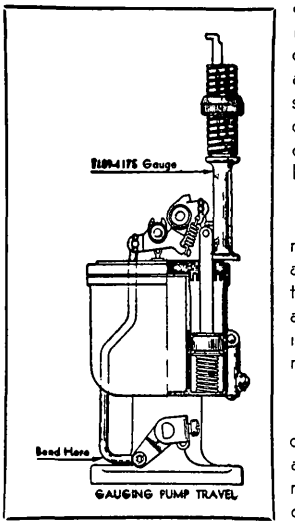
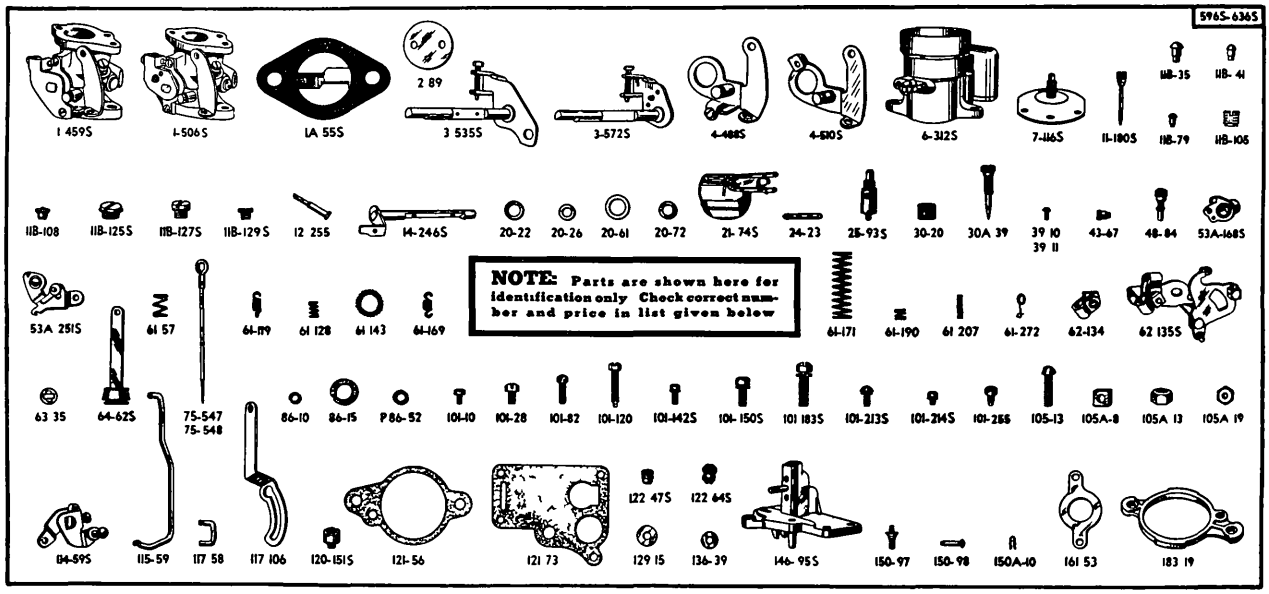


Fig 6

A clogged pump jet may be re moved and cleaned with compressed air which in many cases will remove the dirt or lint However it is usually advisable to replace the pump jet as its cost is nominal All jets and checks must be seated gasoline tight

Poor acceleration may be due to damaged or worn plunger leather in accelerating pump dirt in checks cor rosion or sediment in pump cylinder or bent throttle connector rod (parts which may be replaced at small cost)



WILLYS CARBURETERS 596S-636S-636SA

WHEN SERVICING, USE GASKET ASSORTMENT No. 175A; REPAIR PARTS PACKAGE No. 1355C

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-459S	Body flange assembly (596S)	
1-506S	Body flange assembly (636S SA)	
1A-55S	INSULATOR GASKET AND MANIFOLD BAFFLE ASSEMBLY	
2-89	Throttle valve	
3-535S	Throttle shaft and lever assembly (596S)	
3-572S	Throttle shaft and lever assembly (636S SA)	
4-488S	Throttle lever assembly (loose) (596S)	
4-510S	Throttle lever assembly (loose) (636S SA)	
6-312S	Air horn assembly	
7-116S	Choke valve assembly	
11-180S	Low speed jet assembly (Sup by 11 186S)	
11-186S	LOW SPEED JET ASSEMBLY	
11B-35	Rivet plug	
11B-41	Rivet plug (idle passage)	
11B-79	Rivet plug	(5)
11B-105	Nozzle retainer plug (596S 636S)	
11B-108	IDLE PORT RIVET PLUG	
11B-125S	Pump check passage plug assembly	
11B-127S	Nozzle pump passage plug assembly	(2)
11B-129S	Low speed jet and idle passage plug assembly	(2)
11B-164	Nozzle retainer plug (636SA)	
12-255	Nozzle (596S 636S)	
12-323	Nozzle (636SA)	
14-246S	Choke control lever and shaft assembly	
20-22	Needle seat gasket	(3)
20-26	Metering rod jet and plug gasket	(3)
20-45	NOZZLE GASKET (636SA)	
20-61	Pump check passage plug	
20-72	NOZZLE GASKET (596S 636S)	
21-74S	Float and lever assembly	
24-23	Float lever pin	
25-93S	NEEDLE SPRING AND SEAT ASSEMBLY	
30-20	PUMP CHECK STRAINER	
30A-39	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
39-11	THROTTLE VALVE ATTACHING SCREW	(2)
43-67	IDLE WELL JET	
48-84	PUMP JET	
53A-168S	Pump arm and collar assembly	
53A-251S	Pump operating lever assembly	
61-57	Idle adjustment screw spring	
61-119	Choke pull back spring	
61-128	Connector rod spring (Use with 115 59)	
61-143	Plunger spring	
61-169	Pump arm spring	
61-171	Pump spring	
61-190	Connector link spring	
61-207	Intake needle spring	

Part No.	PART NAME	
61-272	Metering rod spring	
62-134	Tube clamp	
62-135S	Choke tube bracket assembly	
63-35	Spring retainer (Sup by 63 93)	
63-93	Spring retainer (Use with 115 59)	
64-62S	PLUNGER AND ROD ASSEMBLY (Identify by Shaft No 49 121)	
75-547	METERING ROD—STANDARD—060 to 048 - 047'	
75-548	Metering rod—1 size lean—06075' 0485"	
75-1133	*Metering rod (1 size rich)	
86-10	Bowl cover lock washer	(4)
86-15	Flange stud lock washer	
P86-52	Lock washer (636S-SA)	
101-10	Wire clamp screw	
101-28	Throttle shaft arm clamp screw	
101-82	Bowl cover attaching screw	(4)
101-120	Throttle lever adjustment screw	
101-142S	Choke tube bracket screw and washer assembly	
101-150S	Air horn screw and washer assembly	(2)
101-183S	Flange attaching screw and washer assy	(2)
101-213S	Retainer plate screw and washer assy	(2)
101-214S	†Throttle lever screw and washer assy (596S)	
101-255	Throttle lever attaching screw (636S SA)	
105-13	Tube clamp screw	
105A-8	Tube clamp nut	
105A-13	Flange nut	
105A-19	Metering rod pin hex nut	
114-59S	THROTTLE SHAFT ARM ASSEMBLY	
115-59	Throttle connector rod (Sup by 115 142)	
115-142	THROTTLE CONNECTOR ROD	
117-58	PUMP CONNECTOR LINK	
117-106	Choke connector link	
120-151S	METERING ROD JET ASSEMBLY	
121-56	BODY FLANGE GASKET	(2)
121-73	BOWL COVER GASKET	
122-47S	DISCHARGE DISK CHECK PLUG ASSEMBLY	
122-64S	INTAKE BALL CHECK PLUG ASSEMBLY	
129-15	Metering rod disk	
136-39	Metering rod pin washer	
146-95S	Bowl cover and pin asembly	
150-97	Metering rod pin	
150-98	Intake needle pin	
150A-10	PIN SPRING	(4)
161-53	Loose throttle lever retainer plate (Sup by 161-66)	
161-66	Loose throttle lever retainer plate	
172-21	THROTTLE CONNECTOR ROD RETAINER (Use with 115 142)	
183-19	Insulator	

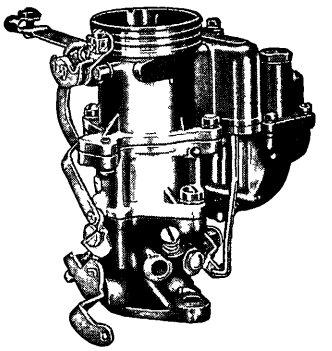
†Must be removed when governor is used

*Used as standard rods on Industrial engines

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is sh wn, nly ne is used.

Car Serial Number
10,001 and Up

Motor Serial Number
10,001 and Up



Casting No 485 on Face of Flange

WILLYS STATION SEDAN AND STATION WAGON SERIES "663" 1948-1949

WA-1 DOWN-DRAFT **CARBURETER No. 645S**

CARBURETER SPECIFICATIONS

For Willys 6 Cylinder Engine 3 Inch Bore 3½ Inch Stroke

Dimensions Flange size 1¼ inch S A E
Primary venturi 11/32 inch I D
Secondary venturi 11/16 inch I D

Main venturi 1 3/16 inch I D (early production) 1 166 inch I D (late production)

Float Level Distance from seam of float (at free end) to tip on lower edge of float chamber cover when needle is seated to be 5/16 inch

Vents Outside No 10 drill Inside none

Gasoline Intake Square vertical (spring loaded) needle Size No 48 drill hole in needle seat

Low Speed Jet Tube Jet size No 68 (.031") drill (11 160S)
No 66 (.033") drill (11 167S)
By pass size No 53 drill
Economizer 0755 0765 inch diameter
Idle bleed size No 49 drill

Idle port Slot type length 230 inch width 030 inch

Idle Port Opening 198 to 202 inch above valve with valve closed tight

Idle Screw Seat No 46 drill

Set Idle Adjustment Screw 1 to 2 turns open For richer mixture turn screw out Do not attempt to idle engine below 350 r p m

Main Nozzles In primary venturi angle 45° Angled tip Inside diameter No 30 drill Discharge jet size 086 inch diameter

Metering Rod Economy step 075 inch diameter middle step tapers to 071 inch diameter power step 050 inch diameter Length 3 9/64 inches

Metering Rod Jet 098 inch diameter

Metering Rod Setting Use gauge part No T109 102 (2 468 inches)

Accelerating Pump High pressure type (spring operated lever) with non adjustable pump stroke
Pump discharge jet size No 72 (.025") drill (48 61) No 71 (.026") drill (48 122)
Relief passage to outside size No 42 drill
Intake ball check seat size No 62 drill
Discharge ball check seat size No 32 drill

Pump Adjustment 11/64 inch plunger travel (full throttle position) Use gauge T109 117S

Choke Manual offset butterfly type interconnected to open throttle valve to fast idle position when choke is in use

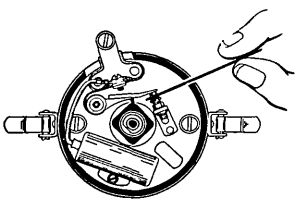
Vacuum Spark Port 054 to 056 inch diameter Top of port 036 to 044 inch above valve

Motor Tune-Up—Be Accurate!

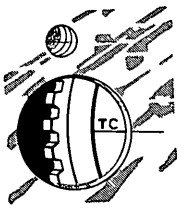
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



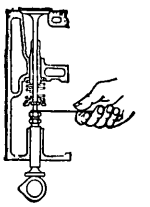
Spark Plug
Gap
030"



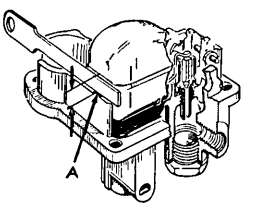
Breaker Point
Setting
020"



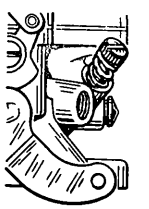
Ignition Timing
Breaker Points to Open
T D C



Valve Setting
(Cold)
Intake 016"
Exhaust 016"



Float Setting
(Measure from point "A" to top of float seam)
5/16"



Idle Adjustment
Screw Setting
1 to 2
Turns Open

CARBURETER ADJUSTMENTS

Float Adjustment With bowl cover assembly inverted and float resting on pin in seated needle, the vertical distance from the projecting tip on edge of float chamber cover to soldered seam of float should be 5/16" Do not depress float lip against spring in needle but let float rest of its own weight Adjustment is made by bending lip of float which contacts pin in needle Do not bend front of float when adjusting as damage will result Use gauge T109-107

Pump Adjustment With pump connector link in place back out throttle lever adjusting screw to allow throttle valve to seat in bore of carbureter Place universal pump travel gauge T109 117S on bowl cover with projecting lip of gauge extending over pump link where it extends through pump plunger shaft Hold gauge vertical to insure correct readings Turn knurled nut of gauge until lip rests on pump link Read number on gauge indicated by notch in knurled nut Repeat with throttle in wide open position The difference in readings obtained at closed and at wide open throttle should be "11" (11/64") plunger travel Adjustment should be made by bending throttle connector rod at lower angle

Metering Rod Adjustment Correct setting of metering rod is important and must be made after pump adjustment Insert metering rod gauge T109-102 in place of metering rod Hold gauge vertical to insure seating tapered end in meter

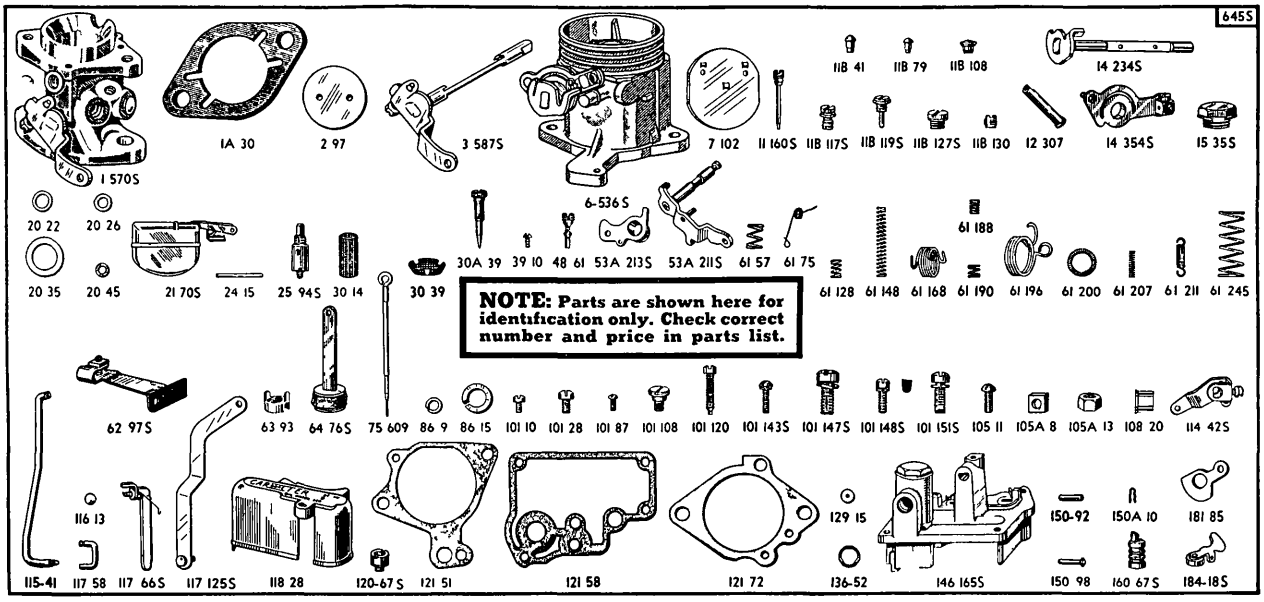
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CARBURETER
TRADE MARK REG U S PAT OFF.
MARCA REGISTRADA

PRINTED IN U.S.A.

ing rod jet With throttle valve seated, press down lightly on piston link (directly over piston) until lip of link touches pin in pump arm There should be less than 005" clearance between metering rod pin and shoulder in notch of gauge Adjust by bending lip on piston link (Use tool T109-105) Remove gauge and install metering rod and disc Connect metering rod and spring

Anti-Percolator Adjustment Crack throttle 030" by placing gauge T109-29 between throttle valve and bore of carbureter, side opposite idle port Bend rocker arm lip until there is 005" to 015" clearance between rocker arm and pump arm With gauge removed, anti-percolator valve should be slightly open when throttle valve is seated.



Willys—1948-1949—Carbureter 645S

WHEN SERVICING, USE GASKET ASSORTMENT No 159A, REPAIR PACKAGE No. 1385A
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

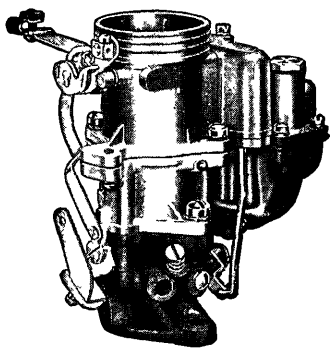
Part No	PART NAME	
1-570S	Body flange assembly	
1A-30	FLANGE GASKET	
2-97	Throttle valve	
3 587S	Throttle shaft and lever assembly	
6 536S	Air horn assembly	
7-102	Choke valve	
11-160S	Low speed jet assembly (Sup by 11 167S)	
11-167S	LOW SPEED JET ASSEMBLY	
11B-41	Rivet plug	
11B-79	Rivet plug	(5)
11B-108	Idle port rivet plug	
11B-117S	Idle passage plug assembly	
11B-119S	Ball retainer screw plug assembly	
11B-127S	Nozzle and pump passage plug assembly	(2)
11B-130	Nozzle retainer plug	
12-307	Nozzle	
14 234S	Choke lever and shaft assembly	
14-354S	Choke lever assembly	
15-35S	Strainer nut assembly	
20-22	Gasket	(3)
20 26	Gasket	(3)
20-35	STRAINER NUT GASKET	
20-45	NOZZLE GASKET	
21-70S	Float and lever assembly	
24-15	Float lever pin	
25-94S	NEEDLE SPRING AND SEAT ASSEMBLY	
30-14	BOWL STRAINER GAUZE	
30-39	PUMP STRAINER	
30A-39	Idle adjustment screw	
39-10	Choke valve attaching screw	(2)
48-61	Pump jet (Sup by 48 122)	
48-122	PUMP JET	
53A-211S	Pump operating lever and countershaft assembly	
53A-213S	Pump arm and collar assembly	
61-57	Adjustment screw spring	
61-75	Metering rod spring	
61-128	Connector rod spring (Use with 115 41)	
61-148	VACUUM PISTON SPRING	
61-168	Choke valve spring	
61-188	Rocker arm spring	
61-190	Connector link spring	
61-196	Choke lever spring	
61-200	Plunger spring	
61-207	Intake needle spring	
61-211	Pump operating lever spring	
61-245	Pump spring	
62-97S	Tube clamp assembly	

Part No.	PART NAME	
63-93	Connector rod spring retainer (Use with 115 41)	
64-76S	PUMP PLUNGER AND ROD ASSEMBLY	
75-589	Metering rod—1 size lean—078" 078" to 074"-059"	
75-601	Metering rod—2 sizes lean—079"-079" to 076" 0625"	
75-609	METERING ROD—STANDARD—075" 075" to 071" 050"	
75-618	Metering rod—3 sizes lean—080" 080 to 0775"-066"	
86-9	Lock washer	
86-15	Flange stud lock washer	
101-10	Wire clamp attaching screw	
101-28	Throttle shaft arm and tube clamp screw	(2)
101-87	THROTTLE VALVE ATTACHING SCREW	(2)
101-108	Fast idle cam screw	
101-120	Throttle lever adjusting screw	
101-143S	Air horn attaching screw and washer assembly	
101-147S	Body flange attach screw and washer assembly	(2)
101-148S	Bowl cover attach screw and washer assembly	(5)
101-151S	Air horn attaching screw and washer assembly	(2)
105-11	Choke tube clamp screw	
105A-8	Clamp screw nut	
105A-13	Flange nut	
108-20	Choke lever spacer	
114-42S	Throttle shaft arm and screw assembly	
115-41	Throttle connector rod (Sup by 115 122)	
115-122	THROTTLE CONNECTOR ROD	
116-13	PUMP CHECK BALL	(2)
117-58	Pump connector link	
117-66S	Piston link and spring assembly	
117-125S	Choke link and pin assembly	
118-28	Dust cover	
120-67S	METERING ROD JET ASSEMBLY	
121-51	AIR HORN GASKET	
121-58	BOWL GASKET	
121-72	BODY FLANGE GASKET	
129-15	Metering rod disk	
136-52	Fast idle cam spring washer	
146-165S	Bowl cover assembly	
150-92	Anti percolator rocker arm pin	
150-98	Intake needle pin	
150A-10	PIN SPRING	(5)
160-67S	Vacuum piston and pin assembly	
172-21	THROTTLE CONNECTOR ROD RETAINER (Use with 115 122)	
181-85	Fast idle cam	
184-18S	ANTI PERCOLATOR CAP AND ROCKER ARM ASSEMBLY	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

Car Serial Number
U-10001 and Up

Motor Serial Number
U-10001 and Up



Casting Number 485 on face of flange

WILLYS MODEL 4-63
STATION WAGON
and
PANEL DELIVERY
1946-1949
VJ-2 & VJ-3 JEEPSTER
(Sports Phaeton)
1948-1949
(738SA can also be used)

WA-1 DOWN-DRAFT **CARBURETER No. 613S**

CARBURETER SPECIFICATIONS

For Willys 4 Cylinder Engine 3⅛" Bore 4⅜" Stroke

Dimensions Flange size 1¼ inch S A E
Primary venturi 11/32 inch I D
Secondary venturi 11/16 inch I D
Main venturi 1 3/16 inch I D (early production)
1 166 inch I D (later production)

Float Level Distance from seam of float (at free end) to t p on lower edge of float chamber cover when needle is seated to be 5/16 inch

Vents Outside No 10 drill Inside none

Gasoline Intake Square vertical needle Size No 48 drill hole in needle seat

Low Speed Jet Tube Jet size No 68 drill (11 160S) No 66 drill (11 167S)
By pass size No 53 drill
Economizer 0755 0765 inch diameter
Idle bleed size No 49 drill

Idle Port Slot type length 230 inch width 030 inch

Idle Port Opening 198 to 202 inch above valve with valve closed tight

Idle Screw Seat No 46 drill

Set Idle Adjustment Screw ½ to 1½ turns open For richer mixture turn screw out Do not attempt to idle engine below 600 r p m

Main Nozzle In primary venturi angle 45 Angled tip Inside d ameter No 30 drill Discharge jet size 086 inch diameter

Metering Rod Economy step 078 inch diameter middle step tapers to 074 inch diameter power step 059 inch diameter Length 3 9/64 inches

Metering Rod Jet 098 inch diameter

Metering Rod Setting Use gauge part No T109 102 (2 468 inches)

Accelerating Pump High pressure type (spring operated lever) with non adjustable pump stroke
Pump discharge jet size No 72 drill (48 61) No 71 drill (48 122)
Relief passage to outside size No 42 drill
Intake ball check seat size No 62 drill
Discharge ball check seat size No 32 drill

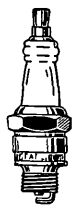
Pump Adjustment 11/64 inch plunger travel (full throttle posi tion) Use gauge T109 117S

Choke Butterfly type offset valve

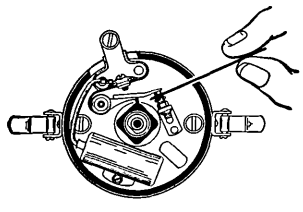
Vacuum Spark Port 054 to 056 inch diameter Top of port 020 to 028 inch above valve (early production)
036 to 044 inch (later production)

Motor Tune-Up—Be Accurate!

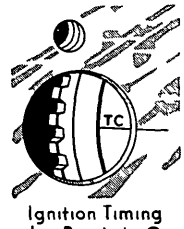
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



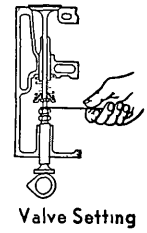
Spark Plug Gap 030"



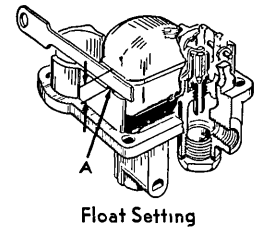
Breaker Point Setting 020"



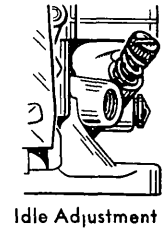
Ignition Timing Breaker Points to Open 5° B T C at IGN Mark on Flywheel



Valve Setting (Cold) Intake 016" Exhaust 016"



Float Setting 5/16 Inch (Measure from point A to top of float seam)



Idle Adjustment Screw Setting ½ to 1½ Turns Open

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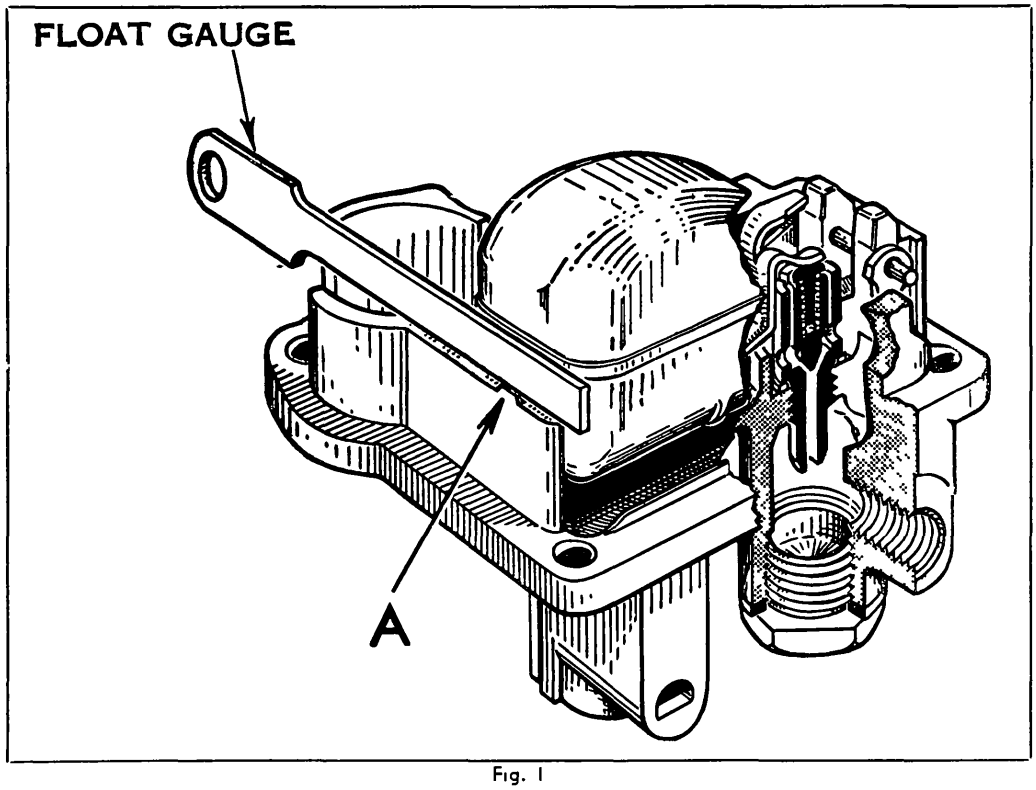


Fig. 1

CARBURETER ADJUSTMENTS

Adjustments must be made in the following order:

1. **FLOAT ADJUSTMENT**· With bowl cover assembly inverted and float resting on pin in seated needle, the vertical distance from the projecting tip on edge of float chamber cover (A) to soldered seam of float should be 5/16" (Fig 1). Do not depress float lip against spring in needle **but let float rest of its own weight.** Adjustment is made by bending lip of float which contacts pin in needle Do not bend front of float when adjusting as damage will result Use gauge T109-107

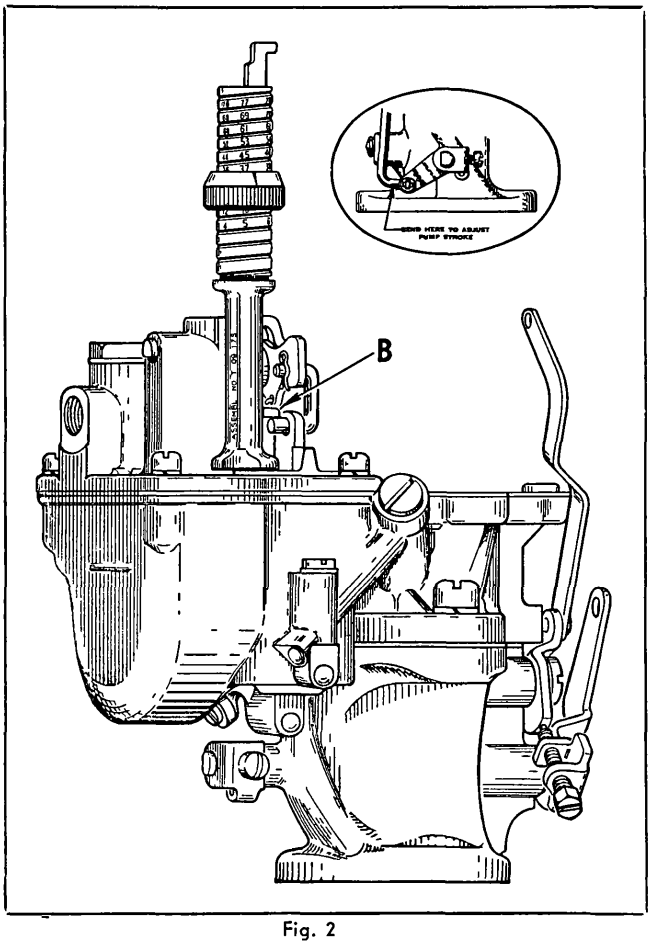


Fig. 2

2 **PUMP ADJUSTMENT:** With pump connector link in place back out throttle lever adjusting screw to allow throttle valve to seat in bore of carbureter Place universal pump travel gauge T109 117S on bowl cover with projecting lip of gauge extending over pump link where it extends through pump plunger shaft (B) (Fig 2) Hold gauge vertical to insure correct readings. Turn knurled nut of gauge until lip rests on pump link Read number on gauge indicated by notch in knurled nut Repeat with throt tle in wide open position The difference in readings obtained at closed and at wide open throttle should be "11" (11/64" plunger travel) Adjustment should be made by bending throttle connector rod at lower angle (Insert, Fig 2)

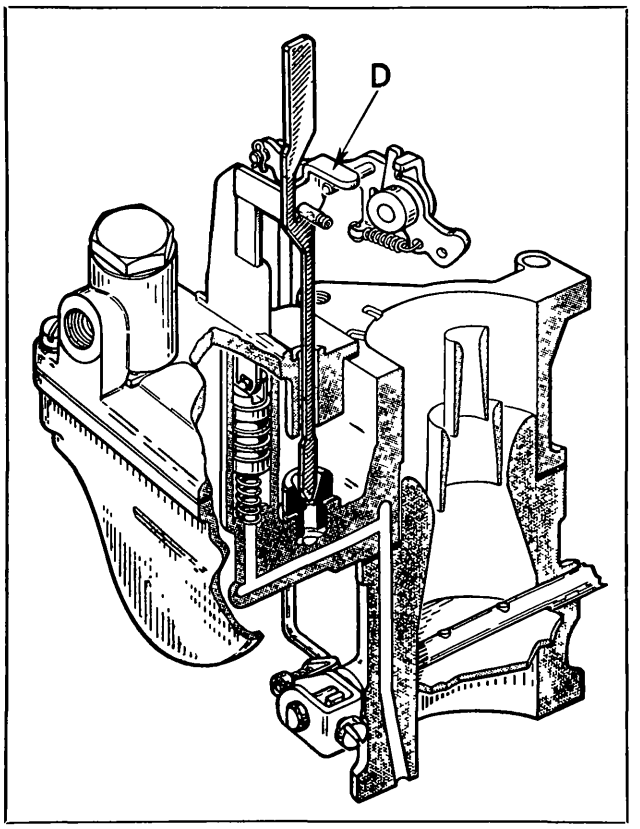


Fig. 3

3. METERING ROD ADJUSTMENT: Correct setting of metering rod is important and must be made **after pump adjustment.** Insert metering rod gauge T109-102 in place of metering rod Hold gauge vertical to insure seating tapered end in metering rod jet (Fig 3) With throttle valve seated press down lightly on piston link (directly over piston) until lip of link touches pin in pump arm There should be less than 005" clearance between metering rod pin and shoulder in notch of gauge Adjust by bending lip on piston link (D) (use tool T109-105) Remove gauge and install metering rod and disc Connect metering rod and spring

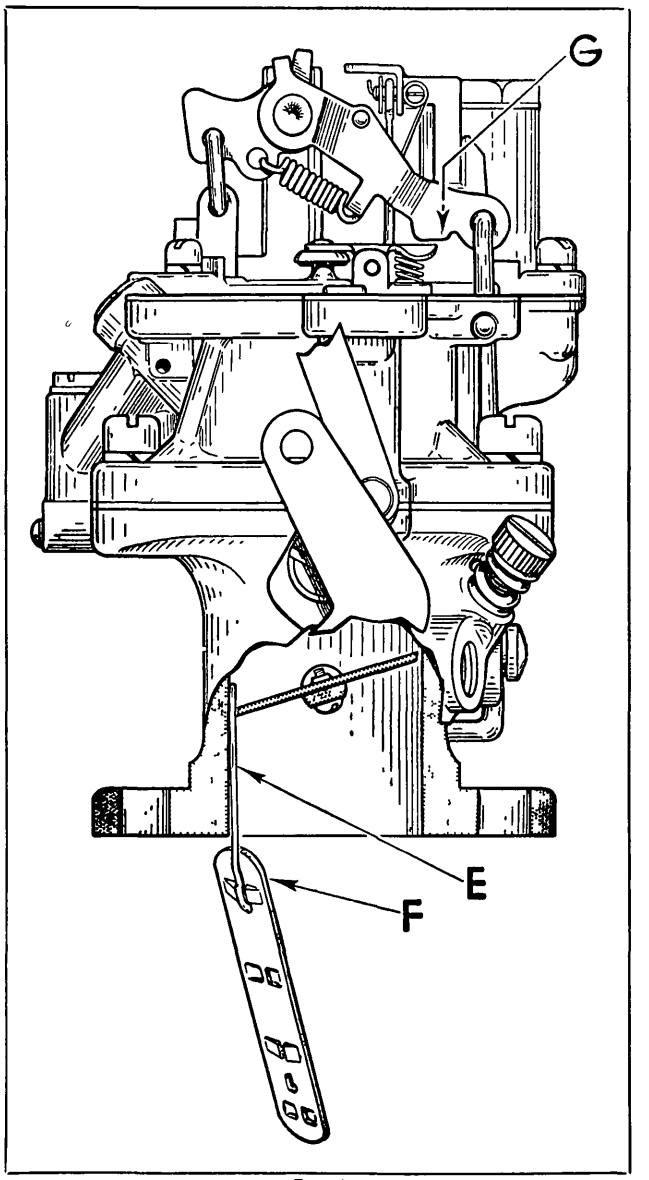


Fig. 4

4. ANTI-PERCOLATOR ADJUSTMENT: Crack throttle 030" (E) by placing gauge T109-29 (F) between throttle valve and bore of carbureter, side opposite idle port (Fig 4). Bend rocker arm lip until there is 005" to 015" clearance between rocker arm and pump arm (G) With gauge removed anti percolator valve should be slightly open when throttle valve is seated

FLANGE GASKETS: The metering rod is controlled by a combination of intake manifold vacuum and throttle position It is known as 'Vacumeter' or Vacuum controlled metering rod A sudden opening of throttle allows the vacuum piston spring to push metering rod upward allowing ample fuel for accelerating purposes to flow through metering rod jet During part throttle and idle operation the metering rod is forced downward against the upward pressure of the vacuum piston spring returning the metering rod to a position controlled by the lip on vacuum piston link contacting the pin on the pump arm. This method of control allows greater economy at constant throttle operation with better metering of fuel for acceleration purposes

The vacuum passage to the Vacumeter cylinder enters the carbureter at the flange face and requires the use of the slotted type flange gasket shown in Fig 5 When a governor is used between the carbureter and manifold the four hole type flange gasket shown in Fig 6 must be used between carbureter and governor and the slotted type gasket used between the governor and the manifold **NEVER USE A SOLID TYPE GASKET WHEN SERVICING THIS CARBURETER.**

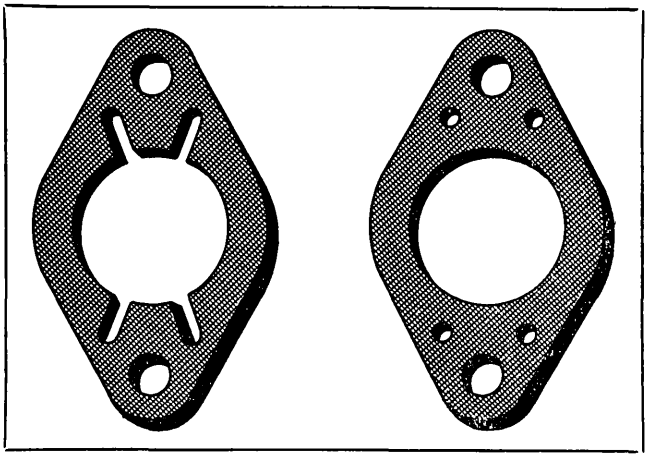
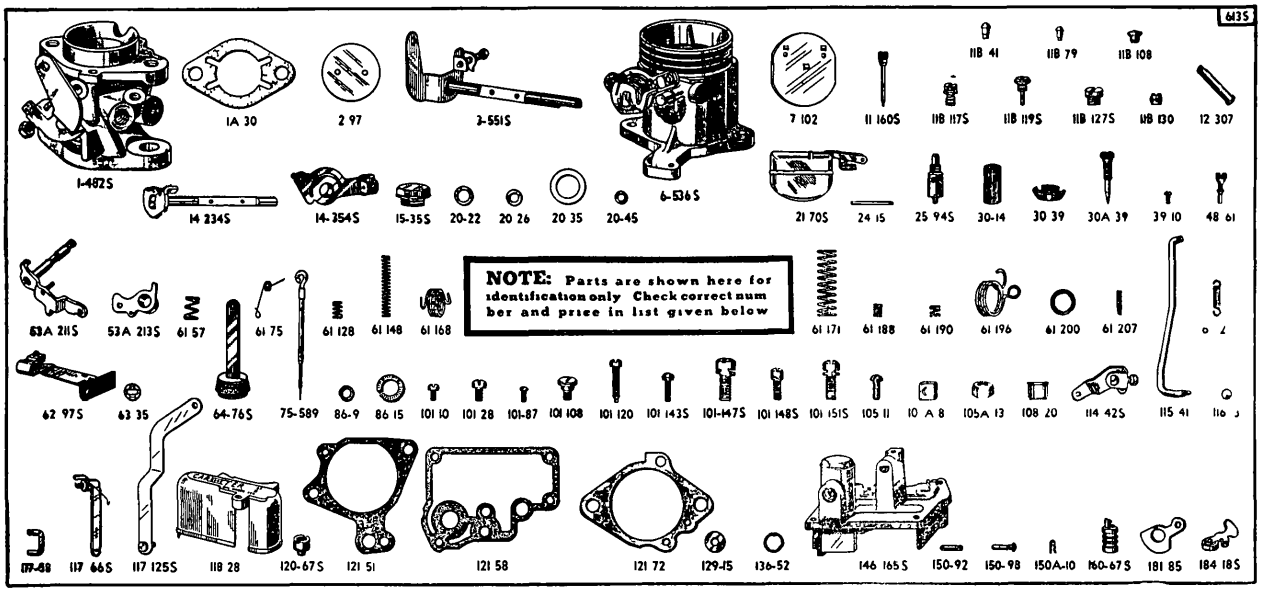


Fig. 5 Fig. 6



Willys—1946-1949—Carbureter 613S

WHEN SERVICING, USE GASKET ASSORTMENT No 159A, REPAIR PACKAGE No 1360B

PART NAMES IN CAPITAL LETTERS LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-482S	Body flange assembly	
1A-30	FLANGE GASKET	
2 97	Throttle valve	
3 551S	Throttle shaft and lever assembly	
6 536S	Air horn assembly	
7 102	Choke valve	
11-160S	Low speed jet assembly (Sup by 11 167S)	
11-167S	LOW SPEED JET ASSEMBLY	
11B 41	Rivet plug	
11B 79	Rivet plug	(5)
11B 108	Idle port rivet plug	
11B 117S	Idle passage plug assembly	
11B 119S	Ball retainer plug assembly	
11B 127S	Pump jet and nozzle passage plug assembly	(2)
11B 130	Nozzle retainer plug	
12-307	Nozzle	
14 234S	Choke shaft and lever assembly	
14 354S	Choke lever assembly	
15 35S	Strainer nut assembly	
20 22	Gasket (Used on needle seat pump jet passage plug and nozzle passage plug)	(3)
20 26	Gasket (Used on metering rod jet low speed jet passage plug and pump discharge ball retainer plug)	(3)
20 35	BOWL STRAINER GASKET	
20 45	NOZZLE GASKET	
21 70S	Float and lever assembly	
24 15	Float lever pin	
25 94S	NEEDLE AND SEAT ASSEMBLY	
30 14	STRAINER GAUZE	
30 39	STRAINER	
30A 39	Idle adjustment screw	
39 10	Choke valve attaching screw	(2)
48 61	Pump jet (Sup by 48 122)	
48 122	PUMP JET	
53A 211S	Pump operating lever and shaft assembly	
53A 213S	Pump arm assembly	
61 57	Idle adjustment screw spring	
61-75	Metering rod spring	
61-128	Connector rod spring (Use with 115 41)	
61-148	VACUUM PISTON SPRING	
61 168	Choke valve spring	
61-171	Pump spring (Sup by 61 245)	
61 188	Anti percolator rocker arm spring	
61 190	Choke connector link spring	
61 196	Choke lever spring	
61 200	Plunger spring	
61 207	Intake needle spring	
61 211	Pump operating lever spring	
61-245	Pump spring	
62 97S	Choke tube clamp assembly	

Part No.	PART NAME	
63 35	Spring retainer (Sup by 63 93)	
63-93	Spring retainer (Clinch ears over after assembly) (Use with 115 41)	
64-76S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49 123)	
75 589	METERING ROD—STANDARD—078" 078" to 074" 059"	
75 601	Metering rod—1 size lean—078" 079" to 075" 062"	
75-618	★Metering rod—2 sizes lean—080" 080" to 077" 066"	
75 681	Metering rod (For use with governor only)	
86 9	Tube clamp lock washer	
86 15	Flange stud lock washer	(2)
101 10	Choke wire clamp screw	
101 28	Throttle arm clamp screw	
101 28	Choke tube clamp attaching screw	
101-87	THROTTLE VALVE ATTACHING SCREW	(2)
101 108	Fast idle cam attaching screw	
101 120	Throttle lever adjusting screw	
101 143S	Air horn attaching screw and washer assembly	
101-147S	Body flange attaching screw and washer assembly	(2)
101 148S	Bowl cover and dust cover attaching screw and washer assembly	(5)
101 151S	Air horn attaching screw and washer assembly	(2)
105 11	Choke tube clamp screw	
105A 8	Choke tube clamp nut	
105A 13	Flange nut	(2)
108 20	Choke lever spacer	
114 42S	Throttle shaft arm and screw assembly	
115 41	Throttle connector rod (Sup by 115 122)	
115-122	THROTTLE CONNECTOR ROD	
116 13	PUMP CHECK BALL	(2)
117-58	Pump connector link	
117 66S	Vacuum piston link and spring assembly	
117-125S	Choke link and pin assembly	
118-28	Dust cover	
120-67S	METERING ROD JET ASSEMBLY	
121-51	AIR HORN GASKET	
121 58	BOWL GASKET	
121 72	BODY FLANGE GASKET	
129 15	Metering rod disk	
136-52	Fast idle cam spring washer	
146-165S	Bowl cover assembly	
150-92	Anti percolator rocker arm pin	
150 98	Intake needle pin	
150A 10	PIN SPRING	(5)
160 67S	Vacuum piston and pin assembly	
172-21	THROTTLE CONNECTOR ROD RETAINER (Use with 115 122)	
181-85	Fast idle cam	
184 18S	ANTI PERCOLATOR CAP AND ROCKER ARM ASSEMBLY	

★High altitude or oil bath air cleaner

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

Form 3604A

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

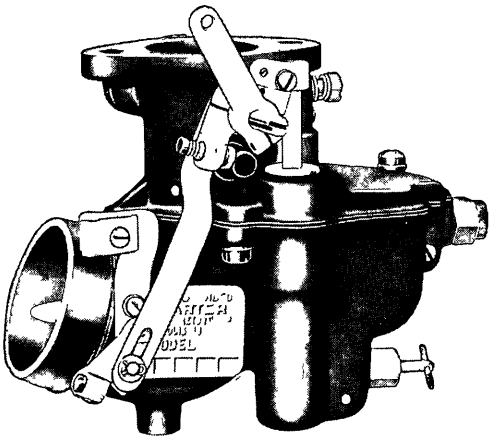
October, 1953
Revised June, 1954

CARTER UNIVERSAL CARBURETERS

FOR MOST ENGINES SMALL TO LARGE.

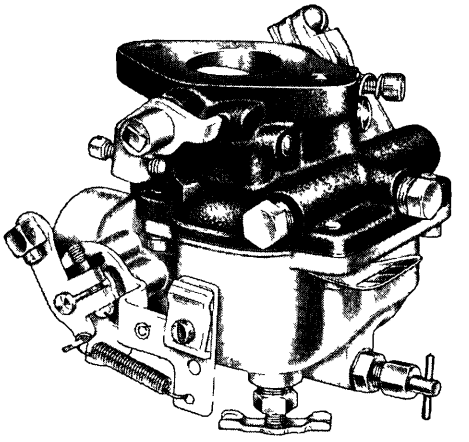
STOCK, SERVICE AND SELL CARTER POWER CENTER® UNIVERSAL CARBURETERS

All carbureters equipped with high and low speed adjustment.



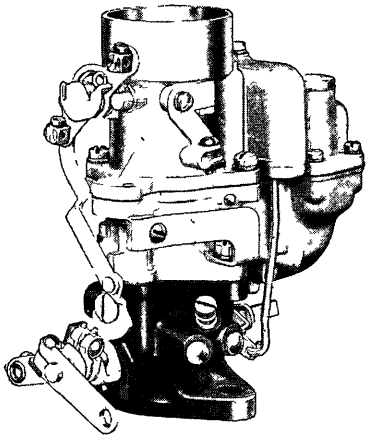
BB UPDRAFT

245SD—1 inch Flange Size, 2⅜ inch Stud Centers.
BB1D—1¼ inch Flange Size, 2-11/16 inch Stud Centers.
289SD—1½ inch Flange Size, 2-15/16 inch Stud Centers.



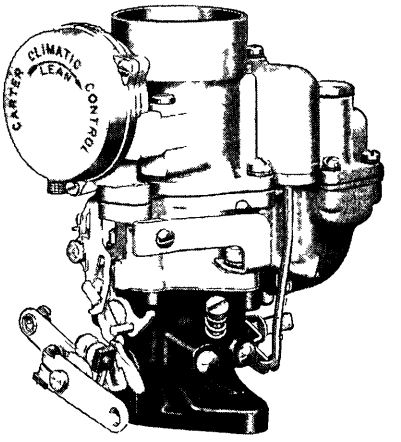
UT UPDRAFT

Carb. No.	Stud Centers	Main Venturi
800SA	2⅜ inch	23/32 inch
801SA	2⅜ "	21/32 "
802SA	2¼ "	23/32 "
803SA	2¼ "	21/32 "



WA1 DOWNDRAFT

413S—1¼ to 1½ inch slotted flange—hand choke. Replaces carbureters measuring 2-11/16 inch or 2-15/16 inch between bolt holes with a throttle bore no larger than 1-9/16 inch. For 1638 to 4096cc (100 to 250 cubic inch) engines



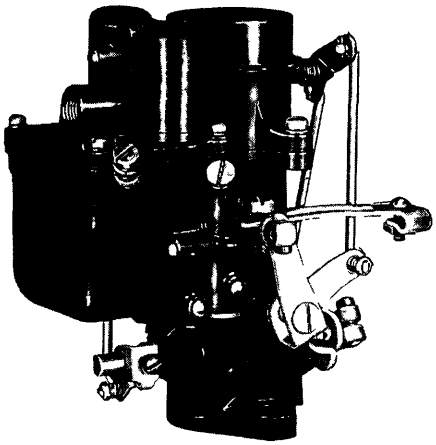
WA1 DOWNDRAFT

414S—1¼ to 1½ inch slotted flange—Climatic® Control choke Replaces carbureters measuring 2-11/16 inch or 2-15/16 inch between bolt holes with a throttle bore no larger than 1-9/16 inch. For 1638 to 4096cc (100 to 250 cubic inch) engines.

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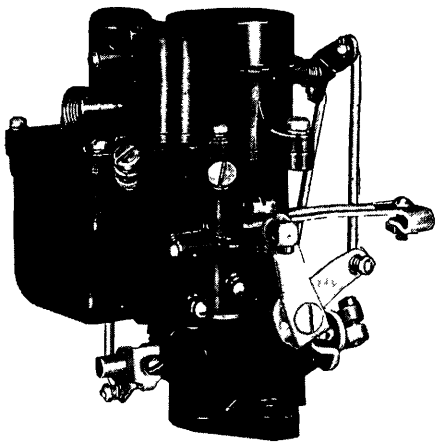
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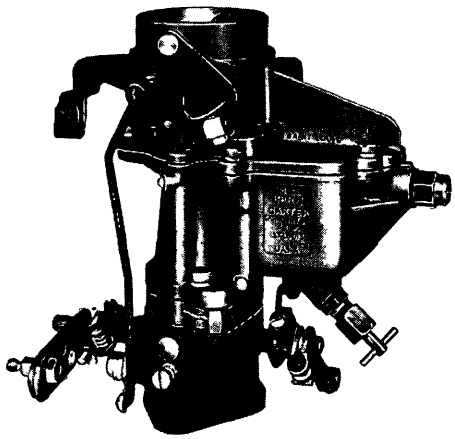
WO DOWNDRAFT

431SD—1 inch slotted flange 2-3/32 or 2⅜ inch stud centers for 750cc to 1233cc (45 to 75 cubic inch) engines.



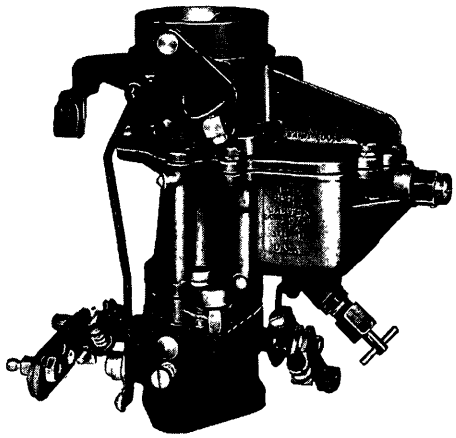
WO DOWNDRAFT

853S—1 inch slotted flange 2-3/32 or 2⅜ inch stud centers for 1147 to 2130cc (70 to 130 cubic inch) engines.



BB DOWNDRAFT

621S—1¼ inch Flange size, 2 11/16 inch stud centers.



BB DOWNDRAFT

692S—1½ inch Flange size, 2 15/16 inch stud centers.

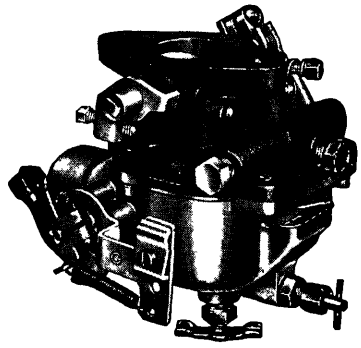
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DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

UT-800S-SA, 801S-SA, 802S-SA, 803S-SA, 2726S-27S-28S-29S
January, 1951
Revised December, 1958

UT-800S-SA, 801S-SA,
2726S, 2727S
2 3/8 Inch (60.325 mm)
Stud Centers

UT-802S-SA, 803S-SA,
2728S, 2729S
2 1/4 Inch (57.15 mm)
Stud Centers



Cut Shows 800S Carbureter

UNIVERSAL TRACTOR & INDUSTRIAL CARBURETERS

(See Page 4 for Applications)

UT CARBURETERS **Nos. 800S-800SA, 801S-801SA, 802S-802SA, 803S-803SA, 2726S, 2727S, 2728S, 2729S**

CARBURETER SPECIFICATIONS

Dimensions: Flange size 1 inch S A E (800S-SA 801S-SA, 2726S, 2727S) 3/4 inch S A E (802S-SA, 803S-SA, 2728S, 2729S) Throttle bore 1-1/16 inch
(801S-SA 803S SA, 2727S 2729S) Main venturi, 21/32 inch
(800S-SA 802S-SA 2726S, 2728S) Main venturi, 23/32 inch

Float Setting: See illustration at bottom of page

Vents: Outside, none Inside balance vent No 12 (.189 inch) drill.

Gasoline Intake Needle: Square vertical needle, size No. 48 (.076 inch) drill in needle seat.

Low Speed Jet Tube: Jet size, No. 66 (.033 inch) drill.
Idle bleed: No. 56 (.0465 inch) drill.
Economizer· No 65 (.035 inch) drill.

Idle Ports: Lower port, slot type, round end, .049 to .051 inch by .029 to .031 inch wide
Bottom of port 044 to .048 inch below lower edge of valve

Upper port .038 to 042 inch diameter (for idle adjustment screw).

Idle Adjustment Screw. For leaner mixture, turn screw in. For richer mixture turn screw out. Do not idle engine below 400 r.p.m.

Main Metering Jet: Adjustable maximum mixture usually obtained with 3 turns open.

Nozzle: In primary venturi, angle 24° from vertical. Inside diameter No 44 (.086 inch) drill.
Accelerating Jets 2—No. 64 (.036 inch) drill 21/64 inch from shoulder
2—No. 64 (.036 inch) drill 27/32 inch from shoulder.

Air Bleed to Nozzle: (Thru plug) No. 64 (.036 inch) drill.

Choke: Manual—With locking device for magneto equipped units Butterfly type with poppet valve

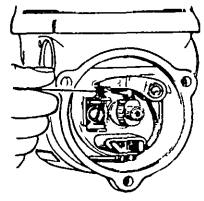
Vacuum Spark: None

Motor Tune-Up—Be Accurate!

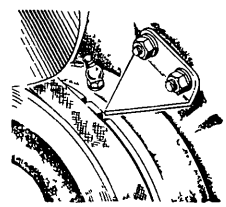
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



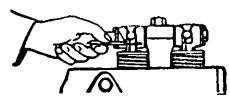
Spark Plug Gap



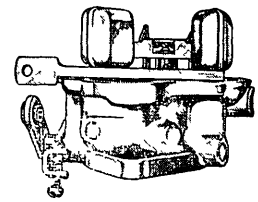
Set Breaker Points



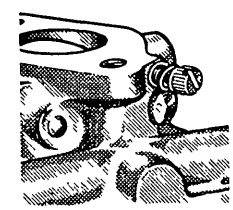
Adjust Ignition Timing Use Timing Light



Set Valves to Specification



Float Setting (Use Gauge T109-166) 11/64" — 1/64"



Idle Adjustment Screw Setting (See above specifications)

THESE ADJUSTMENTS MUST BE ACCURATE AND IN CONFORMITY WITH VEHICLE MANUFACTURER'S SPECIFICATIONS

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CARBURETER ADJUSTMENTS

To secure a good idle Set throttle lever adjusting screw until motor runs approximately 450 r p m Then set idle adjustment screw for highest steady vacuum gauge reading or smoothest engine operation

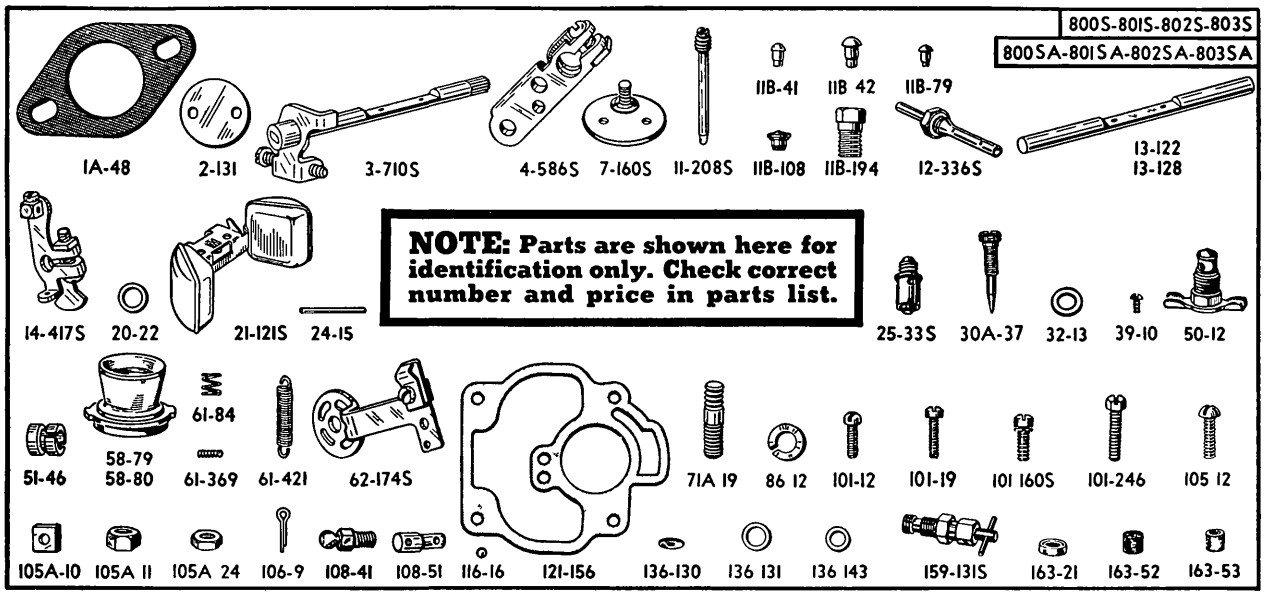
High Speed Adjustment If the engine is normally governed at a speed lower than 1600 r p m disconnect the governor With engine operating at normal temperature set the throttle manu ally for an engine speed of approximately 1600 r p m Open or close the high speed adjusting needle until engine operates smoothly

A slight revision of the idle and high speed adjustment may be necessary for smooth governed speed operation

If motor loads—check float level Wear on lip of float lever will raise float level causing carbureter to load up. To lower float level, bend float lever toward needle To raise float level bend lip away from needle A very slight bend is sufficient Bend lip of float only not bracket Be sure float is installed with lip of float against needle

Maximum performance can be secured only when breaker points spark plugs valves and motor timing are set to manufacturer s specifications

If carbureter does not respond to the above adjustments, dis assemble clean all parts in carbureter cleaner rinse and blow out all passages with compressed air. Replace all worn or damaged parts Always use new gaskets See form No 3525 for complete overhaul procedure



UNIVERSAL TRACTOR AND INDUSTRIAL CARBURETERS

Nos. 800S-SA, 801S-SA, 802S-SA, 803S-SA, 2726S, 2727S, 2728S, 2729S

WHEN SERVICING, USE GASKET ASSORTMENT No 207, REPAIR PACKAGE No 1591 (800S-SA 801S-SA, 802S-SA, 803S-SA)

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME
1A 48	FLANGE GASKET
2-131	Throttle valve
3 710S	THROTTLE SHAFT AND DOG ASSEMBLY (800S SA 801S SA 802S SA 803S SA)
3-1183S	Throttle shaft and dog assembly (2726S 27S 28S 29S)
4 586S	Throttle lever assembly
7-160S	Choke valve assembly (800S SA 801S SA 802S SA 803S SA)
7-175S	Choke valve assembly (2726S 27S 28S 29S)
11-208S	LOW SPEED JET ASSEMBLY
11B-41	Rivet plug (800SA-801SA 802SA 803SA)
11B-42	Rivet plug (800S SA 801S SA 802S SA 803S SA) (2)
11B-79	Rivet plug
11B-108	IDLE PORT RIVET PLUG (800S SA 801S SA 802S SA 803S SA)
11B-194	Screw plug (2)
11B-296	Idle port rivet plug (2726S 27S 28S 29S)
12-336S	Nozzle assembly
13 122	Choke shaft (800S 801S 802S 803S) (Use 13 128)
13-128	Choke shaft (800S SA 801S SA 802S SA 803S SA)
13-192	Choke shaft (2726S 27S 28S 29S)

Part No.	PART NAME
14-417S	Choke lever assembly
20 22	NEEDLE SEAT AND NOZZLE GASKET (2)
20-123	Needle seat gasket (2726S 27S 28S 29S)
21-121S	Float and lever assembly (800S SA 801S SA 802S SA 803S SA)
21-164S	Float and lever assembly (2726S 27S 28S 29S)
24-15	FLOAT LEVER PIN
25-33S	NEEDLE AND SEAT ASSEMBLY (800S SA 801S SA 802S SA 803S SA)
25-330S	Needle and seat assembly (2726S 27S 28S 29S)
30A-37	Idle adjustment screw
32-13	MAIN METERING SCREW GASKET
39-10	THROTTLE AND CHOKE VALVE ATTACHING SCREW (4)
50-12	Drain cock
51-46	Throttle shaft collar
58-79	Venturi (800S-SA 802S-SA)
58 80	Venturi (801S SA 803S SA)
61-84	Idle adjustment screw spring
61-369	CHOKE SHAFT SPRING (800SA 801SA 802SA 803SA 2726S 27S 28S 29S)
61-421	CHOKE LEVER SPRING
62-174S	Choke tube bracket assembly
71A-19	Flange stud (2)
86-12	Lock washer (2)

Part No	PART NAME	
101-12	Clamp screw	
101-19	Choke lever screw	
101-160S	Body attaching screw and washer assembly	(4)
101-246	Throttle adjusting screw	
103-14	Lead shot (2726S 27S 28S 29S)	
103-16	Lead shot (2726S 27S 28S 29S)	
105-12	Tube clamp screw	
105A-10	Tube clamp nut	(2)
105A-11	Flange nut	(2)
105A-24	Throttle lever ball swivel nut	(2)
106-9	Cotter pin	
108-41	Throttle lever ball swivel	(2)
108-51	Throttle lever swivel	

Part No	PART NAME	
116-16	Choke shaft ball (800SA 801SA 802SA 803SA 2726S 27S 28S 29S)	
121-156	BODY GASKET (800S SA 801S SA 802S SA 803S SA)	
121-266	Body gasket (2726S 27S 28S 29S)	
136-130	AIR HORN DUST SEAL RETAINER	
136-131	CHOKE AND THROTTLE SHAFT DUST SEAL RETAINER	(4)
136-143	Swivel retainer washer	
159-131S	Adjustable main metering screw and needle assembly	
163-21	CHOKE AND THROTTLE SHAFT DUST SEAL	(4)
163-52	AIR HORN DRAIN FELT	
163-53	MAIN METERING SCREW PACKING	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

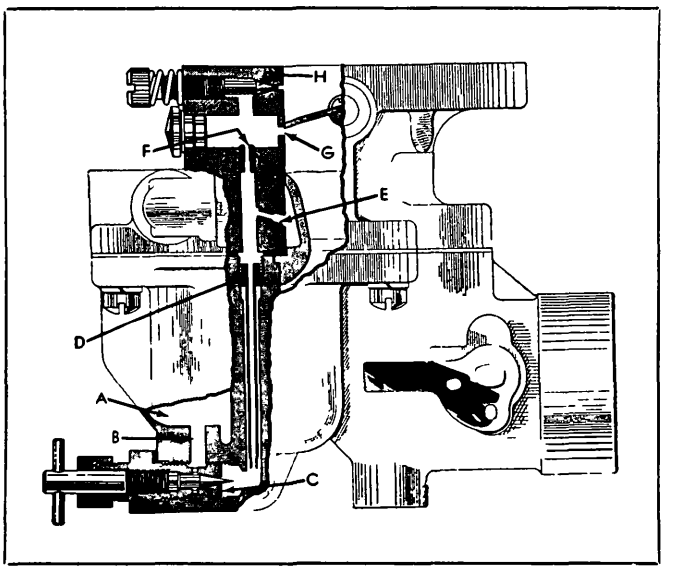


Figure 1

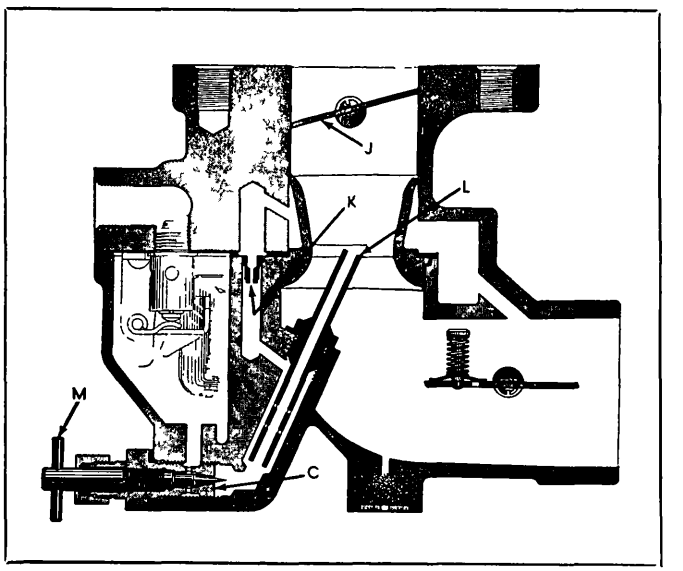


Figure 2

BRIEF CARBURETER DESCRIPTION

Model UT Universal

LOW SPEED CIRCUIT (See Figure 1)

Fuel for idle and low speed operation is drawn from the fuel bowl (A) through fuel passage (B) past main metering jet (C) up channel and through idle jet (D) and is mixed with air from idle air bleed (E) This relatively rich mixture passes through the economizer (F) Part of it then passes into the carbureter bore through idle port (G) and the balance enters the bore past the idle adjustment screw (H) Clockwise rotation of the idle adjustment screw which controls the amount of fuel air mixture leans the mixture while turning the screw counterclockwise richens it **NOTE DO NOT ATTEMPT TO REMOVE IDLE AIR BLEED (E) AND ECONOMIZER (F)**

HIGH SPEED CIRCUIT (See Figure 2)

The main metering jet (C) supplies the amount of fuel required for high speed operations As the carbureter throttle valve (J) is opened (beyond idle speed requirements) high velocity air passing through the carbureter throat creates a suction at the main nozzle outlet This causes fuel to flow from the fuel bowl through main metering jet (C) where it mixes with air from the nozzle bleed (K) This fuel air mixture passes through main nozzle (L) and into air stream at carbureter throat Clockwise adjustment of the main metering screw (M) which controls the amount of fuel leans the mixture Maximum mixture is usually obtained with three turns open **NOTE DO NOT ATTEMPT TO REMOVE NOZZLE BLEED (K)**

FLOAT SETTING

Float setting is illustrated and specified at the bottom of page 1 This is the distance from the top of the float to the machined surface of the casting (Invert for gauging)

APPLICATIONS

EQUIPMENT	YEAR	ENGINE MODEL	CARBURETER NO.
		ALLIS CHALMERS	
All combines and power units, B Tractors	1938-50	Own B	802S-SA, 2728S
W, WC, WF Tractors	1934-50	Own W	800S-SA, 2726S
		J. I. CASE	
A6 Combine	1948	Herc. IXF3 (war emergency only)	803S-SA, 2729S
A6 Combine	All	Wisc. VE4	802S-SA, 2728S
NCM Bailer	1945-50	Wisc. VE4	802S-SA, 2728S
S Tractor	1940-50	Own S	800S-SA, 2726S
SP9 Combine	1948-50	Own SE	800S-SA, 2726S
SC Tractor	1941-50	Own S	800S-SA, 2726S
		JOHN DEERE	
33 Combine	1940-41	Herc. IXA	800S-SA, 2726S
7A Combine	1941	Herc. IXB5	801S-SA 2727S
5A-9 Combine	1942-44	Herc. IXB	801S-SA, 2727S
		FERGUSON	
Tractor	1950	Own	803S-SA, 2729S
		FORD	
Tractor	1939-49	Own	802S-SA, 2728S
		GIBSON	
Tractor H	All	Herc. IXB	802S-SA, 2728S
Tractor S, SD	All	Wisc. AEH	803S-SA, 2729S
Tractor E, EF, EW, EFW	All	Wisc. TF	800S-SA, 2726S
		INTERNATIONAL HARVESTER	
Farmall Super A, AV	1948	Own A	801S SA, 2727S
U2	1939-49	Own IF	801S-SA, 2727S
Farmall A & B	1939-48	Own A	801S-SA, 2727S
No. 15 Bailer	1937-47	Cont. Y69	801S-SA, 2727S
No. 62 Thresher	1938-49	Cont. Y69	801S-SA, 2727S
	1949-50	Own A	801S-SA, 2727S
		OLIVER	
60 HC—Row Crop and Standard	1940-48	Own 60 HC	800S-SA, 2726S
70 HC—Row Crop and Standard	1940-48	Own 70 HC	800S-SA, 2726S
66 HC—Row Crop and Standard	1948-50	Own 66 HC	800S-SA, 2726S
77 HC—Row Crop and Standard	1948-50	Own 77 HC	800S-SA, 2726S
No. 6 Combine	1936-41	Cont. Y91	803S-SA, 2729S
No. 15 Combine	1946-50	Cont. Y91	801S-SA, 2727S
No. 22 Combine	1947-50	Cont. Y112	801S-SA, 2727S
No. 30 Combine	1942-50	Cont. F209	801S-SA, 2727S

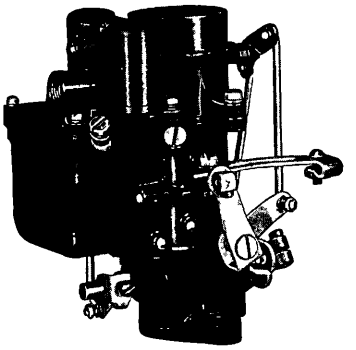
In addition to the above installations, there will be others equally satisfactory on engines of similar characteristics

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Form 4795G

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST LOUIS MO U S A

431S 431SA 431SD-853S
April, 1949
Revised October, 1953



UNIVERSAL CARBURETERS
WO-431S-431SA-431SD-853S

With Manual Choke

HIGH AND LOW SPEED ADJUSTMENT

431S SA SD for use on Motors of Approximately 45 to 75 Cubic Inch Displacement (740 to 1230 C C)

853S for use on Motors of Approximately 70 to 130 Cubic Inch Displacement (1147 to 2130 C C)

WO DOWN-DRAFT **CARBURETERS Nos. 431S-431SA-431SD-853S**

CARBURETER SPECIFICATIONS

Dimensions Flange size 1 inch special slot type Primary venturi 11/32 inch I D Main venturi 787 inch (431S SA SD) Main venturi 1 inch I D (853S)

Float Setting See adjustments

Vents (431S SA SD) Inside No 10 (1935 inch) drill Outside none (853S) Outside 3/16 inch drill in bowl cover Inside none (All) Idle well to bowl size No 30 (1285 inch) drill

Gasoline Intake Spring loaded needle Size No 53 (0595 inch) drill in needle seat

Low Speed Jet Tube Jet size (431S SA SD) calibrated to flow 58 62 cc per minute (853S) No 68 (031 inch) drill Idle well jet size (431S SA SD) calibrated to flow 110 to 114 cc per minute (853S) No 60 (040 inch) drill
By pass in body size (431S SA SD) 070 inch diameter (853S) No 53 (0595 inch) drill Economizer in body size (431S SA SD) 070 inch diameter (853S) No 57 (043 inch) drill Idle bleed in body size (431S SA SD) No 40 (098 inch) drill (853S) No 52 (0635 inch) drill

Idle Port Upper slot type (431S SA SD) length 070 inch width 030 inch (853S) length 140 inch width 030 inch

Idle Port Opening (431S SA SD) 012 to 016 inch (853S) 086 to 090 inch below lower edge of valve with valve tightly closed

Idle Screw Seat Size No 46 (081 inch) drill

Set Idle Adjustment Screw 1/2 to 1 1/2 turns open For richer mixture turn screw out Do not idle engine below 600 r p m or 8 m p h

High Speed Needle Seat size No 59 (041 inch) drill

Main Nozzle (431S SA SD) Inside diameter No 40 (098 inch) drill (853S) Inside diameter No 41 (096 inch) drill

Nozzle Retainer Plug (431S SA SD) calibrated to flow 152 to 156 cc per minute ((853S) Size No 26 (147 inch) drill

Metering Rod (431S SA SD) Economy step 066 inch diameter Middle step 056 inch diameter Power step 052 inch diameter (853S) Economy step 0695 inch diameter Second step tapers to 06525 inch diameter Third step tapers to 05825 inch diameter Power step 056 inch diameter

Metering Rod Jet (431S SA SD) size 067 inch diameter (853S) size 075 inch diameter

Metering Rod Setting See adjustments

Accelerating Pump Discharge jet (431S SA SD) size No 78 (016 inch) drill (853S) size No 73 (024 inch) drill Intake ball check seat size No 40 (098 inch) drill Discharge disk check size No 40 (098 inch) drill Relief passage to outside (853S only) size No 42 (0935 inch) drill

Pump Adjustment See adjustments

Choke Manual offset butterfly type with pressure relief poppet valve Interconnected to open throttle valve to fast idle position when choke is used

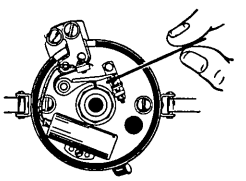
Vacuum Spark Port 054 to 056 inch diameter Top of port (431S SA SD) 048 054 inch (853S) 046 056 inch above upper edge of valve with valve tightly closed (If not used close with screw plug)

Motor Tune-Up—Be Accurate! Always Use Feeler Gauges!

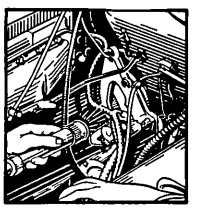
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter



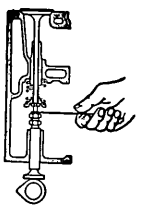
Set Spark Plug Gap



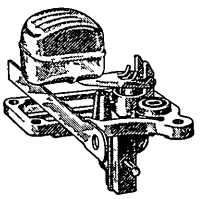
Set Breaker Points



Adjust Ignition Timing Use Timing Light



Valve Setting Set to Specification



Float Setting (See Adjustments)



Idle Adjustment Screw Setting 1/2 to 1 1/2 Turns Open

THESE ADJUSTMENTS MUST BE ACCURATE AND IN CONFORMITY WITH CAR MANUFACTURER'S SPECIFICATIONS

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CARBURETER ADJUSTMENTS

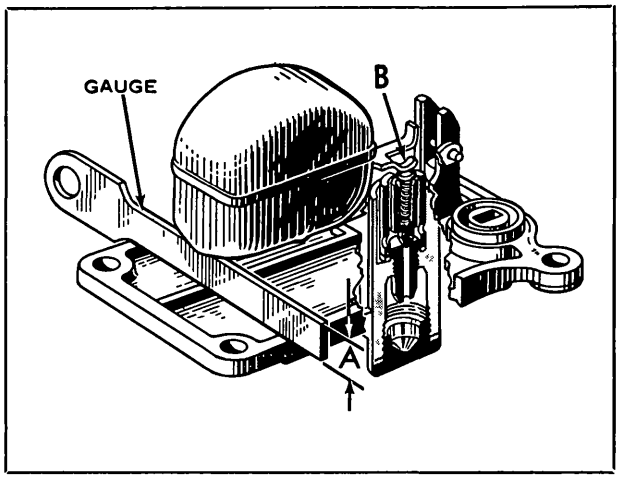


Figure 1
Float Adjustment

FLOAT ADJUSTMENT (Fig. 1):

With bowl cover assembly inverted and float resting on pin in seated needle, and with gasket removed, the distance from the bowl cover to the top of the float should be 1/2 inch (A) (Gauge T109 83) (431S-SA-SD), 3/8 inch (A) (Gauge T109-80) (853S) Do not depress float lip (B) against spring loaded pin in needle but let float rest of its own weight Adjust by bending lip of float not float arm Float setting must be checked with the bowl cover held at eye height in a level position

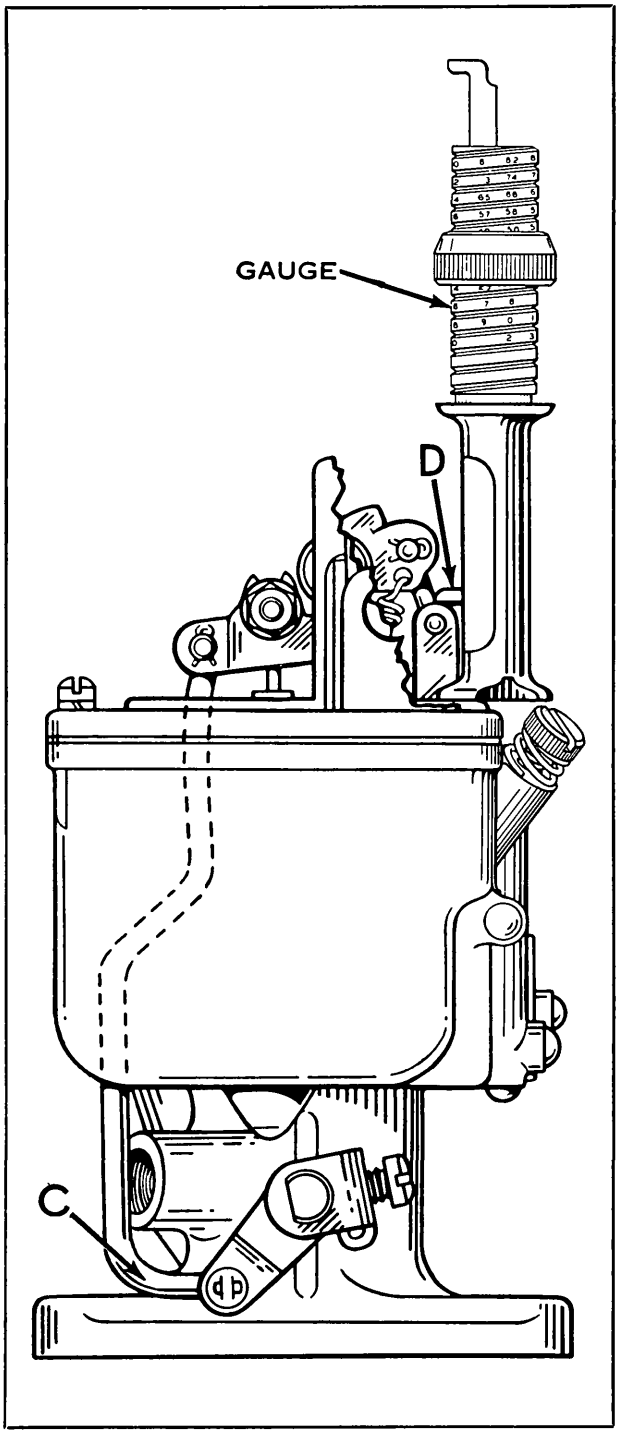


Figure 2
Pump Adjustment

PUMP ADJUSTMENT (Fig. 2):

Back out throttle lever set screw With throttle valve seated, pump should travel 12/64 inch (431S-SA-SD); 14/64 inch (853S) from closed to wide open position Adjustment can be made by bending throttle connector rod at lower angle (C) with tool T109-213 Pump travel can be measured by using universal stroke gauge T109-117S, by placing base of gauge on raised portion of bowl cover so that projecting ear of pump gauge rests on top surface of pump shaft (D) Hold gauge vertical The difference between the number shown by index mark on gauge at wide open and closed position, should be "12" (431S-SA-SD); "14" (853S).

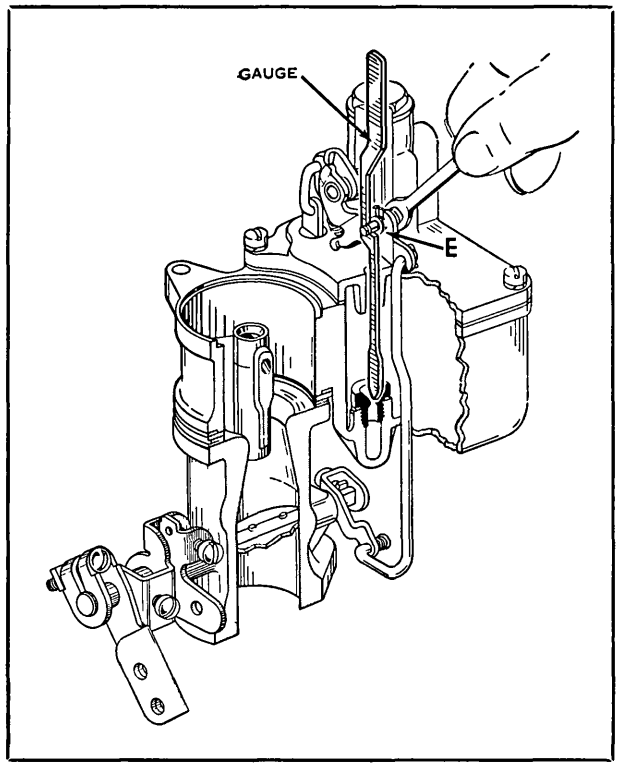


Figure 3
Metering Adjustment

METERING ROD ADJUSTMENT (Fig 3)

Correct setting of metering rod is important and must be made after pump adjustment Install metering rod pin and spring assembly washer and nut loosely on pump operating lever (E) Insert gauge (tool T109-26) in place of meter ing rod seating tapered end in metering rod jet Hold gauge vertical to insure seating With throttle valve seated push metering rod pin (E) even with shoulder of notch in gauge and tighten nut (tool T109 76) Remove gauge and install metering rod disk and pin spring Connect meter ing rod spring

HIGH SPEED ADJUSTMENT (Fig 4):

With motor warm and throttle set to a speed equivalent to 30 m p h on road High speed needle (F) should be screwed in until motor begins to slow down then back needle out until motor reaches maximum speed (A leaner mixture is obtained by turning high speed needle in To richen the mixture turn needle out)

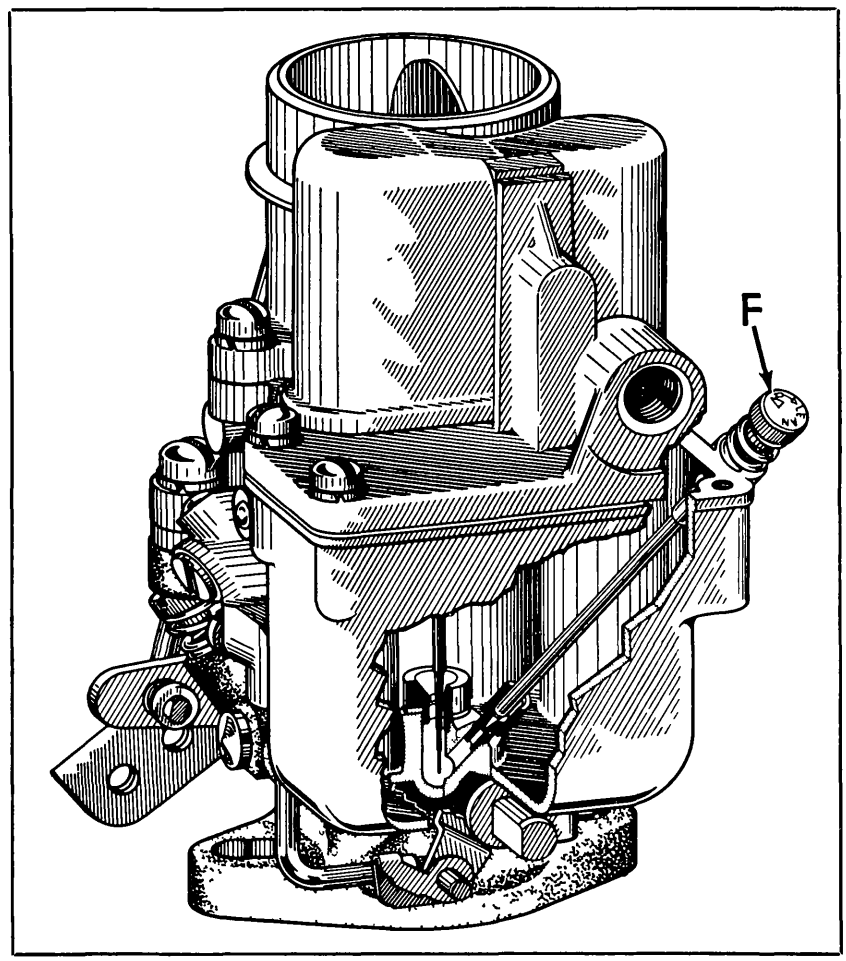
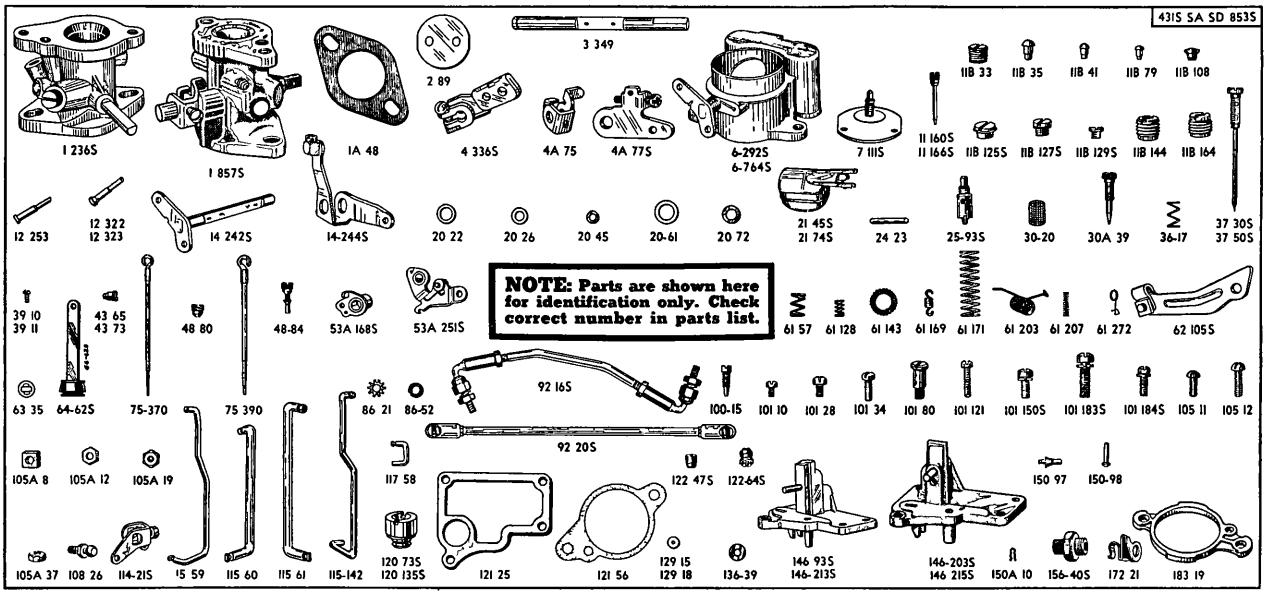


Figure 4
High Speed Adjustment



CARBURETERS MODELS WO-431S-431SA-431SD-853S

WHEN SERVICING, USE GASKET ASSORTMENT No. 217 (431SA-SD-853S), REPAIR PACKAGE No 1553 (431S SA-SD)

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-236S	Body flange assembly (431S-SA-SD)	
1-857S	Body flange assembly (853S)	
1A-48	FLANGE GASKET	
2-89	Throttle valve	
3-349	Throttle shaft	
4-336S	Throttle lever assembly	
4A-75	Throttle shaft dog	
4A-77S	Fast idle dog assembly	
6-292S	Air horn assembly (431S-SA-SD)	
6-764S	Air horn assembly (853S)	
7-111S	Choke valve assembly	
11-160S	Low speed jet assembly (853S)	
11-166S	LOW SPEED JET ASSEMBLY (431S SA-SD)	
11B-33	Pipe plug	
11B-35	Rivet plug	
11B-41	Rivet plug	
11B-79	Rivet plug	(6)
11B-108	IDLE PORT RIVET PLUG	
11B-125S	Strainer plug assembly	
11B-127S	Pump and nozzle passage plug assembly	(2)
11B-129S	Low speed passage plug assembly	(2)
11B-144	Nozzle retainer plug (431S-SA-SD)	
11B-164	Nozzle retainer plug (853S)	
12 253	Nozzle (431S)	
12-322	Nozzle (431SA-SD)	
12-323	Nozzle (853S)	
14-242S	Choke lever and shaft assembly	
14 244S	Choke operating lever assembly	
20-22	Needle seat and plug gasket	(3)
20-26	Plug gasket	(3)
20-45	NOZZLE GASKET (431SA-SD-853S)	
20-61	Strainer plug gasket	
20-72	NOZZLE GASKET (431S)	
21-45S	Float and lever assembly (431S-SA-SD)	
21-74S	Float and lever assembly (853S)	
24-23	Float lever pin	
25-93S	NEEDLE AND SEAT ASSEMBLY	
30-20	BALL CHECK STRAINER	
30A-39	Idle adjustment screw	
36-17	Idle adjustment screw spring	
37-30S	High speed adjustment screw assembly (Sup by 37-50S)	
37-50S	High speed adjustment screw assembly	
39-10	Choke valve attaching screw	(2)
39-11	THROTTLE VALVE ATTACHING SCREW	(2)
43-65	Idle well jet (431S-SA-SD)	
43-73	Idle well jet (853S)	
48-80	PUMP JET (431S-SA-SD)	
48-84	Pump jet (853S)	
53A-168S	Pump arm and collar assembly	
53A-251S	Pump operating lever	
61-57	Idle adjustment screw spring	
61-128	Throttle connector rod spring (Use with 115-59)	(2)
61-143	Plunger spring	
61-169	Pump arm spring	
61-171	Pump spring	
61-203	Choke spring	
61-207	Intake needle spring	

Part No.	PART NAME	
61-272	Metering rod spring	
62-105S	Choke tube clamp assembly	
63-35	Throttle connector rod spring retainer (Use with 115-59)	(2)
64-62S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49-121)	
75-370	METERING ROD (431S-SA-SD)	
75-390	Metering rod (853S)	
86-21	Lock washer (431SD)	
P86-52	Lock washer (431SA-853S) (Use with 92-20S)	(2)
92-16S	Throttle rod assembly (Sup by 92-20S)	
92-20S	Throttle rod assembly	
100-15	Fast idle dog attaching screw	
101-10	Wire clamp screw	
101-28	Throttle shaft arm clamp screw	
101-34	Throttle lever clamp screw (Sup by 105-12)	
101-80	Choke operating lever attaching screw	
101-121	Throttle lever adjusting screw	
101-150S	Air horn attaching screw and washer assembly	
101-183S	Body flange attaching screw and washer assembly	(2)
101 184S	Bowl cover attaching screw and washer assembly	(4)
105-11	Choke tube clamp screw	
105-12	Throttle lever clamp screw	
105A-8	Choke tube and throttle lever clamp nut	(2)
105A-12	Lock nut (431SD-853S)	
105A-19	Metering rod pin hex nut	
P105A-37	Nut (Use with 92-20S)	(2)
108-26	Throttle lever ball swivel (Use with 92-20S)	(2)
114-21S	THROTTLE SHAFT ARM AND SCREW ASSEMBLY	
115-59	Throttle connector rod (431S-SA-SD) (Sup by 115-142)	
115-60	Choke operating rod	
115-61	Choke connector rod	
115-142	THROTTLE CONNECTOR ROD	
117-58	Pump connector link	
120-73S	Metering rod jet assembly (853S)	
120-135S	METERING ROD JET ASSEMBLY (431S-SA-SD)	
121-25	BOWL COVER GASKET	
121-56	BODY FLANGE GASKET	(2)
122 47S	DISCHARGE DISK CHECK ASSEMBLY	
122-64S	INTAKE CHECK BALL ASSEMBLY	
129-15	Metering rod disk (853S)	
129-18	Metering rod disk (431S-SA-SD)	
136-39	Metering rod pin washer	
146-93S	Bowl cover assembly (431S-SA-SD) (Sup by 146-213S)	
146-203S	Bowl cover assembly (853S) (Sup by 146-215S)	
146-213S	Bowl cover assembly (431S-SA-SD)	
146-215S	Bowl cover assembly (853S)	
150-97	Metering rod pin	
150-98	Intake needle pin	
150A-10	PIN SPRING	(5)
156-40S	*Fuel line fitting	
172-21	THROTTLE CONNECTOR ROD RETAINER (Use with 115-42)	
183-19	Insulator	

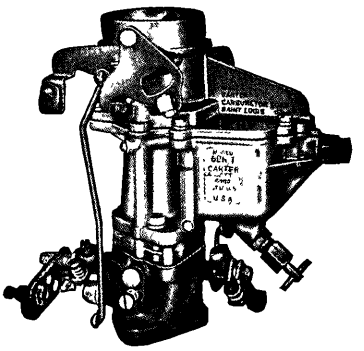
*This fitting used to convert metric gasoline intake thread in bowl cover to standard ⅛ inch pipe thread

NOTE Figures in parentheses indicate number of pieces used in one carbureter. Where no figure is shown, only one is used

Form 4773D

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

BBR2-692S
October, 1948
Revised February, 1956



SPECIAL HEAVY DUTY APPLICATION

(1½ Inch S. A. E. Flange)

BBR2 DOWN-DRAFT **CARBURETER No. 692S**

CARBURETER SPECIFICATIONS

Dimensions: Flange size, 1½ inch S. A. E.
Throttle bore, 1-11/16 inch (42.86 mm).
Main venturi, 1-11/32 inch (34.13 mm) I. D.

Float Setting: Top of float 5/64 inch (1.98 mm) below top surface of carbureter body casting. (Plus or minus 1/64 inch) (.397 mm).

Vents: Outside, none. Inside balance vent .218 inch diameter (5.54 mm).

Gasoline Intake Needle: Triangular, horizontal. No. 42 (2.37 mm) drill in needle seat.

Idle Orifice Tube: Jet size, .0276 inch (.70 mm) drill. Idle passage air bleed (in body) size .063 inch (1.60 mm) diameter. Economizer in body—size .055 inch (1.38 mm) diameter.

Idle Ports: Upper port. Keyhole type; length, .128 inch (3.25 mm); width, .027 inch (.69 mm); .063 inch (1.60 mm) diameter hole at top.
Top of port located .088 to .092 inch (2.24 to 2.34 mm) above top edge of valve.
Lower port size, .053 to .057 inch (1.35 to 1.45 mm) drill. (For idle adjustment screw.)

Set Idle Adjustment Screw: 1 to 2 turns open. For richer mixture turn screw out. Do not idle engine below 400 r.p.m. or 6 miles per hour.

Main Metering Screw: Calibrated to flow 236 to 240 cc per minute. (Do not gauge for size. If in doubt, replace with new part.)

Main Vent: Through diffuser (air bleed inside bowl), size .0315 inch (.80 mm) drill.

Main Vent Tube: Side holes:
2—.0354 inch (.90 mm), approximately 1-1/32 inch (38.10 mm) from end.
2—.0354 inch (.90 mm), approximately 1-23/32 inch (43.66 mm) from end.

Step-Up Jet: Size, .0413 inch (1.05 mm) drill.

Accelerating Pump: Type, delayed action. Stroke: Summer setting (inner hole, short stroke).
Intermediate setting (center hole).
Winter setting (outer hole, long stroke).
Pump intake seat, size .115 to .120 inch (2.93 to 3.05 mm) diameter in body. Pump discharge passage: restriction (under ball check), size .062 to .065 inch (1.57 to 1.65 mm) diameter in body. Pump (discharge) jet size .0374 inch (.95 mm) drill.

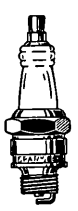
Pump Adjustment: 26/64 inch plunger travel; full throttle position, medium stroke. Use gauge T109-117S.

Choke: Butterfly type, with poppet valve. Interconnected to open throttle valve to fast idle position when choke is used.

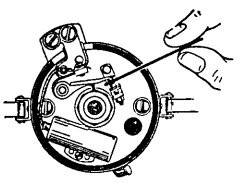
Vacuum Spark Port: Slot (round end) type. Size .040 by .110 inch (1.016 by 2.794 mm). Top of port .035 to .041 inch (.89 to 1.04 mm) above top edge of valve.

Motor Tune-Up—Be Accurate! Always Use Feeler Gauges!

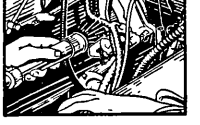
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



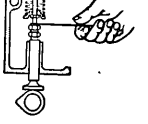
Spark Plug Gap



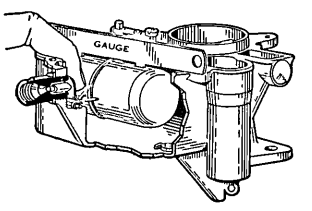
Set Breaker Points



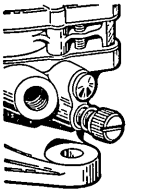
Adjust Ignition Timing Use Timing Light



Set Valves to Specification



Float Setting (Use Gauge) 5/64 Inch



Idle Adjustment Screw Setting 1 to 2 Turns Open

THESE ADJUSTMENTS MUST BE ACCURATE AND IN CONFORMITY WITH CAR MANUFACTURER'S SPECIFICATIONS

CARBURETER ADJUSTMENTS

For most satisfactory starting during extremely cold weather, pull out choke, crack throttle about ⅛ to ¼ open and then engage starter.

If carbureter loads up after considerable service, check float level. Wear on lip of float lever will raise float level. Before adjusting float, be sure float lever pin is firmly seated. Reset by bending lip of float lever away from needle to raise level, or bend lip toward needle to lower float level. Bend vertical lip of float only.

If motor stalls while idling, set throttle lever adjusting screw so motor runs approximately 400 r.p.m. Then set idle adjustment screw to specifications. If these adjustments do not correct the trouble, remove idle orifice tube and plug assembly and clean tube and passages with compressed air.

If acceleration is not satisfactory, remove pump jet and clean with compressed air; however, it is usually advisable to replace the pump jet, as its cost is nominal. All jets must be seated gasoline tight. Poor acceleration may be due to damaged or worn plunger leather in accelerating pump, sediment in pump cylinder or clogged ball check at bottom of pump cylinder and discharge ball check in discharge passage. If plunger is removed from cylinder, use care in installing to avoid damage to plunger leather.

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CARBURETER
TRADE MARK REG. U. S. PAT. OFF.
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PRINTED IN U.S.A.

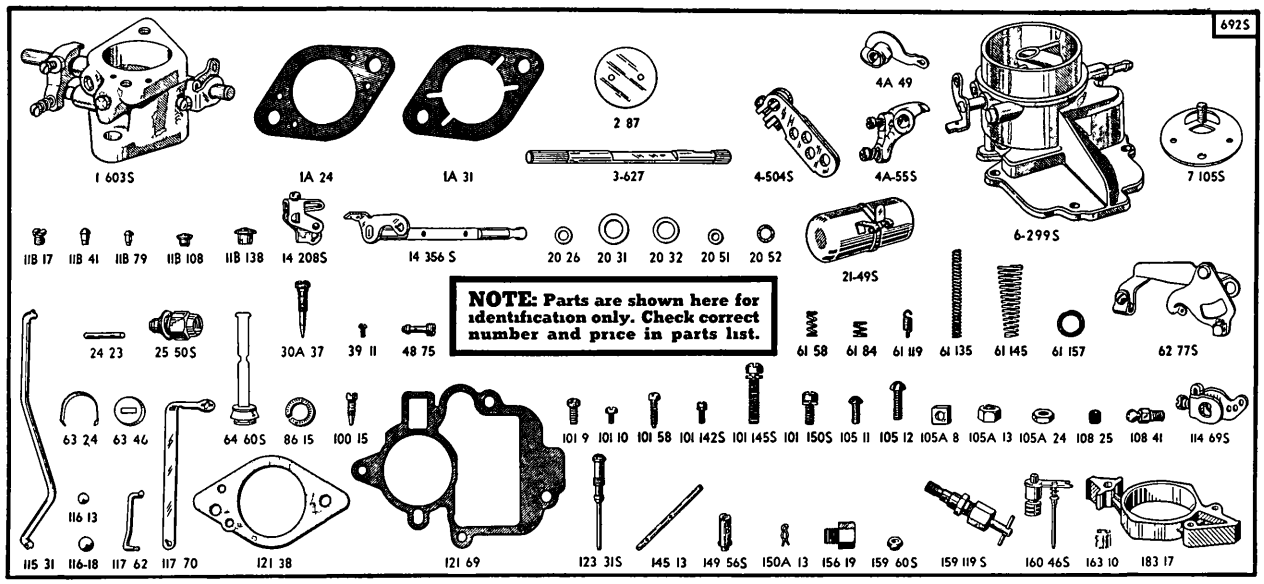
Correct air fuel ratio is provided by a 'balance tube located in the air horn The balance tube should be checked each time the carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type size or condition of air cleaner Should the cleaner become clogged the capacity will be reduced but the air-fuel mixture ratio will not be changed

Excessive richness above 50 miles per hour may be caused by a clogged main vent tube After removal of main metering screw assembly beneath float bowl main vent tube can be removed and a new tube inserted with tool T109 195 Care must be exercised in inserting new tube which must seat tightly

Pump Adjustment Remove air horn assembly, back out throttle lever adjustment screw and install pump operating link in center hole (medium stroke) of throttle shaft arm Place base of pump travel gauge T109-117S on upper edge of body casting at pump cylinder With throttle valve seated turn gauge until projecting finger contacts top of plunger shaft Note number indicated on gauge Repeat with throttle valve wide open and plunger pressed to bottom of the cylinder The difference between the numbers indicated at wide open and closed throttle positions should be 26 (26/64") pump stroke Adjust by bending horizontal portion of pump lifter link This pump is also adjustable for seasonal driving Set to longest stroke (outer hole) for cold weather short stroke (inner hole) for hot weather driving or altitude conditions

Idle Adjustment With engine at normal operating temperature and vacuum gauge attached to intake manifold, idle engine at approximately 400 r p m and turn idle adjustment screw until highest steady vacuum reading is obtained Then slowly open adjusting screw to the point where vacuum just begins to decrease

Main Metering Screw Adjustment Using a tachometer and with engine operating at normal temperature adjust throttle for an engine speed of approximately 2 000 r p m Open main metering screw until engine operates smoothly with the highest vacuum gauge reading Slowly tighten main metering screw until a slight reduction of engine speed can be noticed or vacuum gauge shows slight decrease Open screw slightly from this position until maximum speed is obtained—usually not more than ⅛ to ¼ turn Hold screw securely and tighten nut to lock screw in position



Carbureter No. 692S

WHEN SERVICING USE GASKET ASSORTMENT No 137A, REPAIR PACKAGE No 1567

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-603S	Body flange assembly	
1A-24	FLANGE GASKET—FOR USE WITH GOVERNOR	
1A-31	FLANGE GASKET—FOR USE WITHOUT GOVERNOR	
2-87	Throttle valve	
3-627	Throttle shaft	
4-504S	Throttle lever assembly	
4A-49	Fast idle cam	
4A-55S	Throttle shaft dog assembly	
6-299S	Air horn assembly	
7-105S	Choke valve assembly	
11B-17	PUMP DISCHARGE PASSAGE PLUG	
11B-41	Rivet plug	
11B-79	Rivet plug	(2)
11B-108	IDLE PORT RIVET PLUG	
11B-138	PUMP JET PASSAGE RIVET PLUG	
14 208S	Choke lever and screw assembly	
14 356S	Choke control lever and shaft assembly	
20-26	Gasket—main metering jet	
20-31	Needle seat gasket	
20-32	Metering screw gasket	
20 51	Step up jet gasket	
20-52	STEP UP PISTON GASKET	
21-49S	Float and lever assembly	
24-23	Float lever pin	
25 50S	NEEDLE AND SEAT ASSEMBLY	
30A-37	Idle adjustment screw	
39-11	VALVE ATTACHING SCREW	(4)
48 75	PUMP JET	
61-58	Throttle lever adjusting screw spring	
61-84	Idle adjustment screw spring	
61-119	Choke pull back spring	
61-135	STEP UP PISTON SPRING	
61-145	PUMP SPRING	
61-157	Plunger spring	
62-77S	Choke tube bracket assembly	
63-24	FLOAT LEVER PIN RETAINER	
63 46	Pump spring retainer	
64 60S	PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49 120)	

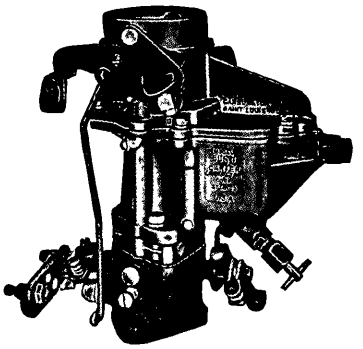
Part No	PART NAME	
72-43	Cross style flange adaptor	
86-15	Flange stud lock washer	(2)
100-15	Throttle shaft dog screw	
101-9	Throttle shaft arm screw	
101-10	Wire clamp screw	
101-58	Throttle adjusting screw	
101-142S	Attaching screw and washer assembly (Choke bracket)	
101-145S	Attaching screw and washer assembly (Body flange)	(2)
101-150S	Attaching screw and washer assembly (Air horn)	(4)
105-11	Tube clamp screw	
105-12	Throttle lever clamp screw	
105A-8	Choke bracket and throttle shaft clamp nut	(2)
105A-13	Flange nut	(2)
105A-24	Ball swivel hex nut	
108-25	Throttle lever bushing	
108-41	Throttle lever ball swivel	
114-69S	Throttle shaft arm and screw assembly	
115-31	Choke connector rod	
116-13	PUMP INTAKE CHECK BALL	
116-18	PUMP DISCHARGE CHECK BALL	
117-62	PUMP LINK	
117-70	PUMP LIFTER	
121-38	BODY FLANGE GASKET	(2)
121-69	BODY GASKET	
123-31S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
145 13	MAIN VENT TUBE	
149-56S	STEP UP JET ASSEMBLY	
150A-13	PIN SPRING	
156-19	Gas line nipple	
159-60S	MAIN METERING JET ASSEMBLY	
159-119S	Adjusting main metering screw assembly	
160-46S	STEP UP PISTON PLATE AND ROD ASSEMBLY	
163-10	Packing	
183-17	Insulator (Sup by 183 64)	
183 64	Insulator	

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used

Form 4706E

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST LOUIS, MO, U S A.

BBR1-621S
March, 1948
Revised April, 1955



SPECIAL HEAVY DUTY APPLICATION

(1¼ Inch S. A. E. Flange)

BBR1 DOWNDRAFT **CARB. No. 621S**

CARBURETER SPECIFICATIONS

Dimensions Flange size 1¼ inch S A E
Throttle bore 1 9/16 inch (39 69 mm)
Main venturi 1 5/16 inch (33 34 mm) I D

Float Setting Top of float 5/64 inch (1 98 mm) below top surface of carbureter body casting (Plus or minus 1/64 inch) (397 mm)

Vents Outside none Inside balance vent 218 inch diameter (5 54 mm)

Gasoline Intake Needle Triangular horizontal No 44 (2 18 mm) drill in needle seat

Idle Orifice Tube Jet size 031 inch (79 mm) drill Idle passage air bleed (in body) size 0635 inch (1 61 mm) diameter Economizer in body—size 0545 inch (1 38 mm) diameter

Idle Ports Upper port Slot type length 175 inch (4 45 mm) width 030 inch (76 mm)
Top of port located 138 to 142 (3 50 to 1 61 mm) above top edge of valve
Lower port size 053 to 057 inch (1 35 to 1 45 mm) drill (For idle adjustment screw)

Set Idle Adjustment Screw ½ to 1½ turns open For richer mixture turn screw out Do not idle engine below 400 r p m or 6 miles per hour

Main Metering Screw Calibrated to flow 146 to 150 cc per minute (Do not gauge for size If in doubt replace with new part)

Main Vent Through diffuser (air bleed inside bowl) size 040 inch (1 01 mm) drill

Main Vent Tube Side holes
2—0354 inch (90 mm) 21/64 inch (8 33 mm) from end
2—0354 inch (90 mm) 1 1/64 inch (25 8 mm) from end
2—0354 inch (90 mm) 1 33/64 inch (38 5 mm) from end

Step up Jet Size 0394 inch (1 00 mm) drill

Accelerating Pump Type delayed action Stroke Summer setting (inner hole short stroke)
Intermediate setting (center hole)
Winter setting (outer hole long stroke)
Pump intake passage size 115 to 120 inch (2 93 to 3 05 mm) diameter in body Pump discharge passage restriction (under ball check) size 062 to 065 inch (1 57 to 1 65 mm) diameter in body Pump (discharge) jet size 0276 inch (70 mm) drill

Pump Adjustment 24/64 inch plunger travel full throttle position medium stroke Use gauge T109 117S

Choke Butterfly type with poppet valve Interconnected to open throttle valve to fast idle position when choke is used

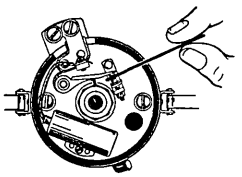
Vacuum Spark Port Slot (round end) type Size 040 by 110 inch (1 016 by 2 794 mm) Top of port 017 to 023 inch (43 to 58 mm) above top edge of valve

Motor Tune-Up—Be Accurate!

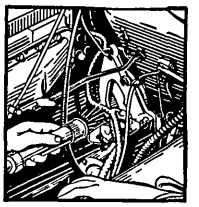
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter.



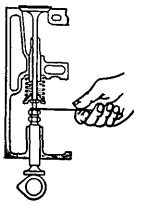
Spark Plug Gap



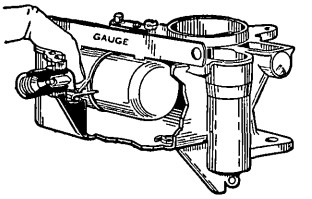
Set Breaker Points



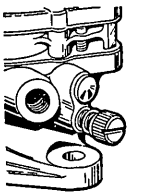
Adjust Ignition Timing Use Timing Light



Set Valves to Specification



Float Setting (Use Gauge) 5/64 inch



Idle Adjustment Screw Setting ½ to 1½ Turns Open

THESE ADJUSTMENTS MUST BE ACCURATE AND IN CONFORMITY WITH CAR MANUFACTURER'S SPECIFICATIONS

CARBURETER ADJUSTMENTS

For most satisfactory starting during extremely cold weather, pull out choke, crack throttle about ⅓ to ½ open and then engage starter

If carbureter loads up after considerable service, check float level Wear on lip of float lever will raise float level Before adjusting float, be sure float lever pin is firmly seated Reset by bending lip of float lever away from needle to raise level, or bend lip toward needle to lower float level Bend vertical lip of float only

If motor stalls while idling, set throttle lever adjusting screw so motor runs approximately 400 r p m Then set idle adjustment screw to specifications If these adjustments do not correct the trouble, remove idle orifice tube and plug assembly and clean tube and passages with compressed air

If acceleration is not satisfactory, remove pump jet and clean with compressed air, however, it is usually advisable to replace the pump jet, as its cost is nominal All jets must be seated gasoline tight Poor acceleration may be due to damaged or worn plunger leather in accelerating pump, sediment in pump cylinder or clogged ball check at bottom of pump cylinder and discharge ball check in discharge passage If plunger is removed from cylinder, use care in installing to avoid damage to plunger leather

Correct air fuel ratio is provided by a 'balance tube located in the air horn The balance tube should be checked each time the carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type, size or condition of air cleaner Should the cleaner become clogged the capacity will be reduced but the air-fuel mixture ratio will not be changed

Excessive richness above 50 miles per hour may be caused by a clogged main vent tube After removal of main metering screw assembly beneath float bowl, main vent tube can be removed and a new tube inserted with tool T109-195 Care must be exercised in inserting new tube which must seat tightly

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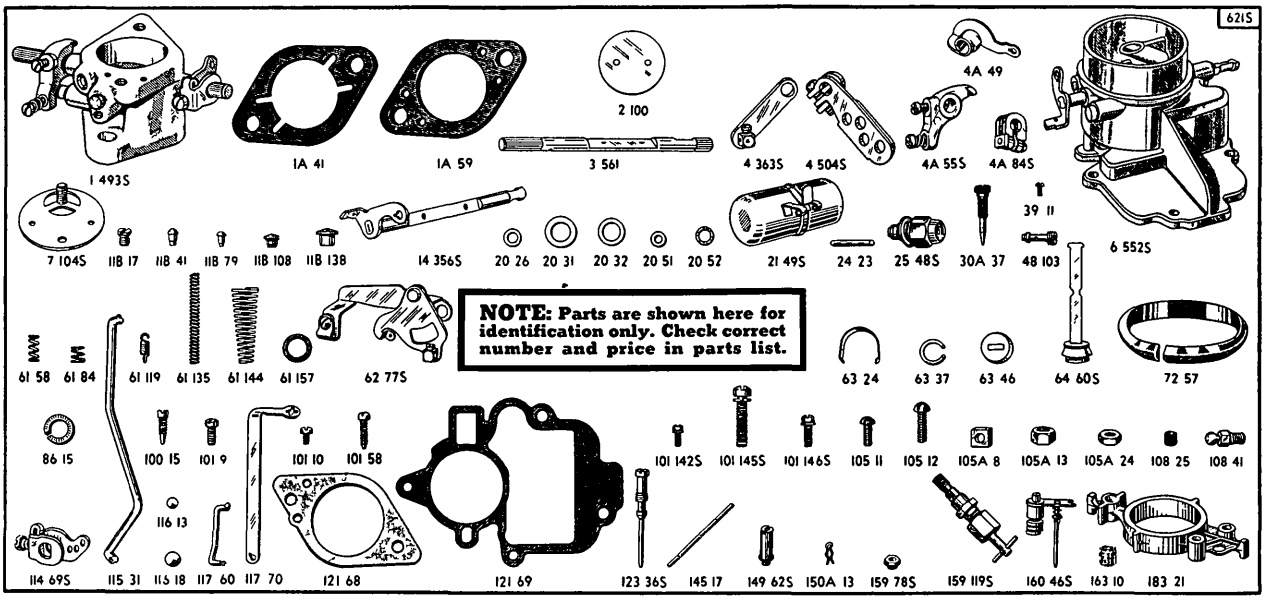
CARBURETER
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Pump Adjustment Remove air horn assembly, back out throttle lever adjustment screw and install pump operating link in center hole (medium stroke) of throttle shaft arm Place base of pump travel gauge T109-117S on upper edge of body casting at pump cylinder With throttle valve seated turn gauge until projecting finger contacts top of plunger shaft Note number indicated on gauge Repeat with throttle valve wide open and plunger pressed to bottom of the cylinder The difference between the numbers indicated at wide open and closed throttle positions should be "24" (24/64") pump stroke) Adjust by bending horizontal portion of pump lifter link This pump is also adjustable for seasonal driving Set to longest stroke (outer hole) for cold weather, short stroke (inner hole) for hot weather driving or altitude conditions

Idle Adjustment With engine at normal operating temperature and vacuum gauge attached to intake manifold, idle engine at approximately 400 r p m and turn idle adjustment screw until highest steady vacuum reading is obtained Then slowly open adjusting screw to the point where vacuum just begins to decrease

Main Metering Screw Adjustment Using a tachometer and with engine operating at normal temperature, adjust throttle for an engine speed of approximately 2,000 r p m Open main metering screw until engine operates smoothly with the highest vacuum gauge reading Slowly tighten main metering screw until a slight reduction of engine speed can be noticed or vacuum gauge shows slight decrease Open screw slightly from this position until maximum speed is obtained—usually not more than ⅛ to ¼ turn Hold screw securely and tighten nut to lock screw in position



Carbureter No. 621S

WHEN SERVICING, USE GASKET ASSORTMENT No. 192; REPAIR PACKAGE No. 1566
PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-493S	Body flange assembly	
1A-41	FLANGE GASKET—FOR USE WITHOUT GOVERNOR	
1A-59	FLANGE GASKET—FOR USE WITH GOVERNOR	
2-100	Throttle valve	
3-561	Throttle shaft	
4-363S	†Throttle lever assembly (loose)	
4-504S	Throttle lever assembly	
4A-49	Fast idle cam	
4A-55S	Throttle shaft dog and screw assembly	
4A-84S	†Throttle shaft dog assembly (loose)	
6-552S	Air horn assembly	
7-104S	Choke valve assembly	
11B-17	PUMP DISCHARGE PASSAGE PLUG	
11B-41	Rivet plug	
11B-79	Rivet plug	(2)
11B-108	IDLE PORT RIVET PLUG	
11B-138	PUMP JET PASSAGE RIVET PLUG	
14-356S	Choke control lever and shaft assembly	
20-26	Main metering jet gasket	
20-31	Needle seat gasket	
20-32	Metering screw gasket	
20-51	Step-up jet gasket	
20-52	STEP-UP PISTON GASKET	
21-49S	Float and lever assembly	
24-23	Float lever pin	
25-48S	NEEDLE AND SEAT ASSEMBLY	
30A-37	Idle adjustment screw	
39-11	VALVE ATTACHING SCREW	
48-103	PUMP JET	
61-58	Throttle lever adjustment screw spring	
61-84	Idle adjustment screw spring	
61-119	Choke pull back spring	
61-135	STEP UP PISTON SPRING	
61-144	PUMP SPRING	
61-157	Plunger spring	
62-77S	Choke tube bracket assembly	
63-24	FLOAT LEVER PIN RETAINER	
63-37	PUMP INTAKE CHECK BALL RETAINER	

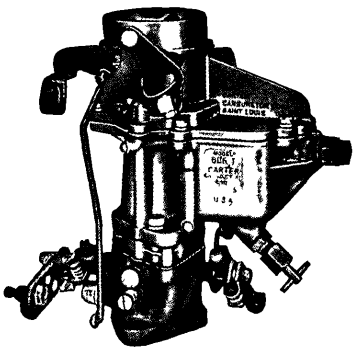
Part No.	PART NAME	
63-46	Spring retainer	
64-60S	PLUNGER AND ROD ASSEMBLY (Identify by 49-120)	
72-42	Cross-style flange adaptor	
72-57	†V-seal air horn adaptor	
86-15	Flange stud lock washer	(2)
100-15	Throttle shaft dog screw	
101-9	Throttle shaft arm screw	
101-10	Wire clamp screw	
101-58	Throttle adjusting screw	
101-142S	Choke bracket attaching screw and washer assembly	
101-145S	Body flange attaching screw and washer assembly	
101-146S	Air horn attaching screw and washer assembly (Sup by 101-150S)	
101-150S	Air horn attaching screw and washer assembly	
105-11	Tube clamp screw	
105-12	Throttle lever clamp screw	
105A-8	Choke bracket and throttle lever clamp nut	(2)
105A-13	Flange nut	(2)
105A-24	Ball swivel hex nut	
108-25	Throttle lever bushing	
108-41	Throttle lever ball swivel	
114-69S	Throttle shaft arm and screw assembly	
115-31	Choke connector rod	
116-13	PUMP INTAKE CHECK BALL	
116-18	PUMP DISCHARGE CHECK BALL	
117-60	PUMP LINK	
117-70	PUMP LIFTER	
121-68	BODY FLANGE GASKET	(2)
121-69	BODY GASKET	
123-36S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
145-17	MAIN VENT TUBE	
149-62S	STEP UP JET ASSEMBLY	
150A-13	PIN SPRING	
159-78S	MAIN METERING JET ASSEMBLY	
159-119S	Adjusting main metering screw assembly	
160-46S	STEP UP PISTON PLATE AND ROD ASSEMBLY	
163-10	Packing	
183-21	Insulator	

†Available for special installations but not included in carbureter carton

NOTE· Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

CARTER CARBURETOR
DIVISION OF ACF INDUSTRIES INCORPORATED
ST LOUIS, MO, U S A

BBR1-621S
March, 1948
Revised April, 1955



SPECIAL HEAVY DUTY APPLICATION

(1¼ Inch S. A. E. Flange)

BBR1 DOWNDRAFT **CARB. No. 621S**

CARBURETER SPECIFICATIONS

Dimensions Flange size 1¼ inch S A E
Throttle bore 1 9/16 inch (39 69 mm)
Main venturi 1 5/16 inch (33 34 mm) I D

Float Setting Top of float 5/64 inch (1 98 mm) below top surface of carbureter body casting (Plus or minus 1/64 inch) (397 mm)

Vents Outside none Inside balance vent 218 inch diameter (5 54 mm)

Gasoline Intake Needle Triangular horizontal No 44 (2 18 mm) drill in needle seat

Idle Orifice Tube Jet size 031 inch (79 mm) drill Idle passage air bleed (in body) size 0635 inch (1 61 mm) diameter Economizer in body—size 0545 inch (1 38 mm) diameter

Idle Ports Upper port Slot type length 175 inch (4 45 mm) width 030 inch (76 mm)
Top of port located 138 to 142 (3 50 to 1 61 mm) above top edge of valve
Lower port size 053 to 057 inch (1 35 to 1 45 mm) drill (For idle adjustment screw)

Set Idle Adjustment Screw ½ to 1½ turns open For richer mixture turn screw out Do not idle engine below 400 r p m or 6 miles per hour

Main Metering Screw Calibrated to flow 146 to 150 cc per minute (Do not gauge for size If in doubt replace with new part)

Main Vent Through diffuser (air bleed inside bowl) size 040 inch (1 01 mm) drill

Main Vent Tube Side holes
2—0354 inch (90 mm) 21/64 inch (8 33 mm) from end
2—0354 inch (90 mm) 1 1/64 inch (25 8 mm) from end
2—0354 inch (90 mm) 1 33/64 inch (38 5 mm) from end

Step up Jet Size 0394 inch (1 00 mm) drill

Accelerating Pump Type delayed action Stroke Summer setting (inner hole short stroke)
Intermediate setting (center hole)
Winter setting (outer hole long stroke)
Pump intake passage size 115 to 120 inch (2 93 to 3 05 mm) diameter in body Pump discharge passage restriction (under ball check) size 062 to 065 inch (1 57 to 1 65 mm) diameter in body Pump (discharge) jet size 0276 inch (70 mm) drill

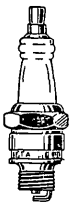
Pump Adjustment 24/64 inch plunger travel full throttle position medium stroke Use gauge T109 117S

Choke Butterfly type with poppet valve Interconnected to open throttle valve to fast idle position when choke is used

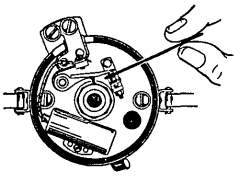
Vacuum Spark Port Slot (round end) type Size 040 by 110 inch (1 016 by 2 794 mm) Top of port 017 to 023 inch (43 to 58 mm) above top edge of valve

Motor Tune-Up—Be Accurate!

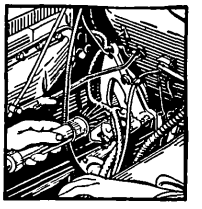
CAUTION Change worn or leaky flange gaskets Tighten manifold bolts and test compression before adjusting carbureter.



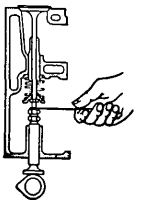
Spark Plug Gap



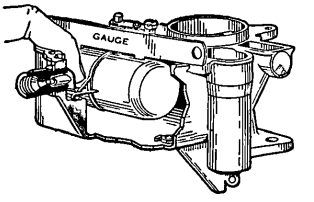
Set Breaker Points



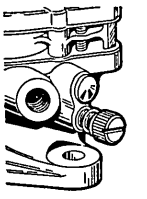
Adjust Ignition Timing Use Timing Light



Set Valves to Specification



Float Setting (Use Gauge) 5/64 inch



Idle Adjustment Screw Setting ½ to 1½ Turns Open

THESE ADJUSTMENTS MUST BE ACCURATE AND IN CONFORMITY WITH CAR MANUFACTURER'S SPECIFICATIONS

CARBURETER ADJUSTMENTS

For most satisfactory starting during extremely cold weather, pull out choke, crack throttle about ⅛ to ½ open and then engage starter

If carbureter loads up after considerable service, check float level Wear on lip of float lever will raise float level Before adjusting float, be sure float lever pin is firmly seated Reset by bending lip of float lever away from needle to raise level, or bend lip toward needle to lower float level Bend vertical lip of float only

If motor stalls while idling, set throttle lever adjusting screw so motor runs approximately 400 r p m Then set idle adjustment screw to specifications If these adjustments do not correct the trouble, remove idle orifice tube and plug assembly and clean tube and passages with compressed air

If acceleration is not satisfactory, remove pump jet and clean with compressed air, however, it is usually advisable to replace the pump jet, as its cost is nominal All jets must be seated gasoline tight Poor acceleration may be due to damaged or worn plunger leather in accelerating pump, sediment in pump cylinder or clogged ball check at bottom of pump cylinder and discharge ball check in discharge passage If plunger is removed from cylinder, use care in installing to avoid damage to plunger leather

Correct air fuel ratio is provided by a "balance tube located in the air horn The balance tube should be checked each time the carbureter is serviced to see that the passage is open The object of a balanced carbureter is to provide a constant air fuel ratio regardless of type, size or condition of air cleaner Should the cleaner become clogged the capacity will be reduced but the air-fuel mixture ratio will not be changed

Excessive richness above 50 miles per hour may be caused by a clogged main vent tube After removal of main metering screw assembly beneath float bowl, main vent tube can be removed and a new tube inserted with tool T109-195 Care must be exercised in inserting new tube which must seat tightly

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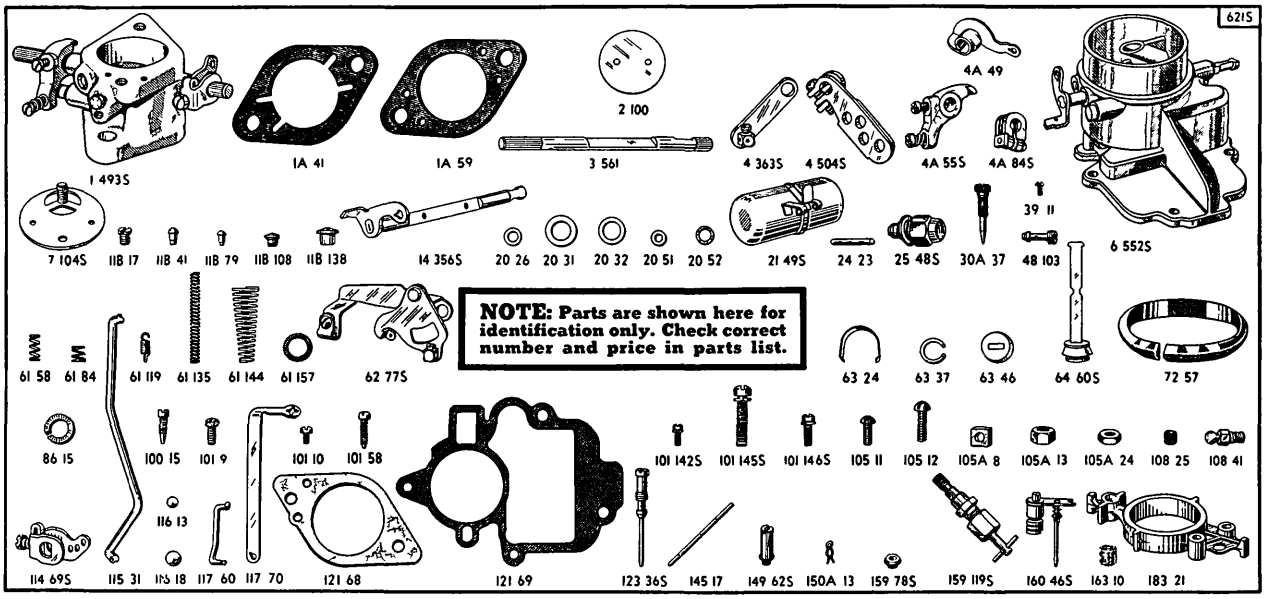
CARBURETER
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Pump Adjustment Remove air horn assembly, back out throttle lever adjustment screw and install pump operating link in center hole (medium stroke) of throttle shaft arm Place base of pump travel gauge T109-117S on upper edge of body casting at pump cylinder With throttle valve seated turn gauge until projecting finger contacts top of plunger shaft Note number indicated on gauge Repeat with throttle valve wide open and plunger pressed to bottom of the cylinder The difference between the numbers indicated at wide open and closed throttle positions should be '24 (24/64') pump stroke) Adjust by bending horizontal portion of pump lifter link This pump is also adjustable for seasonal driving Set to longest stroke (outer hole) for cold weather short stroke (inner hole) for hot weather driving or altitude conditions

Idle Adjustment With engine at normal operating temperature and vacuum gauge attached to intake manifold idle engine at approximately 400 r p m and turn idle adjustment screw until highest steady vacuum reading is obtained Then slowly open adjusting screw to the point where vacuum just begins to decrease

Main Metering Screw Adjustment Using a tachometer and with engine operating at normal temperature adjust throttle for an engine speed of approximately 2 000 r p m Open main metering screw until engine operates smoothly with the highest vacuum gauge reading Slowly tighten main metering screw until a slight reduction of engine speed can be noticed or vacuum gauge shows slight decrease Open screw slightly from this position until maximum speed is obtained—usually not more than ⅛ to ¼ turn Hold screw securely and tighten nut to lock screw in position



Carbureter No. 621S

WHEN SERVICING, USE GASKET ASSORTMENT No 192, REPAIR PACKAGE No. 1566
PART NAMES IN CAPITAL LETTERS LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No	PART NAME	
1-493S	Body flange assembly	
1A-41	FLANGE GASKET—FOR USE WITHOUT GOVERNOR	
1A-59	FLANGE GASKET—FOR USE WITH GOVERNOR	
2-100	Throttle valve	
3-561	Throttle shaft	
4-363S	†Throttle lever assembly (loose)	
4-504S	Throttle lever assembly	
4A-49	Fast idle cam	
4A-55S	Throttle shaft dog and screw assembly	
4A-84S	†Throttle shaft dog assembly (loose)	
6-552S	Air horn assembly	
7-104S	Choke valve assembly	
11B-17	PUMP DISCHARGE PASSAGE PLUG	
11B-41	Rivet plug	
11B-79	Rivet plug	(2)
11B-108	IDLE PORT RIVET PLUG	
11B-138	PUMP JET PASSAGE RIVET PLUG	
14-356S	Choke control lever and shaft assembly	
20-26	Main metering jet gasket	
20-31	Needle seat gasket	
20-32	Metering screw gasket	
20-51	Step up jet gasket	
20-52	STEP UP PISTON GASKET	
21-49S	Float and lever assembly	
24-23	Float lever pin	
25-48S	NEEDLE AND SEAT ASSEMBLY	
30A-37	Idle adjustment screw	
39-11	VALVE ATTACHING SCREW	
48-103	PUMP JET	
61-58	Throttle lever adjustment screw spring	
61-84	Idle adjustment screw spring	
61-119	Choke pull back spring	
61-135	STEP UP PISTON SPRING	
61-144	PUMP SPRING	
61-157	Plunger spring	
62-77S	Choke tube bracket assembly	
63-24	FLOAT LEVER PIN RETAINER	
63-37	PUMP INTAKE CHECK BALL RETAINER	

Part No	PART NAME	
63-46	Spring retainer	
64-60S	PLUNGER AND ROD ASSEMBLY (Identify by 49 120)	
72-42	Cross style flange adaptor	
72-57	†V seal air horn adaptor	
86-15	Flange stud lock washer	(2)
100-15	Throttle shaft dog screw	
101-9	Throttle shaft arm screw	
101-10	Wire clamp screw	
101-58	Throttle adjusting screw	
101-142S	Choke bracket attaching screw and washer assembly	
101-145S	Body flange attaching screw and washer assembly	
101-146S	Air horn attaching screw and washer assembly (Sup by 101-150S)	
101-150S	Air horn attaching screw and washer assembly	
105-11	Tube clamp screw	
105-12	Throttle lever clamp screw	
105A-8	Choke bracket and throttle lever clamp nut	(2)
105A-13	Flange nut	(2)
105A-24	Ball swivel hex nut	
108-25	Throttle lever bushing	
108-41	Throttle lever ball swivel	
114-69S	Throttle shaft arm and screw assembly	
115-31	Choke connector rod	
116-13	PUMP INTAKE CHECK BALL	
116-18	PUMP DISCHARGE CHECK BALL	
117-60	PUMP LINK	
117-70	PUMP LIFTER	
121 68	BODY FLANGE GASKET	(2)
121-69	BODY GASKET	
123-36S	IDLE ORIFICE TUBE AND PLUG ASSEMBLY	
145-17	MAIN VENT TUBE	
149-62S	STEP UP JET ASSEMBLY	
150A-13	PIN SPRING	
159-78S	MAIN METERING JET ASSEMBLY	
159-119S	Adjusting main metering screw assembly	
160 46S	STEP UP PISTON PLATE AND ROD ASSEMBLY	
163-10	Packing	
183 21	Insulator	

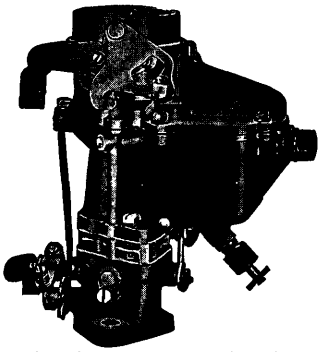
†Available for special installations but not included in carbureter carton

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown only one is used

Form 4665J

CARTER CARBURETOR
DIVISION OF ACF INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

BBR1-590S, BBR1-591S, BBR2-592S
September, 1944
Revised March, 1953



Cut Shows 591S Carbureter

CARBURETERS
BBR1-590S – BBR1-591S – BBR2-592S

BB Downdraft Models
High and Low Speed Adjustment

Model BBR1-590S—(Small Bore)
Model BBR1-591S—1¼ Inch S.A.E.
Model BBR2-592S—1½ Inch S.A.E.

(621S can be used in place of 591S)
(692S can be used in place of 592S)

CARBURETER SPECIFICATIONS

Dimensions: Flange size, (590S-591S) 1¼ inch S. A. E.
(592S) 1½ inch S. A. E.
Throttle bore, (590S) 1-5/32 inch (29.37 mm).
(591S) 1-7/16 inch (36.51 mm).
(592S) 1-11/16 inch (42.86 mm).
Main venturi, (590S) 1-3/32 inch (27.78 mm).
(591S) 1¼ inch (31.75 mm).
(592S) 1-9/32 inch (32.54 mm).

Float Setting: (All models) Top of float 5/64 inch (1.98 mm) below top surface of carbureter body casting, plus or minus 1/64 inch (.397 mm).

Vents: (All models) Outside, none. Inside, balance vent .218 inch (5.56 mm) diameter.

Gasoline Intake Needle: Triangular, horizontal.
(590S) No. 48 (1.93 mm) drill in needle seat.
(591S-592S) No. 44 (2.18 mm) drill in needle seat.

Idle Orifice Tube: (All models) Jet size, .0276 inch (.70 mm).
(590S) Idle air bleed (in plug) size .052 inch (1.32 mm) dia.
(591S) Idle air bleed (in body) size .067 inch (1.70 mm) dia.
(592S) Idle air bleed (in body) size .063 inch (1.60 mm) dia.
(590S) Idle restriction, in body, size .0512 in. (1.30 mm) dia.
(591S) Idle restriction, in body, size .051 to .052 inch (1.30 to 1.32 mm) diameter.
(592S) Idle restriction, in body, size .048 to .050 inch (1.22 to 1.27 mm) diameter.

Idle Port: (All models) Upper port, keyhole type.
(590S) Length, .132 inch (3.35 mm). Width, .030 inch (.76 mm); .063 inch (1.60 mm) diameter hole at top. Top of port located .096 to .100 inch (2.44 to 2.54 mm) above top edge of valve.
(591S) Length, .160 inch (4.06 mm). Width, .030 inch (.76 mm); .045 inch (1.14 mm) diameter hole at top. Top of port located .118 to .122 inch (3.00 to 3.10 mm) above top edge of valve.
(592S) Length, .128 inch (3.25 mm). Width, .027 inch (.69 mm); .063 inch (1.60 mm) diameter hole at top. Top of port located .088 to .092 inch (2.24 to 2.34 mm) above top edge of valve.

Lower Port Size: (All models) .053 to .057 inch (1.35 to 1.45 mm) diameter. (For idle adjustment screw.)

Set Idle Adjustment Screw: (All models) ½ to 1½ turns open.

Main Metering Jet: (All models) Non-adjustable.
Calibrated to flow —
(590S) 148 cc. per minute.
(591S) 190 cc. per minute.
(592S) 212 cc. per minute.
(Do not gauge for size. If in doubt replace with new part.)

Main Metering Screw: (All models) Adjustable.

Main Vent: (All models) Through diffuser (air bleed inside bowl) size, .0315 inch (.80 mm) drill.

Main Vent Tube: (590S) 1—.0236 in. (.60 mm) drill hole in end. (Side holes) 7—.0197 inch (.50 mm) drill—one side, spaced 3/16 inch (4.76 mm) apart. First hole 9/16 inch (14.29 mm) from lower end.
7—.0197 inch (.50 mm) drill—opposite side, spaced 3/16 inch (4.76 mm) apart. First hole 21/32 inch (16.67 mm) from lower end.
(591S) (Side holes) 2—.0354 (.90 mm) drill—approx. 5/16 inch (7.94 mm) from end.
2—.0354 (.90 mm) drill—approx. 1 inch (25.40 mm) from end.
2—.0354 (.90 mm) drill—approx. 1½ in. (38.10 mm) from end.
(592S) (Side holes) 2—.0354 (.90 mm) drill—approx. 5/16 in. (7.94 mm) from end.
2—.0354 (.90 mm) drill—approx. 1 in. (25.40 mm) from end.

Step-Up Jet: (590S) size, .0236 inch (.60 mm) diameter.
(591S-592S) size No. 63 .037 in. (.94 mm) drill size diameter.

Accelerating Pump: (All models) Type, delayed action. Stroke, summer setting (inner hole, short stroke). Intermediate setting (center hole). Winter setting (outer hole, long stroke).
Pump intake passage, ball check seat size .115 to .120 inch (2.92 to 3.05 mm) diameter.
Pump discharge passage: Restriction (under ball check) size .062 to .065 inch (1.58 to 1.65 mm) diameter in body.
(590S) Pump (discharge) jet size: .0236 inch (.60 mm) dia.
(591S) Pump (discharge) jet size: .0315 inch (.80 mm) dia.
(592S) Pump (discharge) jet size: .0374 inch (.95 mm) dia.

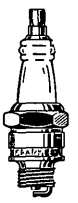
Pump Adjustment: (590S) Pump set at 23/64 inch (9.92 mm) plunger travel, with pump connector link in center or medium hole. Use Gauge No. T109-117S.
(591S) Pump set at 24/64 inch (9.53 mm) plunger travel, with pump connector link in center or medium hole. Use Gauge No. T109-117S.
(592S) Pump set at 26/64 inch (10.32 mm) plunger travel, with pump connector link in center or medium hole. Use Gauge No. T109-117S.

Choke: (All models) Butterfly type (with poppet valve), interconnected to open throttle valve to fast idle position when choke is used.

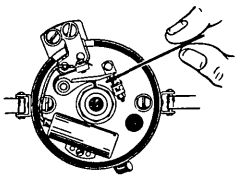
Vacuum Spark Port: (All models) Horizontal (round end) slot type, size .040 by .110 inch (1.016 by 2.794 mm). Top of port .035 to .041 inch (.89 to 1.041 mm) above top edge of valve.

Motor Tune-Up—Be Accurate! Always Use Feeler Gauges!

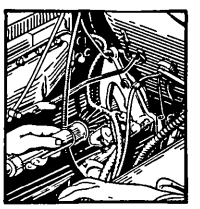
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



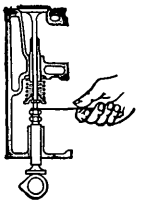
Set Spark Plug Gap



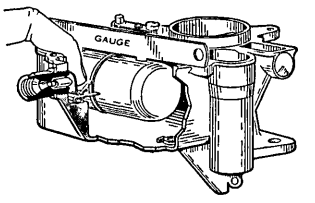
Set Breaker Points



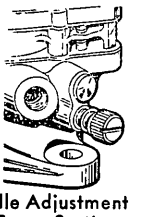
Adjust Ignition Timing Use Timing Light



Set Valves to Specification



Float Setting (Use Gauge) 5/64 Inch



Idle Adjustment Screw Setting ½ to 1½ Turns Open

THESE ADJUSTMENTS MUST BE ACCURATE AND IN CONFORMITY WITH CAR MANUFACTURER'S SPECIFICATIONS

CARBURETER ADJUSTMENTS

PUMP TRAVEL ADJUSTMENT: Remove air horn assembly, back out throttle adjustment screw, and install pump operating link in center hole of throttle shaft arm. Place base of pump travel gauge (tool No. T109-117S) on upper edge of body casting at pump cylinder. With throttle valve seated turn knurled nut of gauge until projecting finger contacts top of plunger shaft. Note number indicated on gauge. Repeat with throttle valve wide open and plunger pressed to bottom of cylinder. The difference in the numbers indicated at wide open and closed throttle positions is the number of 64ths of an inch the plunger has moved. The difference in readings should be as follows: (590S)—23, (591S)—24, (592S)—26. Adjust by bending horizontal portion of pump connector link.

IDLE ADJUSTMENT: Heat engine to operating temperature and connect vacuum gauge to intake manifold. With engine idling at the specified idle R.P.M. for that particular engine on which installation is being made, turn idle adjusting screw until highest vacuum reading is obtained. Slowly open adjusting screw to point where vacuum just begins to decrease. This is known as "setting the idle on the rich side."

MAIN METERING SCREW ADJUSTMENT: There are many ways in which the main metering screw may be adjusted. Tachometers, gas exhaust analyzers and vacuum gauges are helpful but not essential in making this adjustment.

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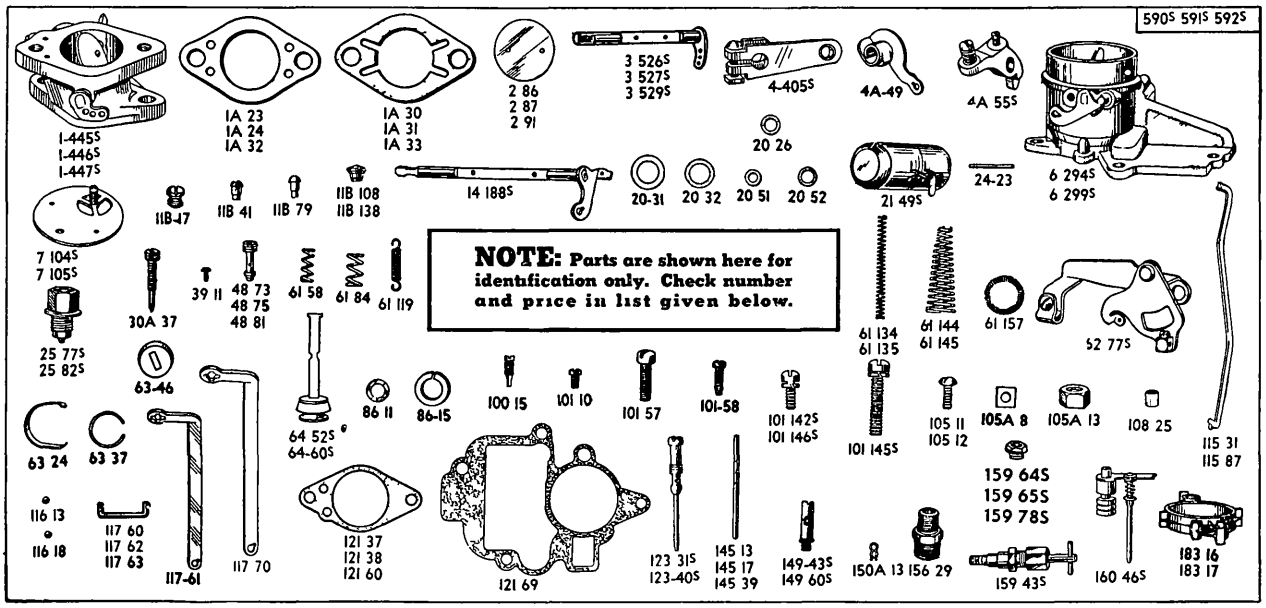
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MAIN METERING SCREW ADJUSTMENT The simplest method of adjusting on the service floor is as follows

(A) Heat engine to standard operating temperature

(B) Open throttle until engine speed is approximately 30 m p h or 1,000 R P M

(C) Open main metering screw until engine operates smoothly at this speed (highest reading on tachometer or vacuum gauge) Slowly tighten main metering screw until a slight reduction in engine speed can be noticed Open screw slightly from this position until maximum speed is attained—usually not more than ⅛ to ¼ turn Hold screw steady and tighten packing nut to lock screw in position



Models BBR1-590S, BBR1-591S, BBR2-592S

Part No	NAME OF PART	
1-445S	Body flange assembly (590S)	
1 446S	Body flange assembly (591S)	
1-447S	Body flange assembly (592S)	
1A-23	Flange gasket—with governor (591S)	
1A 24	Flange gasket—with governor (592S)	
1A 30	Flange gasket—without governor (591S)	
1A 31	Flange gasket—without governor (592S)	
1A 32	★Flange gasket—with governor (590S)	
1A 33	★Flange gasket—without governor (590S)	
2-86	Throttle valve (591S)	
2 87	Throttle valve (592S)	
2-91	Throttle valve (590S)	
3-526S	Throttle shaft and arm assembly (591S)	
3-527S	Throttle shaft and arm assembly (592S)	
3-529S	Throttle shaft and arm assembly (590S)	
4 405S	Throttle lever assembly (All)	
4A-49	Fast idle cam (All)	
4A 55S	Fast idle cam and screw assembly (All)	
6 294S	Air horn assembly (590S-591S)	
6 299S	Air horn assembly (592S)	
7-104S	Choke valve assembly (590S-591S)	
7 105S	Choke valve assembly (592S)	
11B 17	Pump check passage plug (All)	
11B-41	Rivet plug (All)	
11B 79	Rivet plug (All)	(2)
11B-108	Idle port rivet plug (All)	
11B-138	Pump jet rivet plug (All)	
14-188S	Choke control lever and shaft assembly (All)	
14 208S	‡Choke lever and screw assembly (All)	
20 26	Metering jet gasket (All)	
20-31	Needle seat gasket (All)	
20-32	Metering screw gasket (All)	
20-51	Step up jet gasket (All)	
20-52	Step-up piston gasket (All)	
21 49S	Float and lever assembly (All)	
24-23	Float lever pin (All)	
25-48S	Needle and seat assembly (All)	
25-77S	Needle and seat assembly (590S) (Sup by 25-48S)	
25-82S	Needle and seat assembly (591S 592S) (Sup by 25-48S)	
30A-37	Idle adjustment screw (All)	
39 11	Valve attaching screw (All)	(4)
48-73	Pump jet (591S)	
48-75	Pump jet (592S)	
48 81	Pump jet (590S)	
61-58	Throttle lever adjusting screw spring (All)	
61-84	Idle adjustment screw spring (All)	
61 119	Choke pull-back spring (All)	
61 134	Step up piston spring (590S)	
61 135	Step-up piston spring (591S-592S)	
61 144	Pump spring (Conical) (590S 591S)	
61-145	Pump spring (Conical) (592S)	
61 157	Plunger spring (All)	
62 77S	Choke tube bracket assembly (All)	
63-24	Float lever pin retainer (All)	
63 37	Pump retainer ring (All)	
63 46	Spring retainer (All)	
64-52S	Plunger and rod assembly (Identify by shaft No 49-115) (590S)	
64-60S	Plunger and rod assembly (Identify by shaft No 49-120) (591S-592S)	
86-11	Lock washer (590S)	(2)
86-15	Flange stud lock washer (All)	(2)
100 15	Throttle shaft dog set screw (All)	
101-10	Wire clamp screw (All)	
101-57	Attaching screw (body flange) (590S)	(2)
101-58	Throttle adjusting screw (All)	
101 142S	Choke bracket screw and washer assembly (All)	
101-145S	Body flange screw and washer assembly (591S-592S)	(2)
101-146S	Air horn screw and washer assembly (Sup by 101-150S) (All)	
101-150S	Air horn attaching screw and washer assembly (All)	(4)
105-11	Tube clamp screw (All)	
105 12	Throttle lever clamp screw (All)	
105A-8	Choke bracket clamp nut (All)	(2)
105A-13	Flange stud nut (All)	(2)
108-25	★Throttle lever bushing (All)	
115-31	Fast idle rod (591S 592S)	
115 87	Fast idle rod (590S)	
116-13	Pump cylinder ball (All)	
116-18	Pump check ball (All)	
117 60	Pump link (591S)	
117-61	Pump lifter link (590S)	
117 62	Pump link (592S)	
117 63	Pump link (590S)	
117 70	Pump lifter link (591S 592S)	
121-37	Body flange gasket (591S)	(2)
121 38	Body flange gasket (592S)	(2)
121 60	Body flange gasket (590S)	
121 69	Body gasket (All)	
123 31S	Idle orifice tube and plug assembly (591S-592S)	
123-40S	Idle orifice tube and plug assembly (590S)	
145 13	Main vent tube (592S)	
145-17	Main vent tube (591S)	
145-39	Main vent tube (590S)	
149-41S	Step-up jet assembly—1 size lean (591S-592S)	
149 43S	Step-up jet assembly—standard (591S 592S)	
149 50S	Step-up jet assembly—1 size rich (590S)	
149 60S	Step up jet assembly—standard (590S)	
149 62S	Step-up jet assembly—1 size rich (591S-592S)	
150A-13	Pin spring (All)	
156 19	Gas line connection (brass) (All)	
156 47	Gas line connection (steel) optional	
159 43S	Adjustable main metering screw assembly (All)	
159 64S	Main metering jet assembly (591S) (Sup by 159-88S)	
159 65S	Main metering jet assembly (592S)	
159 78S	Main metering jet assembly (590S)	
159 88S	Main metering jet assembly (591S)	
160 46S	Step-up piston plate and rod assembly (All)	
183 16	Insulator (591S)	
183 17	Insulator (592S) (Sup by 183-64)	
183 64	Insulator (592S)	

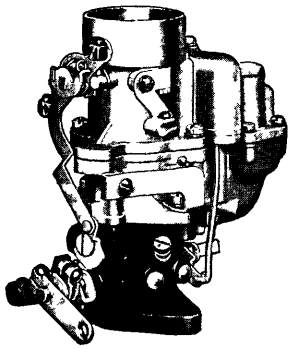
★Not assembled on carbureter

‡When using Sisson Choke, remove manual choke bracket and spring and install 14-208S Be sure to readjust Sisson Choke when making this installation

Form 4585S

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

413S-414S
September, 1940
Revised April, 1955



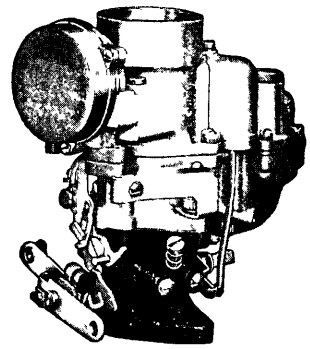
Casting No. 223 on face of flange
WAI Carbureter No. 413S

CARBURETERS FOR SPECIAL APPLICATION

413S—Manual Choke

414S—Climatic® Control

High Speed Adjustment—1¼" and 1½" Flange



Casting No. 223 on face of flange
WAI Carbureter No. 414S

For use with or without governor—Anti-percolator. Manual or vacuum operated metering rod.

CARBURETER SPECIFICATIONS

Dimensions (Both Models): Flange size, 1¼ inch and 1½ inch —special.
Primary venturi, 11/32 inch I. D.
Secondary venturi, 11/16 inch I. D.
Main venturi, 1¼ inch I. D.

Float Level (Both Models): Distance from seam of float (at free end) to tip on lower end of float chamber cover, when needle is seated, to be 5/16 inch.

Vents (Both Models): Outside, No. 10 drill. Inside, none.

Gasoline Intake (Both Models): Square vertical needle. Size No. 38 drill hole in needle seat.

Low Speed Jet Tube (Both Models): Jet size No. 68 drill.
By-pass size No. 54 drill.
Economizer size .060-.061 inch diameter.
Idle bleed size No. 52 drill.

Idle Port (Both Models): Slot type length .175 inch; width .040 inch.

Idle Port Opening (Both Models): .132 to .136 inch above valve with valve closed tight.

Idle Screw Seat (Both Models): No. 46 drill.

Set Idle Adjustment Screw (Both Models): ¾ to 1½ turns open. For richer mixture, turn screw out. Do not attempt to idle engine below 350 r. p. m.

Main Nozzle (Both Models): In primary venturi, angle 45°.
Closed tip. Inside diameter, No. 30 drill.
Upper hole: No. 75 drill on 45° angle.
Lower hole: No. 50 drill on 60° angle.

Metering Rod (Both Models): Economy step, .076 inch diameter; middle step tapers to .066 inch diameter; power step, .042 inch diameter. Length 3-9/64 inches.

Metering Rod Jet (Both Models): .091 inch diameter.

Metering Rod Setting (Both Models): Use gauge, part No. T109-102 (2.468 inches).

Accelerating Pump (Both Models): High pressure type (spring operated lever) with adjustable pump stroke.
Pump discharge jet size No. 71 drill.
Intake ball check seat size No. 62 drill.
Discharge ball check seat size No. 32 drill.
Relief passage to outside size No. 42 drill.

Pump Adjustment (Both Models): Pump stroke may be varied to suit condition. Loosen nut on the pump link, slide upper end of pump link away from pump shaft for greater pump stroke or toward the shaft for less stroke.

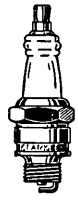
Choke: (413S) Manual—butterfly type, offset valve, inter-connected to open throttle valve to fast idle position.
(414S) Carter Climatic® Control, set at index. Butterfly type offset valve.

Choke Heat Suction Hole, in body, Size No. 38 (.1015") drill.

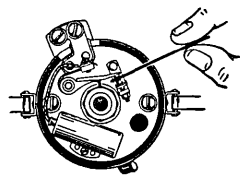
Vacuum Spark Port (Both Models): Horizontal slot type .041 x .125", bottom of slot .004" above valve (early production). Bottom of slot, .010" above valve (late production).

Motor Tune-Up—Be Accurate!

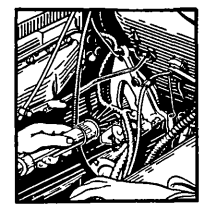
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



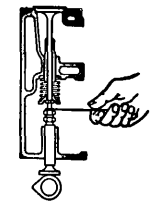
Set Spark Plug Gap



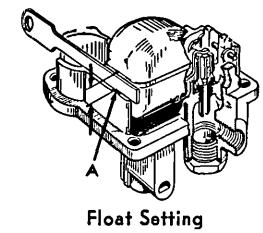
Set Breaker Points



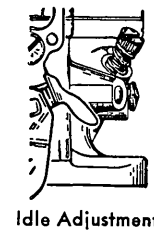
Adjust Ignition Timing Use Timing Light



Set Valves to Specification



Float Setting 5/16 Inch (Measure from point "A" to top of float seam)



Idle Adjustment Screw Setting ¾ to 1½ Turns Open

THESE ADJUSTMENTS MUST BE ACCURATE AND IN CONFORMITY WITH CAR MANUFACTURER'S SPECIFICATIONS

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BRIEF CARBURETER ADJUSTMENTS

PUMP ADJUSTMENT: (Both models) Should be made **BEFORE** metering rod and anti-percolator adjustments on carbureters with inspection tags marked prior to B-2; **AFTER** metering rod and anti-percolator adjustments on all carbureters with inspection tags marked B-2 or later.

Standard setting 20/64". See "Pump Adjustment" on page 3.

METERING ROD ADJUSTMENT: (Both models) Correct setting of metering rod is important, and should be made before the pump adjustment on carbureters tagged B-2 and later; after pump adjustment on carbureters tagged prior to that marking. Procedure is as follows:

Insert gauge (tool No. T109-102) in place of metering rod, seating tapered end in metering rod jet. Hold gauge vertical to insure seating. With throttle valve seated, press down lightly on piston link directly over piston. The metering rod pin should lightly contact the shoulder of notch in gauge, but gauge should not drag on pin. Adjustment can be made as follows: On carbureters marked prior to B-2, bend lip on piston link until it contacts pump arm. On carbureters tagged B-2 and later, with pin in pump arm tightened in bottom of slot, make adjustment by bending throttle connector rod at lower angle, but **do not bend** lip "E", Fig. 1B, on link. (Use tool T109-41 for bending connector rod.)

Remove gauge, and install metering rod and disk. Then connect metering rod and spring.

ANTI-PERCOLATOR ADJUSTMENT (Both models): Crack throttle valve .030" by placing gauge T109-29 between valve and bore of carbureter (side opposite port). Bend rocker arm (use tool T109-105) until there is a clearance of .005" to .015" between rocker arm and pump arm.

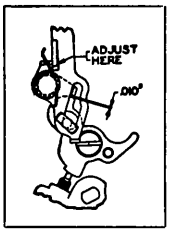
FAST IDLE ADJUSTMENT: (414S) With fast idle cam held in normal idle position, tighten throttle lever adjusting screw until it just seats against cam. Hold throttle lever closed and pull cam back until first (or lower) step on cam is **against** (not on) **set screw.** There should now be 5/8" clearance between inside wall of air horn and lower edge of choke valve. (Use tool T109-85.) Adjustment can be made by bending at offset portion of fast idle link. (Use tool T109-41.)

UNLOADER ADJUSTMENT: (414S) With throttle valve wide open there should be 5/16" clearance between lower edge of choke valve and inner wall of air horn. (Use gauge T109-107.) Adjustment should be made by bending cam on throttle lever. (Use tool T109-41.)

LOCK-OUT ADJUSTMENT: (414S) With throttle and choke valves wide open, choke should lock in wide open position. Adjustment should be made by bending lip at lower end of fast idle link to give 1/32" clearance between lip and throttle lever lock with throttle and choke valves held wide open. (Use tool T109-105.)

TRIP LEVER ADJUSTMENT: (414S) After making all choke linkage adjustments, hold choke valve tightly closed with pin on fast idle cam resting at bottom of slot in fast idle link.

Adjust stop for trip lever to give .010" clearance between fast idle cam and trip lever lip. (See cut.)



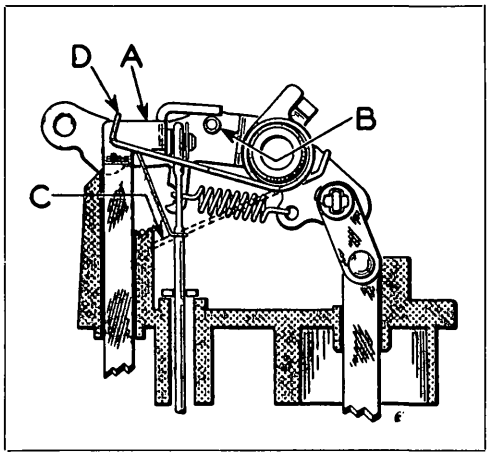


FIG. 1

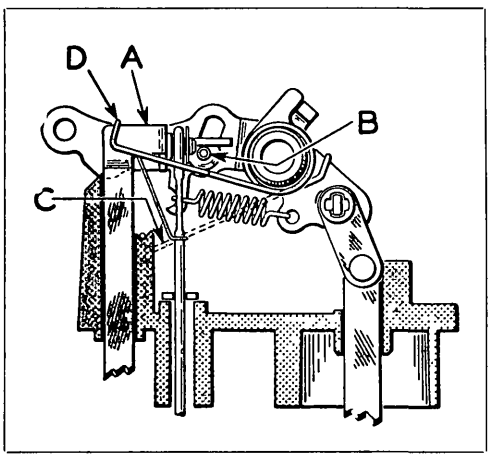


FIG. 1A

For Use Without Governor

1. The carbureter is assembled so that the piston link (A), which operates the metering rod is held in contact with a pin (B) in the pump operating lever at all times by means of a torsion spring (D).

   By unhooking the spring and allowing it to rest on small rib on side of pump link guide (Position C), the carbureter then operates as a vacumeter carbureter. First production carbureters do not have this rib, so be careful that the spring does not rest against metering rod or on metering rod disk as it may interfere with the free operation of the metering rod.

   Early production carbureters have fixed pin in pump arm (Figure 1); later production a removable pin (Figures 1A and 1B).

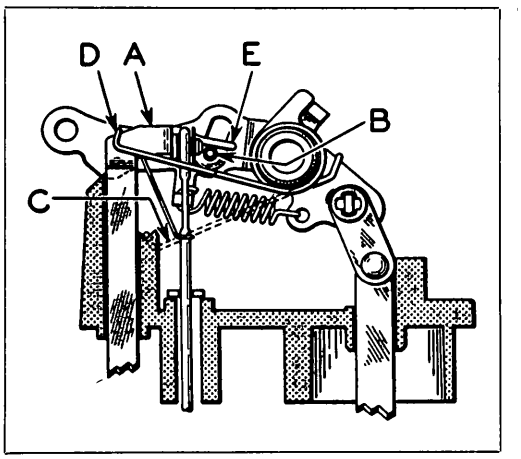


FIG. 1B

For Use With Governor

With the spring unhooked, breaking or cutting off the tongue on the piston link which contacts the pump operating lever pin (break at (A)) in early production carbureters, or removing the pin in late production carbureters, the carbureter may be used with an engine governor. The function is then the same as a vacumeter carbureter—the metering rod moves up to the power step or acceleration and returns to the economy range as the manifold vacuum builds up.

Where maximum economy is paramount, as in city bus service, the pin (B) in the pump operating lever may be used with the pin above the tongue on the piston link. This allows the vacuum, below th

governor, to draw the metering rod to the economy step but limits the movement of the metering rod to the normal mixture corresponding to the throttle position (See chart below).

	With Governor	Without Governor
Early Production (Figure 1) Non-vacumeter operat'n		Use carbureter as is
Vacumeter operation	Hook spring (D) on rib Break off tongue	Hook spring (D) on rib.
Late Production (Figures 1A & 1B) Non-vacumeter operat'n	Hook spring (D) on rib Pump arm pin above tongue	Pump arm pin below tongue Spring (D) hooked on link
Vacumeter operation	Hook spring (D) on rib Pump arm pin removed	Hook spring (D) on rib. Pump arm pin below tongue

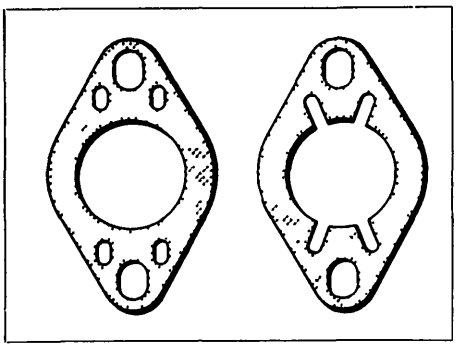


FIG. 2 FIG. 3

2.

When operating with a governor a gasket must be used as shown in Fig. 2. Otherwise the gasket as shown in Fig. 3 is used.

3.

A high speed needle is to be found in the bowl cover behind the pump lever bearing post as shown in Fig. 4. To adjust the carbureter for best economy, with the engine warmed up, speed up engine on floor, with the throttle stop screw or hand throttle, to a speed corresponding to approximately 30 miles per hour. With a small screw driver, screw high speed needle in a clockwise direction until the engine begins to lose speed. Turn screw back in anti-clockwise direction until the maximum speed is attained.

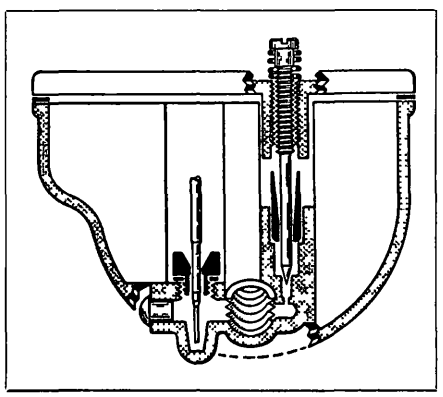


FIG. 4

4.

The groove in the carbureter flange (see D, Fig 5) connects the passage to the vacuum piston, the hole in the governor and, on the automatic choke carbureter, the passage to the choke housing.

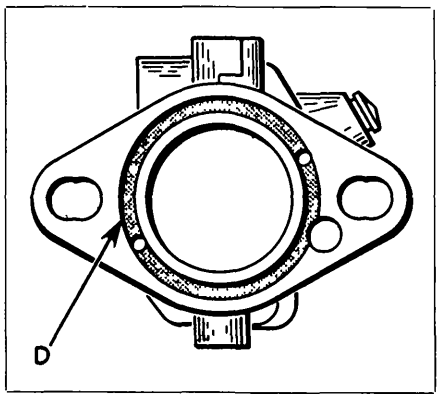


FIG. 5

5. **Pump Adjustment:**

The pump stroke may be varied to suit, by loosening the nut on the pump link (F. Fig. 6) and sliding the upper end of the link away from the center of the pump shaft for greater pump stroke, and toward the shaft for less stroke, to suit conditions. (Standard setting is 20/64".)

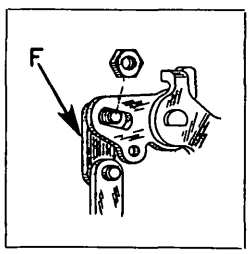
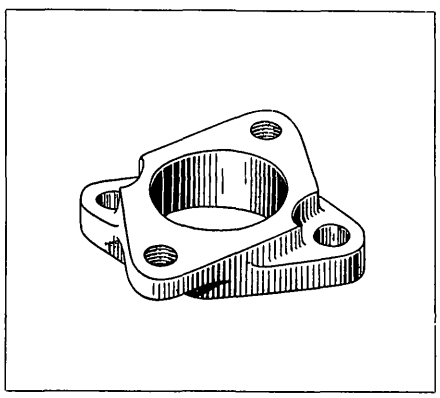


FIG. 6

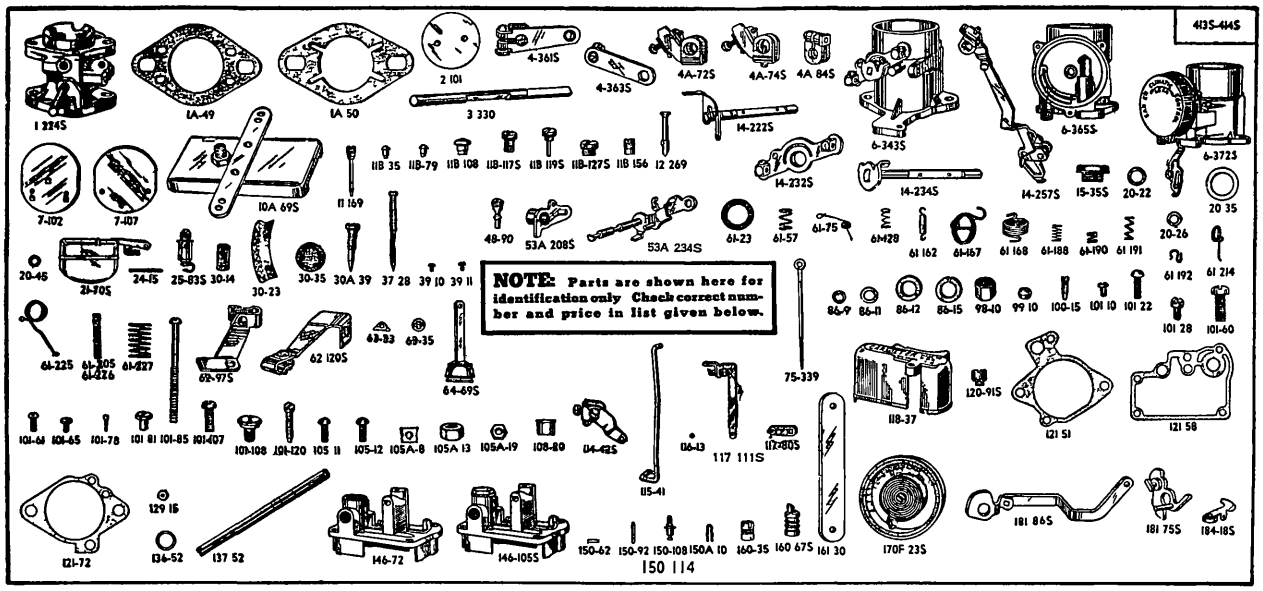
ADAPTOR FLANGES



Two adaptor flanges are available for use in making 413S or 414S installations on a number of cars. They are cross style flanges, 11/16" in height, 13/32" end holes, no thread on manifold side.

SPECIFICATIONS:

Number	Flange Size	Manifold Centers
72-42	1¼" S. A. E.	2-11/16"
72-43	1½" S. A. E.	2-15/16"



Carbureters 413S-414S

USE GASKET ASSORTMENT 162; REPAIR PACKAGE 1094A FOR 413S, 1095A FOR 414S

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	PART NAME	
1-224S	Body flange assembly	
1A-49	FLANGE GASKET (for use with governor)	
1A-50	FLANGE GASKET (for use without governor)	
2-101	Throttle valve	
3-330	Throttle shaft	
4-363S	Throttle lever assembly (loose)	
4-405S	Throttle lever assembly	
4A-72S	Throttle shaft dog assembly (413S)	
4A-74S	Throttle shaft dog assembly (414S)	
4A-84S	Throttle shaft dog assembly (loose lever)	
6-343S	Air horn assembly (413S)	
6-365S	Air horn and piston housing assembly (414S)	
6-372S	Air horn and Climatic® control assembly (414S)	
7-102	Choke valve (413S)	
7-107	Choke valve (414S)	
10A-69S	Manifold stove assembly (414S)	
11-169S	LOW SPEED JET ASSEMBLY	
11B-33	**Vacuum spark port plug	
11B-35	Rivet plug	
11B-79	Rivet plug	(5)
11B-108	Idle port rivet plug	(2)
11B-117S	Idle passage plug assembly	
11B-119S	Ball retainer screw plug assembly	
11B-127S	Nozzle passage plug assembly	(2)
11B-156	Nozzle retainer plug	
12-269	Nozzle	
14-222S	Choke piston lever, link and shaft assembly (414S)	
14-232S	Choke lever assembly (413S)	
14-234S	Choke lever and shaft assembly (413S)	
14-257S	Choke lever, screw and link assembly (414S)	
15-35S	Strainer nut assembly	
20-22	Needle seat and plug gasket	(3)
20-26	Plug gasket	(3)
20-35	Bowl strainer gasket	
20-45	NOZZLE GASKET	
21-70S	Float and lever assembly	
24-15	Float lever pin	
25-83S	NEEDLE AND SEAT ASSEMBLY	
30 14	Bowl strainer gauze	
30-23	PISTON HOUSING STRAINER (414S)	
30-35	PUMP STRAINER	
30A-39	Idle adjustment screw	
37-28	High speed adjustment screw	
39-10	CHOKE VALVE ATTACHING SCREW	(2)
39-11	Throttle valve attaching screw	(2)
48-90	PUMP JET	
53A-208S	Pump arm and collar assembly	
53A-277U	Pump operating lever and link unit (Consists of one 53A-234S and one 117-111S)	
61-23	Plunger spring	
61-57	Adjustment screw spring	
61-75	Metering rod spring	
61-128	Connector rod spring (Use with 115-41)	(2)
61-168	Choke valve spring (413S)	
61-188	Rocker arm spring	
61-190	Connector link spring (choke) (413S)	
61-191	High speed adjustment screw spring	
61-192	Needle pull clip	
61-196	Choke lever spring (413S)	
61-205	VACUUM PISTON SPRING (414S)	
61-214	Trip lever spring (414S)	
61-225	Vacumeter hold down spring	
61-226	VACUUM PISTON SPRING (413S)	
61-227	Pump spring	
61-228	Pump operating lever spring (414S)	
61-271	Pump operating lever spring (413S)	
62-97S	Choke tube clamp assembly (413S)	
62-120S	Throttle tube clamp assembly	
63-33	Thermostat housing retainer (414S) (Use with 170F-23S)	(3)
63-48	Thermostat housing retainer (414S) (Use with 170F-64S)	(3)
63-93	Spring retainer (Clinch ears over after assembly) (Use with 115-41)	
64-69S	X PLUNGER AND ROD ASSEMBLY (Identify by shaft No 49-123)	
75-339	★METERING ROD— 076"- 076 to 066'- 042"	
86-15	Flange stud lock washer	(2)
98-10	Comp coupling nut (heat tube) (414S)	(2)
99-10	Comp coupling cone (heat tube) (414S)	(2)
100-15	Headless screw	
101-10	Tube clamp and loose lever attaching screw	(3)
101-26	Coil housing attaching screw (414S) (Use with 170F-64S)	(3)
101-28	Throttle shaft arm and tube clamp screw	(2)
101-65	Coil housing attaching screw (414S) (Use with 170-23S)	(3)
101 78	Choke lever clamp screw (414S)	
101-81	Fast idle cam screw (414S)	
101-85	Manifold stove attaching screw (414S)	(2)
101-108	Fast idle cam screw (413S)	
101-120	Throttle lever adjusting screw	
101 143S	Air horn attaching screw and washer assembly	
101-147S	Body flange attaching screw and washer assembly	(2)
101-148S	Bowl cover attaching screw and washer assembly	(5)
101-151S	Air horn attaching screw and washer assembly	(2)
105-11	Tube clamp screw	(2)
105-12	Throttle lever and loose lever dog clamp screw	(2)
105A-8	Clamp screw nut	(4)
105A-13	Flange nut	(2)
105A 27	Pump link pin and countershaft hex nut	(2)
108 20	Choke lever spacer (413S)	
114-42S	THROTTLE SHAFT ARM AND SCREW ASSEMBLY	
115-41	Throttle connector rod (Sup by 115-122)	
115-122	THROTTLE CONNECTOR ROD	
116-13	BALL	(2)
117-80S	Pump link and pin assembly	
117-111S	Piston link and spring assembly (Use 53A-277U)	
118-28	Dust cover	
118-37	Dust cover (Sup by 118-28)	
120-91S	METERING ROD JET ASSEMBLY	
121-51	AIR HORN GASKET	
121-58	BOWL COVER GASKET	
121-72	BODY FLANGE GASKET	
121-74	COIL HOUSING GASKET (414S)	
129-15	Metering rod disk	
136 52	Spring washer (413S)	
137-52	Heat tube (Climatic® control) (414S)	
146 105S	Bowl cover and strainer assembly	
150-62	Piston pin (414S)	
150-92	Anti-percolator pin	
150-108	Connector link pin (upper)	
150-118	Counter pin	
150A 10	PIN SPRING	(3)
160-35	Choke piston (414S)	
160 67S	Vacuum piston and pin assembly	
161-30	Stove clamp plate (414S)	
170F-23S	Thermostatic housing and coil assembly (414S) (Sup by 170F-64S)	
170F 64S	Thermostatic coil and housing assembly (414S)	
170F-64SU	Unitized package (Consists of 1—170F-64S, 3—63-48, 3—101-26 1—121-74) (414S)	
172 21	THROTTLE CONNECTOR ROD RETAINER (Use with 115-122)	
181-75S	Fast idle cam and pin assembly (414S)	
181-86S	Fast idle cam and link assembly (413S)	
184-18S	ANTI-PERCOLATOR CAP AND ROCKER ARM ASSEMBLY	

**Remove this plug when car is equipped with vacuum operated distributor

★ Leaner or richer size metering rods are not necessary as the high speed needle can be used to lean or richen the mixture as desired

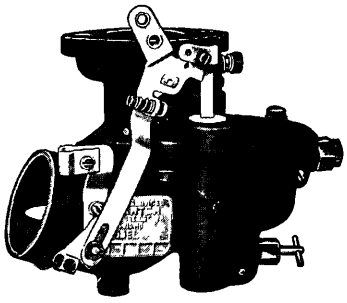
X 64-76S Plunger and rod assembly should be used to replace 64-69S to increase pump delivery when used on heavy duty truck installations

Form 4360R
Replacing All Previous Forms

CARTER CARBURETOR BB1-BB1A-BB1D-245S-245SA-245SD-289S-289SD

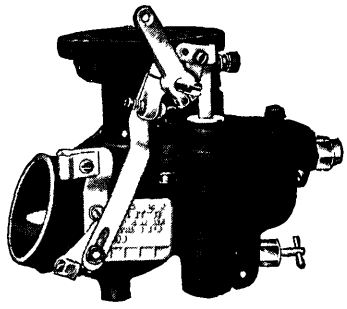
DIVISION OF acf INDUSTRIES INCORPORATED
ST LOUIS, MO, U S A

December, 1934
Revised June, 1956



BB1-245S—1 inch Flange Size
BB1-Special—1¼ inch Flange Size
(BB1A or BB1D, 245SA or 245SD can be used in place of the above.)
(289SD can be used in place of 289S)

BB1-BB1A-BB1D-
245S-245SA-245SD
289S-289SD



245SA-245SD—1 inch Flange Size
BB1A-BB1D—1¼ inch Flange Size
289S-289SD—1½ inch Flange Size

THE CARBURETERS

BB1 and 245S carbureters have throttle lever riveted on shaft BB1A 245SA and 289S carbureters have throttle lever adjustable on shaft to facilitate installation where variations occur in the length of the accelerator or hand throttle rods

BB1D, 245SD and 289SD carbureters have die-cast lower body.

Early production 245SD BB1D and 289SD used float lever pin and plug assembly inserted from outside of body

Later production (starting October 1, 1945 designated as H-45 on inspection tag) uses float pin and pin retainer in slot in bowl

CARBURETER ADJUSTMENTS

High Speed Adjustment

Adjustable main metering screw controls fuel supply above idling speed Turning screw in, gives leaner mixture Turning screw out, gives richer mixture In adjusting, do not sacrifice power or performance for economy

After motor has reached normal running temperature and correct idle adjustment has been made open throttle to about 35 miles per hour engine speed Turn metering screw OUT until motor reaches maximum speed, then IN until engine speed starts to decrease Now open screw slowly until motor reaches maximum speed This adjustment will give maximum power and economy

Idle Adjustment

First, set throttle lever adjusting screw so that motor runs approximately 300 rpm Then set idle adjustment screw so that motor fires evenly (Most mechanics prefer to use a vacuum gauge setting idle adjusting screw to highest vacuum)

Note A richer mixture is obtained by backing out adjustment screw—a leaner mixture by turning screw in

The Accelerating Pump

The pump operates in a well in the body casting At opening of throttle, pump discharges through main nozzle starting a flow of fuel through nozzle from main float chamber and supplying instantly the excess fuel necessary for prompt acceleration

Pump link is provided with two holes to receive pump link screw giving short and long strokes to pump piston For winter driving in Northern climates link screw should be set in outer (top) hole which gives longer stroke supplying maximum quantity of fuel for acceleration

If this does not give desired results the main metering jet check valve assembly and pump valve assembly should be removed and cleaned with compressed air

If Motor Loads—Check Float Level

To check float level remove upper casting from float chamber Remove body gasket and place gauge T109-49 across machined edges of float chamber Hold lip of float firmly against end of seated needle

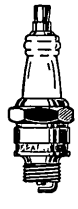
Top of float (not soldered seam) should just touch float gauge

Before adjusting float see that float lever pin plug is firmly seated To lower float level bend lip of float lever toward needle To raise float level bend lip away from needle A very slight bend is usually sufficient

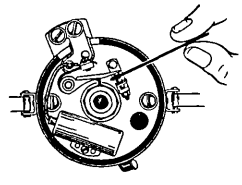
Be sure to bend lip of float not bracket holding lip against needle with needle firmly seated

Motor Tune-Up—Be Accurate!

CAUTION Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



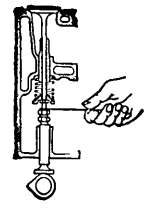
Set Spark Plug Gap



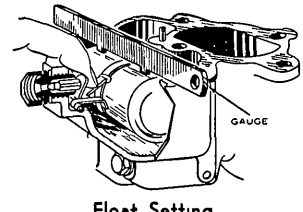
Set Breaker Points



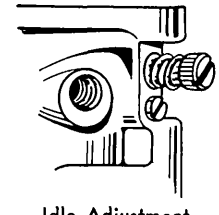
Adjust Ignition Timing Use Timing Light



Set Valves to Specification



Float Setting (Use Gauge) 1/32"-1/16" Below Top Edge of Casting



Idle Adjustment Screw Setting ¼ to 1¼ Turns Open

These adjustments must be accurate and in conformity with manufacturer's specifications.

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CARBURETER
TRADE MARK REG U S PAT. OFF.
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PRINTED IN U S A

CARBURETER SPECIFICATIONS

Dimensi ns: (BBI-BBIA-BBID-245S-245SA-245SD) Flange size, 1¼ in. (31.75 mm) (245SA and 245SD have 1¼ in. (SAE) flange but holes drilled for 1 in. manifold).

(289S-289SD) Flange size, 1½ in. (38.10 mm).

Throttle bore, 1-7/16 in. (36.51 mm).

(BBI BBIA-BBID-245S-245SA-245SD) Main venturi, 1 in. (25.40 mm) I D. Air bleed through venturi, to idle passage, .085 to .087 in. diameter (2.15 to 2.20 mm) drill.

(289S 289SD) Main venturi, 1-1/16 in. (26.99 mm) I. D. Air bleed through venturi to idle passage, .0885 to .0905 in. diameter (2 25 to 2.30 mm) drill.

Float Setting: Top of float 1/32 in. to 1/16 in. (.79 to 1.59 mm) below top surface of lower body.

Vent: (To Float Chamber) Outside, Size: No. 30 (3.26 mm) drill.

Gasoline Intake Needle: Triangular, horizontal. No. 38 (2.58 mm) drill in needle seat, 25-44S. (No. 31 (3.048 mm) drill 25-46S, used with vacuum tank or gravity feed only.)

Idle Jet Tube: Jet size, .0236 in. (.60 mm) drill.

Idle Ports: Lower port size: .062 to .064 in. (1.58 to 1.63 mm) diameter. Top of port located .005 to .009 in. (.13 to .23 mm) below lower edge of valve.

Upper port size: .053 to .057 in. (1.35 to 1.45 mm) diameter (for idle adjustment screw).

Set Idle Adjustment Screw: ¼ to 1¼ turns open. For richer mixture, turn screw out. Do not idle engine below 300 r.p.m. or 6 miles per hour.

Main Metering Screw: Adjustable.

Nozzle: No. 33 (2.87 mm) drill.

Accelerating Jets:
2—.0394 in. (1.00 mm) drill 1/16 in. (1.59 mm) from shoulder.
1—.051 in. (1.3 mm) drill ⅜ in. (9.53 mm) from shoulder.
1—.063 in. (1.6 mm) drill 23/32 in. (18.26 mm) from shoulder.
1—.051 in. (1.3 mm) drill 1-1/16 in. (26 99 mm) from shoulder.

Air Bleed to Nozzle: (BBI-BBIA-BBID-245S-245SA-245SD) Size· .0275 to .0295 in. (.70 to .75 mm) drill.

(289S-289SD) Size· .0384 to .0404 in. (1 mm) drill.

Step-up Jet: (Power Orifice) (BBI-BBIA-BBID-245S-245SA-245SD) .0315 in. (80 mm) drill.

(289S-289SD) .0354 in. (.90 mm) drill.

Accelerating Pump: Type, low pressure, delayed action.

Stroke: Summer setting (inner hole, short stroke) 9/16 in. (14.29 mm).

Stroke: Winter setting (outer hole, long stroke) 1 in. (25.40 mm).

Pump intake ball check: size ⅛ in. (3.18 mm).

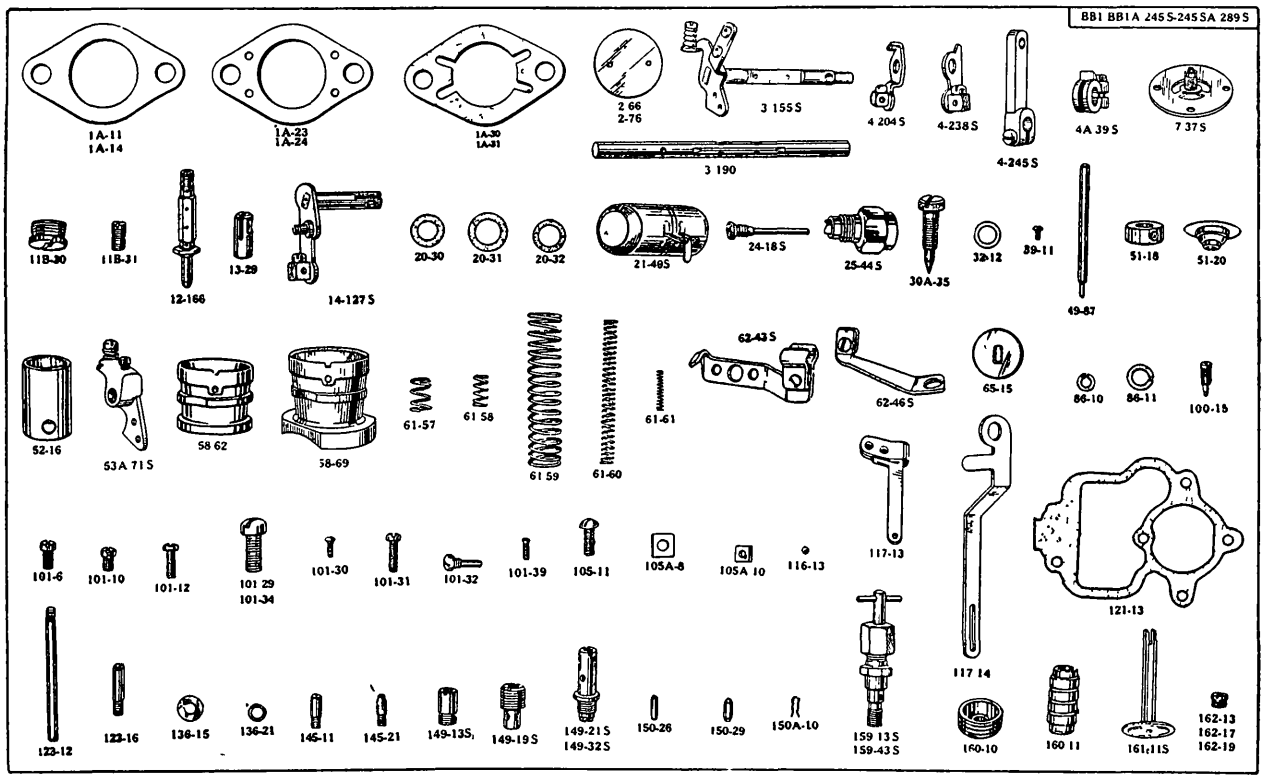
Pump discharge jet (in pump valve cage assembly) No. 52 (1.61 mm) drill size.

Choke: Butterfly type, with poppet valve.

Tube Clamps: On air intake and under body attaching screw.

Throttle Lever: Adjusting—on left side. Loose lever on right side.

Note: Parts shown below are for identification only. Check number and price in list given on Page 3.



Models BB1, BB1A, BB1D, 245S, 245SA and 245SD

Models 289S and 289SD

WHEN SERVICING, USE GASKET ASSORTMENT No 101A

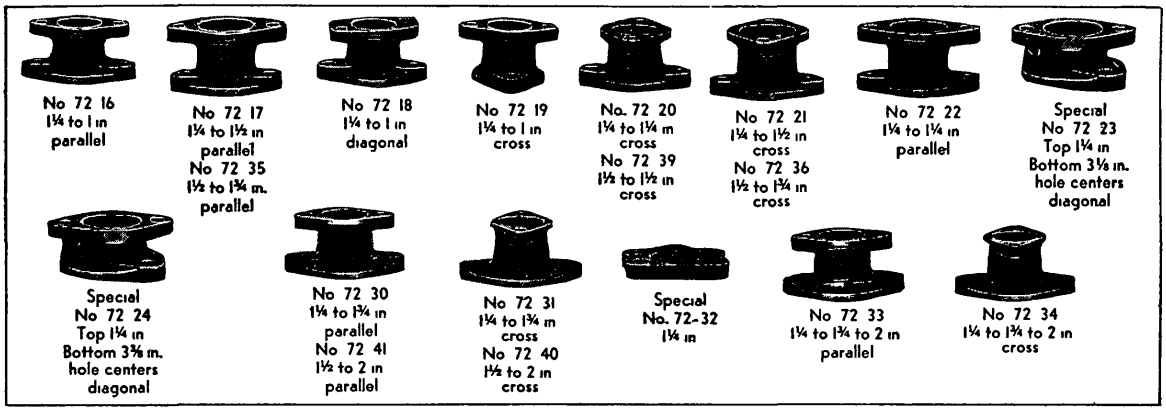
Part No.	PART NAME
1A-11	Flange gasket (BB1 245S)
1A-23	★Flange gasket (with governor) (BB1A BB1D)
1A-24	★Flange gasket (with governor) (289S 289SD)
1A-30	Flange gasket (without governor) (BB1A BB1D)
1A-31	Flange gasket (without governor) (289S 289SD)
1A-54	Flange gasket (245SA 245SD)
2-66	Throttle valve (BB1 245S)
2-76	Throttle valve (BB1A BB1D 245SA 245SD 289S 289SD)
3 155S	Throttle shaft and lever assembly (BB1 245S)
3-190	Throttle shaft (BB1A BB1D 245SA 245SD 289S 289SD)
4-204S	Throttle lever assembly (loose) (BB1 245S)
4-238S	Throttle lever assembly (loose) (BB1A BB1D 245SA 245SD 289S 289SD)
4-245S	Throttle lever assembly (BB1A BB1D 245SA 245SD 289S 289SD)
4A-39S	Throttle shaft dog assembly (BB1A BB1D 245SA 245SD 289S 289SD)
7-37S	Choke valve assembly (All)
11B-12	Rivet plug (BB1 BB1A 245S 245SA 289S)
11B-26	Rivet plug (BB1 BB1A 245S 245SA 289S)
11B-30	Step up piston plug (All)
11B-31	Idle hole plug (All)
11B-33	Spark control passage plug (BB1A BB1D 245SA 245SD)
11B-41	Rivet plug (245SD BB1D 289SD)
11B-79	Rivet plug (245SD BB1D 289SD)
12-166	‡Nozzle (All)
13-29	Choke shaft (stub) (All)
14-127S	Choke assembly with clamp and screw (All)
20-30	‡Nozzle gasket (All)
20-31	Needle seat gasket (All)
20-32	Metering screw gasket (All)
21-49S	Float and lever assembly (All)
24-18S	Float lever pin and plug assembly (245S 245SA BB1 BB1A-289S and early models of 245SD BB1D 289SD)
24-23	Float lever pin (Late models of 245SD BB1D 289SD)
25-44S	Needle and seat assembly (For cars with fuel pump) (All)
25-46S	Needle and seat assembly (For cars with vacuum tank or gravity feed) (All)
30A-35	Idle adjustment screw (All)
32-12	Pump rod gasket (All)
39-11	Throttle valve screw (BB1 245S)
49-87	Step up push rod (All)
51-18	Throttle shaft collar (BB1 245S)
51-20	Pump collar (All)
52-16	Pump sleeve (All)
53A-71S	Pump arm assembly (BB1A BB1D 245SA 245SD 289S 289SD)
58-62	Venturi (BB1 BB1A BB1D 245S 245SA 245SD)
58-69	Venturi (289S 289SD)
61-57	Idle adjustment screw spring (All)
61-58	Throttle lever adjusting screw spring (All)
61-59	Pump spring (All)
61-60	Step up piston spring (All)
61-61	Step up spring (All)
62-43S	Choke tube bracket assembly (All)
62 46S	Tube clamp assembly (All)
63 24	Float lever pin retainer (Late models of 245SD BB1D 289SD)
65-15	Pump link coverplate (All)
71A-17	Flange stud (All)
86-10	Lock washer (Use with 101 6) (All)
86-15	Lock washer (All)
100-15	Collar screw (All)
101-6	Choke bracket attaching screw (Sup by 101 142S) (All)
101-10	Wire clamp screw (All)
101-12	Choke tube bracket clamp screw (All)
101-29	Body attaching screw (Sup by 101 151S) (BB1 BB1A 245S 245SA 289S)
101-30	Choke valve screw (All)
101-31	Throttle lever adj screw (Sup by 101 58) (All)
101-32	Pump link screw (All)
101-34	Throttle lever clamp screw (Sup by 105 12) (BB1A BB1D 245SA 245SD 289S 289SD)
101-39	Throttle valve screw (BB1A BB1D 245SA 245SD 289S 289SD)
101-57	Body attaching screw (Sup by 101 234S) (BB1D 245SD 289SD)
101 58	Throttle lever adjusting screw (All)
101-142S	Choke bracket attaching screw and washer assembly (All)
101-151S	Body flange attaching screw and washer assembly (BB1 BB1A 245S 245SA 289S)
101-234S	Body flange attaching screw and washer assembly (BB1D 245SD 289SD)
105-11	Tube clamp screw (All)
105-12	Throttle lever clamp screw (BB1A BB1D-245SA-245SD 289S 289SD)
105A-8	Tube clamp nut (All) (2)
105A-10	Choke tube clamp nut (All)
105A-13	Flange nut (All)
116-13	Ball (All)
117-13	Pump link (All)
117-14	Choke link (All)
121-13	Body gasket (BB1 BB1A 245S 245SA 289S)
121-126	Body gasket (BB1D 245SD 289SD) (Sup by 121 168)
121-168	Body gasket (BB1D 245SD 289SD)
123-12	Idle passage tube (All)
123-16	Idle orifice tube (All)
136-15	Choke link washer (All)
136-21	Float lever pin plug washer (BB1 BB1A 245S 245SA 289S early production of BB1D 245SD 289SD)
145-11	Vent tube (BB1 BB1A BB1D 245S 245SA 245SD)
145-21	Vent tube (289S 289SD)
149-13S	Check valve assembly (All)
149-19S	Pump valve assembly (All)
149 21S	Step up valve assembly (BB1 BB1A BB1D 245S 245SA 245SD)
149-32S	Step up valve assembly (289S 289SD)
150-26	Pump collar pin (All)
150-29	Venturi pin (All)
150A-10	Pin spring (All)
159-13S	Adj main metering screw and needle assembly (Sup by 159 43S) (BB1 BB1A 245S 245SA)
159-43S	Adjustable main metering screw assembly (All)
160-10	Pump piston (All)
160-11	Step up piston (All)
161-11S	Pump rod plate and rod assembly (All)
162-13	Power orifice (BB1 BB1A BB1D 245S 245SA 245SD)
162-17	†Power orifice (289S 289SD)
162-19	Power orifice (289S 289SD)

‡When servicing 289S and 289SD carbureters two nozzle gaskets No 20 30 should be installed beneath nozzle No 12 166

†This power orifice (1 mm) may be used when installations are made on motors originally equipped with 1¾ inch or larger units

★This gasket to be installed between carbureter and governor when governor is installed Original flange gasket to remain between governor and manifold

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.



CARTER FLANGE ADAPTORS

(SIZES GIVEN ARE STANDARD S A E BOLT CENTERS)

These adaptors have been designed to make possible the installation of the Carter BB1A 245SA and 289S Carbureters on a number of cars These adaptors all have carbureter end drilled with two 13/32" holes spaced 2 11/16" center to center to fit carbureter flange Drillings of manifold ends of adaptors are shown below

Adaptor	Manifold Flange Size	Manifold End Holes	Manifold Centers
72-16	1 inch S A E.	2 holes 5/16-inch—18 thread	2⅜ inches
72-17	1½-inch S A.E	2 holes ⅜-inch—16 thread	2-15/16-inches
72-18	1 -inch S.A E	2 holes 11/32-inch No thread	2⅜ inches
72-19	1 -inch S.A E	2 holes 5/16-inch—18 thread	2⅜ inches
72-20	1¼-inch S.A E	2 holes ⅜-inch—16 thread	2-11/16-inches
72-21	1½-inch S.A E.	2 holes ⅜-inch—16 thread	2-15/16-inches
72-22	1¼-inch S.A E	2 holes 13/32-inch—No thread	2-11/16-inches
*72 23	1½-inch S.A E	2 holes 13/32-inch—No thread	3⅛-inches
*72-24	1½-inch S A E	2 holes 13/32-inch—No thread	3⅜-inches
72-30 & 72-31	1¾-inch S A E	2 holes 7/16-inch—14 thread	3-5/16-inches
★72-32	1½-inch S.A E	2 holes 11/32-inch—No thread	2-15/16-inches
72-33 & 72-34	1¾ or 2-inch S.A E	Not drilled	
72-35 & 72-36	1¾-inch S A E	2 holes 7/16-inch—14 thread	3-5/16-inches
72-39	1½-inch S A E	2 holes ⅜-inch—16 thread	2-15/16-inches
72-40 & 72-41	2 -inch S A E	2 holes 7/16-inch—14 thread	3-9/16-inches
72-43	1½-inch S.A E	2 holes 13/32-inch—No thread	2-15/16-inches
72-44	1½-inch S.A E.	2 holes 13/32-inch—No thread	2-15/16-inches

*Buick installations require B-19S Dash Choke Control Assembly and 92-11S Throttle Rod Assembly

★Note This flange is supplied unless otherwise specified, with special throttle lever, control rod, etc

The installations listed below have been reported as entirely successful Undoubtedly the "BB1" Carbureters will prove equally adaptable to many other motors of similar characteristics.

Car	Model	Year	Carbureter	Adaptor
Auburn	6-43	1923-25	BB1-245SA	None
Auburn	6-66	1926	BB1-245SA	None
‡Auburn	8-77	1927	BB1A-Special	None
Auburn	6-80	1928-29	BB1A-Special	None
‡Auburn	8 88	1925 27	BB1A-Special	None
Auburn	120	1928-29	BB1A-Special	None
Auburn	DD6	1929	BB1A-Special	None
Auburn "8"	8-100	1932	289	None
Buick	Standard Six		BB1A-Special	72-23
Buick	Master Six		BB1A-Special	72-24
‡Buick	8-50	1931	BB1A-Special	72-24
Chandler	31	1928	BB1-245SA	None
Chandler	65	1929	BB1-245SA	None
Chrysler "4"	58	1925-26	BB1-245SA	None
Chrysler	60 62	1927-28	BB1-245SA	None
Chrysler	70	1925-27	BB1A-Special	72-20
Chrysler	72-75	1927 29	BB1A-Special	72-20
Chrysler	65	1928-29	BB1A-Special	None
Chrysler	80 Imperial	1929	BB1A-Special	72-30
Chrysler	66	1930	BB1A-Special	None
Chrysler	Six	1930	BB1-245SA	None
Chrysler	Six	1931	6B2 Chrysler	None
De Soto	Six "K"	1928-29	BB1 245SA	None
De Soto	Six "K"	1930	BB1 245SA	None
De Soto	Six "K"	1931	6B2	None
Devaux	6-75	1931	BB1A-Special	72-22
Diamond T	Truck Model 290	1930	BB1A-Special	None
‡Dodge	Senior Six	1928-30	BB1-289S	72-39
Dodge	Victory Six	1927-28	BB1A-Special	72-20
Dodge	Standard Six	1927 28	BB1A-Special	72-20
Dodge	Six DA	1929	BB1A-Special	None
Dodge	Six DD	1930	BB1-245SA	None
Dodge	Six DH	1931	6B2 Dodge	None
Durant	6-14	1930-31	BB1A-Special	None
Durant	6-70—6-75	1930	BB1A-Special	None
Erskine	6	1927-29	BB1-245SA	None
Erskine "Dynamic"	6	1930	BB1A-Special	None
Essex	6	1930-31	BB1A-Special	72-32
Falcon-Knight	All		BB1 245SA	None
Flint	35-60-80	1924-26	BB1A-Special	72-20
Flint	A40 B40	1924-26	BB1-245SA	None
Franklin	Six	1927-30	BB1A-Special	None
‡Gardner	Eight	1928	BB1-289S	None
Graham Paige	6-10	1928	BB1A-Special	72-18
Graham Paige	6-19	1928	BB1A-Special	72-33
‡Graham-Paige	16-14	1928	BB1-289S	None
Graham Paige	6-12	1929	BB1A-Special	72-22
‡Graham-Paige	6-15	1929	BB1-289S	None
(Necessary to drill out threads in 1½" (38 10 mm) end of adaptor)				
Graham	8-37	1929	†BB1A-Special	72 30
Graham Paige	Special	1930	BB1A-Special	72-22
Graham	"Standard"	1930	BB1A-Special	72-22

Car	Model	Year	Carbureter	Adaptor
Graham	"Prosperity Six"	1931-32	BB1A-Special	72-22
Graham	Blue Streak	1932	†BB1A-Special	72-17
Graham	"65"	1933	BB1A-Special	72-22
Hupmobile	A-6	1925-27	BB1-245SA	None
Hupmobile	Eight	1927	BB1A-Special	72-20
Hupmobile	Six	1928-31	BB1A-Special	None
International (I.H C)	Truck	1927-8-9	BB1A-Special	None
International	Truck 646	1930-31	BB1A	None
Jewett	644	1922-24	BB1A-Special	None
Jewett		1925-26	BB1A-Special	72 20
La Salle "8"	345C	1931	289	72-41
Marmon	L Eight	1927	BB1A-Special	72-20
Marmon	68-78	1929	†BB1A-Special	72-20
Marmon	69 or Q	1930	†BB1A-Special	72-20
Marmon	70	1931	†BB1A-Special	72-20
Nash	Standard Six	1928-31	BB1A-Special	72-18
Nash	8 Twin Ignition	1931	BB1A	72-24
Oakland	Six "All Am "	1928	BB1A-Special	72-16
Oakland	Six	1929	BB1A-Special	72-22
Oldsmobile	Six	1927-30	BB1-245SA	None
‡Packard	Six	1926-28	BB1 289S	72-39
‡Packard	Eight	1929 -	BB1 289S	72-39
Packard "8"	900	1931-32	289	72-39
Paige	6-45		BB1A-Special	72-17
Pierce-Arrow	81	1928	289	None
Pontiac	Six	1926 7-8	BB1-245SA	None
Pontiac	Six	1929-32	BB1A-Special	72-22
Reo	"Flying Cloud"	1929	BB1A-Special	72-21
Reo	"Mate"	1929	BB1A-Special	72-20
Reo	"Wolverine"	1927-28	BB1A-Special	72-20
Reo	Mdls "T" & "U"	1923-27	BB1A-Special	72-20
Reo	Speed Wagon	1925-26	BB1A-Special	None
Reo	Truck "FA"	1927-28	BB1A-Special	72-20
Reo	Trk "DA"-"DC"	1927-28	BB1A-Special	72-20
Roosevelt	"Eight"	1929	BB1A-Special	72-20
Studebaker	"Light 6"	1919	BB1A-Special	72-20
Studebaker	"Special Six"	1920-25	BB1A-Special	72-20
Studebaker	"Standard Six"	1926-27	BB1A-Special	None
‡Studebaker	"Commander 6"	1927-29	BB1 289S	72-39
Studebaker	"Dictator"	1928 30	BB1A-Special	72-20
‡Studebaker	"Commander 8"		BB1A-Special	72-20
Studebaker	President 8	1931	BB1-289S	72-17
Studebaker	"Fifty-five"	1932	BB1A-Special	None
Whippet	Four	1928	BB1-245SA	None
Whippet	Six	1929-30	BB1-245SA	None
White Truck	45		BB1-289S	72-17
Willys	Six	1930	BB1A-Special	72-16
Willys-Knight	70-70A	1926-29	BB1-245SA	None
Willys-Knight	70B	1926-29	BB1A-Special	72-16
Willys-Knight	6-87	1930	BB1A-Special	72-16
Willys	"6-97"—"6-98D"	1931	BB1A-Special	72 22
Willys "8"	880 98D	1931	BB1A-Special	None
Willys-Knight	"66A"—"66B"	1929-30	BB1A-Special	72-20

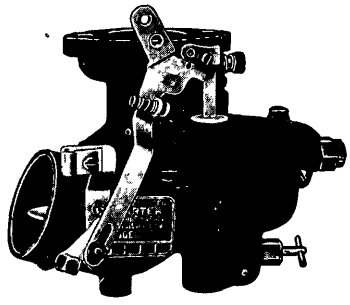
†For constant open throttle driving install power orifice No 162 17

‡When installations are made on these cars install larger power orifice (step up jet) No 162 17

Form 4360R
Replacing All Previous Forms

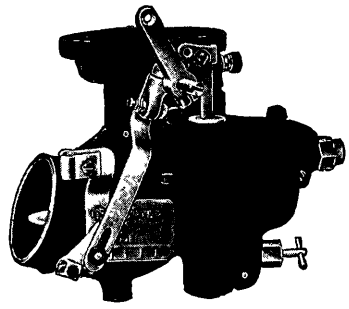
CARTER CARBURETOR

BB1-BB1A-BB1D-245S-245SA-245SD-289S-289SD
DIVISION OF ACF INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.
December, 1934
Revised June, 1956



BB1-245S—1 inch Flange Size
BB1-Special—1¼ inch Flange Size
(BB1A or BB1D, 245SA or 245SD can be used in place of the above.)
(289SD can be used in place of 289S.)

BB1-BB1A-BB1D-
245S-245SA-245SD
289S-289SD



245SA-245SD—1 inch Flange Size
BB1A-BB1D—1¼ inch Flange Size
289S-289SD—1½ inch Flange Size

THE CARBURETERS

BB1 and 245S carbureters have throttle lever riveted on shaft. BB1A, 245SA and 289S carbureters have throttle lever adjustable on shaft to facilitate installation where variations occur in the length of the accelerator or hand throttle rods.

BB1D, 245SD and 289SD carbureters have die-cast lower body.

Early production 245SD, BB1D and 289SD used float lever pin and plug assembly inserted from outside of body.

Later production (starting October 1, 1945, designated as H-45 on inspection tag) uses float pin and pin retainer in slot in bowl.

CARBURETER ADJUSTMENTS

High Speed Adjustment

Adjustable main metering screw controls fuel supply above idling speed. Turning screw in, gives leaner mixture. Turning screw out, gives richer mixture. In adjusting, do not sacrifice power or performance for economy.

After motor has reached normal running temperature and correct idle adjustment has been made, open throttle to about 35 miles per hour engine speed. Turn metering screw OUT until motor reaches maximum speed, then IN until engine speed starts to decrease. Now open screw slowly until motor reaches maximum speed. This adjustment will give maximum power and economy.

Idle Adjustment

First, set throttle lever adjusting screw so that motor runs approximately 300 rpm. Then set idle adjustment screw so that motor fires evenly. (Most mechanics prefer to use a vacuum gauge, setting idle adjusting screw to highest vacuum.)

Note: A richer mixture is obtained by backing out adjustment screw—a leaner mixture by turning screw in.

The Accelerating Pump

The pump operates in a well in the body casting. At opening of throttle, pump discharges through main nozzle, starting a flow of fuel through nozzle from main float chamber and supplying instantly the excess fuel necessary for prompt acceleration.

Pump link is provided with two holes to receive pump link screw, giving short and long strokes to pump piston. For winter driving, in Northern climates, link screw should be set in outer (top) hole, which gives longer stroke, supplying maximum quantity of fuel for acceleration.

If this does not give desired results, the main metering jet, check valve assembly and pump valve assembly should be removed and cleaned with compressed air.

If Motor Loads—Check Float Level

To check float level, remove upper casting from float chamber. Remove body gasket and place gauge T109-49 across machined edges of float chamber. Hold lip of float firmly against end of seated needle.

Top of float (not soldered seam) should just touch float gauge.

Before adjusting float, see that float lever pin plug is firmly seated. To lower float level, bend lip of float lever toward needle. To raise float level, bend lip away from needle. A very slight bend is usually sufficient.

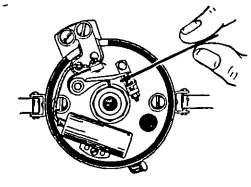
Be sure to bend lip of float, not bracket, holding lip against needle with needle firmly seated.

Motor Tune-Up—Be Accurate!

CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carbureter.



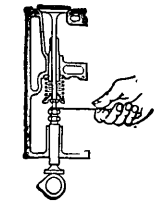
Set Spark Plug Gap



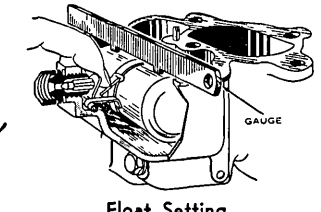
Set Breaker Points



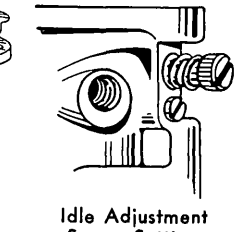
Adjust Ignition Timing Use Timing Light



Set Valves to Specification



Float Setting (Use Gauge) 1/32"-1/16" Below Top Edge of Casting



Idle Adjustment Screw Setting ¼ to 1¼ Turns Open

These adjustments must be accurate and in conformity with manufacturer's specifications.

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CARBURETER
TRADE MARK REG. U. S. PAT. OFF.
MARCA REGISTRADA

PRINTED IN U.S.A.

CARBURETER SPECIFICATIONS

Dimensi ns (BBI BBIA BBID 245S 245SA 245SD) Flange size 1¼ in (31 75 mm) (245SA and 245SD have 1¼ in (SAE) flange but holes drilled for 1 in manifold)

(289S 289SD) Flange size 1½ in (38 10 mm)

Throttle bore 1 7/16 n (36 51 mm)

(BBI BBIA BBID 245S 245SA 245SD) Main venturi 1 in (25 40 mm) 1 D Air bleed through venturi to idle passage 085 to 087 in diameter (2 15 to 2 20 mm) drill

(289S 289SD) Main venturi 1 1/16 in (26 99 mm) 1 D Air bleed through venturi to idle passage 0885 to 0905 in diameter (2 25 to 2 30 min) drill

Float Setting Top of float 1/32 in to 1/16 in (79 to 1 59 mm) below top surface of lower body

Vent (To Float Chamber) Outside Size No 30 (3 26 mm) drill

Gasoline Intake Needle Triangular horizontal No 38 (2 58 mm) drill in needle seat 25 44S (No 31 (3 048 mm) drill 25 46S used with vacuum tank or gravity feed only)

Idle Jet Tube Jet size 0236 in (60 mm) drill

Idle Ports Lower port size 062 to 064 in (1 58 to 1 63 mm) diameter Top of port located 005 to 009 in (13 to 23 mm) below lower edge of valve

Upper po t size 053 to 057 in (1 35 to 1 45 mm) diameter (for idle adjustment screw)

Set Idle Adjustment Screw ¼ to 1¼ turns open For richer mixture turn screw out Do not idle engine below 300 r p m or 6 miles per hour

Main Metering Screw Adjustable

Nozzle No 33 (2 87 mm) drill

Accelerating Jets
2— 0394 in (1 00 mm) drill 1/16 in (1 59 mm) from shoulder
1— 051 in (1 3 mm) drill ⅜ in (9 53 mm) from shoulder
1— 063 in (1 6 mm) drill 23/32 in (18 26 mm) from shoulder
1— 051 in (1 3 mm) drill 1 1/16 in (26 99 mm) from shoulder

Air Bleed to Nozzle (BBI BBIA BBID 245S 245SA 245SD) Size 0275 to 0295 in (70 to 75 mm) drill

(289S 289SD) Size 0384 to 0404 in (1 mm) drill

Step up Jet (Power Orifice) (BBI BBIA BBID 245S 245SA 245SD) 0315 in (80 mm) dr ll

(289S 289SD) 0354 in (90 mm) drill

Accelerating Pump Type low pressure delayed action

Stroke Summer setting (inner hole short stroke) 9/16 in (14 29 mm)

Stroke Winter setting (outer hole long stroke) 1 in (25 40 mm)

Pump intake ball check size ⅛ in (3 18 mm)

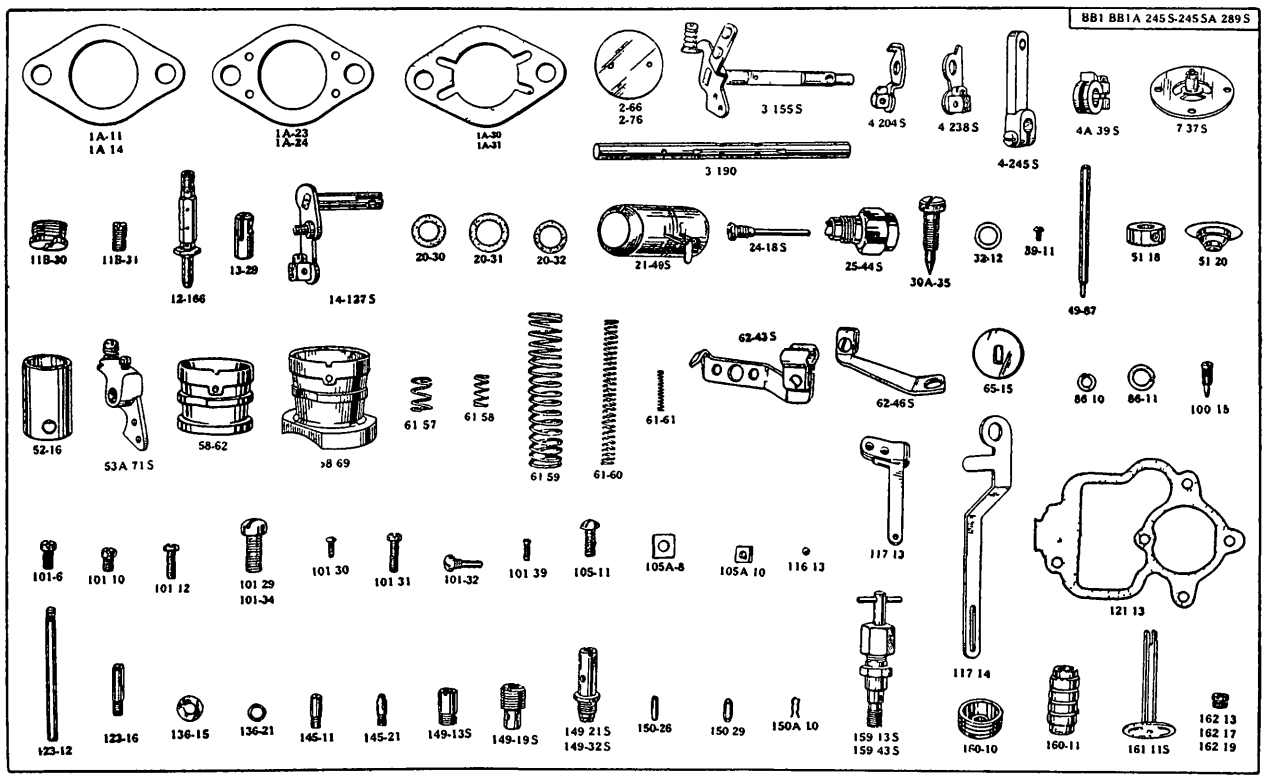
Pump discharge jet (in pump valve cage assembly) No 52 (1 61 mm) drill size

Choke Butterfly type with poppet valve

Tube Clamps On air intake and under body attaching screw

Throttle Lever Adjusting—on left side Loose lever on right side

Note: Parts shown below are for identification only. Check number and price in list given on Page 3.



Models BB1, BB1A, BB1D, 245S, 245SA and 245SD

Models 289S and 289SD

WHEN SERVICING, USE GASKET ASSORTMENT No 101A

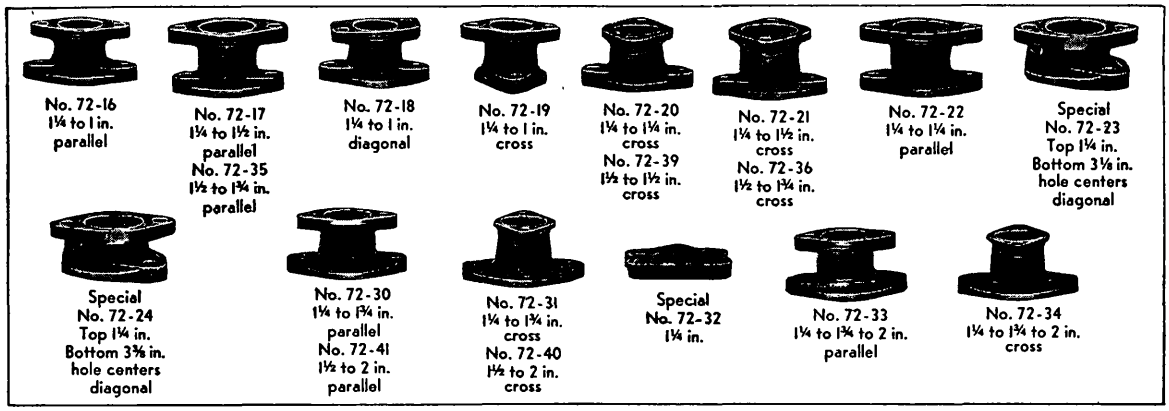
Part No.	PART NAME
1A-11	Flange gasket (BB1 245S)
1A-23	★Flange gasket (with governor) (BB1A BB1D)
1A-24	★Flange gasket (with governor) (289S 289SD)
1A-30	Flange gasket (without governor) (BB1A BB1D)
1A-31	Flange gasket (without governor) (289S 289SD)
1A-54	Flange gasket (245SA 245SD)
2-66	Throttle valve (BB1 245S)
2-76	Throttle valve (BB1A BB1D 245SA 245SD 289S 289SD)
3-155S	Throttle shaft and lever assembly (BB1 245S)
3-190	Throttle shaft (BB1A BB1D 245SA 245SD 289S 289SD)
4-204S	Throttle lever assembly (loose) (BB1 245S)
4-238S	Throttle lever assembly (loose) (BB1A BB1D 245SA 245SD 289S 289SD)
4-245S	Throttle lever assembly (BB1A BB1D 245SA 245SD 289S 289SD)
4A-39S	Throttle shaft dog assembly (BB1A BB1D 245SA 245SD 289S 289SD)
7-37S	Choke valve assembly (All)
11B-12	Rivet plug (BB1 BB1A 245S 245SA 289S)
11B-26	Rivet plug (BB1 BB1A 245S 245SA 289S)
11B 30	Step up piston plug (All)
11B-31	Idle hole plug (All)
11B-33	Spark control passage plug (BB1A BB1D 245SA 245SD)
11B-41	Rivet plug (245SD BB1D 289SD)
11B-79	Rivet plug (245SD BB1D 289SD)
12-166	‡Nozzle (All)
13-29	Choke shaft (stub) (All)
14-127S	Choke assembly with clamp and screw (All)
20-30	‡Nozzle gasket (All)
20-31	Needle seat gasket (All)
20-32	Metering screw gasket (All)
21-49S	Float and lever assembly (All)
24-18S	Float lever pin and plug assembly (245S 245SA BB1 BB1A 289S and early models of 245SD BB1D 289SD)
24-23	Float lever pin (Late models of 245SD BB1D 289SD)
25-44S	Needle and seat assembly (For cars with fuel pump) (All)
25-46S	Needle and seat assembly (For cars with vacuum tank or gravity feed) (All)
30A-35	Idle adjustment screw (All)
32-12	Pump rod gasket (All)
39-11	Throttle valve screw (BB1 245S)
49-87	Step up push rod (All)
51-18	Throttle shaft collar (BB1 245S)
51-20	Pump collar (All)
52-16	Pump sleeve (All)
53A-71S	Pump arm assembly (BB1A BB1D 245SA 245SD 289S 289SD)
58 62	Venturi (BB1 BB1A BB1D 245S 245SA 245SD)
58-69	Venturi (289S 289SD)
61-57	Idle adjustment screw spring (All)
61-58	Throttle lever adjusting screw spring (All)
61-59	Pump spring (All)
61-60	Step up piston spring (All)
61-61	Step up spring (All)
62-43S	Choke tube bracket assembly (All)
62 46S	Tube clamp assembly (All)
63-24	Float lever pin retainer (Late models of 245SD BB1D 289SD)
65-15	Pump link coverplate (All)
71A-17	Flange stud (All)
86-10	Lock washer (Use with 101 6) (All)
86-15	Lock washer (All)
100-15	Collar screw (All)
101-6	Choke bracket attaching screw (Sup by 101 142S) (All)
101-10	Wire clamp screw (All)
101-12	Choke tube bracket clamp screw (All)
101-29	Body attaching screw (Sup by 101 151S) (BB1 BB1A 245S 245SA 289S)
101-30	Choke valve screw (All)
101-31	Throttle lever adj screw (Sup by 101 58) (All)
101-32	Pump link screw (All)
101-34	Throttle lever clamp screw (Sup by 105 12) (BB1A BB1D 245SA 245SD 289S 289SD)
101-39	Throttle valve screw (BB1A BB1D 245SA 245SD 289S 289SD)
101-57	Body attaching screw (Sup by 101 234S) (BB1D 245SD 289SD)
101-58	Throttle lever adjusting screw (All)
101-142S	Choke bracket attaching screw and washer assembly (All)
101-151S	Body flange attaching screw and washer assembly (BB1 BB1A 245S 245SA 289S)
101-234S	Body flange attaching screw and washer assembly (BB1D 245SD 289SD)
105-11	Tube clamp screw (All)
105-12	Throttle lever clamp screw (BB1A BB1D 245SA 245SD 289S 289SD)
105A-8	Tube clamp nut (All) (2)
105A-10	Choke tube clamp nut (All)
105A-13	Flange nut (All)
116-13	Ball (All)
117-13	Pump link (All)
117-14	Choke link (All)
121-13	Body gasket (BB1 BB1A 245S 245SA 289S)
121-126	Body gasket (BB1D 245SD 289SD) (Sup by 121 168)
121-168	Body gasket (BB1D 245SD 289SD)
123-12	Idle passage tube (All)
123-16	Idle orifice tube (All)
136-15	Choke link washer (All)
136-21	Float lever pin plug washer (BB1 BB1A 245S 245SA 289S early production of BB1D 245SD 289SD)
145-11	Vent tube (BB1 BB1A BB1D 245S 245SA 245SD)
145-21	Vent tube (289S 289SD)
149-13S	Check valve assembly (All)
149-19S	Pump valve assembly (All)
149-21S	Step up valve assembly (BB1-BB1A BB1D 245S 245SA 245SD)
149-32S	Step up valve assembly (289S 289SD)
150-26	Pump collar pin (All)
150-29	Venturi pin (All)
150A-10	Pin spring (All)
159-13S	Adj main metering screw and needle assembly (Sup by 159 43S) (BB1 BB1A 245S 245SA)
159-43S	Adjustable main metering screw assembly (All)
160-10	Pump piston (All)
160-11	Step up piston (All)
161-11S	Pump rod plate and rod assembly (All)
162-13	Power orifice (BB1 BB1A BB1D 245S 245SA 245SD)
162-17	†Power orifice (289S 289SD)
162-19	Power orifice (289S 289SD)

‡When servicing 289S and 289SD carbureters two nozzle gaskets No 20 30 should be installed beneath nozzle No 12 166

†This power orifice (1 mm) may be used when installations are made on motors originally equipped with 1¾ inch or larger units

★This gasket to be installed between carbureter and governor when governor is installed Original flange gasket to remain between governor and manifold

NOTE Figures in parentheses indicate number of pieces used in one carbureter Where no figure is shown, only one is used.



CARTER FLANGE ADAPTORS

(SIZES GIVEN ARE STANDARD S. A. E. BOLT CENTERS)

These adaptors have been designed to make possible the installation of the Carter "BB1A," "245SA" and "289S" Carbureters on a number of cars. These adaptors all have carbureter end drilled with two 13/32" holes, spaced 2-11/16" center to center, to fit carbureter flange. Drillings of manifold ends of adaptors are shown below:

Adaptor	Manifold Flange Size	Manifold End Holes	Manifold Centers
72-16	1 -inch S.A.E.	2 holes 5/16-inch—18 thread	2⅜-inches
72-17	1½-inch S.A.E.	2 holes ⅜-inch—16 thread	2-15/16-inches
72-18	1 -inch S.A.E.	2 holes 11/32-inch No thread	2⅜-inches
72-19	1 -inch S.A.E.	2 holes 5/16-inch—18 thread	2⅜-inches
72-20	1¼-inch S.A.E.	2 holes ⅜-inch—16 thread	2-11/16-inches
72-21	1½-inch S.A.E.	2 holes ⅜-inch—16 thread	2-15/16-inches
72-22	1¼-inch S.A.E.	2 holes 13/32-inch—No thread	2-11/16-inches
*72-23	1½-inch S.A.E.	2 holes 13/32-inch—No thread	3⅛-inches
*72-24	1½-inch S.A.E.	2 holes 13/32-inch—No thread	3⅜-inches
72-30 & 72-31	1¾-inch S.A.E.	2 holes 7/16-inch—14 thread	3-5/16-inches
★72-32	1½-inch S.A.E.	2 holes 11/32-inch—No thread	2-15/16-inches
72-33 & 72-34	1¾ or 2-inch S.A.E.	Not drilled	
72-35 & 72-36	1¾-inch S.A.E.	2 holes 7/16-inch—14 thread	3-5/16-inches
72-39	1½-inch S.A.E.	2 holes ⅜-inch—16 thread	2-15/16-inches
72-40 & 72-41	2 -inch S.A.E.	2 holes 7/16-inch—14 thread	3-9/16-inches
72-43	1½-inch S.A.E.	2 holes 13/32-inch—No thread	2-15/16-inches
72-44	1½-inch S.A.E.	2 holes 13/32-inch—No thread	2-15/16-inches

*Buick installations require B-19S Dash Choke Control Assembly and 92-11S Throttle Rod Assembly.

★Note: This flange is supplied unless otherwise specified, with special throttle lever, control rod, etc.

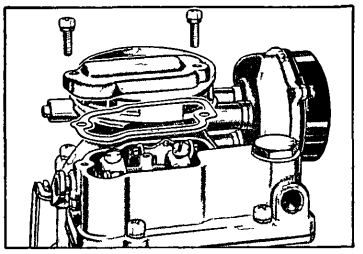
The installations listed below have been reported as entirely successful. Undoubtedly the "BB1" Carbureters will prove equally adaptable to many other motors of similar characteristics.

Car	Model	Year	Carbureter	Adaptor
Auburn	6-43	1923-25	BB1-245SA	None
Auburn	6-66	1926	BB1-245SA	None
‡Auburn	8-77	1927	BB1A-Special	None
Auburn	6-80	1928-29	BB1A-Special	None
‡Auburn	8-88	1925-27	BB1A-Special	None
Auburn	120	1928-29	BB1A-Special	None
Auburn	DD6	1929	BB1A-Special	None
Auburn "8"	8-100	1932	289	None
Buick	Standard Six		BB1A-Special	72-23
Buick	Master Six		BB1A-Special	72-24
‡Buick	8-50	1931	BB1A-Special	72-24
Chandler	31	1928	BB1-245SA	None
Chandler	65	1929	BB1-245SA	None
Chrysler "4"	58	1925-26	BB1-245SA	None
Chrysler	60-62	1927-28	BB1-245SA	None
Chrysler	70	1925-27	BB1A-Special	72-20
Chrysler	72-75	1927-29	BB1A-Special	72-20
Chrysler	65	1928-29	BB1A-Special	None
Chrysler	80 Imperial	1929	BB1A-Special	72-30
Chrysler	66	1930	BB1A-Special	None
Chrysler	Six	1930	BB1-245SA	None
Chrysler	Six	1931	6B2 Chrysler	None
De Soto	Six "K"	1928-29	BB1-245SA	None
De Soto	Six "K"	1930	BB1-245SA	None
De Soto	Six "K"	1931	6B2	None
Devaux	6-75	1931	BB1A-Special	72-22
Diamond T	Truck Model 290	1930	BB1A-Special	None
‡Dodge	Senior Six	1928-30	BB1-289S	72-39
Dodge	Victory Six	1927-28	BB1A-Special	72-20
Dodge	Standard Six	1927-28	BB1A-Special	72-20
Dodge	Six DA	1929	BB1A-Special	None
Dodge	Six DD	1930	BB1-245SA	None
Dodge	Six DH	1931	6B2 Dodge	None
Durant	6-14	1930-31	BB1A-Special	None
Durant	6-70—6-75	1930	BB1A-Special	None
Erskine	6	1927-29	BB1-245SA	None
Erskine "Dynamic"	6	1930	BB1A-Special	None
Essex	6	1930-31	BB1A-Special	72-32
Falcon-Knight	All		BB1-245SA	None
Flint	35-60-80	1924-26	BB1A-Special	72-20
Flint	A40-B40	1924-26	BB1-245SA	None
Franklin	Six	1927-30	BB1A-Special	None
‡Gardner	Eight	1928	BB1-289S	None
Graham-Paige	6-10	1928	BB1A-Special	72-18
Graham-Paige	6-19	1928	BB1A-Special	72-33
‡Graham-Paige	16-14	1928	BB1-289S	None
Graham-Paige	6-12	1929	BB1A-Special	72-22
‡Graham-Paige	6-15	1929	BB1-289S	None
(Necessary to drill out threads in 1⅛" (38.10 mm) end of adaptor)				
Graham	8-37	1929	†BB1A-Special	72-30
Graham-Paige	Special	1930	BB1A-Special	72-22
Graham	"Standard"	1930	BB1A-Special	72-22
Graham	"Prosperity Six"	1931-32	BB1A-Special	72-22
Graham	Blue Streak	1932	†BB1A-Special	72-17
Graham	"65"	1933	BB1A-Special	72-22
Hupmobile	A-6	1925-27	BB1-245SA	None
Hupmobile	Eight	1927	BB1A-Special	72-20
Hupmobile	Six	1928-31	BB1A-Special	None
International (I.H.C.)	Truck	1927-8-9	BB1A-Special	None
International	Truck 646	1930-31	BB1A	None
Jewett	644	1922-24	BB1A-Special	None
Jewett		1925-26	BB1A-Special	72-20
La Salle "8"	345C	1931	289	72-41
Marmon	L-Eight	1927	BB1A-Special	72-20
Marmon	68-78	1929	†BB1A-Special	72-20
Marmon	69 or Q	1930	†BB1A-Special	72-20
Marmon	70	1931	†BB1A-Special	72-20
Nash	Standard Six	1928-31	BB1A-Special	72-18
Nash	8 Twin Ignition	1931	BB1A	72-24
Oakland	Six "All Am."	1928	BB1A-Special	72-16
Oakland	Six	1929	BB1A-Special	72-22
Oldsmobile	Six	1927-30	BB1-245SA	None
‡Packard	Six	1926-28	BB1-289S	72-39
‡Packard	Eight	1929 -	BB1-289S	72-39
Packard "8"	900	1931-32	289	72-39
Paige	6-45		BB1A-Special	72-17
Pierce-Arrow	81	1928	289	None
Pontiac	Six	1926-7-8	BB1-245SA	None
Pontiac	Six	1929-32	BB1A-Special	72-22
Reo	"Flying Cloud"	1929	BB1A-Special	72-21
Reo	"Mate"	1929	BB1A-Special	72-20
Reo	"Wolverine"	1927-28	BB1A-Special	72-20
Reo	Mdls. "T" & "U"	1923-27	BB1A-Special	72-20
Reo	Speed Wagon	1925-26	BB1A-Special	None
Reo	Truck "FA"	1927-28	BB1A-Special	72-20
Reo	Trk. "DA"-"DC"	1927-28	BB1A-Special	72-20
Roosevelt	"Eight"	1929	BB1A-Special	72-20
Studebaker	"Light 6"	1919	BB1A-Special	72-20
Studebaker	"Special Six"	1920-25	BB1A-Special	72-20
Studebaker	"Standard Six"	1926-27	BB1A-Special	None
‡Studebaker	"Commander 6"	1927-29	BB1-289S	72-39
Studebaker	"Dictator"	1928-30	BB1A-Special	72-20
‡Studebaker	"Commander 8"		BB1A-Special	72-20
Studebaker	President 8	1931	BB1-289S	72-17
Studebaker	"Fifty-five"	1932	BB1A-Special	None
Whippet	Four	1928	BB1-245SA	None
Whippet	Six	1929-30	BB1-245SA	None
White Truck	45		BB1-289S	72-17
Willys	Six	1930	BB1A-Special	72-16
Willys-Knight	70-70A	1926-29	BB1-245SA	None
Willys-Knight	70B	1926-29	BB1A-Special	72-16
Willys-Knight	6-87	1930	BB1A-Special	72-16
Willys	"6-97"—"6-98D"	1931	BB1A-Special	72-22
Willys "8"	880-98D	1931	BB1A-Special	None
Willys-Knight	"66A"—"66B"	1929-30	BB1A-Special	72-20

†For constant open throttle driving install power orifice No. 162-17.

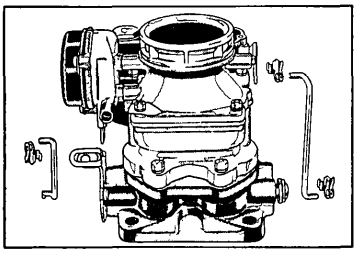
‡When installations are made on these cars install larger power orifice (step-up jet), No. 162-17.

SERVICE PROCEDURE
WGD DUAL CLIMATIC® CONTROL CARBURETER



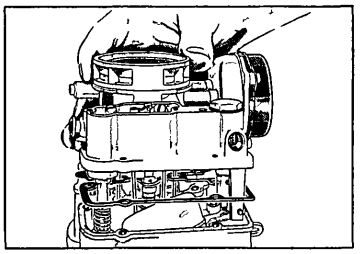
1.

Remove dust cover screws, cover and gasket.



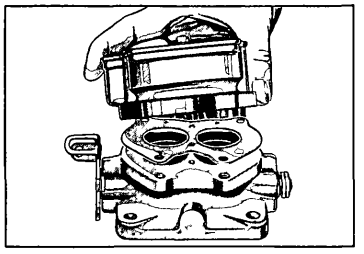
2.

Remove clevis clips, throttle connector rod and choke connector rod.



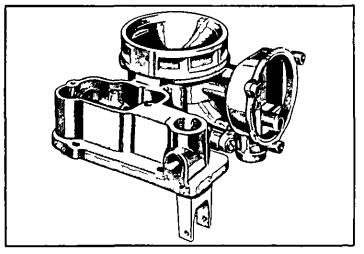
3.

Remove bowl cover with all parts attached.



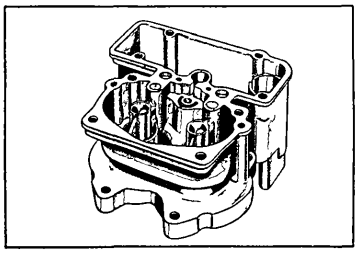
4.

Remove body flange screws, flange assembly and gasket.



5.

Remove all parts from bowl cover.

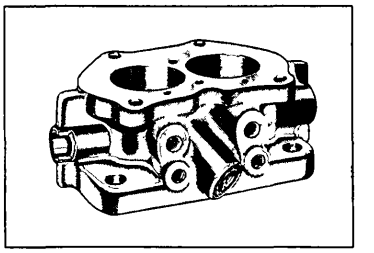


6.

Remove all parts from carbureter body, except nozzles, and other pressed in parts.

7.

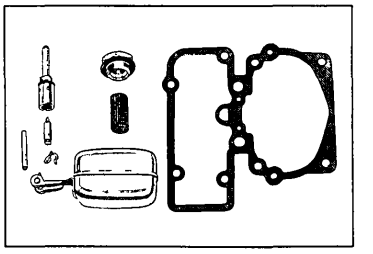
Remove all parts from body flange assembly.
*See Note



TO REASSEMBLE

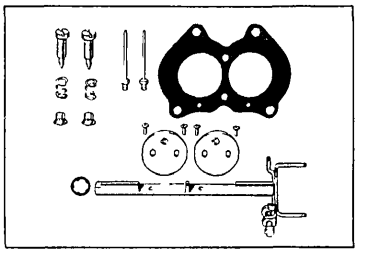
8.

Group all parts controlling gasoline level.



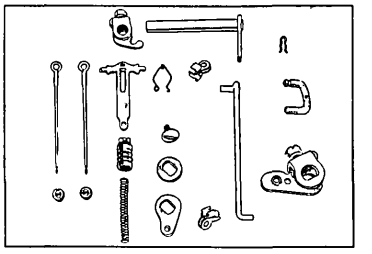
9.

Group all parts controlling idle operation.



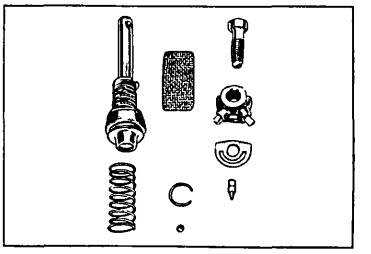
10.

Group all parts controlling high speed operation.



11.

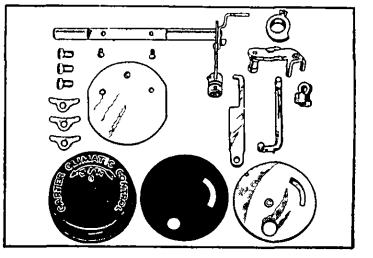
Group all parts controlling pump operation.



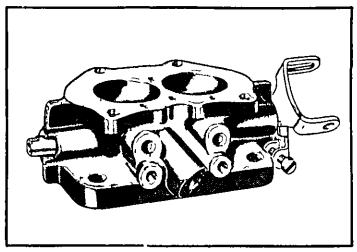
12.

Group all parts controlling choke operation.

NOTE If Welsh plug has been removed from choke housing for cleaning, install new plug.

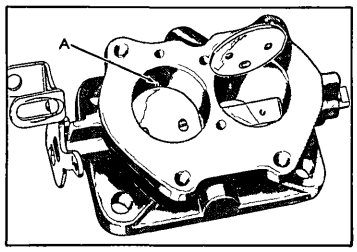


*NOTE: Wash all parts in carbureter cleaning solution, except thermostatic coil and housing assembly, starter switch parts and pump plunger **Do not soak bowl cover assembly for more than** ne-half hour.
Note carefully, slots in choke piston cylinder If they are carbonized, remove Welsh plug by piercing center with a small p inted instrument and prying outward Be careful not to damage casting Blow out passages with compressed air and scrape **carbon** from bore of flange Replace all worn or damaged parts and all gaskets



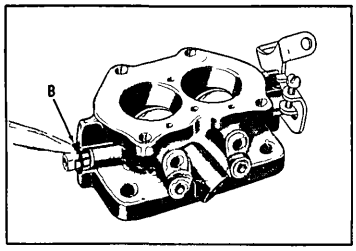
13.

Idle circuit. Install throttle shaft and lever assembly. Back out throttle lever adjusting screw.



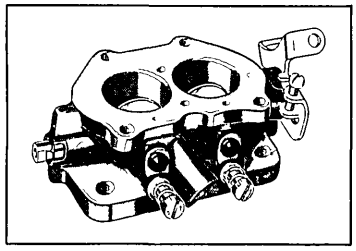
14.

Install throttle valves. Small "c" in circle should be toward idle port (A) when viewing casting from manifold side. Center throttle valves by tapping lightly and holding in place with fingers before tightening screws. Always use new screws.



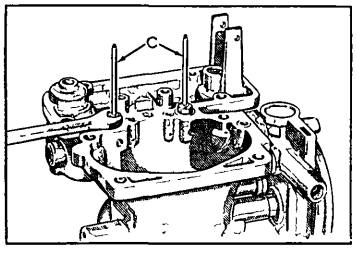
15.

Install throttle centering washer (B). With throttle closed, press shaft from lever side and install throttle centering washer with prongs extending outward. Press washer tight against casting.



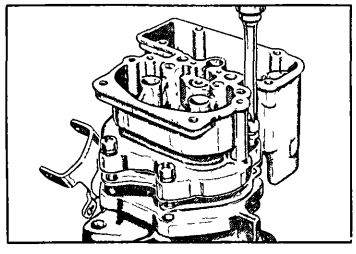
16.

Install idle port rivet plugs, then idle adjustment screws and springs. Adjust to specifications.



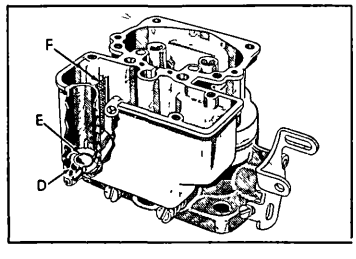
17.

Install low speed jet assemblies (C). No gaskets are used.



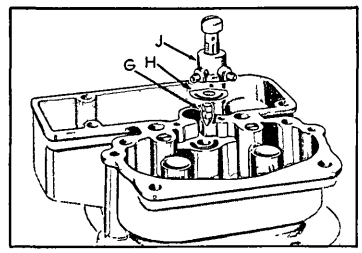
18.

Assemble body casting to flange. Use new gasket.



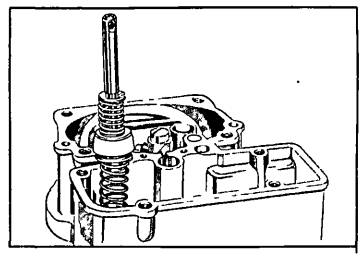
19.

Pump circuit. Install intake ball check (D), retainer ring (E) and strainer (F). Use Tool T109-122U.



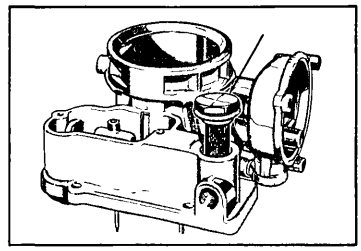
20.

Install discharge check nozzle (G) (point downward), pump jet cluster gasket (H), pump jet cluster and screw (J). Always use new gasket.



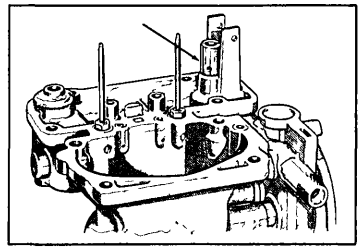
21.

Install lower pump spring and plunger assembly.



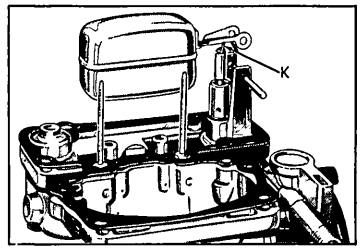
22.

Float circuit. Install bowl strainer gauze and nut and gasket assembly.



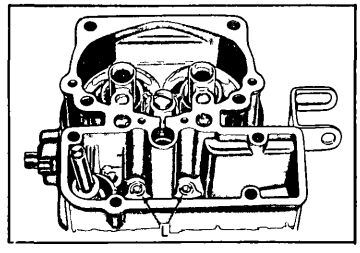
23.

Install needle seat and gasket assembly.



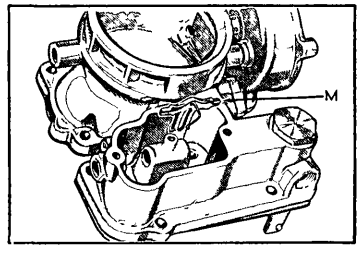
24.

Attach intake needle and pull clip (K) to float lip (when a pull clip is used), install float and lever assembly and float lever pin. Set float to specifications. Then install new bowl cover gasket.



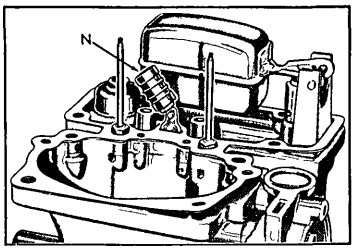
25.

Install metering rod jets (L). No gaskets are used.



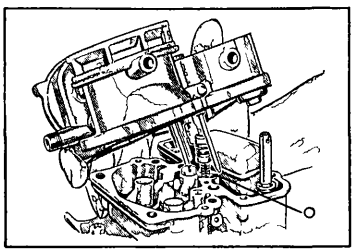
26.

Install vacumeter piston link and metering rod spring (M), lip on link extending toward air horn.



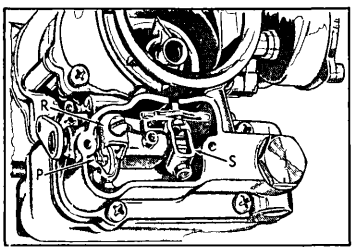
27.

Install vacumeter piston (N) on link with pin extending away from float. (See Illustration) **Install bowl cover gasket.** Always use new gasket



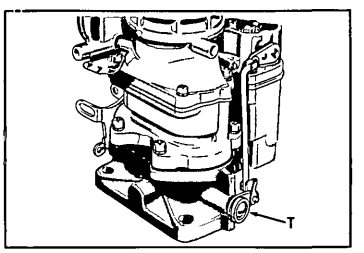
28.

Install vacumeter spring (O) in cylinder and assemble bowl cover on body. Install bowl cover screws, tightening center screws first



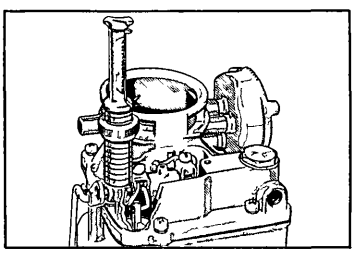
29.

Install pump connector link (P) in proper hole of pump arm. (See Specifications) **Install pin spring. Insert the lower end of connector link in hole in plunger shaft. Hold pump arm (R) in place and press shaft through arm. Hold metering rod arm (S) with lip extending through slot in vacumeter piston link and press shaft in place. Tighten pump arm screw.**



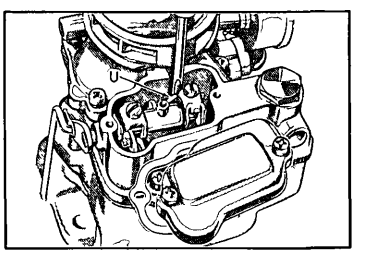
30.

Install throttle shaft lever, washer and screw (T). Install throttle connector rod and clevis clips.



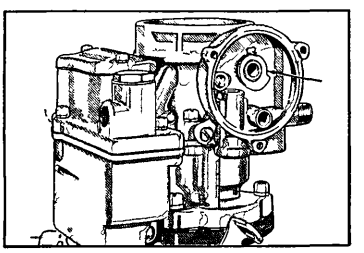
31.

Set pump.
See Specifications for instructions



32.

Install metering rods. Catch metering rod spring loop with lower end of metering rod as rods are inserted. Adjust metering rods in following manner: Back out throttle lever adjusting screw so throttle valves seat. Loosen metering rod arm set screw. Press down on vacumeter link (U) until metering rods bottom in body casting. With tongue on metering rod arm touching lip (top of slot) of link, tighten set screw, install dust cover, gasket and screws.

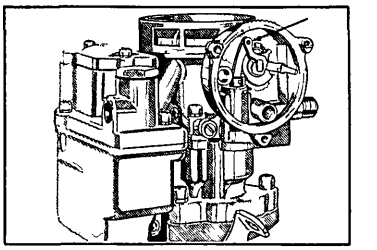


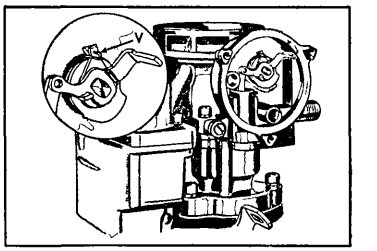
33.

Choke circuit. Install fast idle cam and spring.

34.

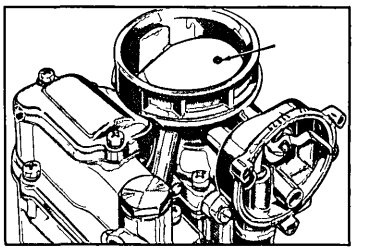
Install chok piston, l ver, link and shaft.





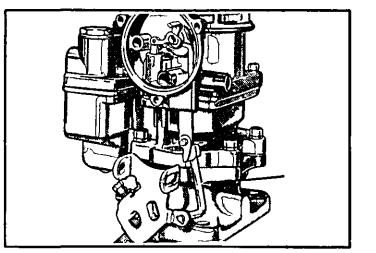
35.

Connect the fast idle cam spring (V) to the choke piston lever.



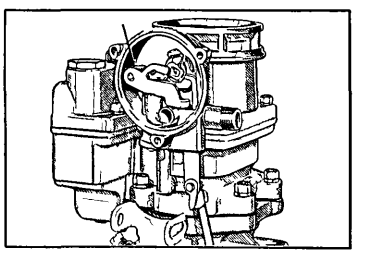
36.

Install choke valve.
Use new screws Choke valve to be installed with circle "c" visible from top of the carbureter with valve in closed position Seat choke valve by tapping lightly, hold in place with finger before tightening screws Valve or shaft must not bind in any position



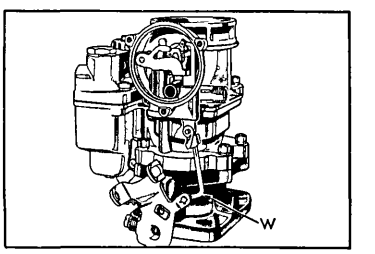
37.

Install fast idle link, choke connector rod and clevis clip.



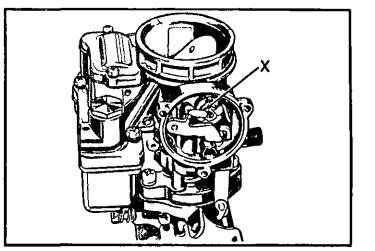
38.

Install choke trip lever assembly.



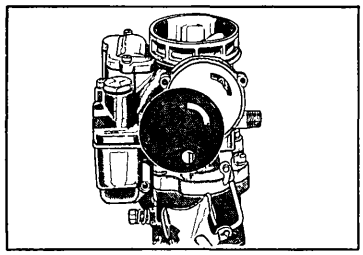
39.

Fast idle adjustment.
With choke valve tightly closed, adjust by bending choke connector rod at lower angle (W) to give clearance (see specifications) between the throttle valve and bore of carbureter (side opposite port) Use bending Tool T109 41



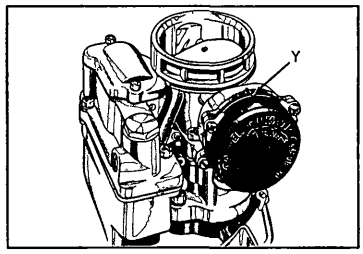
40.

Unloader adjustment.
With throttle valves wide open, bend lip (X) on choke trip lever to get clearance (see specifications) between top edge of choke valve and inner wall of air horn Use bending Tool T109 187



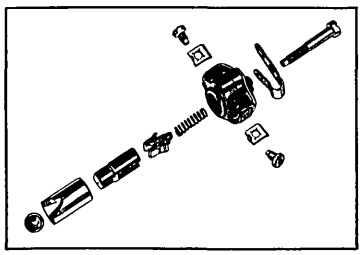
41.

Install ch k baffle plat and gasket.



42.

Install thermostatic coil and housing assembly, retainers and screws.
Install housing with index marks to bottom Revolve housing in direction opposite to that of arrow, set index marks (Y) to specifications Tighten attaching screws.



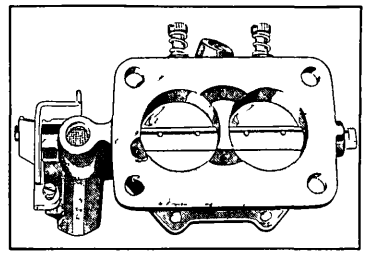
STARTER SWITCH (Where Used)

43.

Group all parts for starter switch.

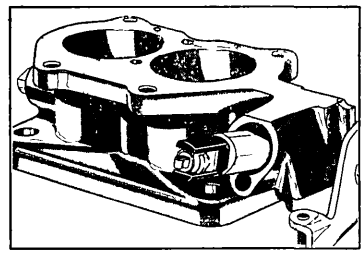
44.

Install switch strainer.



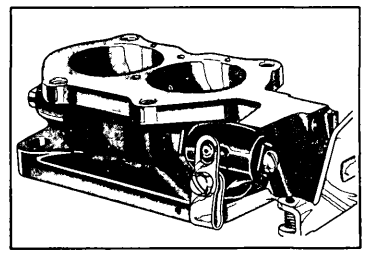
45.

Install switch ball, switch plunger (notch up), guide block and "W" shaped switch contact spring.
Reinstall original shims under contact spring.



46.

Install switch return spring, terminal cap assembly, hold down clip and attaching screw. Set switch to specifications.

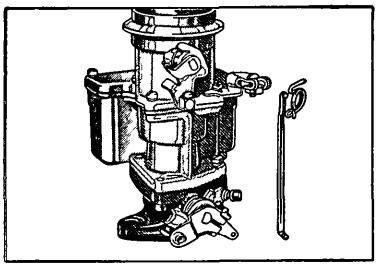


Not : The specifications referred to in this procedure are detailed in catalog pages issued for each Carter carbureter. These pages can be obtained from Carter Carburetor Corporation, Catalog Department, St. Louis (7), Missouri. Please specify the carbureter number found on the brass identification tag, when requesting specifications.

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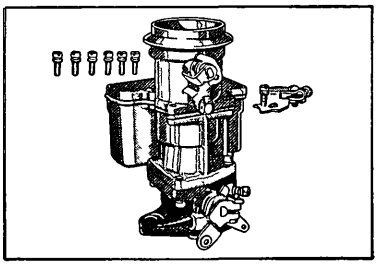
CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

SERVICE PROCEDURE
YF DOWNDRAFT CARBURETER



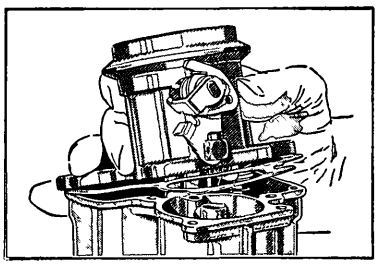
1.

Remove pin springs, fast idle connector rod spring and rod.



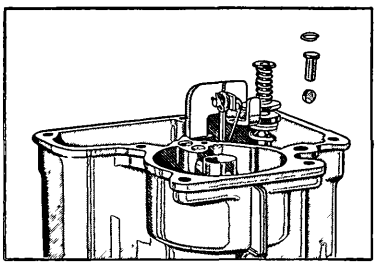
2.

Remove air horn and bowl cover attaching screws (7), and choke tube clamp assembly.



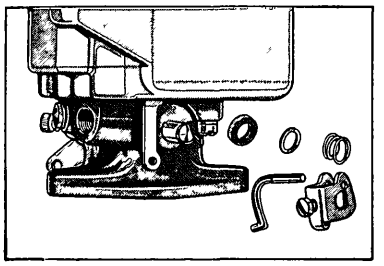
3.

Remove air horn assembly and gasket.



4.

Remove pump disc retainer ring (using knife tip) retainer and pump check disc.

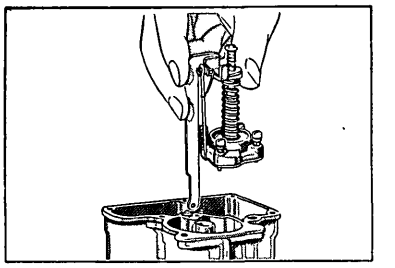


5.

Remove throttle shaft arm assembly, pump connector link, shaft seal spring, dust seal washer and felt dust seal.

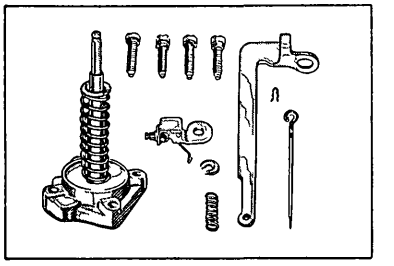
6.

Loosen diaphragm housing attaching screws (4) and lift out entire pump and metering rod assembly.



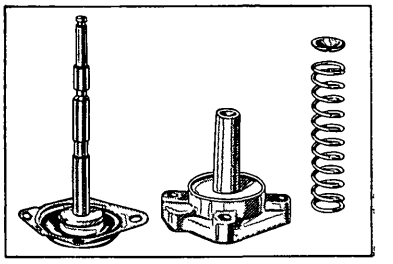
7.

Remove diaphragm housing attaching screws, pin spring, metering rod, upper pump spring retainer, upper pump spring, metering rod arm assembly and pump lifter link.



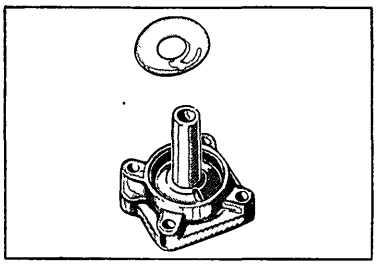
8.

Remove diaphragm spring retainer, spring and pump diaphragm assembly.



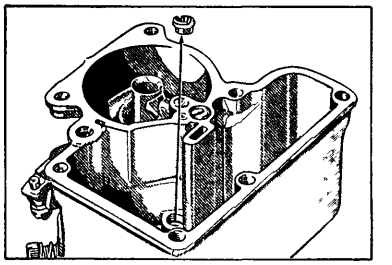
9.

Carefully remove pump intake strainer from housing, using tip of knife blade.



10.

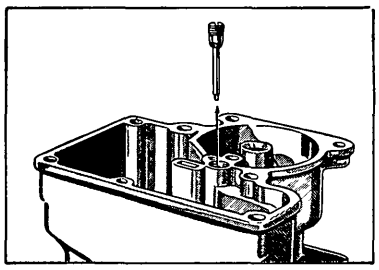
Remove metering rod jet.



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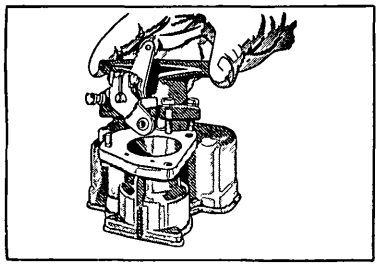
CARBURETER
TRADE MARK REG U. S PAT. OFF.
MARCA REGISTRADA

PRINTED IN U.S.A.



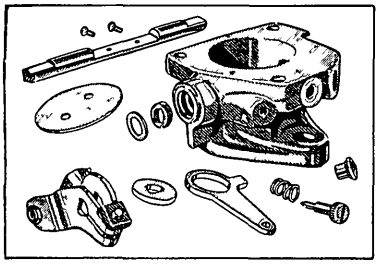
11.

Remove low speed jet assembly. **Do not remove pressed in parts such as: nozzle, pump jet or anti-percolator air bleed.**



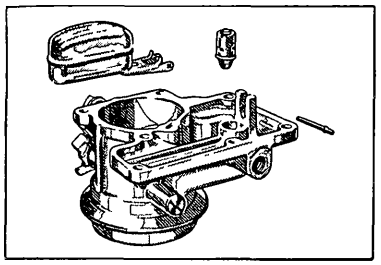
12.

Remove body flange attaching screws (3), body flange assembly and gasket.



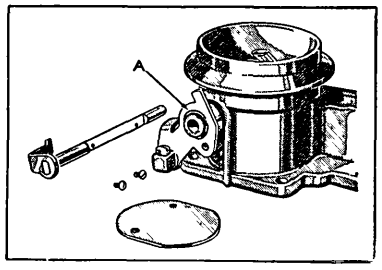
13.

Remove idle adjustment screw, spring, idle port rivet plug, throttle lever assembly, washer, fast idle arm, valve attaching screws (2) and throttle shaft. Then remove throttle shaft seal by prying out seal retainer. **Do not remove vacuum passage orifice (pressed in).**



14.

Remove float pin, float, and needle and seat assembly from air horn casting



15.

Remove choke valve screws and choke valve. Unhook choke spring and slide shaft from housing. **Do not remove balance vent tube.** Note: In normal service, choke lever assembly will not require replacing. However, if it has been bent or otherwise damaged requiring replacement, proceed as follows: Pry off choke lever retainer ring (A) and remove lever assembly

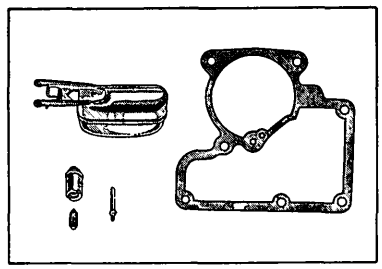
16.

Wash all parts in carbureter cleaning solution and blow out passages with compressed air. **Do not immerse diaphragm assembly, pump check disc or seals in cleaning solution.** Inspect all parts for wear or damage—replace if necessary. Always use new gaskets.

TO REASSEMBLE

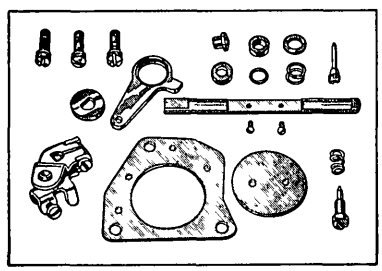
17.

Group all parts controlling float circuit: float, float pin, needle and seat assembly, air horn gasket.



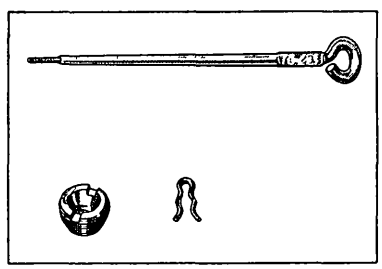
18.

Group all parts controlling low speed circuit: Throttle shaft seals (2) and retainers (2), throttle shaft, throttle valve and screws, fast idle arm, throttle shaft washer, throttle lever assembly, idle port rivet plug, idle adjusting screw and spring, gasket, attaching screws (3), low speed jet, throttle shaft seal spring



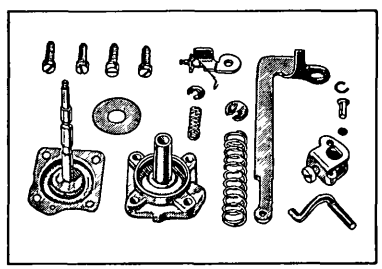
19.

Group all parts controlling high speed circuit: Metering rod, metering rod jet, pin spring.



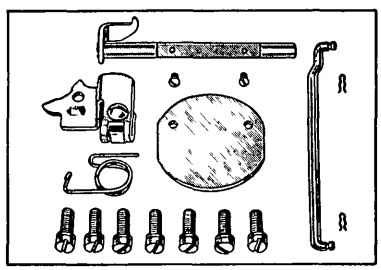
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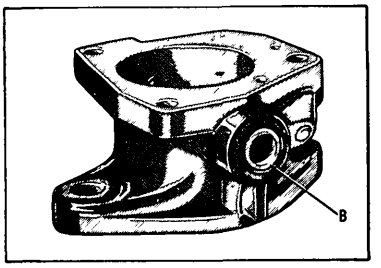
Group all parts controlling pump circuit: Pump lifter link, pump connector link, throttle shaft arm assembly, metering rod arm assembly, pump diaphragm housing, pump diaphragm assembly, pump diaphragm spring, diaphragm spring retainer, pump intake strainer, upper pump spring, upper pump spring retainer, pump disc check, pump disc retainer, pump disc retainer ring, diaphragm screw and washer assemblies (4).



21.

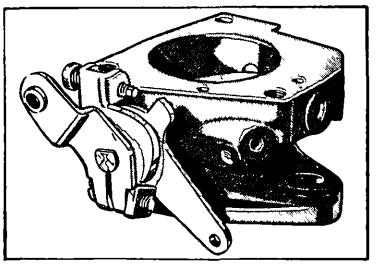
Group all parts controlling choke circuit: Choke valve and screws (2), choke shaft and lever assembly, fast idle connector rod and spring, choke tube clamp assembly, air horn attaching screw and washer assembly (7), pin spring (2).





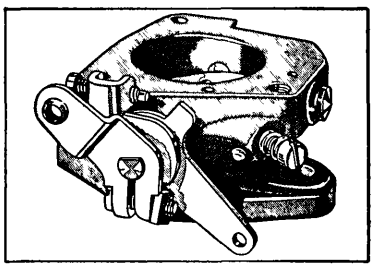
22.

Install throttle shaft seal and retainer (B) in flange casting.



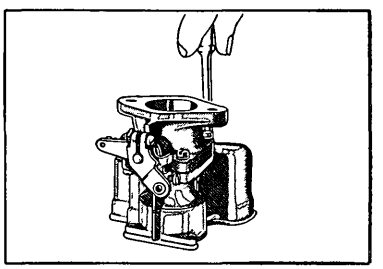
23.

Install fast idle arm, washer and lever assembly on throttle shaft, slide shaft into place and install throttle valve. Carter trademark (c) should go toward the idle port when viewed from manifold side of flange. Tap valve and hold in place with finger before tightening screws.



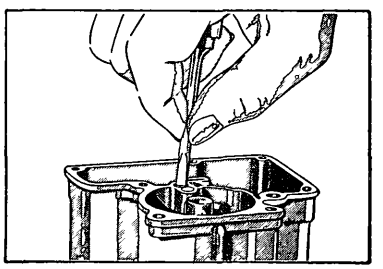
24.

Install idle port rivet plug and idle adjusting screw and spring.



25.

Attach flange assembly to body casting Use new gasket

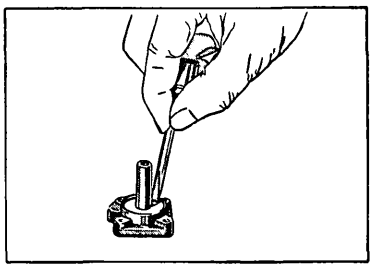


26.

Install low speed jet assembly.

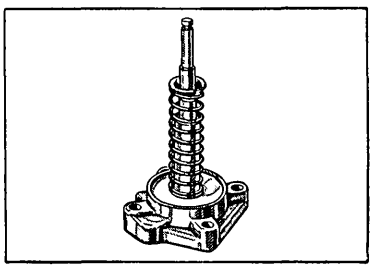
27.

Install pump intake strainer in pump diaphragm housing and carefully press into recess. Caution: If strainer is even slightly damaged, a new one must be used



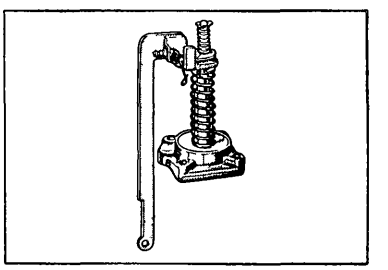
28.

Install pump diaphragm assembly in diaphragm housing, then install pump diaphragm spring (lower) and retainer.



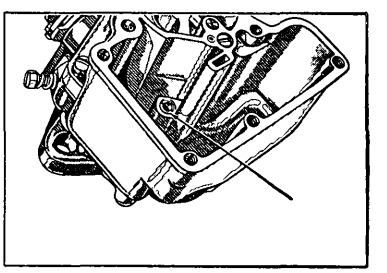
29.

Install pump lifter link, metering rod arm, upper pump spring and retainer



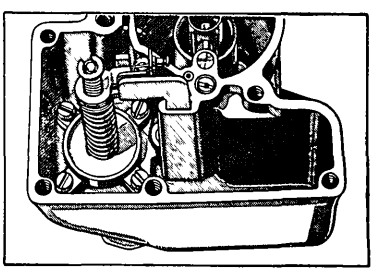
30.

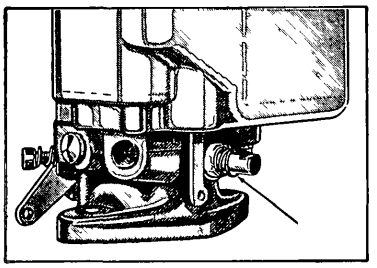
Install metering rod jet. (No gasket used with this jet.)



31.

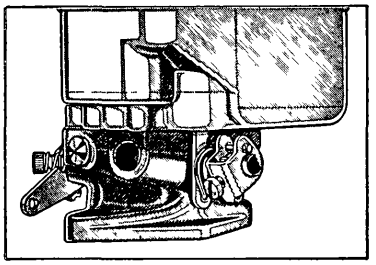
Install diaphragm housing attaching screws (4) in the diaphragm housing, making sure the edges of diaphragm are not wrinkled. Lower into place and tighten screws evenly and securely.





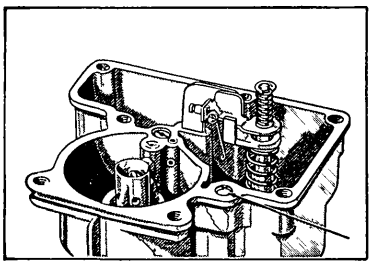
32.

Install throttle shaft seal, dust seal washer, and shaft seal spring.



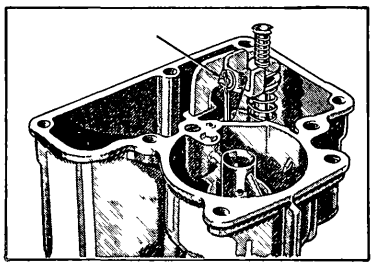
33.

Install pump connector link in the throttle shaft arm assembly. Install throttle shaft arm assembly on throttle shaft, guiding connector link into pump lifter link hole. Caution: Linkage must not bind in any throttle position. If binding occurs, loosen clamp screw in throttle arm, adjust slightly and retighten screw.



34.

Install pump check disc, disc retainer, and lock ring.

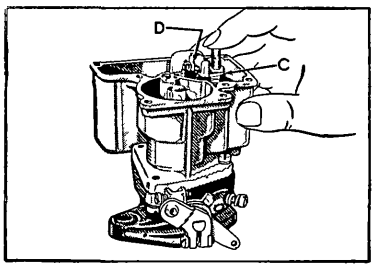


35.

Install metering rod and pin spring. Connect metering rod spring.

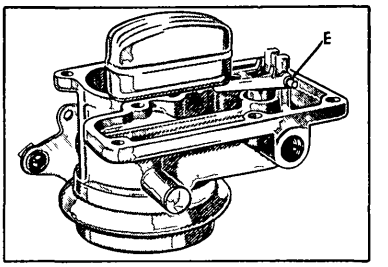
36.

Metering Rod Adjustment: Be sure flat of metering rod arm is parallel to flat of pump lifter link before proceeding with metering rod adjustment. With throttle valve seated, press down on upper end of diaphragm shaft. Metering rod should be seated in casting and metering rod arm flat against pump lifter link (C). If metering rod does not seat in body casting (check by pressing downward on metering rod) or seats before the metering rod arm makes flat contact with pump lifter link, raise or lower by bending lip (D) on metering rod arm.



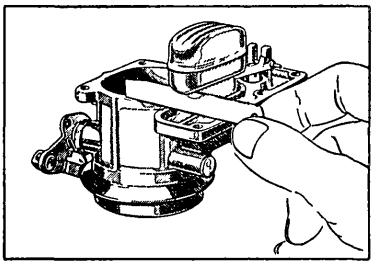
37.

Install needle seat and gasket assembly, needle, float and float pin. **Stop shoulder (E) on float pin must be on side away from bore of carbureter.**



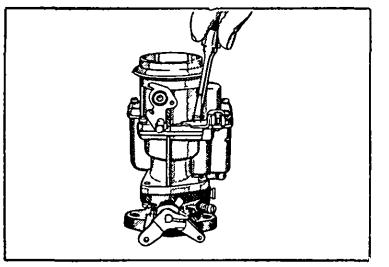
38.

Set float level to catalog page specifications. Measure from machined surface of casting (gasket removed). Adjust by bending lip which contacts needle.



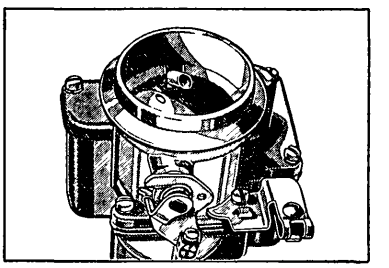
39.

Install air horn gasket and air horn assembly. Install attaching screws and lock washers (7) and choke tube clamp assembly. (Tighten center screws first.)



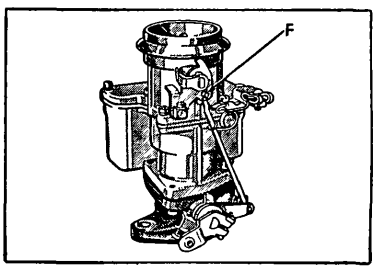
40.

Slide choke shaft and lever assembly into place and connect choke lever spring. Install choke valve. Center valves by tapping lightly and hold in place with fingers when tightening screws



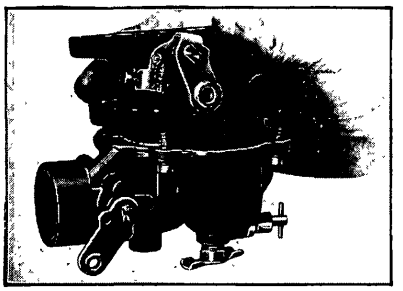
41.

Install fast idle connector rod with offset portion of the rod to top and pin spring to the outside (F). Install fast idle connecting rod spring.

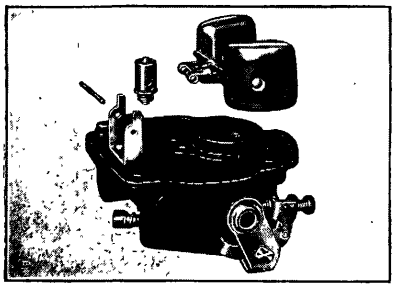


SERVICE PROCEDURE
UT UPDRAFT CARBURETER

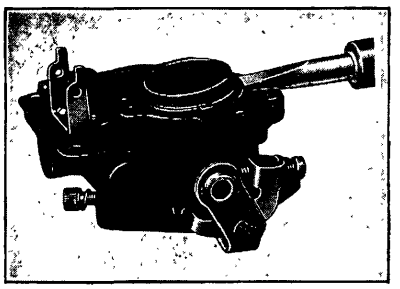
A fast, simple, Circuit method of servicing. Use Carter tool kit. BE ACCURATE.



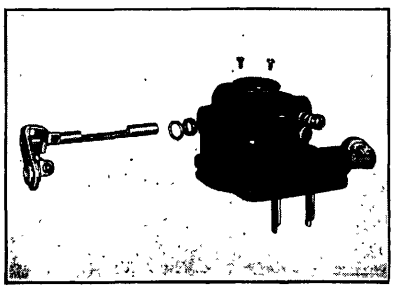
1. Remove flange attaching screws and washers (4) and lift off bowl cover assembly.



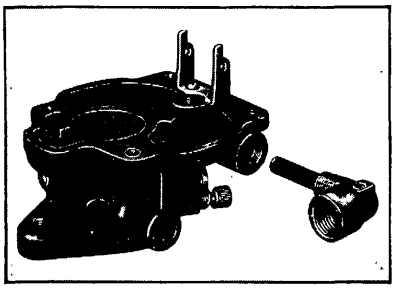
2. Remove float pin, float, and needle and seat assembly. Use tool T109-61 or screw driver wide enough to reach across needle seat slots.



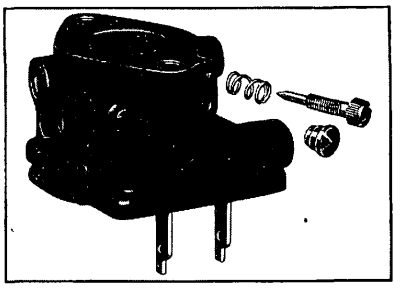
3. Remove venturi and bowl cover gasket. Venturi seals at top edge with light press fit; to loosen, pry venturi upward with screw driver from bowl vent recess. Tap lightly on opposite side if necessary.



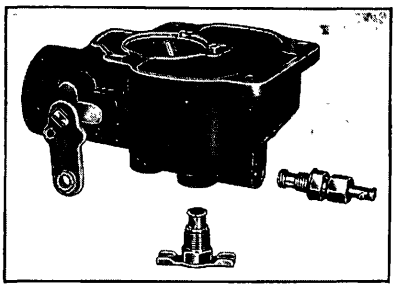
4. Remove throttle valve screws, valve, and shaft and lever assembly. Pry out throttle shaft seal retainer and remove seal.



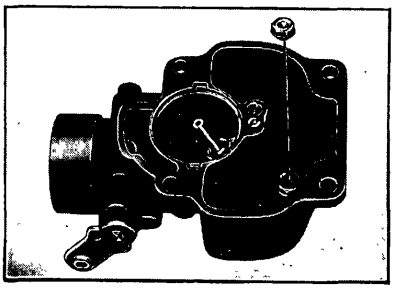
5. Remove fuel line elbow and strainer assembly.



6. Remove idle adjustment screw and spring, then remove idle port rivet plug. (Use tool T109-43).



7. Remove bowl drain cock (found only on some models) and main metering jet assembly.

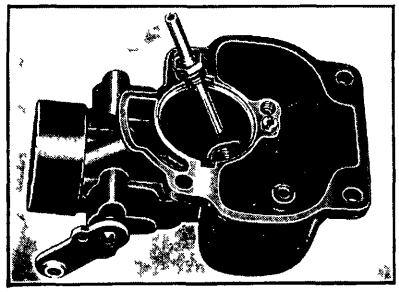


8. Fixed type main metering jet is shown in this picture.

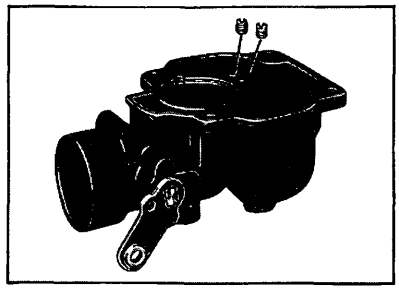
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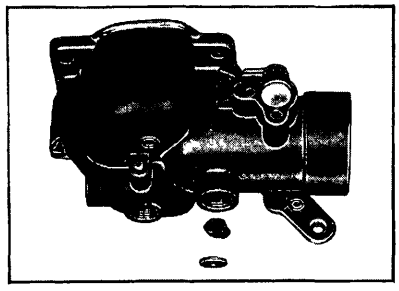
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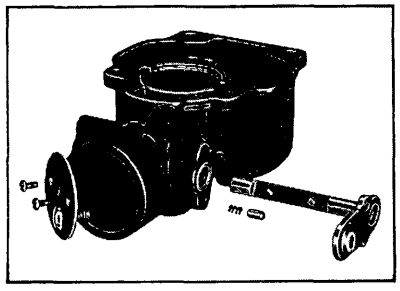
9 Remove nozzle and gasket assembly (Use Tool T109 203)



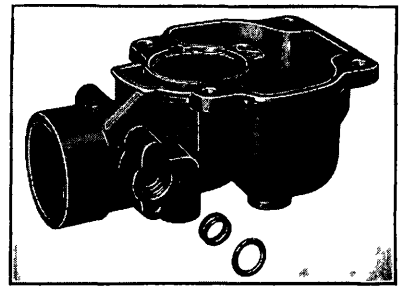
10. Remove nozzle bleed and idle jet



11. Remove dust seal retainer and felt packing from air horn Pry out with small point



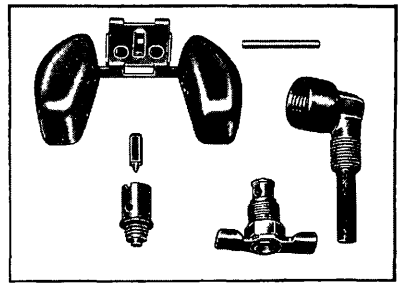
12 Remove choke valve screws choke valve choke shaft and lever assembly choke lock pin and spring Note when removing the choke shaft and lever assembly be careful not to lose the choke lock pin and spring



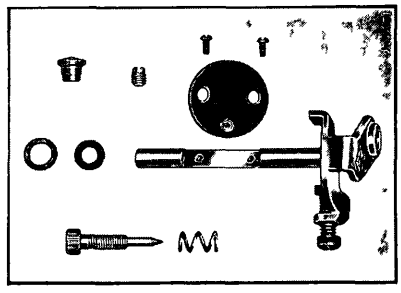
13. Pry out shaft seal retainer and remove seal. **Do not remove expansion plugs from ends of throttle shaft and choke shaft when present.**

14 Wash all parts (except dust seals) in carbureter cleaning solution and rinse Blow out all passages with compressed air replace any worn or damaged parts. **Always use new gaskets.**

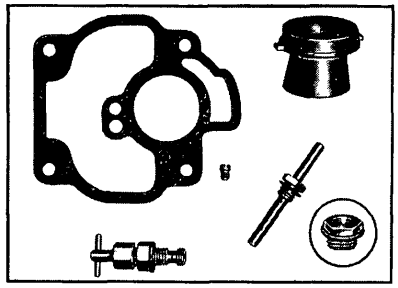
TO REASSEMBLE



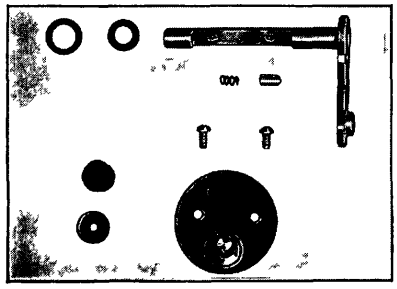
15. Group all parts controlling fuel level (float circuit)· Float, float pin, needle and seat assembly elbow and strainer assembly bowl drain cock (if used)



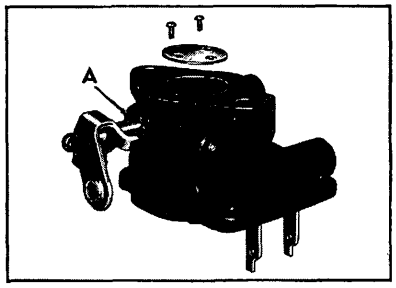
16 Group all parts controlling low speed circuit Throttle shaft and lever assembly dust seal dust seal retainer throttle valve and screws idle adjustment screw and spring idle jet screw plug idle port rivet plug



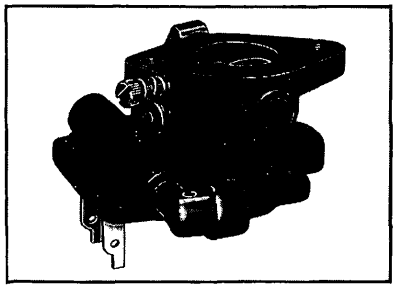
17. Group all parts controlling high speed circuit Nozzle and gasket assembly venturi nozzle bleed, bowl cover gasket main metering jet assembly or high speed adjusting needle if used



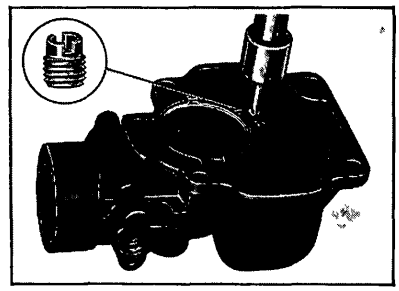
18. Group all parts controlling choke circuit Choke shaft and lever assembly dust seal dust seal retainer, choke valve assembly, valve screws, choke lock pin and spring, air horn drain felt and retainer



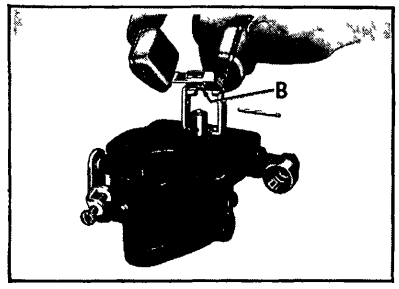
19. Install dust seal (with groove to outside) and retainer (throttle shaft) A Install throttle shaft and lever assembly *Install throttle valve with C towards the idle port when viewed from flange side Center valve in bore before tightening screws Caution Be sure throttle lever adjusting screw is backed out from boss on casting



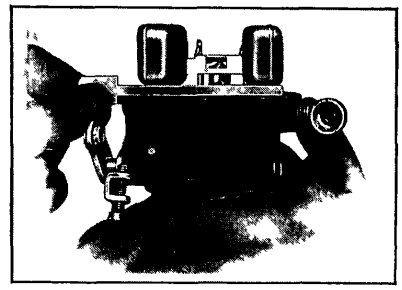
20 Install idle port rivet plug, idle adjustment screw and spring and elbow and strainer assembly



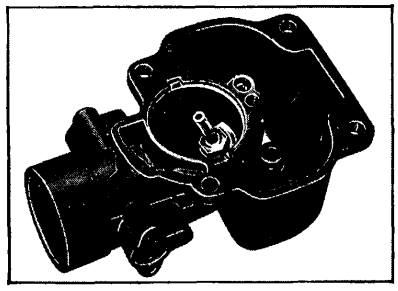
21. Install idle jet Note Idle jet has larger thread than nozzle bleed screw plug Do not interchange parts



22 Install needle and seat assembly (use tool T109 61, or screw driver wide enough to reach across slots) float and float pin **with lip "B" of float lever against needl .**

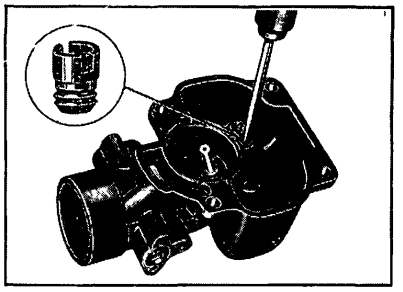


23. Set float to specifications as indicated on catalog page Measure distance between machined surface of casting and float

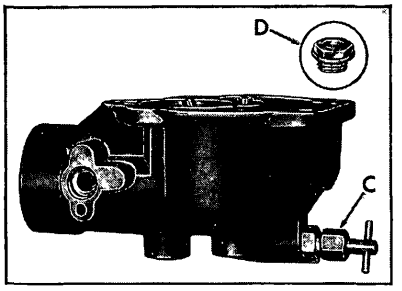


24 Install nozzle and gasket assembly.

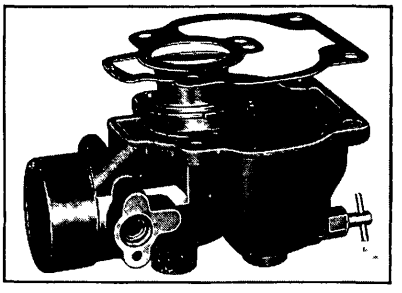
*NOTE First production carbureters stamped G 49 and H 49 may be found with the 'C located on the opposite side from the idle port. In this instance valves so stamped should be installed with the "C' opposite the idle port



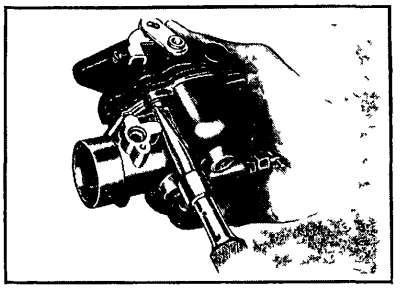
25. Install nozzle bleed



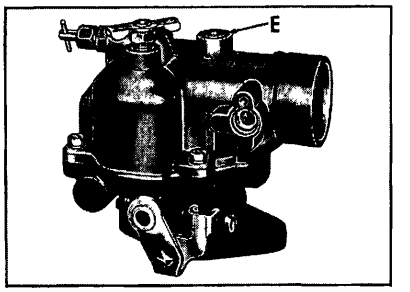
26. Install main metering jet assembly (adjustable "C" or fixed type "D").



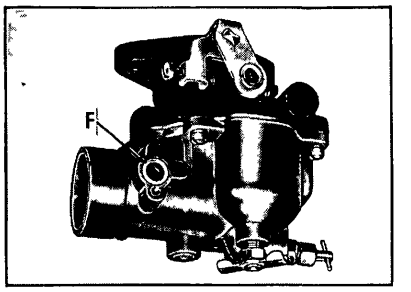
27. Install venturi in body casting, then install bowl cover gasket.



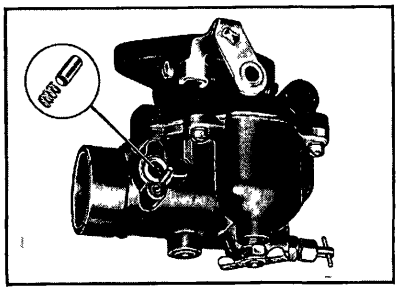
28. Install bowl cover as assembled Install four bowl cover attaching screws. Tighten evenly and securely (Retighten after carbureter has been in service).



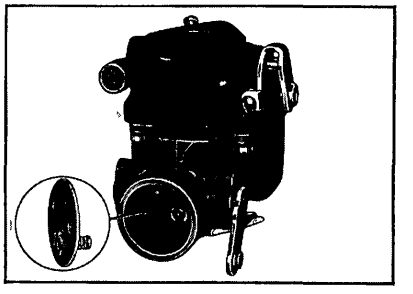
29. Install drain cock (where used), air horn drain felt and retainer "E". If necessary, carefully stake casting around dust seal retainer.



30. Install dust seal (with groove to outside) and retainer "F" (choke shaft). Press retainer to shoulder in casting and carefully stake casting around dust seal.



31. Install choke lock spring and pin. Be sure flat end of pin is against spring.



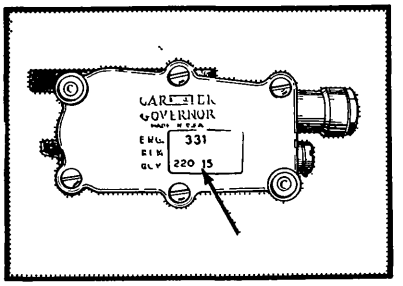
32. Install choke shaft and lever assembly. Install choke valve assembly with poppet valve stem towards the bowl Install choke valve screws. (Center choke valve before tightening screws)

33. Set throttle lever adjusting screw to open throttle slightly. Adjust idle adjustment screw and high speed adjusting needle (when used). See catalog page for correct specifications. **Note:** Final adjustments must be made with carbureter operating on engine.

SERVICE PROCEDURE

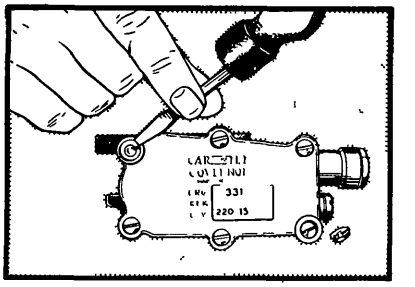
CARTER VELOCITY GOVERNOR

To be used in conjunction with governor instruction sheet.



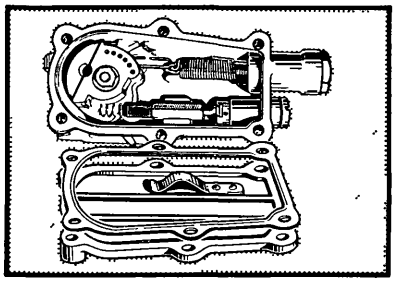
1.

Determine the governor unit number. (Stamped on governor cover plate and also on housing on later production)



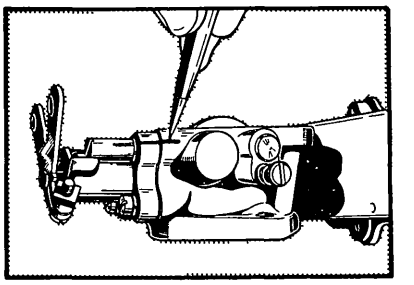
2.

Remove lead seals from cover plate



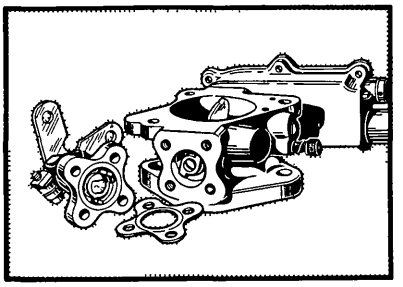
3.

Remove cover plate assembly and gasket



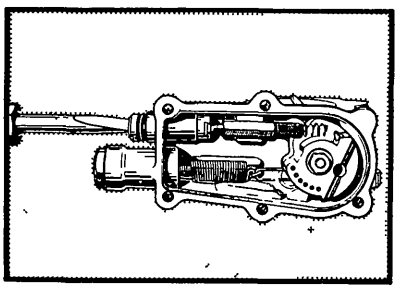
4.

Mark location of throttle stop screw so re-assembly will be correct



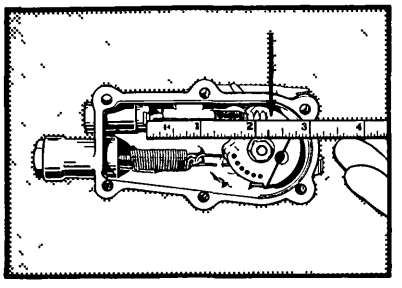
5.

Remove shaft housing and lever assembly and gasket.
CAUTION: Do not submerge these parts in cleaning solvent. To clean bearings in throttle casting squirt with non-corrosive solvent and dry with compressed air. Do not lubricate



6.

Remove secondary screw plug and gasket assembly.

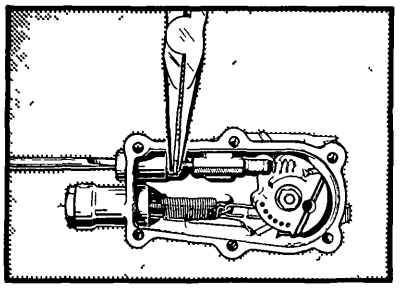


7.

Check "A" dimension.

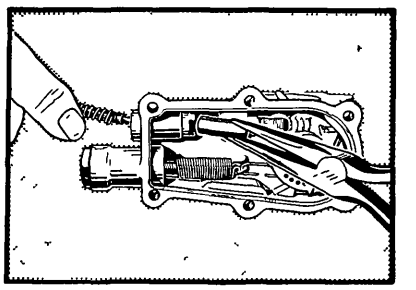
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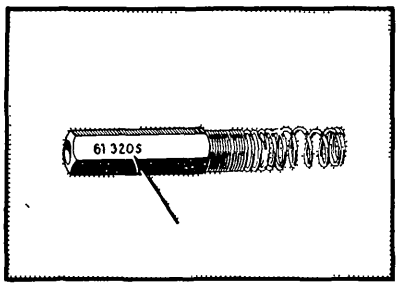
8.

Press secondary adjusting screw in with screw driver and remove retainer



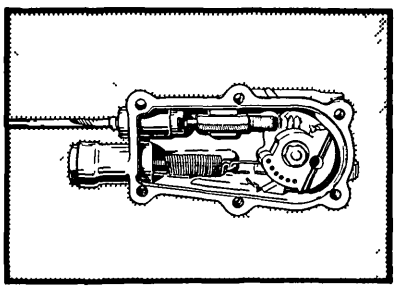
9.

Remove secondary adjusting screw, friction spring and secondary spring assembly.



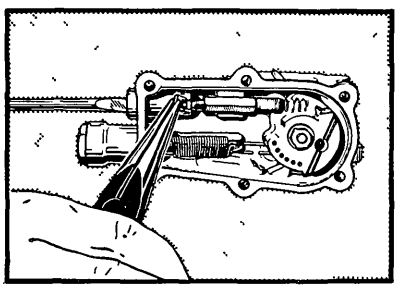
10.

Identify secondary spring assembly and re place with new part (Number stamped on spring holder)



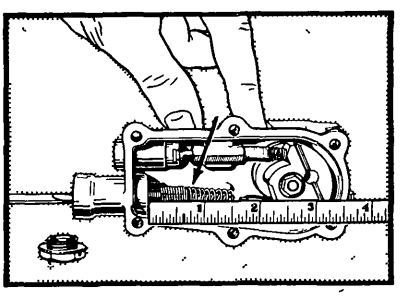
11.

Install friction spring and secondary adjust ing screw



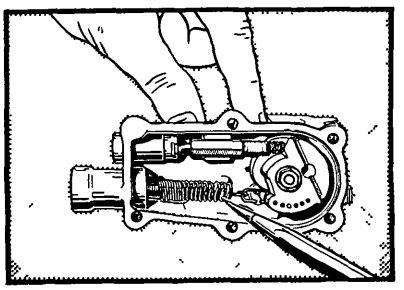
12.

Install secondary spring retainer.
CAUTION. Be sure retainer is installed in the proper slot and not against the threads. Adjust secondary screw until "A" dimension is set to specifications If spring buckles with throttle in closed position, remove secondary spring assembly and revolve entire spring assembly 1/6 turn and reinstall. If necessary, repeat until buckling condition no longer exists.
Do not remove spring from its holder.



13.

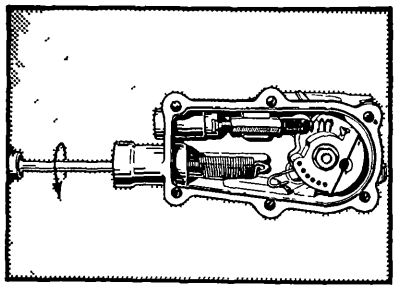
Remove primary adjusting screw plug and aasket assembly. Check "C" dimension with throttle valve closed Correct by turning primary adjusting screw



14.

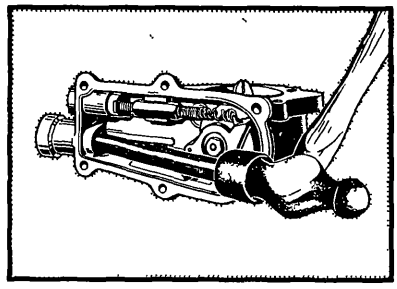
Check "B" specification Hold throttle valve closed This will make it easy to count the number of **active** coils Start with the first complete coil from the loop end. The active coils end at the entering edge of the primary adjusting screw thread. If the number of ac tive coils **is not within one coil** of "B" specification, indications are that the spring has been tampered with and recalibration of "C" specification, with the adjusting nut, is necessary.

NOTE. If it is necessary to correct "B" speci fication and no fiber washer is found pressed against primary adjusting nut, proceed to operation 21 However, if fiber washer is found proceed with operation 15.



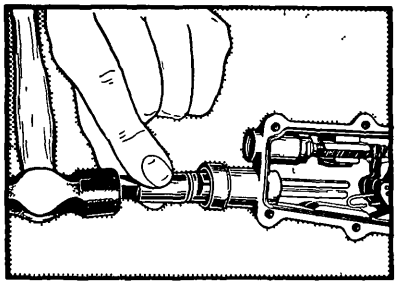
15.

Unhook the primary spring from link and, using a narrow screw driver, turn the primary adjusting screw clockwise out of the adjusting nut.



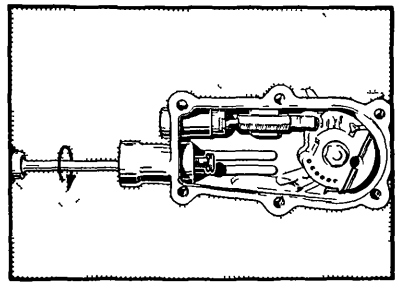
16.

Remove adjusting nut assembly and fiber seal. To do this place a fiber drift inside the governor housing against the adjusting nut and drive out of primary adjusting screw passage



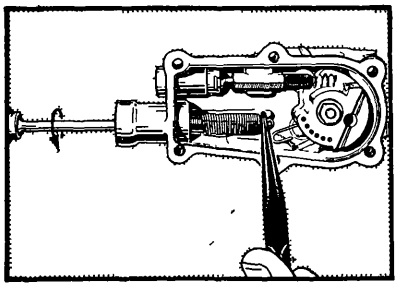
17.

Install a new adjusting nut by driving it against its seat (use tool T109-185).
CAUTION: Indentify nut by number stamped on face of nut assembly.



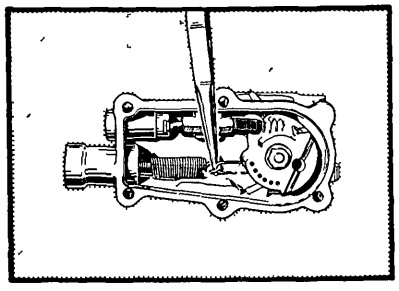
18.

Install new primary adjusting screw (start from inside of the governor housing). Turn screw counter clockwise until all but a few threads have engaged the adjusting nut.
CAUTION: Number on adjusting nut and primary adjusting screw **must** be the same.



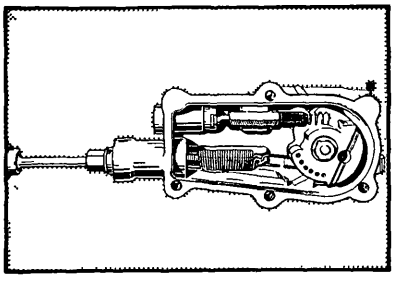
19.

Install primary spring by inserting **tail of spring in slot in governor housing** and turn primary screw into spring.



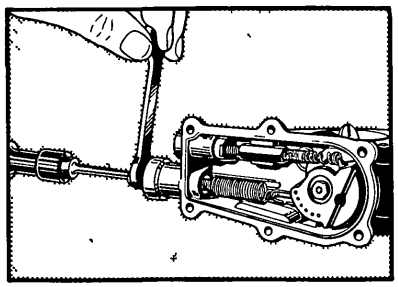
20.

Hook spring to governing lever link



21.

Adjust "B" specification with screw driver and adjusting tool T109-185 in place.

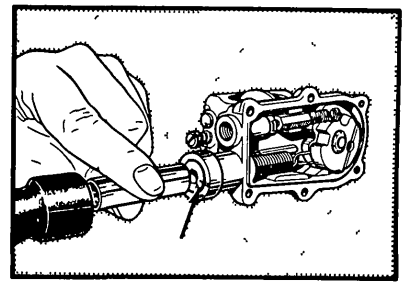


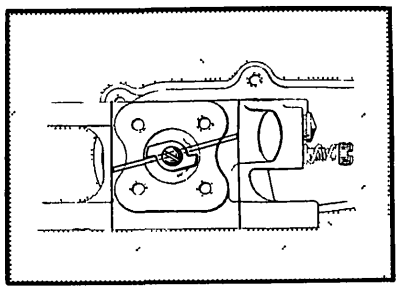
22.

Set "C" dimension by holding primary adjusting screw stationary with screw driver and turning adjusting nut with wrench on tool T109-185 until correct dimension is obtained

23.

After making certain of correct adjustment, insert fiber washer over primary adjusting screw to seal adjusting nut (A section of ¼" pipe will suffice)



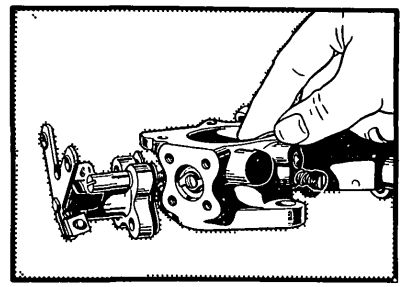


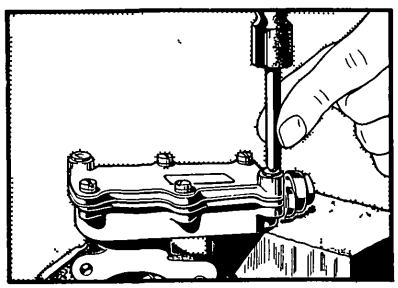
24.

Inspect throttle shaft pick-up dog for wear. Replace if necessary Position of pick-up dog in relation to throttle valve **must** be as shown in illustration
CAUTION Draw into place with screw and lock washer Do not tap end of throttle shaft Excessive tightening will shear the screw

25.

After making certain that throttle lever assembly is pressed on the shaft (stub) as far as it will go to eliminate end play, install shaft housing and lever assembly with throttle valve closed and lever assembly in open position. **Be sure throttle stop screw is in position marked in operation 4.**





26.

Install governor housing gasket and cover assembly Place lead shot (Part No. 103-11) in the two depressed screw openings and while supporting governor housing, tamp into place and stamp with identifying tool

27.

Install carburetor on engine and adjust for desired performance, then seal primary and secondary adjusting screw plugs with lead seals (Part No 163-37)

COMPLETE GOVERNOR ADJUSTMENTS ARE CONTAINED IN CARTER VELOCITY GOVERNOR INSTRUCTION SHEET.

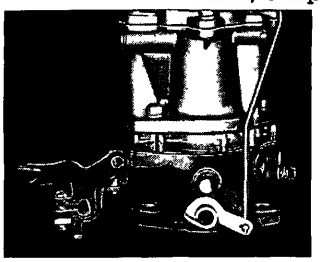
FORM 3501B
August, 1947
Revised August, 1948

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST LOUIS, MO, U S A

SERVICE PROCEDURE

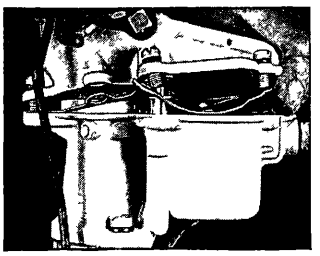
BB DOWNDRAFT CARBURETER FOR INTERNATIONAL HARVESTER TRUCKS

A fast, simple, Circuit method of servicing. Use Carter tool kit. BE ACCURATE



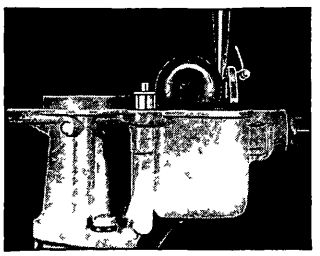
1.

Remove throttle lever assembly.



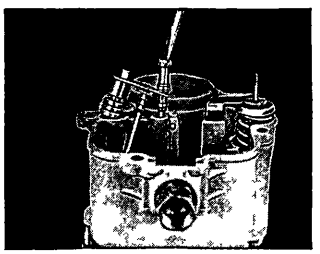
2.

Remove air horn assembly.
Remove body gasket
Disconnect throttle connector rod at upper end



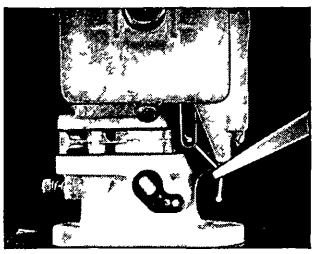
3.

Remove float and lever assembly, float pin and retainer.



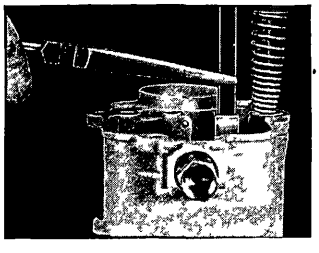
4.

Remove idle orifice tube and plug assembly, step-up piston plate and rod assembly, step-up piston spring and gasket.



5.

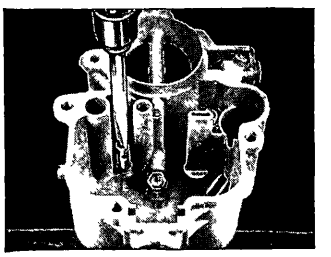
Remove pump connector link.



6.

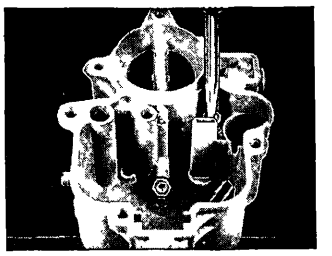
Remove pump plunger and rod assembly intact, and separate plunger from pump lifter link.

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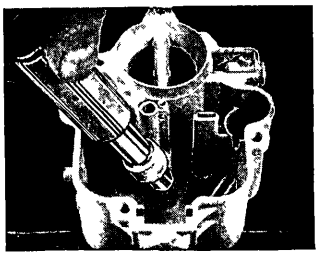
7.

Remove step-up jet and gasket assembly.



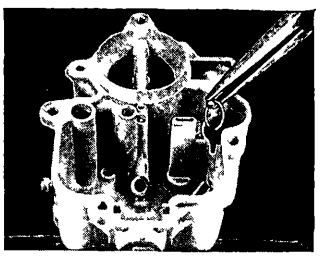
8.

Remove pump check plug and discharge check ball.



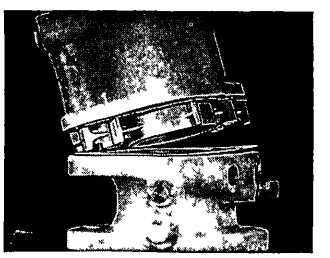
9.

Remove main metering jet and gasket assembly.



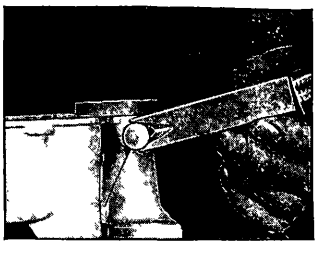
10.

Remove pump retainer ring and intake check ball.



11.

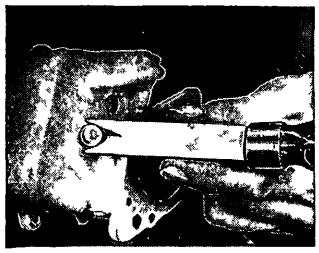
Remove body flange assembly and insulator from body.



12.

Remove pump jet rivet plug and pump jet.

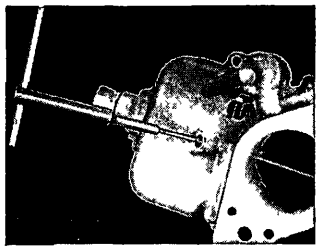
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13.

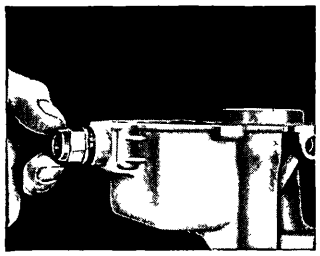
R move main v nt tub rivet plug.

(For high altitude and Export carbureter unscrew high speed adjusting needle assembly)



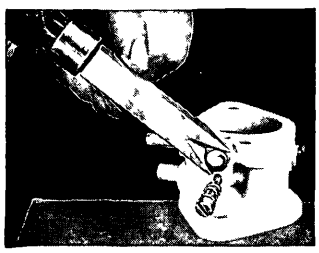
14.

Remove main vent tube.
Use tool T109 195



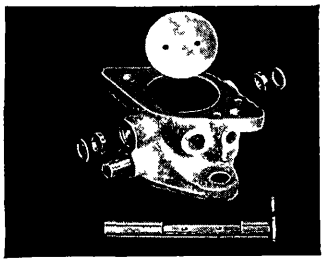
15.

Remove needle seat and gasket.



16.

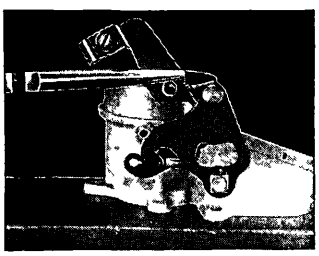
Remove idle adjustment screw and spring, then idle port rivet plug.



17.

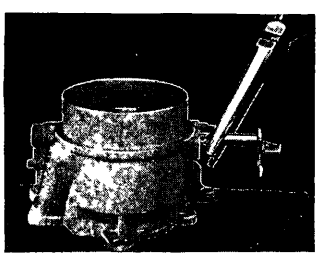
Remove throttle valve and throttle shaft and arm assembly. On carbureters having throttle shaft seals, remove retainer and seals.

CAUTION: Do not submerge flange in cleaning solvent un til retainer and seals have been removed



18.

Remove choke tube bracket assembly.



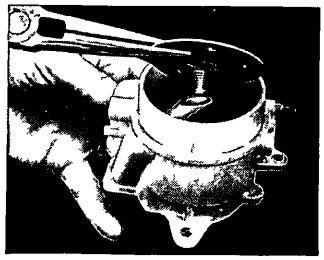
19.

Remove choke valve screws and chok shaft and l ver assembly.

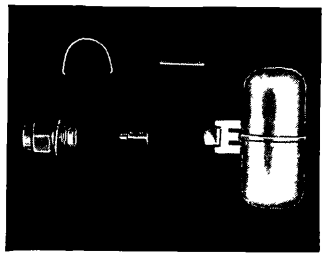
Check for wear and loose lever on shaft

20.

Remov chok valve.
Clean castings and all parts thoroughly with solv nt or any good carbureter cleaner. Scrape all carbon from bore of casting

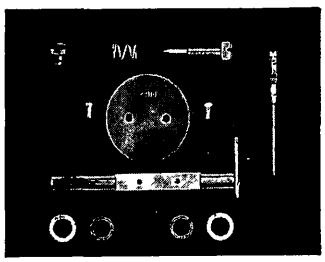


TO REASSEMBLE



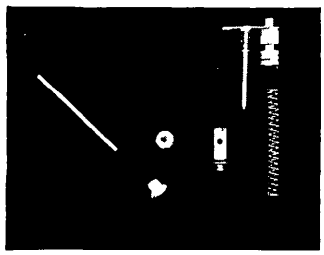
21.

Group parts controlling gasoline level.



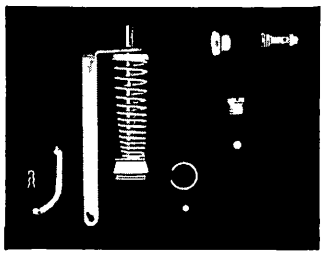
22.

Group parts controlling idle circuit.



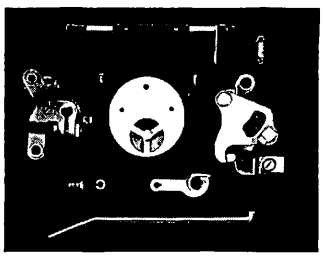
23.

Group parts controlling high speed circuit.



24.

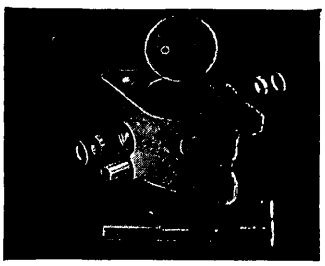
Group parts controlling pump circuit.



25.

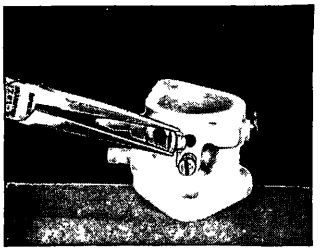
Group parts controlling choke circuit.

Examine each part in the five groups and replace any part that shows wear, or does not meet specifications



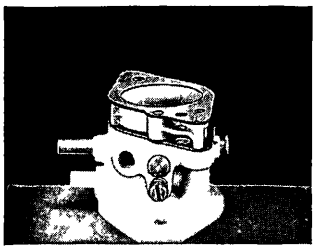
26.

With manifold side of flange down, install throttle shaft s als, r tain rs, thr ttle shaft and arm ass mbly, th n throtl valve.
Small "c" in circle should b toward idle port, and facing downward. Center valv by tapping lightly and hold in plac b f o r tightening screws Us new scr ws



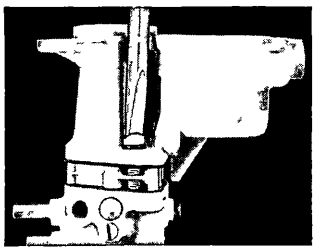
27.

Install new idle port rivet plug first, then install idl adjustment screw and spring. Back out seated screw to specifications



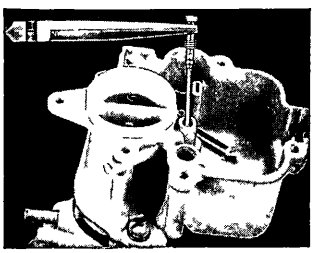
28.

Install insulator and gaskets. Use new gaskets. Be sure that holes in casting, insulator and gaskets line up properly.



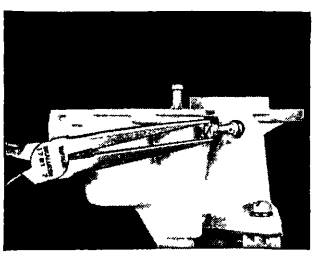
29.

Install body castings and securely tighten screws. Don't forget lock washers



30.

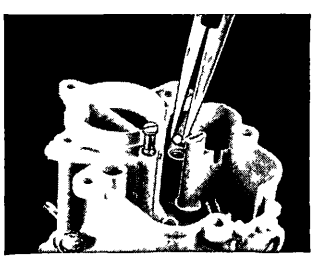
Install idle orifice tube. Do not tighten—leave it loose.



31.

Install pump jet and pump jet rivet plug.

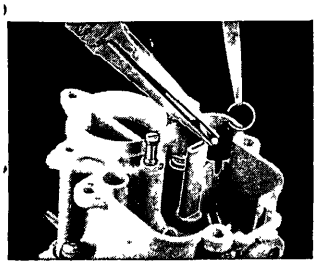
Be sure jet is clear of all restrictions and seats properly.



32.

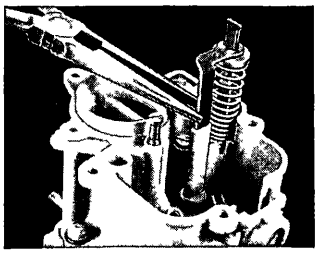
Install pump discharge check ball and plug.

Discharge ball is large ball. Be sure to put check balls in correct passages



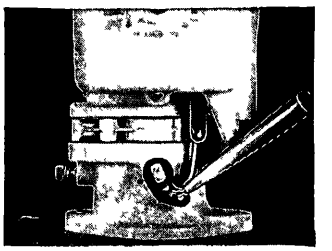
33.

Install pump intake ch ck ball and pump retainer. Intake ball is small.



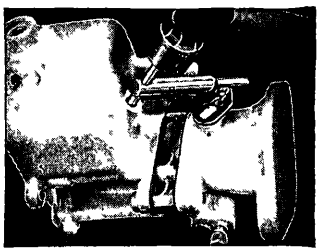
34.

Install pump plung r and rod ass mbly, pump spring and pump lifter link.



35.

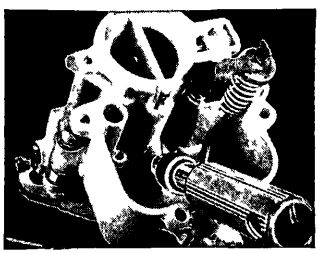
Install pump connector link and pin spring. Connect in center hole in 3 hole levers, inner hole in 2 hole levers.



36.

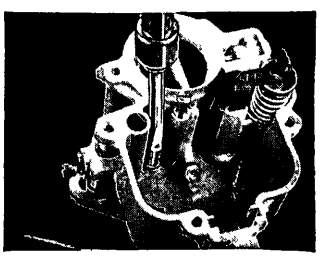
Install main vent tube, then main vent tube rivet plug.

Tool T109-195 must be used to install new tube. Never reuse an old vent tube or plug.



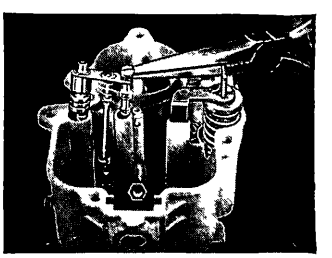
37.

Install main metering jet and gasket assembly.



38.

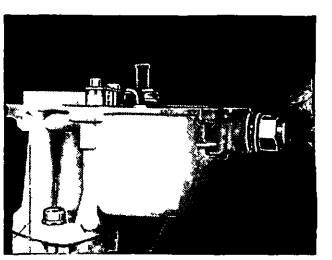
Install step up jet and gasket assembly.



39.

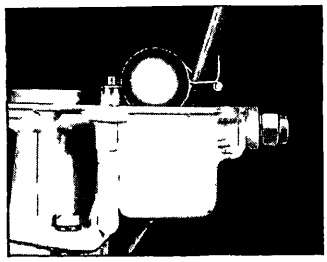
Install step-up piston gasket, spring and step-up piston plate and rod assembly. Press piston down with finger while tightening idle orifice tube.

Check springs for damage.



40.

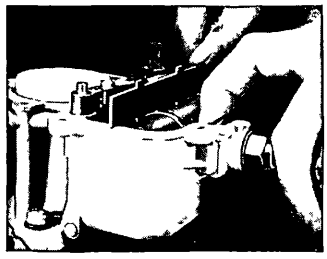
Install needle seat and gasket. Then install needle. If needle or seat shows wear, replace both parts.



41.

Install float and lever assembly, float pin and float lever pin retainer.

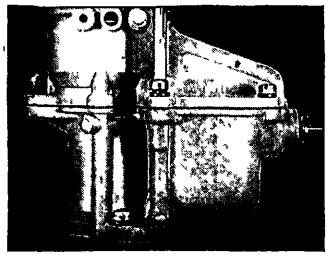
Check float for dents and for wear on float lip or pin.



42.

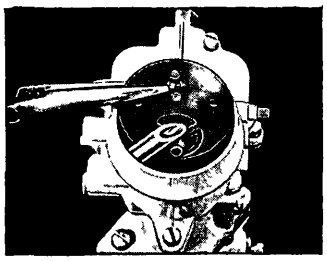
Set float level.

Set float level to specifications. Bend lip, not float.



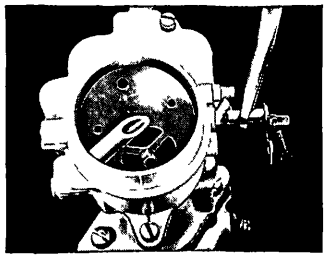
43.

Install air horn assembly.
Use new gasket.



44.

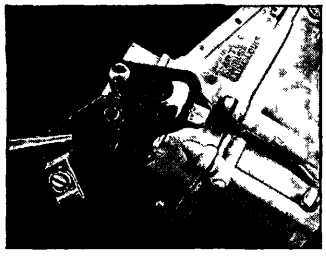
Install choke valve.



45.

Install choke shaft and lever assembly with spring attached.

Use new screws. Center valve by tapping lightly before tightening screws.



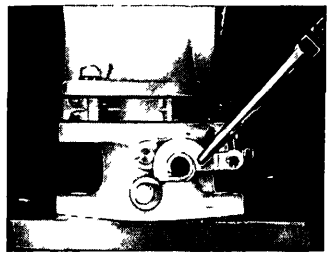
46.

Install choke bracket assembly.
Attach spring.

47.

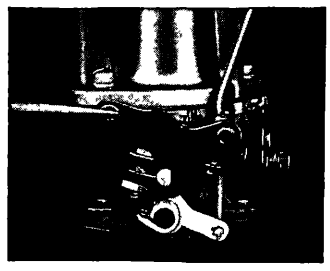
Install fast idle rod and fast idle cam. Place cam on cast iron boss.

Check rod and cam for wear.



48.

Install throttle lever assembly.
Tighten screws securely.
Protect your work with a Carter Airdome or Ceramic Filter.



Note: New flange gasket should be used when installing carbureter on manifold. On cars without governor, gasket with 4 slots should be used; on cars with governor, gasket with 4 small holes should be used between carbureter and governor, the original gasket with 4 slots to remain on manifold beneath governor.

Always use complete new gasket assortment when servicing a Carter Carbureter.

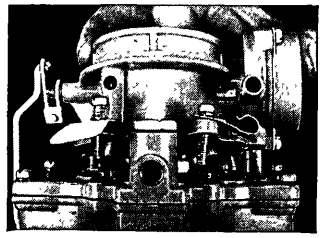
NO CARBURETER CAN DELIVER GOOD MILEAGE OR PERFORMANCE UNLESS COMPRESSION IS NORMAL AND THE MOTOR IS PROPERLY TUNED.

CARBURETER
TRADE MARK REG U. S PAT. OFF
MARCA REGISTRADA

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

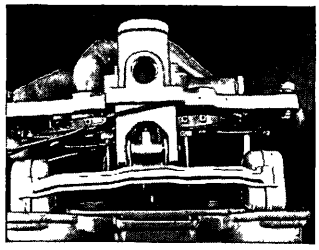
SERVICE PROCEDURE
WCD DUAL CLIMATIC® CONTROL CARBURETER
WITH VACUUM OPERATED METERING ROD AND CARTER STARTER SWITCH

Use Carter tool kit.



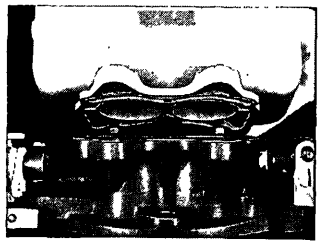
1.

Remove air horn and climatic control assembly with all parts attached.



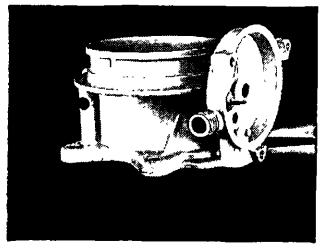
2.

Remove bowl cover with all parts attached.



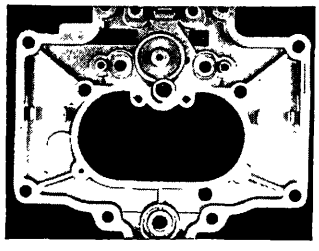
3.

Remove body flange assembly and body flange gasket.



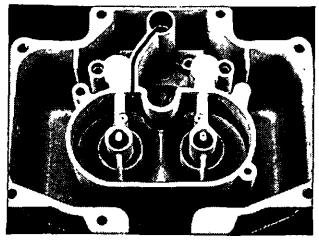
4.

Remove all parts from air horn and choke.



5.

Remove all parts from bowl cover.



6.

Remove all parts from carburetor body EXCEPT NOZZLES. Do not, under any circumstances, attempt to remove nozzles from body casting.

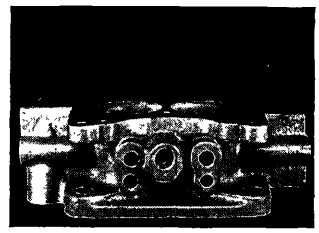
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Copyright © 1948
by Carter Carburetor Corporation
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7.

Remove all parts from body flange assembly.

Check throttle shaft for wear, loose lever and throttle rod holes in lever for wear.

(NOTE: Wash all parts in clean gasoline **except coil and housing assembly, cork pieces and switch parts.** Blow out all passages with compressed air and scrape carbon from bores of flange and replace all worn or damaged parts.)

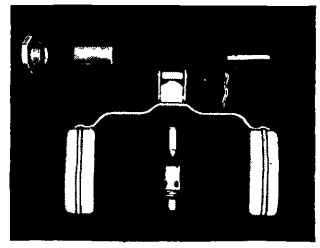


TO REASSEMBLE

8.

Group all parts controlling gasoline level.

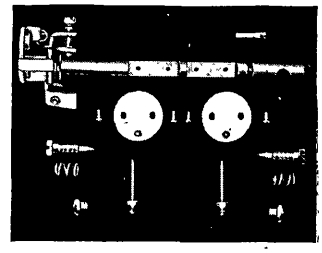
No. 1. Float circuit.



9.

Group all parts controlling idle operation.

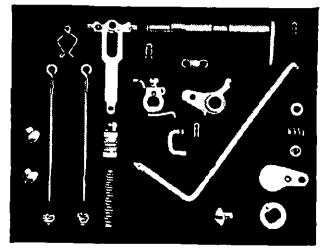
No. 2. Low speed circuit.



10.

Group all parts controlling high speed operation.

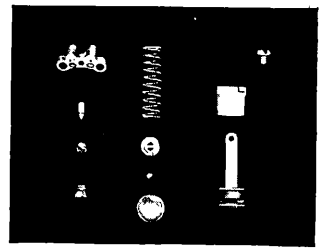
No. 3. High speed circuit.



11.

Group all parts controlling pump operation.

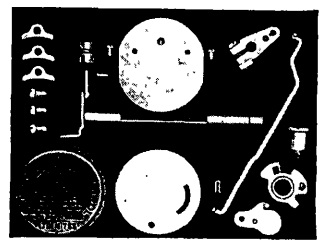
No. 4. Pump circuit.



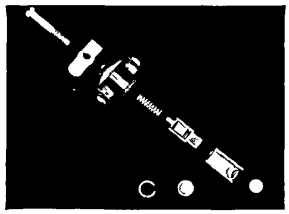
12.

Group all parts controlling choke operation.

No. 5. Choke circuit.

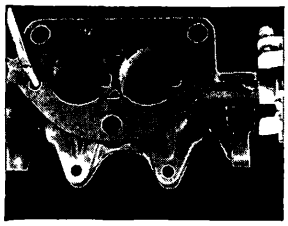


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13.

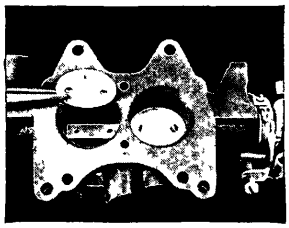
Group all parts controlling switch operation.



14.

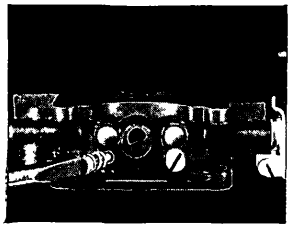
Idle Circuit. Install throttle shaft and lever assembly and throttle centering screw.*

Back out throttle lever adjusting screw.



15.

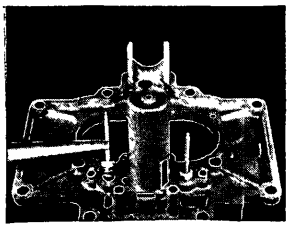
Install throttle valve.
Small "c" in circle (or part number) should be toward idle port when viewing casting from manifold side. Center throttle valves by tapping lightly and hold in place with fingers before tightening screws. Always use new screws.



16.

Install idle port rivet plugs, then idle adjustment screws and springs.

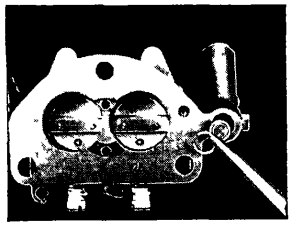
Set idle adjusting screws to specifications.



17.

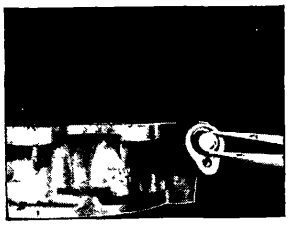
Install low speed jet assemblies.

No gaskets are used.



18.

Starter Switch. Install switch strainer and retainer.



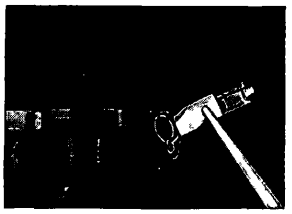
19.

Install switch ball.

20.

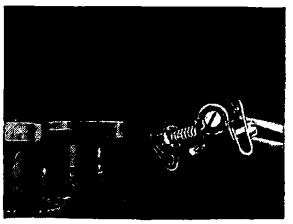
Install switch plunger, guide block and "W" shaped switch contact spring.

Do not forget to reinstall shims under contact spring.



21.

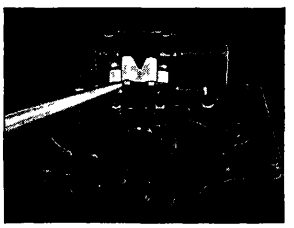
Install switch return spring, terminal cap assembly, hold down clip and attaching screw.



22.

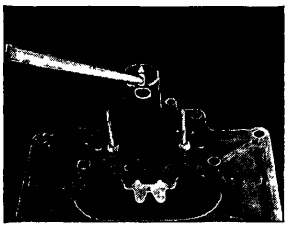
Pump Circuit. Install air horn gasket, then pump jet and housing assembly.

Use new gasket.



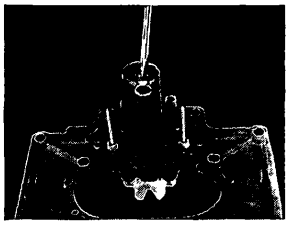
23.

Install pump check needle, blunt end first.



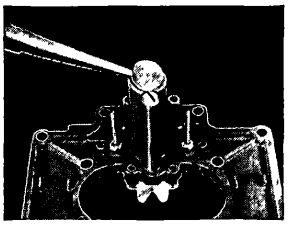
24.

Install discharge check plug first, then pump discharge passage plug.



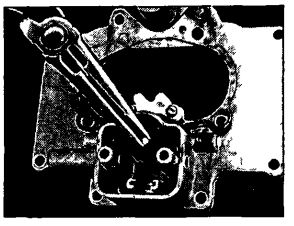
25.

Install pump strainer.

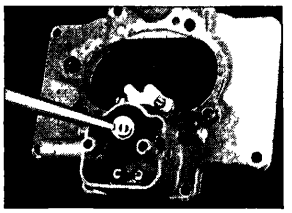


26.

Install intake ball check.



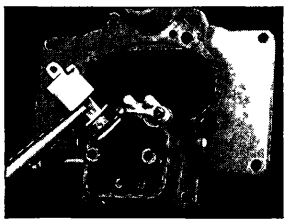
*Late models use throttle centering washer—refer to specification page for installation instructions.



27.

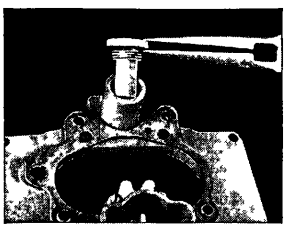
Install ball ch ck retainer.

Use sleeve from tool T109-122U to put cap firmly in poistion



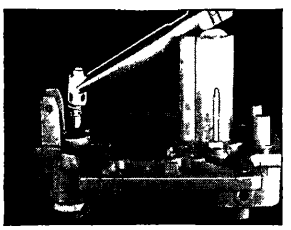
28.

Install pump spring, plunger assembly and plunger guide.



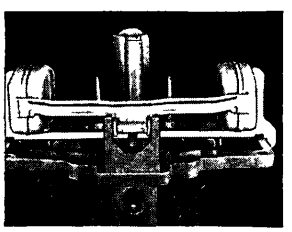
29.

Float Circuit. Install bowl strainer gauze and nut and gasket assembly.



30.

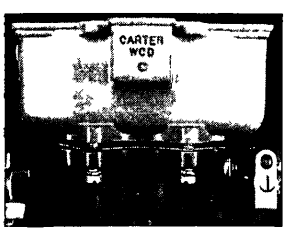
Install needle a n d seat assembly.



31.

Install float and l e v e r assembly.

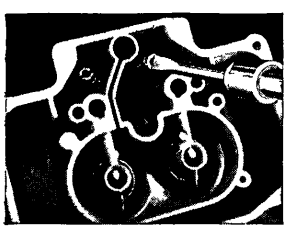
Use gauge T109 160 or T109 162 With bowl cover inverted, place gauge directly under float with notched portions fit ted over machined edge of casting Float should just touch vertical sides of gauge and just clear horizontal portion Carefully remove float, install bowl cover gasket, then replace float



32.

High Speed Circuit. Assemble body flange assembly to body casting.

Use new gasket



33.

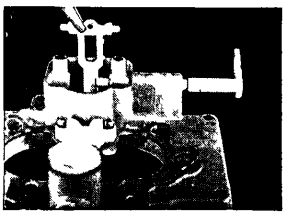
Install metering r d j ts.

Use new gaskets Jets must be installed snugly, but not so tightly as to cause distortion

34.

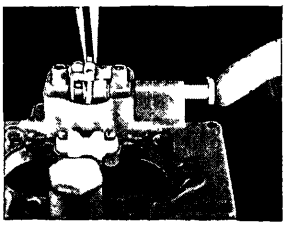
Install vacum t r piston link and m t ring rod spring.

Start pump countershaft assembly.



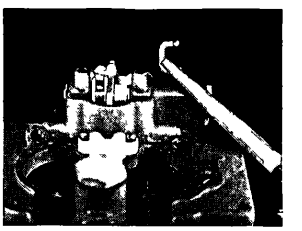
35.

Install pump arm and collar assembly, metering rod arm and s c r e w assembly and pump arm spring.



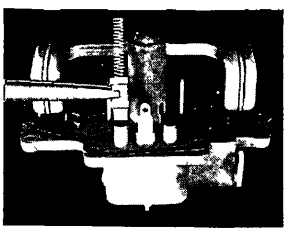
36.

Install pump arm l i n k on pump arm and collar assembly and plunger shaft.



37.

Install vacuum piston and pin assembly, and vacuum piston spring on piston link.



38.

Install body on bowl cover as assembled.

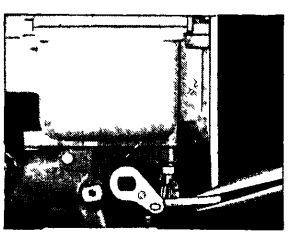
Use new gasket



39.

Install throttle shaft lever and throttle connector rod.

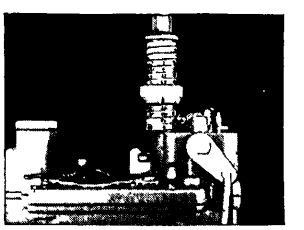
Do not forget throttle shaft washer

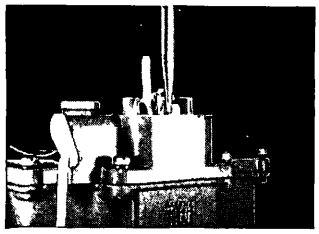


40.

Mak pump adjustm nt. Us tool T109-117S.

See specifications for instruc tions

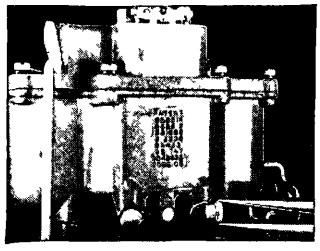




41.

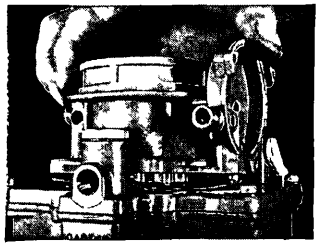
Adjust m t ring r ds.

Install metering rod gauge in place of rod Press down on piston link adjust lip on metering rod arm to just make contact when throttle valves are completley closed Remove gauge and install metering rods



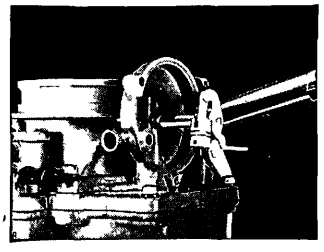
42.

Install nozzle passage rivet plugs.



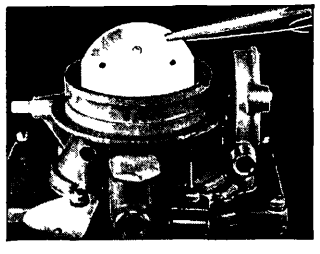
43.

Choke Circuit. Install air horn casting.



44.

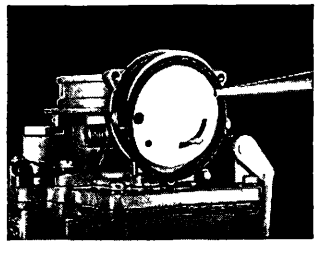
Install choke piston, lever, link and shaft assembly, and piston.



45.

Install choke valve.

Use new screws Seat choke valve by tapping lightly, hold in place with finger before tightening screws Valve or shaft must not bind in any position



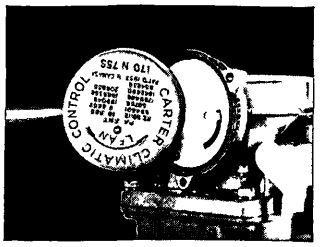
46.

Install coil housing baffle plate and coil housing gasket.

47.

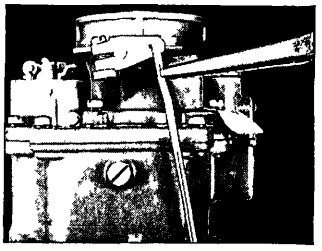
Install thermostatic coil and housing assembly.

Install housing with indicator marks at bottom Revolve housing clockwise and set index mark as stated in specification sheet, then tighten attaching screws



48.

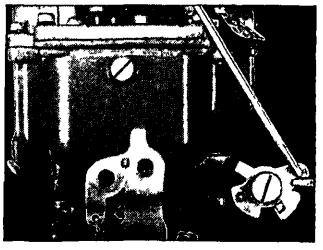
Install choke lever and screw assembly and fast idle connector rod.



49.

Install fast idle cam assembly.

Make unloader and fast idle adjustments (see below) and starter switch adjustment using tool T109 155S



UNLOADER ADJUSTMENT: Two adjustments are necessary to get correct unloader setting Loosen choke lever and screw assembly on shaft Insert 010" flat feeler gauge between lip on fast idle cam and boss on flange casting Hold choke valve closed and tighten choke shaft arm. Then adjust unloader lip on throttle shaft lever to give specified clearance between upper edge of choke valve and inside wall of air horn with throttle wide open

FAST IDLE ADJUSTMENT: With choke valve tightly closed adjust fast idle set screw to give specified clearance between throttle valve and bore of carbureter (side opposite port)

Always use complete new gasket assortment when servicing a Carter Carbureter.

NO CARBURETER CAN DELIVER GOOD MILEAGE OR PERFORMANCE UNLESS COMPRESSION IS NORMAL AND THE MOTOR IS PROPERLY TUNED.

CARBURETER

TRADE MARK REG U S PAT OFF.
MARCA REGISTRADA

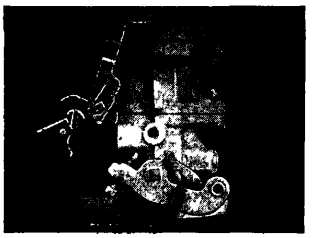
CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

SERVICE PROCEDURE

WA-1 CLIMATIC® CONTROL CARBURETER

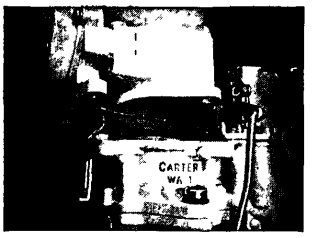
A fast, simple, Circuit method of servicing Carter WA-1 Climatic® Control Carbureters. Use Carter tool kit.

BE ACCURATE.



1.

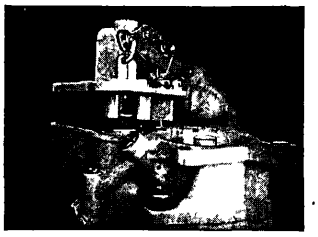
Remove fast idle cam and pin assembly.



2.

Remove air horn and climatic® control assembly.

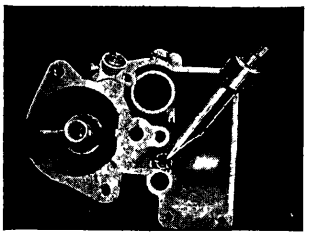
Lift off air horn gasket.



3.

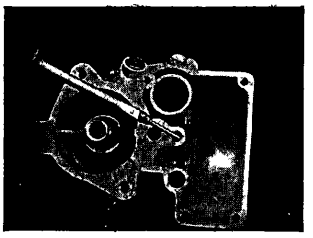
Disconnect throttle connector rod; then remove bowl cover with all parts attached. Remove throttle shaft arm assembly.

Check throttle connector rod for wear at both ends, and hole in pump arm. Remove bowl cover gasket and pump spring.



4.

Remove metering rod jet and gasket assembly.



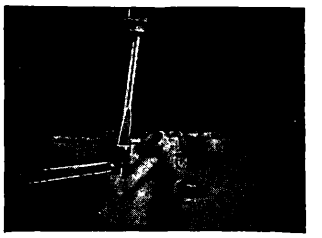
5.

Remove low speed jet assembly.



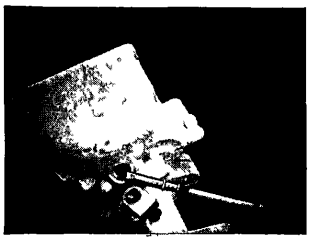
6.

Remove pump jet plug and gasket assembly and pump jet.



7.

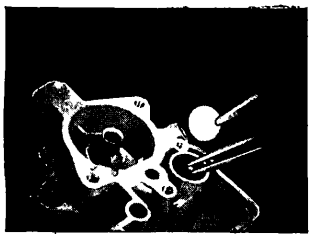
Remove pump discharge ball retainer and gasket, and check ball.



8.

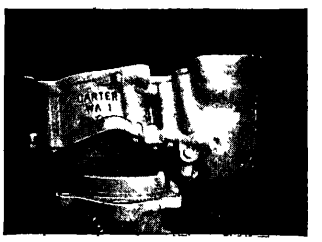
Remove nozzle passage plug, nozzle retainer plug and nozzle.

Be sure to remove small nozzle gasket from casting



9.

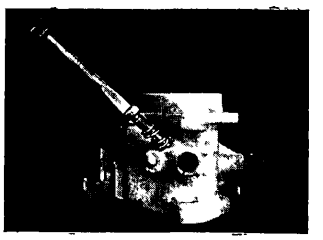
Remove pump strainer, and pump intake check ball.



10.

Separate body from flange assembly.

Remove body flange gasket.



11.

Remove idle adjustment screw and spring.

Check for groove on seating surface.



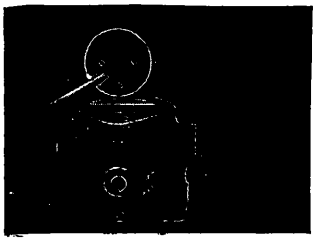
12.

Remove idle port rivet plug.

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TRADE MARK REG. U. S PAT. OFF.
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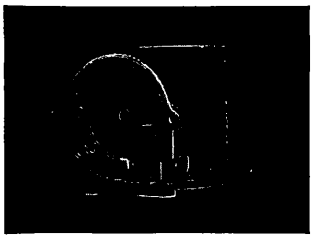
PRINTED IN U.S.A.



13.

Remove throttl valve scr ws, valve and throttle shaft and lever assembly.

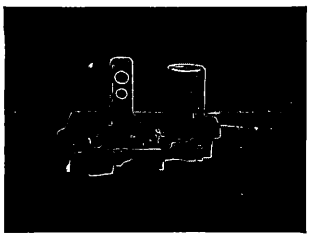
Do not remove baffle plate from carbureter casting. Check shaft for wear, loose lever and throttle rod hole in lever for wear.



14.

Remove all parts from air horn.

Do not remove piston housing attached to air horn with rivet

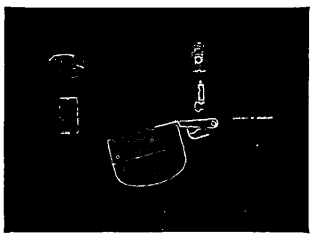


15.

Remove all parts from bowl cover.

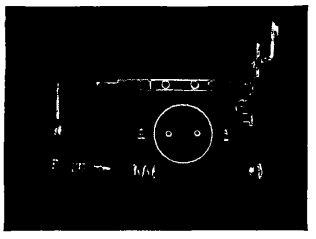
TO REASSEMBLE

(See note at bottom of page)



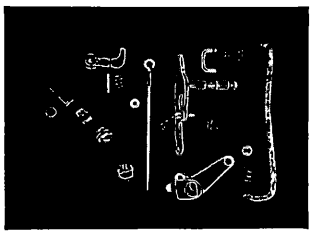
16.

Group parts controlling float circuit.



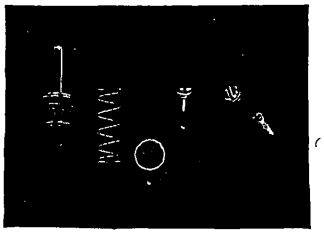
17.

Group parts controlling low speed circuit.



18.

Group parts controlling high speed circuit.



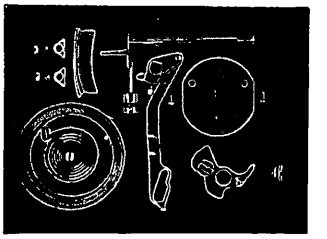
19

Group parts controlling pump circuit.

20.

Group parts for choke circuit.

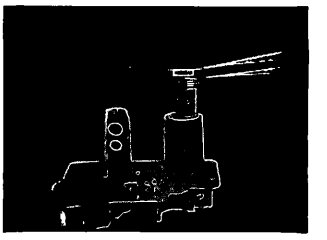
Examine each part in the five groups and replace any part that shows wear, or does not meet specifications



21.

Install strainer and strainer nut and gasket assembly.

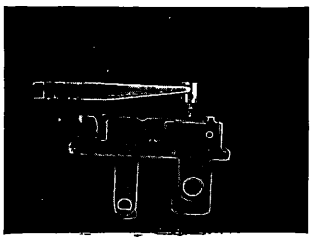
Use new gasket



22.

Install needle seat and gasket assembly.

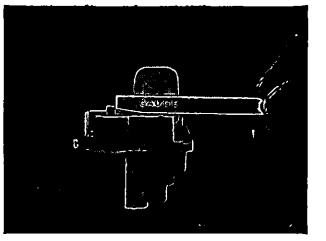
Check for wear If either needle or seat shows wear, replace both



23.

Install needle, float and lever assembly, float lever pin.

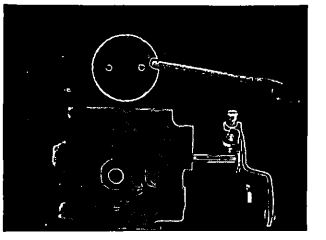
Check float for dents and wear on lip, and float pin for wear Check bowl cover for wear in countershaft hole. Set float level to specifications by bending lip, not float Measure distance from projection on bowl cover to soldered seam of float, as shown



24.

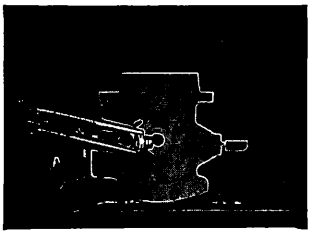
Install throttle shaft and lever assembly and throttle valve.

Small "c" in circle should be toward idle port facing manifold side of flange. Center valve by tapping lightly before tightening screws Use new screws. Back out throttle lever adjusting screw before installing



25.

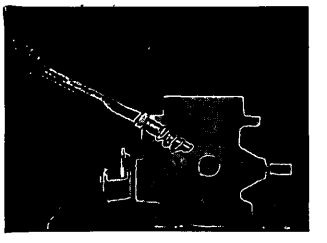
Install idle port rivet plug.



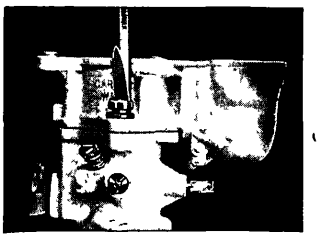
26.

Install idle adjustment screw and spring.

Back out from seated position to specifications



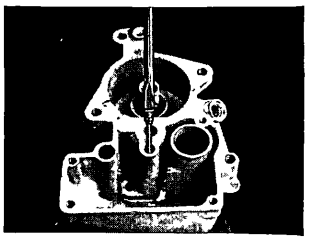
Not : Clean casting and all parts thoroughly, except cork pieces and coil and housing ass mbly, with cl an gasoline. Paint outsid of body casting with Carter Sp cial Body Finish Be sure Finish does not r strict passag s.



27.

Ass mbl body and body flang assembly.

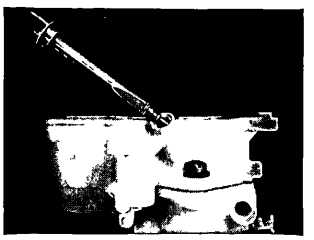
Use new gasket. Pull screws down evenly. Don't forget lock washers.



28.

★Install low speed jet assembly.

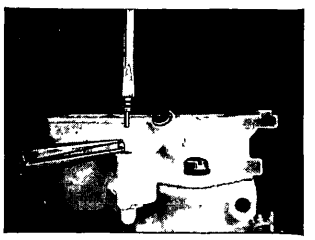
Be sure jet seats firmly in casting.



29.

Install pump jet and pump jet passage plug and gasket assembly.

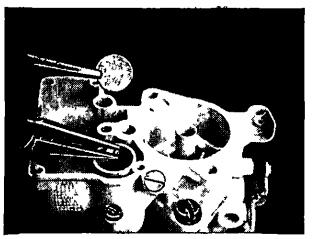
Be sure jet is clear of all restrictions and seats properly. Use new gasket on passage plug.



30.

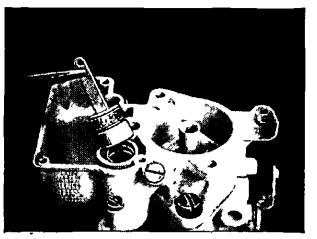
Install pump check ball and pump discharge ball retainer and gasket.

Use new gasket.



31.

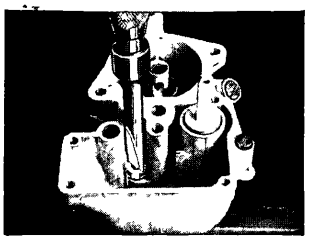
Install pump intake check ball and pump strainer.



32.

Install pump spring and pump plunger and rod assembly.

Examine leather for damage. If not in good condition, replace entire assembly.



33.

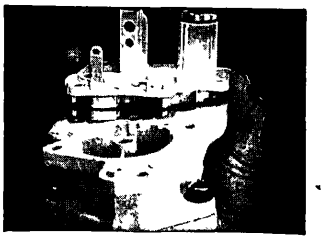
Install metering rod jet and gasket assembly.

Examine for wear. If jet is worn, replace both metering rod and jet. Use new gasket.

34.

Install bowl cover ass mbly.

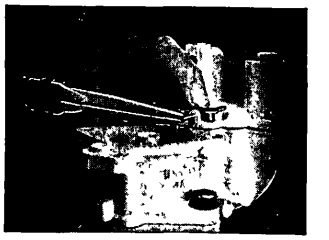
Use new gasket. Pull screws down evenly. Install idle passage plug and gasket assembly (center of bowl cover).



35.

Install anti-percolator cap and rocker arm assembly and spring.

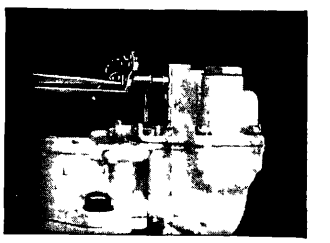
Make certain that leather is in good condition and that pin is not worn.



36.

Install pump arm and countershaft assembly.

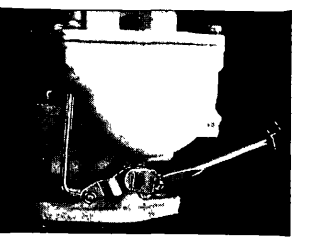
Install connector link on pump shaft and in proper hole in pump arm.



37.

Install throttle shaft arm and screw assembly and throttle connector rod.

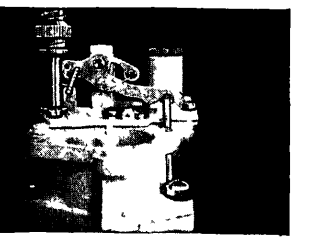
Check throttle shaft arm for wear.



38.

With throttle connector rod in place, adjust pump stroke.

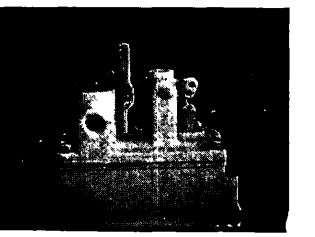
Use universal pump travel gauge T109-117S. See specification sheet for correct pump plunger travel. Adjustment is made by bending throttle connector rod at lower angle.



39.

Adjust metering rod.

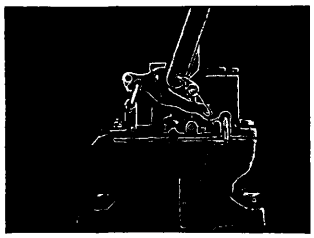
See footnote at bottom of page.



Metering Rod Adjustment: Adjust metering rod after pump adjustment is made. Insert metering rod gauge in place of metering rod, seating tapered end in jet. With throttle valve seated, there should be less than .005" clearance between metering rod pin and shoulder in notch of gauge. Adjustment can be made by bending metering rod pin portion of pump arm up or down as shown in illustration No. 40. **(See page 4 for metering rod adjustment for vacum ter carbureters.)** Remove gauge, install rod and disc, and connect spring.

★ In cases where low speed jet extends into high speed passage, nozzle must be installed before low speed jet.

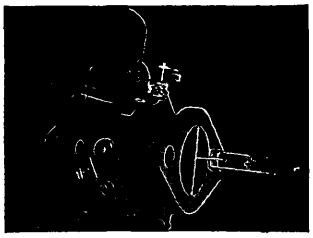
CARBURETER
TRADE MARK REG. U. S. PAT. OFF.
MARCA REGISTRADA



40.

Met ring r d adjustm nt.

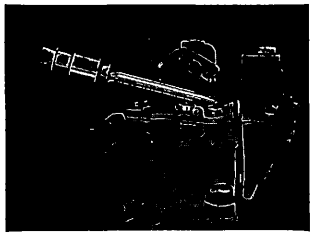
See footnote



41.

Adjust anti-percolator.

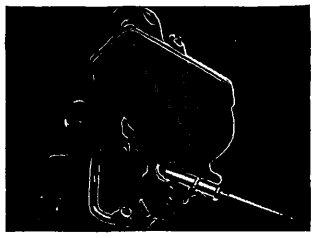
Crack throttle valve specified distance by placing gauge between valve and bore of carbureter (side opposite port) (See specification sheet)



42.

Anti-percolator adjustment.

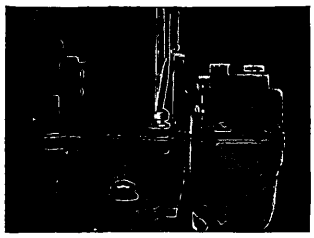
Bend anti percolator rocker arm until there is a clearance of 005" to 015" between rocker arm and pump arm



43.

Install nozzle, nozzle retainer plug and nozzle passage plug and gasket assembly.

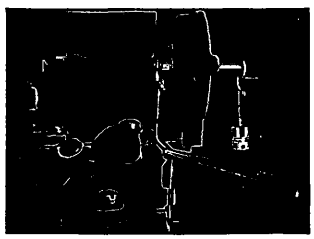
Use new gasket on nozzle and nozzle passage plug



44.

Install air horn and piston housing assembly.

Use new gasket Tighten screws evenly Don t forget lock washers



45.

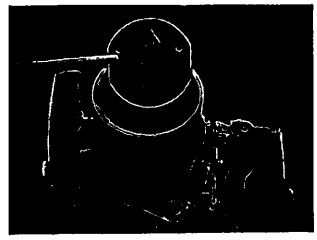
With choke lever, screw and link assembly in place, install choke shaft and piston assembly.

Check for loose lever on shaft

46.

Install chok valve.

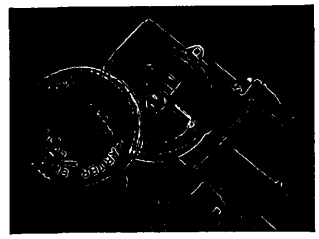
Use new screws when install ing valve. Center choke valve by tapping lightly. Hold in place with finger before tightening screws.



47.

Install piston housing strainer and thermostatic coil and housing assembly.

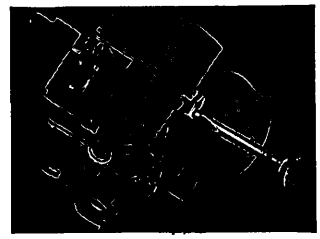
Install coil housing assembly with indicator marks at bottom. Then revolve housing counter clockwise and set as specified



48.

Hold choke valve wide open, then tighten choke lever screw as shown.

Be sure that linkage does not bind in any position Fast idle, unloader and lockout adjustments must be made as specified



49.

Install fast idle cam and pin assembly.

Carbureter is now ready for installation. Protect your work with a Carter Ceramic or Air dome Fuel Filter



Always use complete new gasket assortment when servicing a Carter Carbureter

NO CARBURETER CAN DELIVER GOOD MILEAGE OR PERFORMANCE UNLESS COMPRESSION IS NORMAL AND THE MOTOR IS PROPERLY TUNED.

CARBURETER

TRADE MARK REG U S PAT OFF.
MARCA REGISTRADA

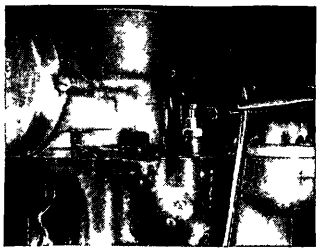
Metering Rod Adjustment (Vacumeter carbureters). Adjust metering rod after pump adjustment is made Insert metering rod gauge in place of metering rod, seating tapered end in jet With throttle valve s at d, press down lightly on piston link directly over piston There should be less than 005" clearance between metering rod pin and shoulder of notch in gauge Gauge must not drag on pin Adjustment can be made by bending lip on piston link so that it contacts hump on pump arm Remove gauge install rod and disc and connect spring

SERVICE PROCEDURE

W-1 CLIMATIC CONTROL CARBURETER

A fast, simple, Circuit method of servicing Carter W-1 Climatic Control Carbureters. Use Carter tool kit

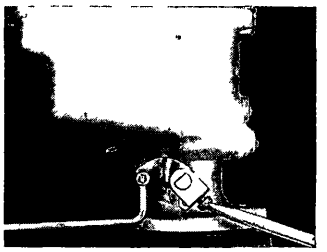
BE ACCURATE



1.

Remove throttle connector rod at pump arm.

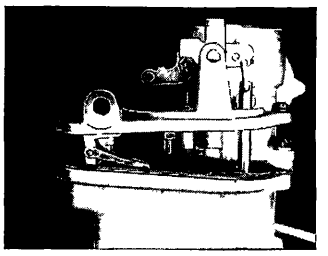
Check for wear at upper end of rod and hole in pump arm



2.

Remove throttle connector rod and throttle shaft arm.

Check for wear at lower end of rod and hole in arm



3.

Remove bowl cover with all parts attached.

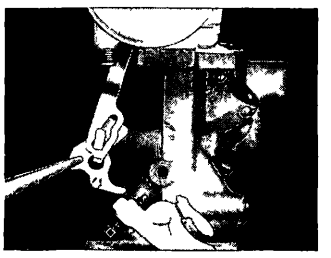
(On 1934-35 models, air horn must be removed before bowl cover is removed.)



4.

Remove nozzle passage plug and nozzle.

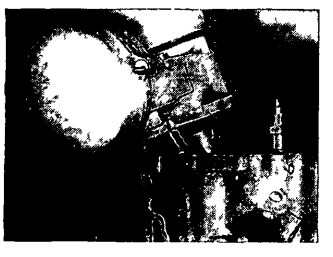
Be sure to remove small nozzle gasket from casting



5.

Remove fast idle cam and pin assembly and screw.

Disconnect from fast idle link



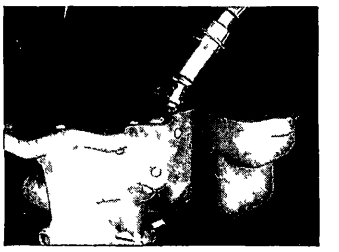
6.

Remov air horn and climatic c ntrol assembly.

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by Carter Carburetor Corporation
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7.

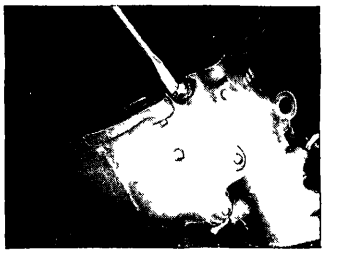
Remove anti-percolator assembly.



8.

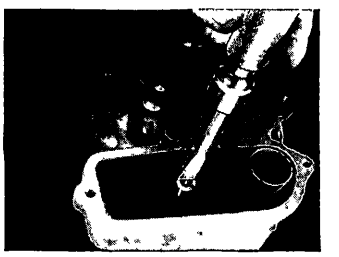
Remove pump jet passage plug and pump jet.

Be sure to remove small copper washer from casting



9.

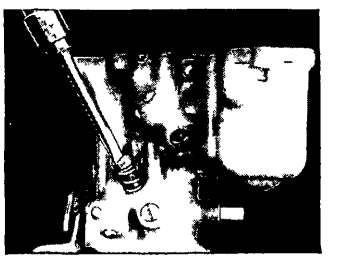
Remove metering rod jet and gasket assembly.



10.

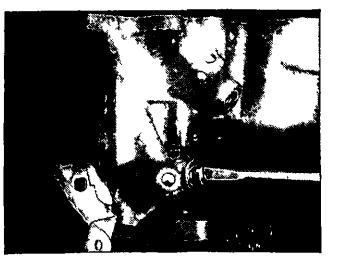
Remove idle adjusting screw and spring.

Check for groove on seating surface.



11.

Remove idle port plug.



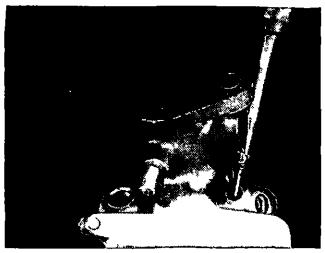
12.

Remov check valve passage plug strainer, intake and discharg ch ck valves.

Remov copper wash r from casting.



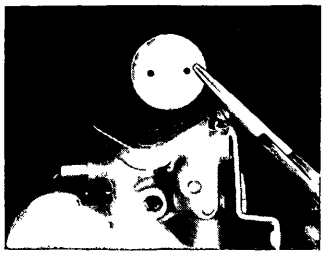
PRINTED IN U.S.A.



13.

★Remove low speed jet.

Remov small copper washer from casting



14.

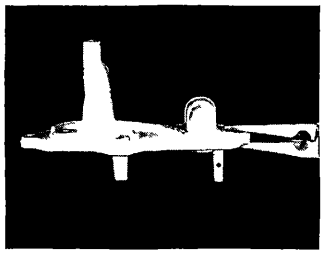
Remove throttle valve.



15.

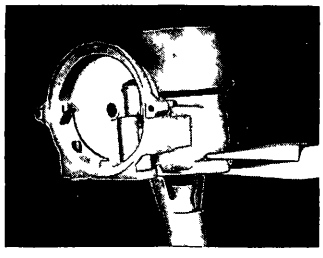
Remove throttle shaft and lever assembly.

Check shaft for wear, loose lever and throttle rod hole in lever for wear



16

Remove all parts from bowl cover.



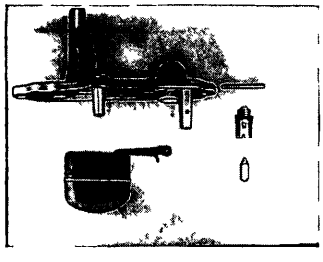
17.

Remove all parts from air horn.

Do not remove piston housing attached to air horn with rivet

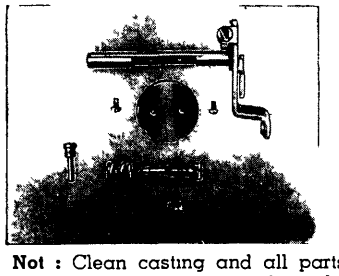
(See note at bottom of page)

TO REASSEMBLE



18.

Group parts controlling the gasoline level.

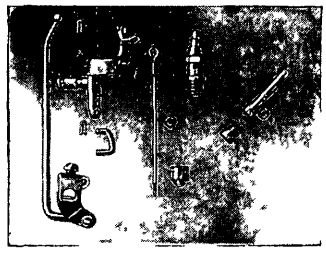


19.

Group parts controlling idle circuit.

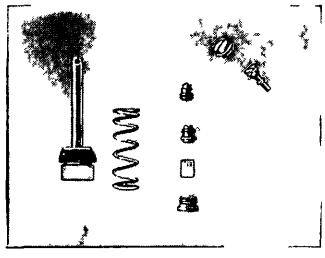
20.

Group parts controlling high speed circuit.



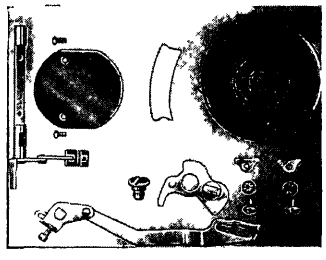
21.

Group parts for pump circuit.



22.

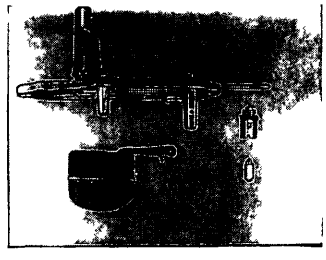
Group parts for choke circuit. Examine each part in the five groups and replace any part that shows wear, or does not meet specifications



23.

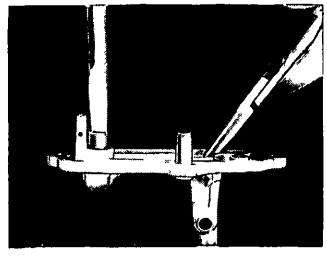
Assembly parts that control gasoline level as shown.

Check float for dents and wear on lip and float pin for wear Check bowl cover for warpage and wear in countershaft hole If needle shows groove on seating surface, replace both needle and seat



24.

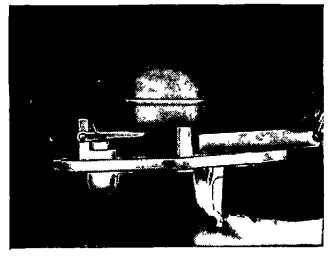
Install needle seat and gasket assembly.



25.

Install needle, float and lever assembly and float pin

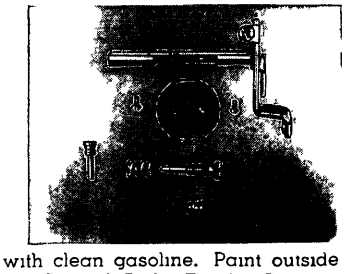
Set float level to specifications by bending lip, not float



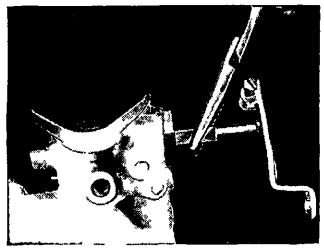
26.

Assemble idle circuit parts as shown.

Never reinstall a used low speed jet Use new jet and new copper washer Be sure to scrape all carbon from bore of casting



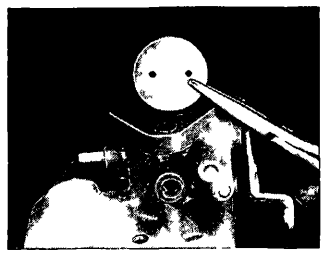
Note : Clean casting and all parts thoroughly, except cork pieces and coil and housing assembly with clean gasoline. Paint outside of body casting, and inside of bowl to a depth of 1 in from top edge of casting with Carter Special Body Finish Be sure Finish does not restrict passages **★On some carburetors the low speed jet is pressed in place and cannot be removed.**



27.

Install throttle shaft and l ver assembly.

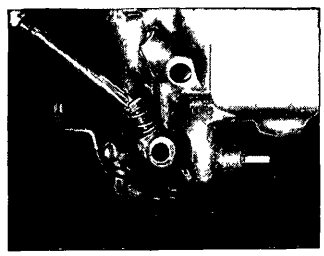
Back out throttle lever adjust ing screw



28.

Install throttle valve.

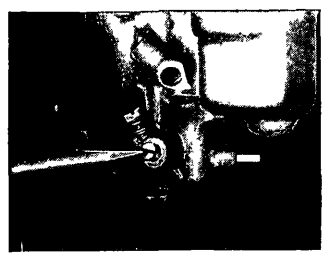
Small "c" in circle or part number should be toward idle port when viewing casting from manifold side Center throttle valve by tapping lightly and hold in place with finger before tightening screws Always use new screws



29.

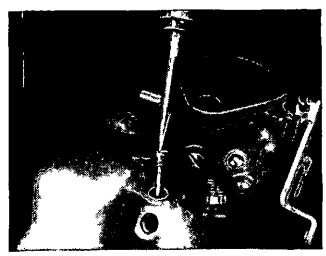
Install idle adjusting screw and spring.

Back out from seated position to specifications



30.

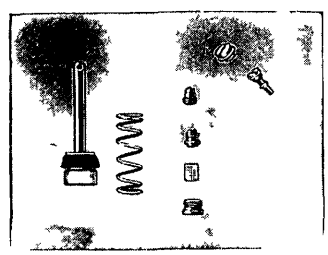
Install idle port plug



31.

★Install low speed jet.

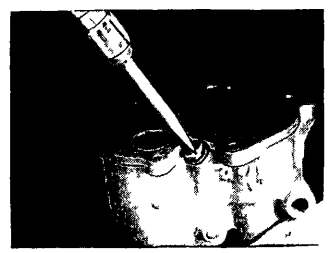
Be careful to install new cop per washer in casting before installing new jet



32.

Assemble parts for pump cir cuit.

Replace both spring and leather if leather shows wear or mutilation Test checks by blowing for free operation



33.

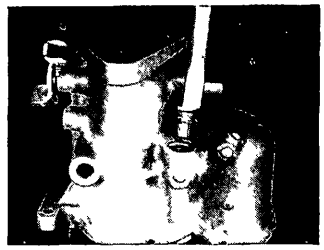
Install pump discharge jet and plug.

B sure jet is clear of all re strictions and seats properly Place new copper washer in casting before installing plug.

34.

Install discharge and intake checks, strainer and plug.

Place new copper washer in casting before installing plug and strainer



35.

Install pump spring and plunger assembly.

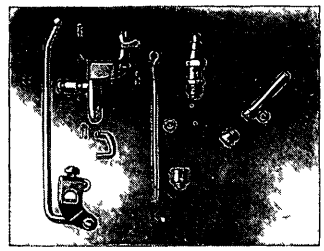
Use loading tool to avoid damage to leather



36.

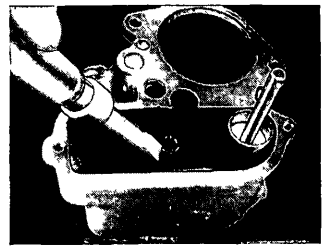
Assemble parts controlling high speed circuit.

Check pump arm and coun tershaft for wear on shaft and for loose lever If metering rod shows wear, replace both rod and jet New nozzles should be used whenever carbureters are serviced Check anti percolator valve closely for dirt and wear



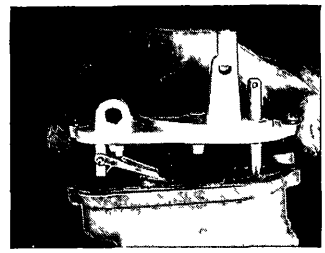
37.

Install metering rod jet and gasket assembly



38.

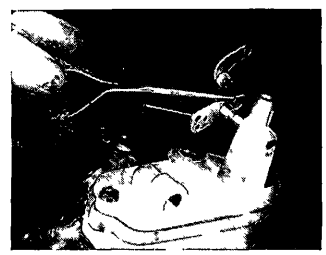
Install bowl cover assembly and gasket



39.

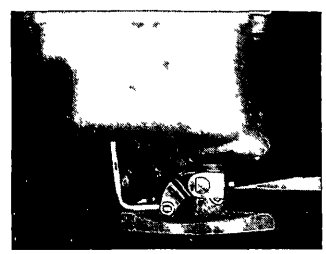
Install pump arm and coun tershaft assembly.

Connect pump shaft to pump arm with connector link

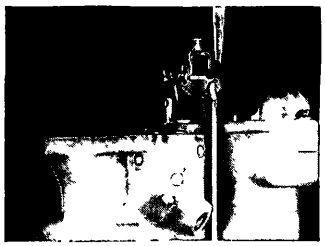


40

Install throttle shaft arm and throttle connector rod

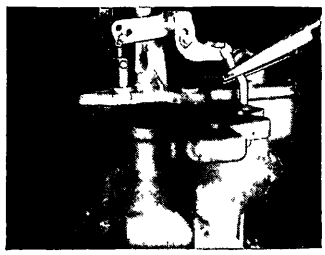


★On some carbureters the low sp ed jet is pressed in place and cannot be removed.



41.

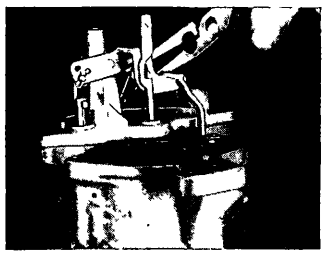
Conn ct upper nd of throttle *connector rod to pump arm.*



42.

Bend throttle connector rod at lower end to give specified pump plunger travel. (This adjustment only for carbureters with specified pump stroke.)

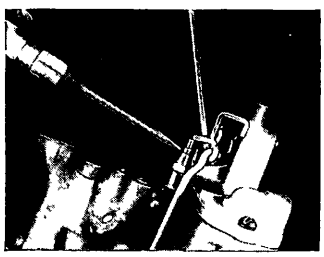
Do not bend throttle connector rod at point shown by pliers in picture. Bend at lower angle for adjustment.



43.

Install metering rod gauge.

Hold gauge verticle to insure seating. For carbureters with adjustable metering rod pin, loosen nut on pin, and rest pin in notch of gauge and tighten nut (Tool No. T109-76). For carbureters with fixed pin, bend throttle connector rod so upper end centers freely in pump arm hole.



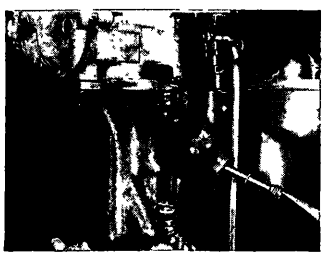
44.

Install anti-percolator valve. Seat tightly. Adjust lip on pump arm so indicator line is flush with top of anti-percolator. Then install metering rod.



45.

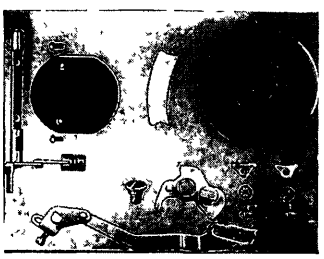
Install air horn.



46.

Install nozzle and nozzle passage plug.

Put new gasket on nozzle before installing. Slip nozzles should always be installed with flat surface upward. Insert new copper washer in casting before installing plug.



47.

Assembl choke parts.

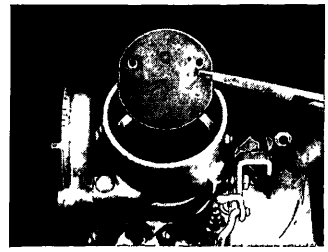
Check for loose lever on shaft.



48.

Install choke shaft and lever *assembly with piston attached.*

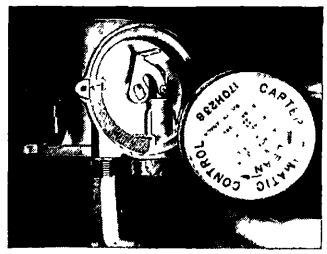
Be sure to install choke lever, screw and link assembly when installing choke shaft.



49.

Install choke valve.

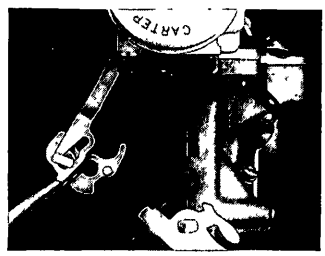
Use new screws when installing valve. Center choke valve by tapping lightly. Hold in place with fingers before tightening screws.



50.

Install strainer and thermostatic coil and housing assembly.

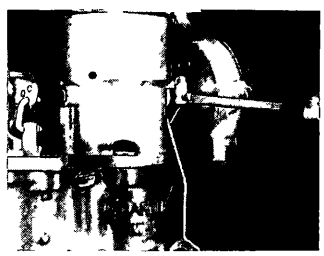
Install thermostatic coil housing assembly with indicator mark to bottom. Then revolve housing ½ turn counter-clockwise and set indicator as specified.



51.

Install fast idle cam and pin assembly.

Attach to body with screw



52.

Tighten choke lever screw.

Be sure that linkage does not bind in any position. Fast idle, unloader and lockout adjustments must be made as specified. Protect your work with a Carter Airdome Fuel Filter.

Always use complete new gasket assortment when servicing a Carter Carbureter.

NO CARBURETER CAN DELIVER GOOD MILEAGE OR PERFORMANCE UNLESS COMPRESSION IS NORMAL AND THE MOTOR IS PROPERLY TUNED.

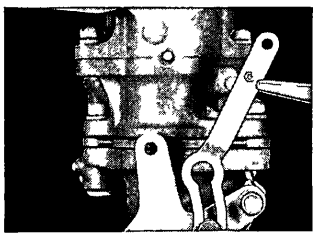
CARBURETER
TRADE MARK REG. U. S. PAT. OFF.
MARCA REGISTRADA

Form 3359C
April, 1939
Revised July, 1948

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST LOUIS, MO, U S A

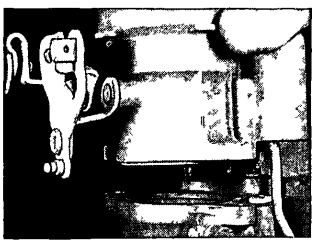
W-O CARBURETER SERVICE PROCEDURE

A fast, simple, Circuit method of servicing Carter W-O Carbureters. Use Carter Tool Kit BE ACCURATE.



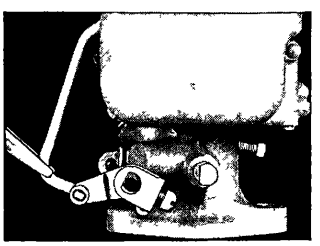
1.

Remove choke link pin spring, choke connector link and spring.



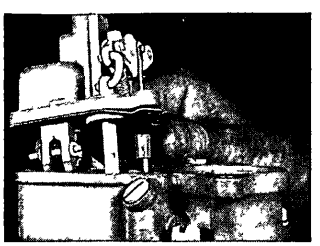
2.

Remove air horn and dust cover assembly with all parts attached.



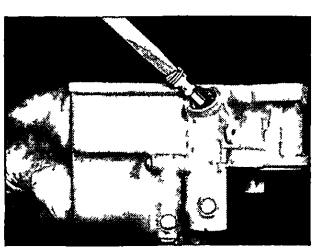
3.

Remove throttle shaft arm and screw assembly and throttle connector rod.



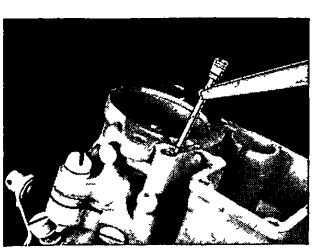
4.

Remove bowl cover with all parts attached.



5.

Remove pump jet passage plug and gasket assembly, and pump jet.



6.

Remove low speed jet plug and gasket assembly, and low speed jet.



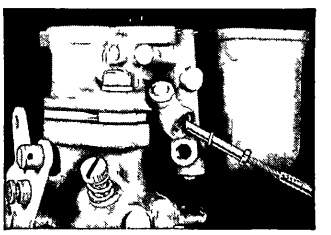
7.

Remove idle well plug and gasket assembly, and idle well jet.

8.

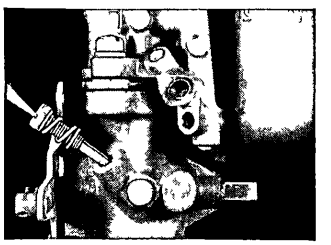
Remove nozzle passage plug and gasket assembly, nozzle retainer plug and nozzle.

Be sure to remove small nozzle gasket



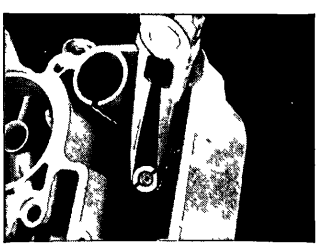
9.

Remove idle adjusting screw and spring.



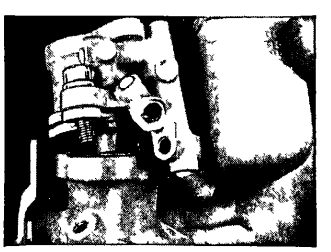
10.

Remove metering rod jet and gasket assembly.



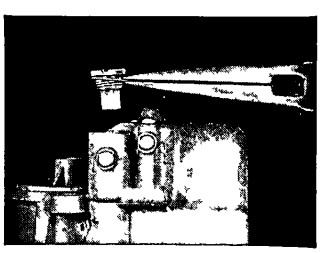
11.

Disassemble flange from body and remove insulator and gaskets.



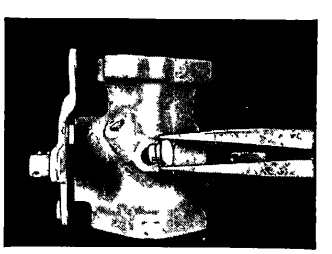
12.

Remove strainer passage plug, strainer, intake and discharge check assemblies.



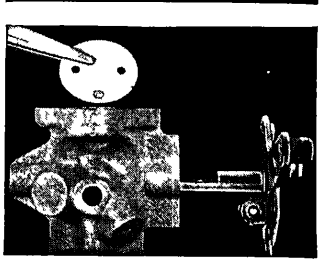
13.

Remove idle port rivet plug.



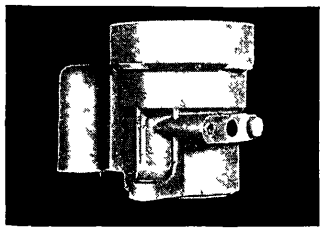
14.

Remove throttle valve screws, valve and throttle shaft and lever assembly.



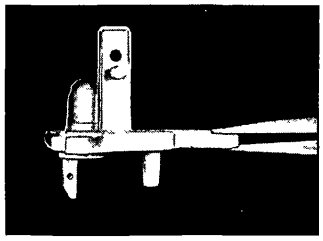
Copyright 1939
Copyright 1948
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15.

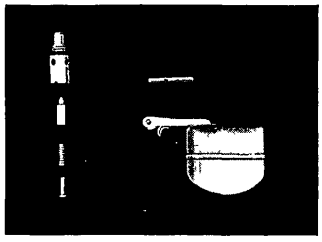
Remove all parts from air horn and dust cover assembly.



16.

Disassemble all parts from bowl cover.

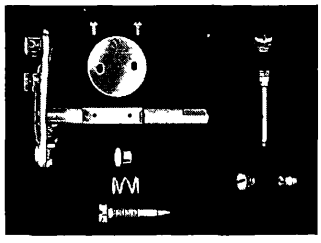
Clean all castings thoroughly, inside and out, with a small brush and clean gasoline Then blow out all passages with compressed air



TO REASSEMBLE

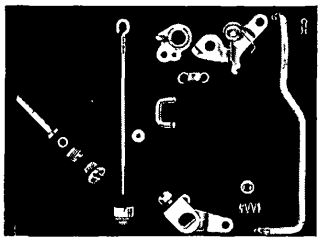
17.

Group all parts controlling gasoline level.



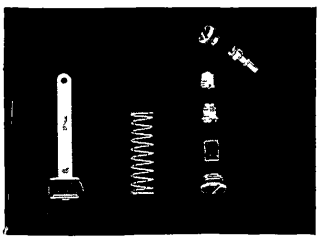
18.

Group all idle circuit parts.



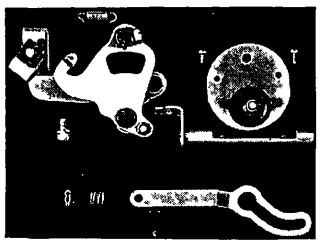
19.

Group all high speed circuit parts.



20.

Group all pump circuit parts.



21.

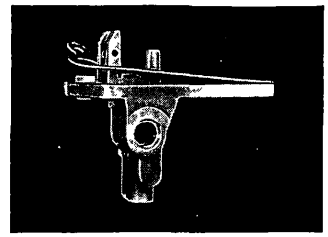
Group all choke circuit parts.

(See note at bottom of page)

22.

Install bowl cover gasket.

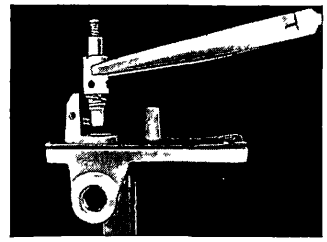
Check bowl cover for warpage and wear on countershaft pin



23.

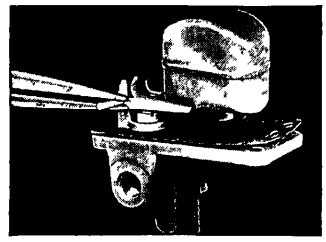
Install needle seat and gasket assembly in bowl cover.

Then install needle pin and spring



24.

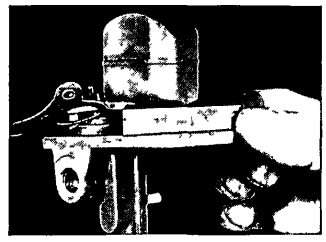
Install float and lever assembly and float pin.



25

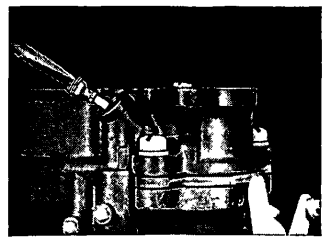
Set float level.

Turn gasket around so gauge can be placed on machined surface of casting Adjustment is obtained by bending float lip (which contacts needle). Do not bend float



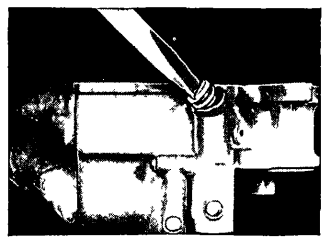
26.

Install pump jet.



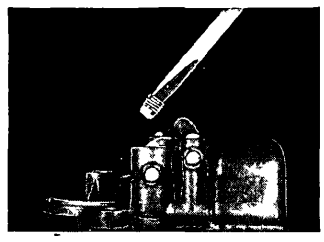
27.

Install pump jet passage plug and gasket assembly.

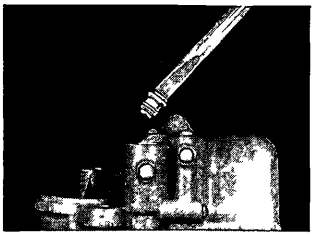


28.

Install discharge check assembly.

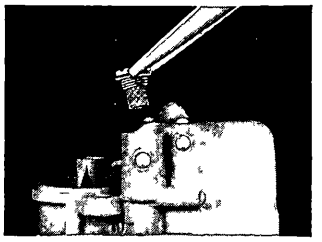


NOTE· Examine each part in each group and replace those parts that show wear or damage If any carbon is in the bore of the flange, remove it by scraping or with sandpaper (do not use emery cloth) Install all parts tight. Use all new gaskets



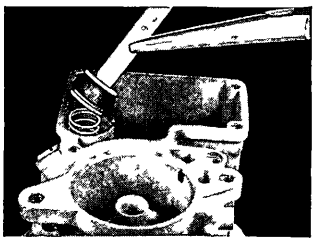
29.

Install intak check assembly.



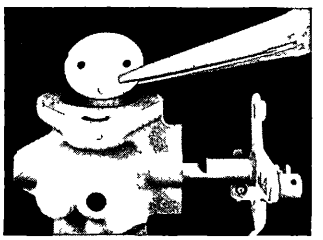
30.

Insert strainer in recessed portion of strainer plug. Then install strainer plug as assembled.



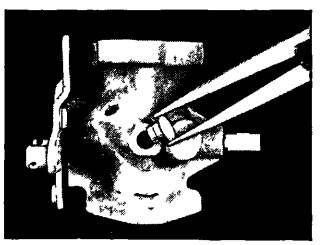
31.

Install pump spring and pump plunger and rod assembly.



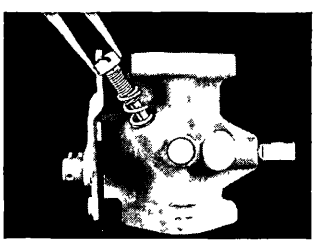
32.

Install throttle shaft and lever assembly and throttle valve. Install valve with small "c" toward idle port opening and facing manifold side of flange. Back out throttle lever adjusting screw. With screws loose, tap throttle valve lightly to centralize it in bore of carbureter, hold in place with fingers and securely tighten screws. Always use new screws



33.

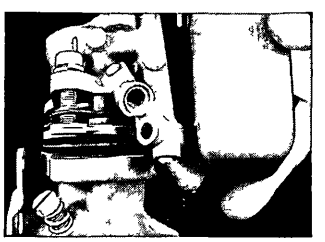
Install new idle port plug.



34.

Install idle adjustment screw and spring.

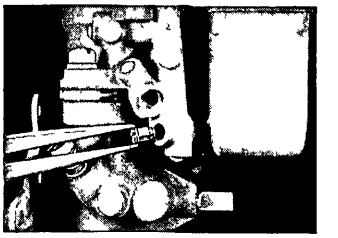
Set to specification



35

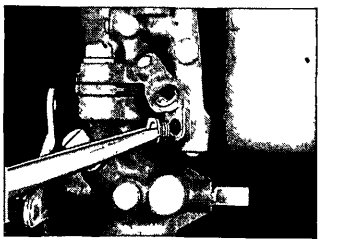
Assemble flange to body.

Use new gaskets Line up holes in body casting with holes in insulator, gaskets and flange before tightening screws Don t forget lock washers



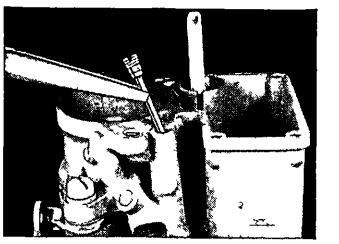
36.

Install idl w ll j t.



37.

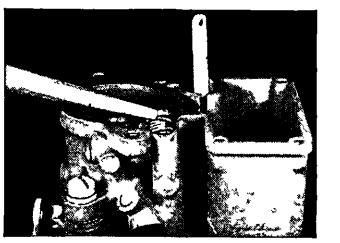
Install idle well jet passage plug and gasket assembly.



38.

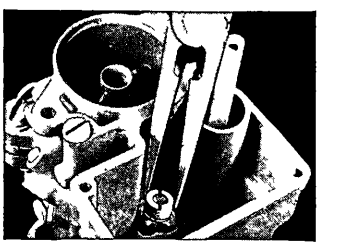
Install low speed jet.

Work jet well into seat to insure a good seal.



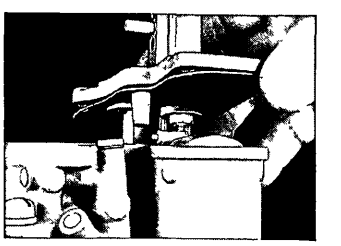
39.

Install low speed jet passage plug and gasket assembly.



40.

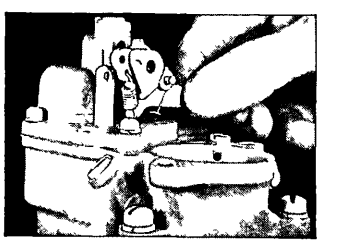
Install metering rod jet and gasket assembly.



41.

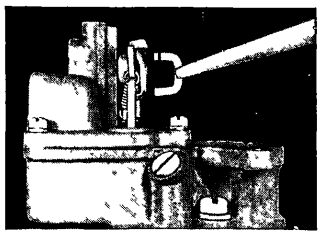
Install bowl cover as assembled.

Tighten screws evenly and securely.



42.

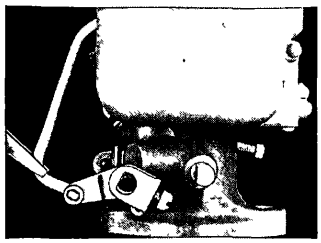
Install pump arm and collar and pump operating lever assembly on pin in bowl cover.



43.

Install pump connector link.

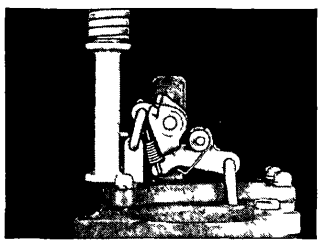
Ends of link should be away from bore with pin spring at top.



44.

Install throttle shaft arm and screw assembly on throttle shaft.

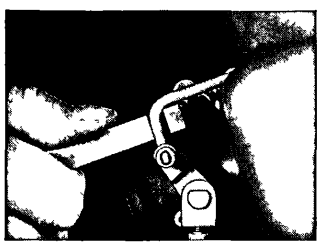
Then install throttle connector rod using new spring and retainer at lower end and pin spring at top end. Examine throttle connector rod and throttle shaft arm for wear.



45.

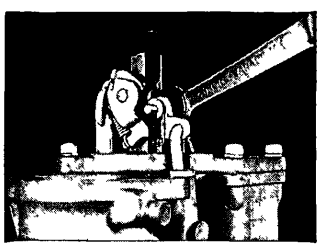
Adjust pump stroke.

(See note at bottom of right hand column.)



46.

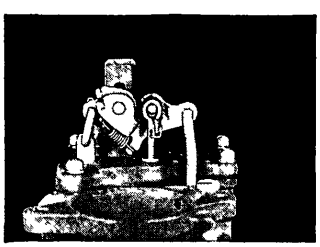
Proper method of bending throttle connector rod for pump adjustment.



47.

Adjust metering rod.

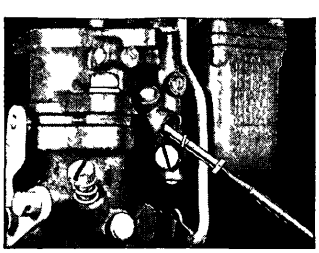
(See note at bottom of right hand column.)



48.

Remove metering rod gauge and install metering rod and disk.

End of metering rod spring should be inserted **through** hole in metering rod in 539S carbureter.



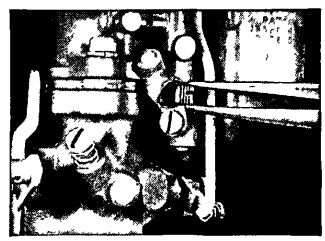
49.

Install nozzle and gasket.

Install nozzle with flat side facing up. Be sure to install new nozzle gasket.

50.

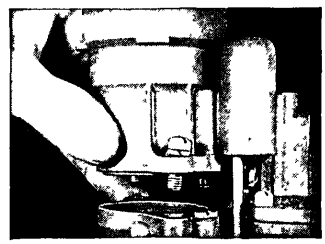
Install nozzle retainer plug and nozzle passage plug and gasket assembly.



51.

Install air horn and dust cover assembly on body.

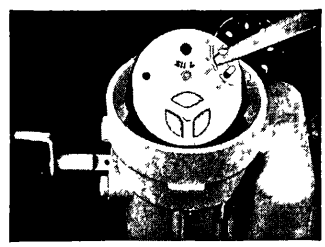
Tighten screws evenly and securely.



52.

Install choke shaft and lever assembly and choke valve.

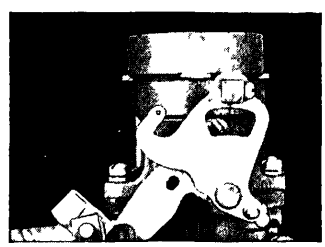
Centralize valve in air horn, then securely tighten screws. Always use new screws.



53.

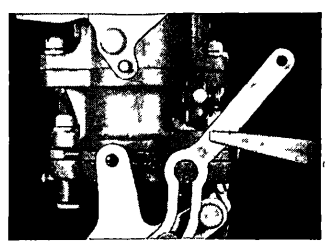
Install choke tube bracket assembly.

Connect choke pull back spring.



54.

Install choke connector link, spring and pin spring.



PUMP ADJUSTMENT: Back out throttle lever set screw. Pump plunger should travel specified distance from closed to wide open position. Pump travel can be measured by placing base of gauge T109-117S on raised portion of bowl cover so that projecting ear of gauge rests on top surface of pump shaft. Hold gauge vertical. The difference between the numbers shown by index mark on gauge at closed and wide open throttle positions will be plunger travel in 64th's. Adjust by bending throttle connector rod at lower angle (Fig. 46).

METERING ROD ADJUSTMENT: Insert gauge in place of metering rod, seating tapered end in metering rod jet. **With throttle valve seated** (back out throttle lever set screw) and metering rod pin resting on shoulder of gauge, tighten adjusting nut (Fig. 47). Remove gauge and install metering rod and disc. Connect metering rod spring.

ALWAYS USE ALL NEW GASKETS WHEN SERVICING A CARTER CARBURETER.

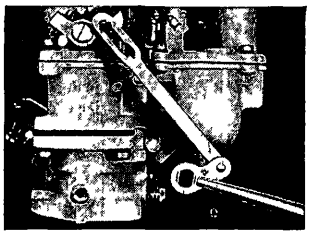
NO CARBURETER CAN DELIVER GOOD MILEAGE OR PERFORMANCE UNLESS COMPRESSION IS NORMAL AND THE MOTOR IS PROPERLY TUNED.

Form 3364E
June, 1939
Revised October, 1949

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

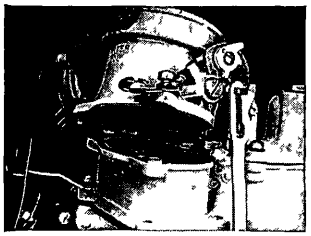
SERVICE PROCEDURE
1939 AND LATER WDO DUAL CLIMATIC® CONTROL
CARBURETER WITH VACUUM OPERATED METERING ROD AND CARTER STARTER SWITCH

Use Carter tool kit.



1.

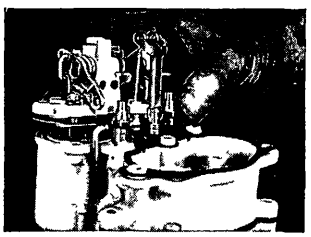
Remove throttle shaft arm and screw assembly and fast idle connector link.



2.

Remove air horn with all parts attached.

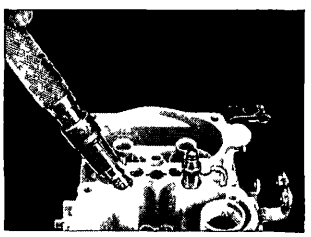
Attaching screw in air horn beneath choke valve must be removed



3.

Disconnect throttle connector rod at upper end and remove bowl cover, with vacuum piston and link assembly and all attached parts.

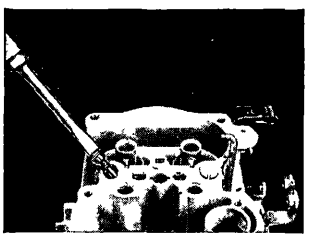
Remove bowl cover gasket and vacuum piston spring



4.

Remove both anti-percolator valve assemblies.

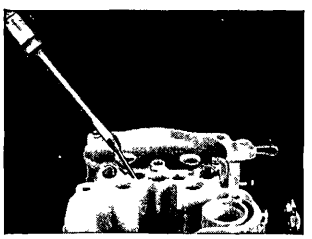
(Omit when servicing Buick 440S)



5.

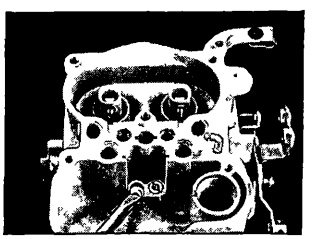
Remove both pump jet plugs and pump jets.

All metering jets in dual carbureters are in duplicate Illustrations shows removal of only one



6.

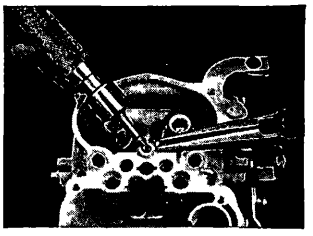
★Remove both by-pass bleeder plugs and low speed jets.



7.

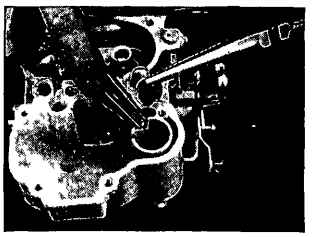
Remove both metering rod jet and gasket assemblies.

Copyright 1939
Copyright 1949
by Carter Carburetor Corporation
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8.

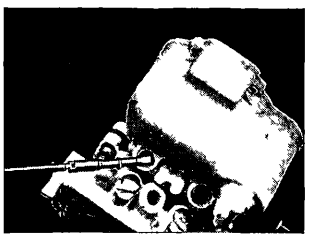
Remove pump discharge ball retainer plug and check ball.



9.

Remove pump strainer, pump check ball retainer ring and check ball.

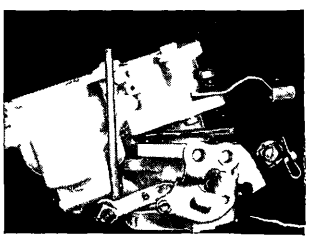
(Use tool No T109-56)



10.

Remove nozzle passage plugs, nozzle retainer plugs and nozzles.

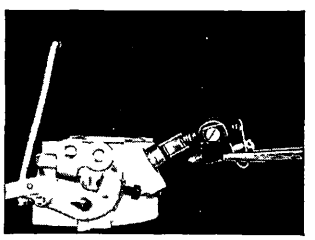
See that small nozzle gaskets are removed from casting



11.

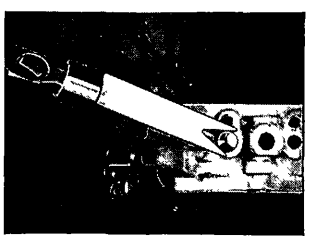
Separate body flange assembly from body.

Remove body flange gasket.



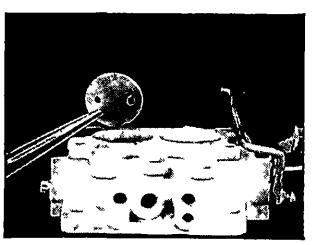
12.

Loosen terminal cap attaching screw and remove entire switch assembly from body casting.



13.

Remove idle adjustment screws and springs and idle port plugs.

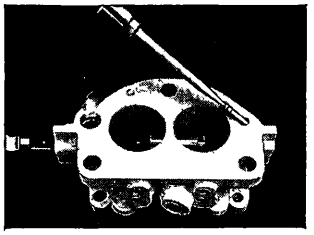


14.

Remove throttle valve screws and throttle valves.

PRINTED IN U.S.A.

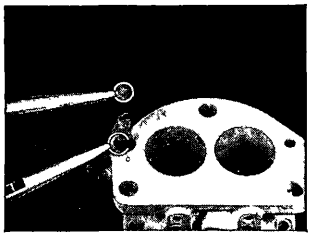
★Some carbureters have low speed tubes pressed in place and must not be removed



15.

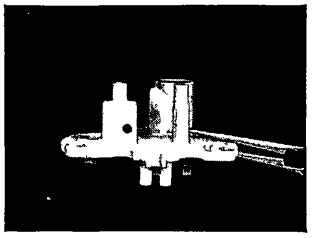
R mov throttl cent ring scr w, th n thr ttle shaft and lever assembly.*

Check shaft for wear, loose lever and throttle rod holes in lever for wear



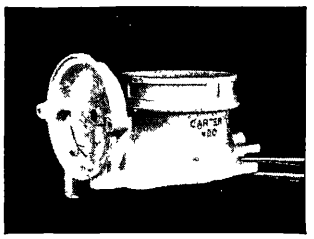
16.

Remove switch strainer retainer ring and strainer.



17.

Remove all parts from bowl cover.

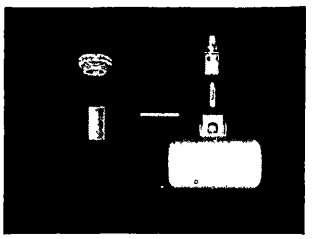


18.

Remove all parts from air horn and piston housing.

(See note at bottom of page)

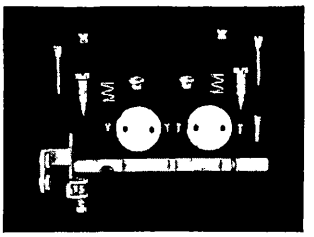
TO REASSEMBLE



19.

Group all parts controlling gasoline level.

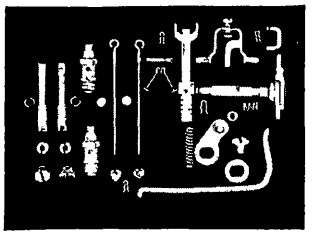
No. 1 Float circuit



20.

Group all parts controlling idle operation.

No. 2 Low speed circuit



21.

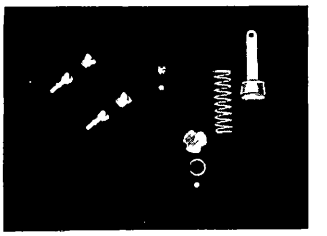
Group all parts controlling high speed operation.

No 3 High speed circuit

22.

Group all parts controlling pump operation.

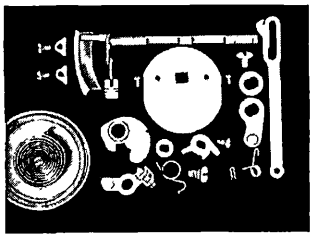
No 4 Pump circuit.



23.

Group all parts controlling choke operation.

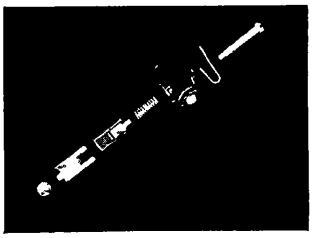
No 5 Choke circuit.



24.

Group all parts controlling car starter switch.

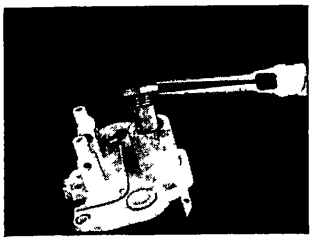
Examine each part in all the groups and replace any part that shows wear or does not meet specifications



25.

Install bowl cover strainer gauze, strainer nut and gasket assembly.

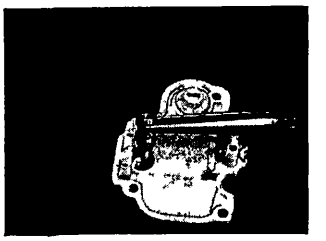
Use new gasket



26.

Install needle seat and gasket assembly.

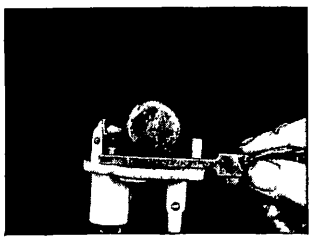
Use new gasket



27.

Install needle, float pin and float and lever assembly.

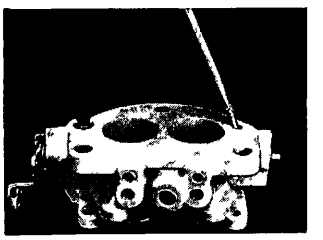
Check float for dents and wear on lip and float pin for wear Check bowl cover for warpage and wear in countershaft hole If needle shows groove on seating surface, replace both needle and seat. Set float level by gauging at both ends of float Adjust by bending float lip—**not float.**



28.

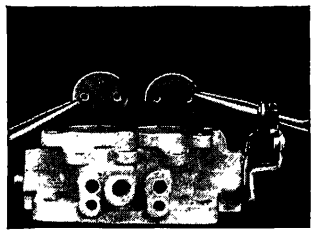
Install throttle shaft and lever assembly, loose throttle lever and throttle centering screw.*

Back out throttle lever adjusting screw



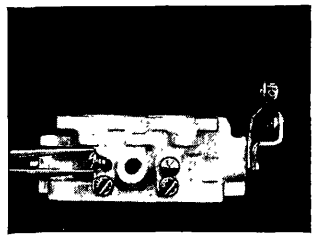
NOTE: Clean casting and all parts thoroughly (except cork pieces), with clean gasoline. Clean throttle bores with sandpaper and gasoline Paint outside of body casting with Carter Special Body Finish. Do not restrict passages when painting All relief passages to outside must be clean.

*Late models use throttle centering washer—refer to specification page for installation instructions



29.

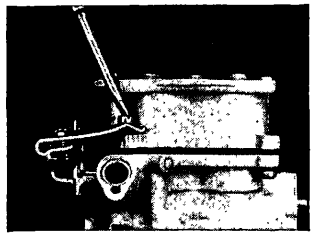
Install thr ttl valv .
Small "c" in circle (or part number) should be toward idle port when viewing casting from manifold side. Center throttle valves by tapping lightly and hold in place with fingers b e f o r e tightening screws. A l w a y s use new screws.



30.

Install idle port plugs, then idle adjustment screws and springs.

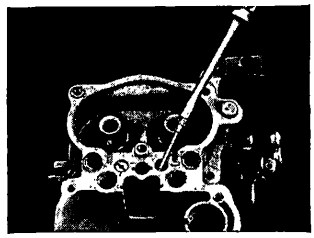
Set idle adjusting screws to specifications.



31.

Install body on body flange assembly.

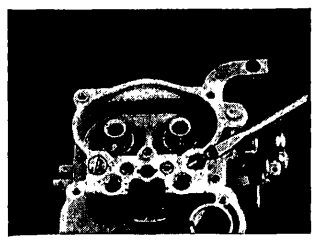
Use new gasket. Be sure tube clamp assembly is in place.



32.

★Install low speed jet and by-pass bleeder plugs.

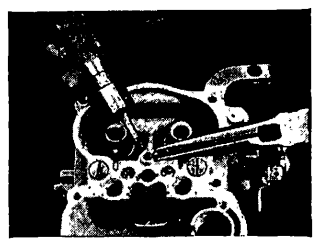
Jets must seat in casting.



33.

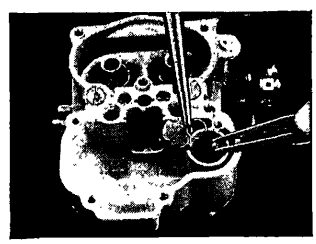
Install pump jets and pump jet plugs.

Make certain jets are clear of all restriction and seat properly. No washers are used beneath plugs. Check to see that outside bleed hole in casting is not restricted.



34.

Install check ball and pump discharge ball retainer plug.



35.

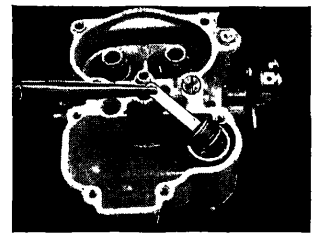
Install intake c h e c k ball, pump check ball retainer ring and pump strainer.

(Use tool No. T109-122U.)

36.

Install pump spring and pump plunger and rod assembly.

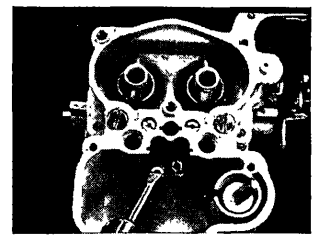
Replace entire plunger assembly if leather shows wear or mutilation. No pump loading cylinder is necessary.



37.

Install metering rod jet and gasket assemblies.

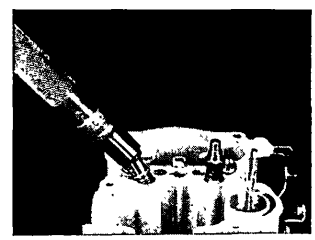
Metering rod jets must be installed snugly, but not so tightly as to cause distortion.



38.

Install anti-percolator valves.

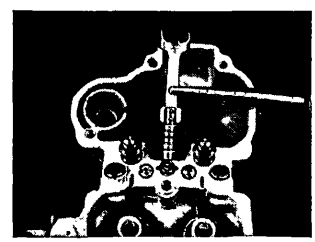
No gaskets are used. (Omit when servicing Buick 440S.)



39.

Install vacuum piston spring and vacuum piston and link assembly.

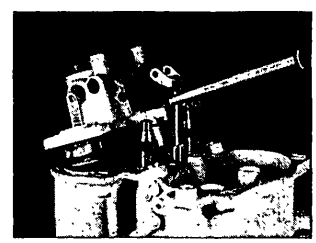
It is usually advisable to replace vacuum piston spring each time carbureter is serviced.



40.

Raise vacuum piston and link assembly and install b o w l cover with parts attached.

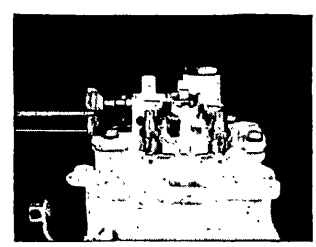
Use new bowl cover gasket.



41.

Install anti-percolator arm and screw assembly, pump operating lever and countershaft assembly and pump arm and collar assembly.

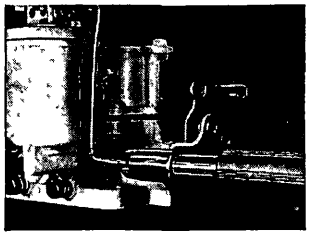
Install pump link in proper hole in pump arm.



42.

Install throttle connector rod. Gauge pump stroke.

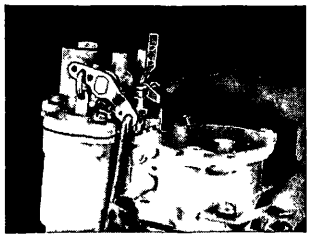
Check throttle connector rod for w ar on both nds. (To check pump stroke, see note on page 4.)



43.

Bend throttle connector rod as shown for pump stroke adjustment.

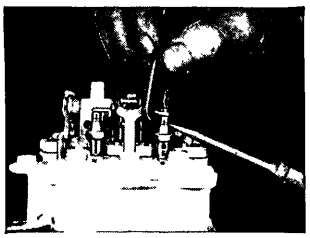
Use tool T109-75.



44.

Adjust metering rods.

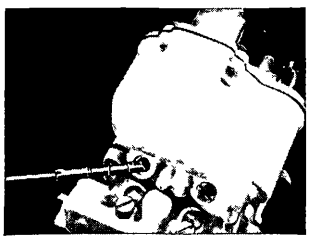
(See note below.)



45.

Adjust anti-percolator valves.

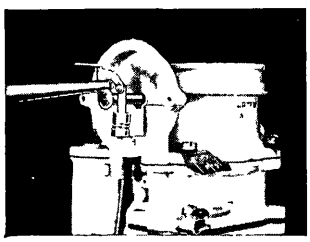
See Specification Sheet for adjustment.



46.

Install nozzles, nozzle retainer plugs and nozzle passage plugs.

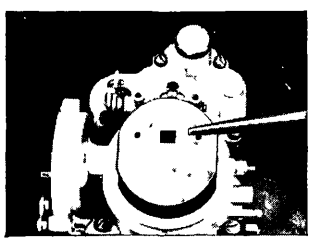
Install with flat side of nozzle up. Use new gaskets.



47.

Install air horn and piston housing on body. Then install choke piston lever, link and shaft assembly.

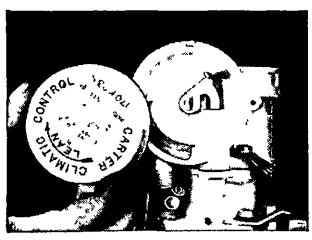
Use new air horn gasket.



48.

Install choke valve.

Use new screws. Seat choke valve by tapping lightly and hold in place with finger before tightening screws. Valve or shaft must not bind in any position.



49.

Install piston housing strainer and thermostatic coil and housing assembly.

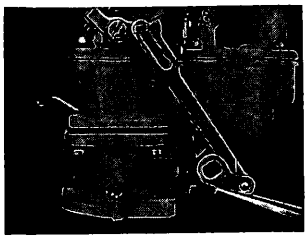
Install housing with indicator mark at bottom. Revolve housing counter clockwise and set index mark as stated in specification sheet, then tighten attaching screws.



50.

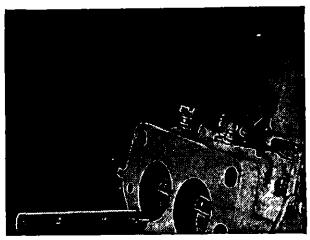
Install fast idle cam, washer and choke trip lever on choke shaft.

Then install fast idle arm, pin and screw assembly and fast idle arm spring.



51.

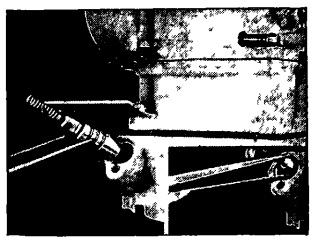
Install fast idle connector link, throttle shaft arm and pin assembly, washer and spring.



52.

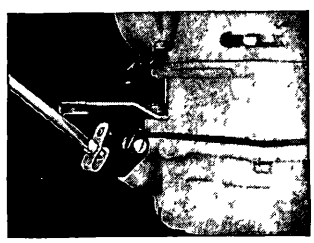
Adjust fast idle.

Hold choke valve tightly closed and adjust fast idle arm screw to give specified clearance between edge of throttle valve and bore of carbureter, side opposite port.



53.

Install switch strainer and retainer ring (See Fig. 16). Then switch ball, switch plunger, guide block, contact spring and return spring.



54.

Install terminal cap assembly, hold down clip and terminal cap attaching screw.

Use tool T109-155S to qualify switch.

PUMP ADJUSTMENT: With pump connector link in proper hole in pump arm, throttle adjustment screw backed out, pump plunger should travel specified distance from closed to wide open position. Adjustment can be made by bending throttle connector rod at lower angle as shown on Fig. 43. (Use tool T109-75.) Travel can be measured with tool T109-117S. Indicator ear of gauge should be placed on top surface of connector link at pump shaft.

METERING ROD ADJUSTMENT: Back out throttle lever adjusting screw so that throttle valves seat, insert metering rod pin in vacuum piston shaft and then insert metering rod gauge in place of metering rod, making sure that gauge seats in metering rod jet. Depress vacuum piston shaft lightly until contact is made with tongue on anti-percolator arm, using tool No. T109-105, bend tongue on anti-percolator arm until there is less than .005" clearance between metering rod pin and shoulder of notch in gauge. (See Fig. 44.) Remove gauge and install metering rods, discs and metering rod spring. Use pin spring on metering rod pin.

Always use complete new gasket assortment when servicing a Carter Carbureter.

NO CARBURETER CAN DELIVER GOOD MILEAGE OR PERFORMANCE UNLESS COMPRESSION IS NORMAL AND THE MOTOR IS PROPERLY TUNED

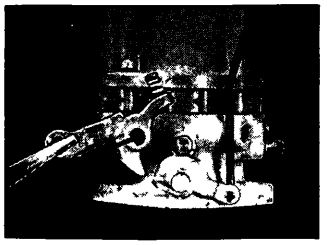
CARBURETER
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CARTER CARBURETOR
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ST. LOUIS, MO, U. S. A.

SERVICE PROCEDURE

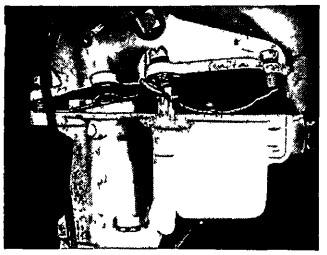
1939 AND LATER BB DOWNDRAFT CARBURETER

A fast, simple, Circuit method of servicing 1939 BB Downdraft Carbureters. Use Carter tool kit BE ACCURATE.



1.

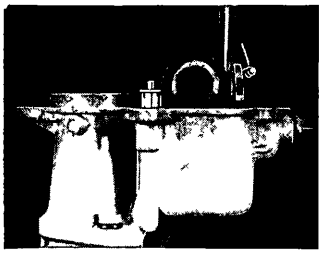
Remove throttle lever assembly.



2.

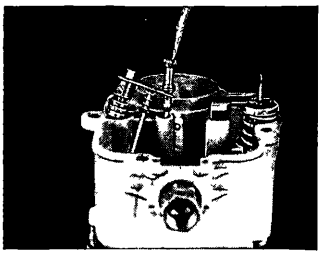
Remove air horn assembly.

Remove body gasket.
Disconnect throttle connector rod at upper end



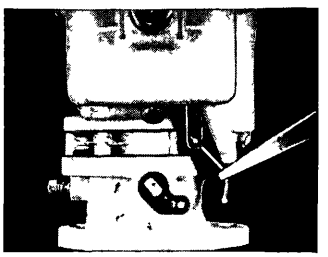
3.

Remove float and lever assembly, float pin and retainer.



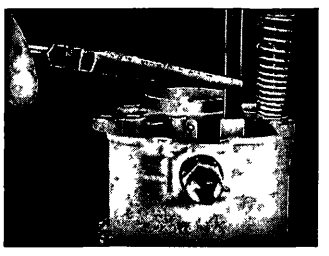
4.

Remove idle orifice tube and plug assembly, step-up piston plate and rod assembly, step-up piston spring and gasket.



5.

Remove pump connector link.



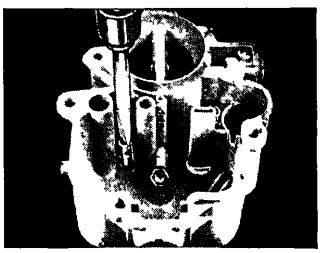
6.

Remove pump plunger and rod assembly intact and separat plung r from pump lifter link.

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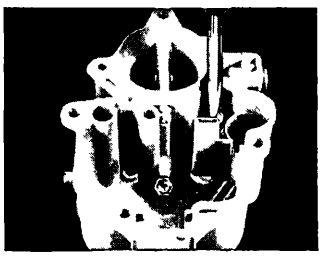
7.

Remove step-up jet and gasket assembly.



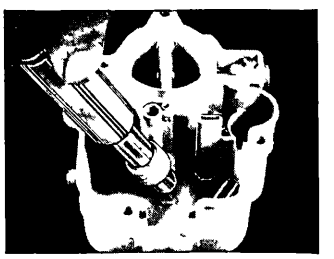
8.

Remove pump check plug and discharge check ball.



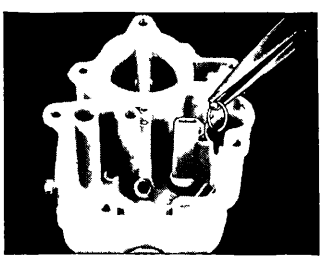
9.

Remove main metering jet and gasket assembly.



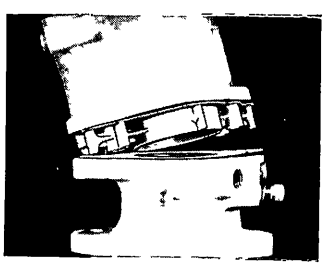
10.

Remove pump retainer ring and intake check ball.



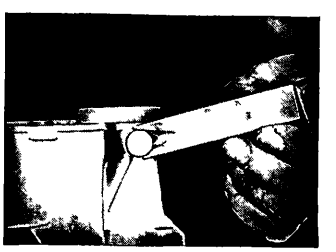
11.

Remove body flange assembly and insulator from body.

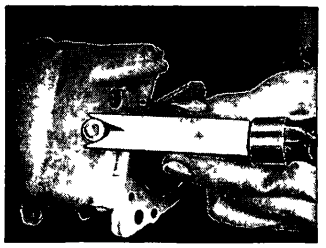


12.

Remove pump j t rivet plug and pump j t.

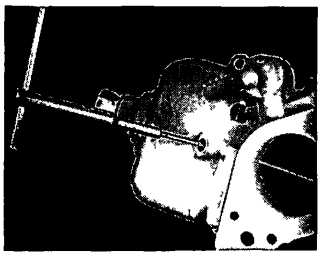


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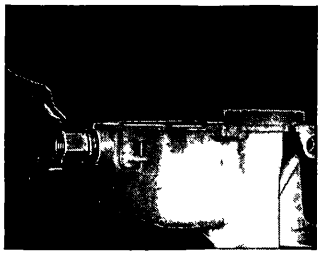
13.

R move main vent tube rivet plug.



14.

Remove main vent tube.
Use tool T109-195.



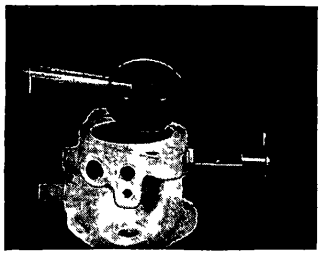
15.

Remove needle seat and gasket.



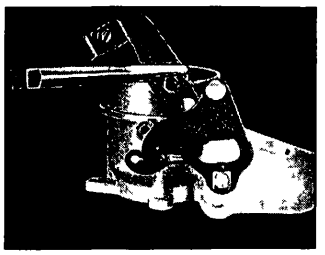
16.

Remove idle adjustment screw and spring, then idle port rivet plug.



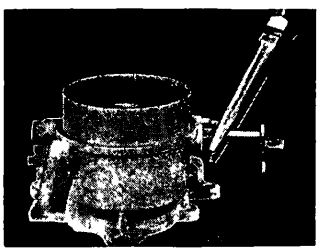
17.

Remove throttle valve and throttle shaft and arm assembly.



18.

Remove choke tube bracket assembly.



19.

Remove choke valve screws and ch ke shaft and lever assembly.

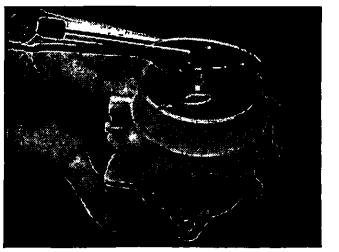
Check for wear and loose l ver on shaft.

20.

R m ve choke valve.

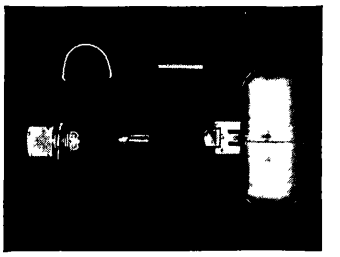
Clean castings and all parts thoroughly with solvent or any good carbureter cleaner. Scrape all carbon from bore of casting.

TO REASSEMBLE



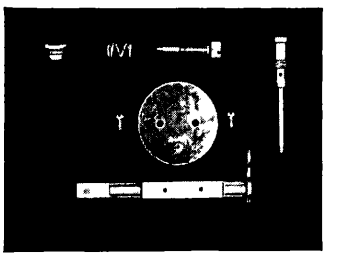
21.

Group parts controlling gasoline level.



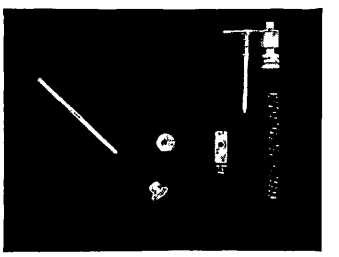
22.

Group parts controlling idle circuit.



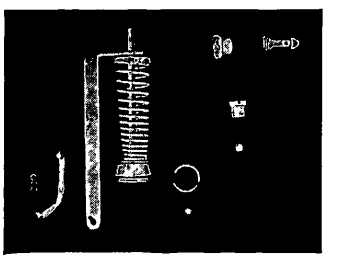
23.

Group parts controlling high speed circuit.



24.

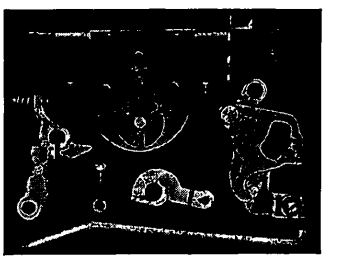
Group parts controlling pump circuit.



25.

Group parts controlling choke circuit.

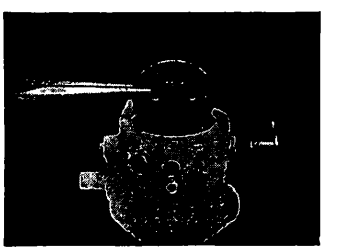
Examine each part in the five groups and replace any part that shows wear, or does not meet specifications.

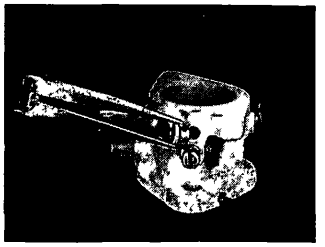


26.

With manifold side of flange d wn, install thr ttl shaft and arm assembly, th n thr ttl valv .

Small "c" in circle should be toward idl port, and facing downward. C nter valv by tapping lightly and hold in plac b for tight ning scr ws. Use n w scr ws.

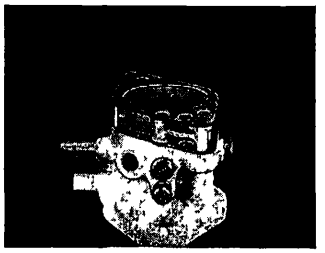




27.

Install new idl port rivet plug first, th n install idl adjustment screw and spring.

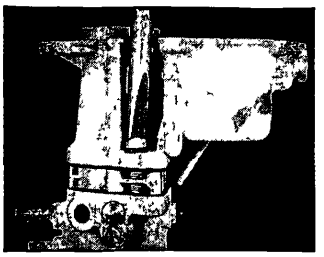
Back out seated screws to specifications



28.

Install insulator and gaskets.

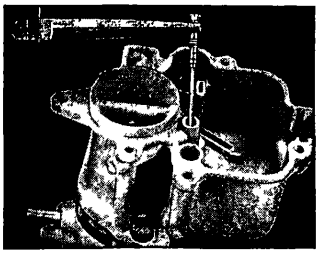
Use new gaskets Be sure that holes in casting, insulator and gaskets line up properly.



29.

Install body castings and securely tighten screws.

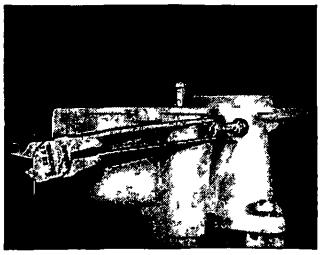
Don't forget lock washers



30.

Install idle orifice tube.

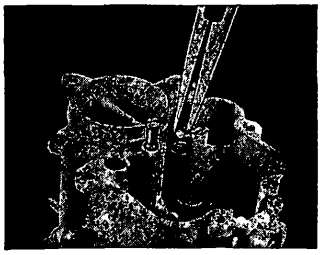
Do not tighten—leave it loose



31.

Install pu- jet and pump jet rivet plug.

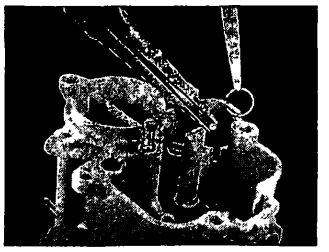
Be sure jet ' clear of all restrictions an its pr perly.



32.

Install pump discharge ball and plug

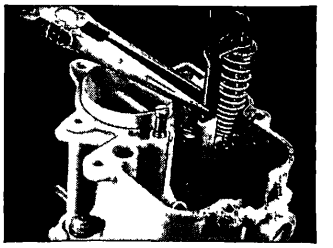
Discharge all is large ball Be sur put check balls in correct passages



33.

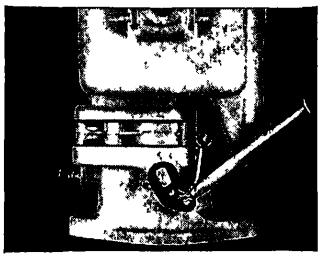
Install pump intak check ball and pump r tain r.

Intake ball is small.



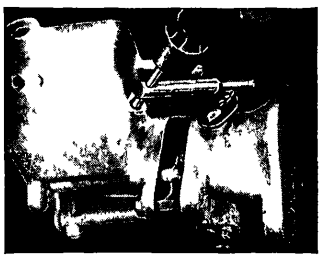
34.

Install pump plunger and r d ass mbly, pump spring and pump lifter link.



35.

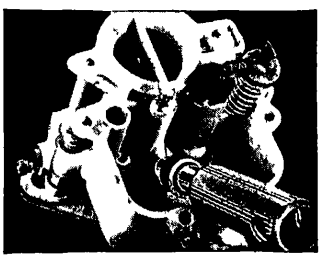
Install pump connector link and pin spring. Connect in center hole.



36.

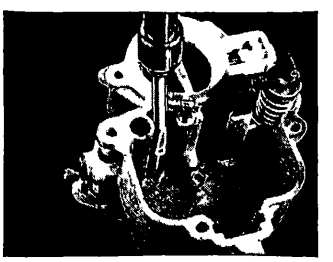
Install main vent tube, then main vent tube rivet plug.

Tools T109-70 or T109-151 must be used to install new tube (See "Adjustments" on catalog page) Never reuse an old vent tube or plug.



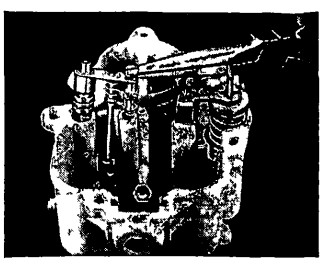
37.

Install main metering jet and gasket assembly.



38.

Install step-up jet and gasket assembly.



ll step-up piston gasket, pring and step-up piston, plate and rod assembly. Secur ly tighten idle orifice tube.

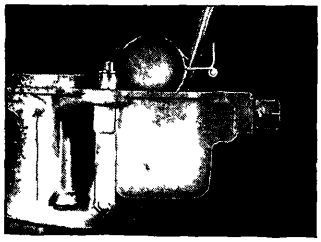
Check springs for damage.



40.

Install needle seat and gask t.

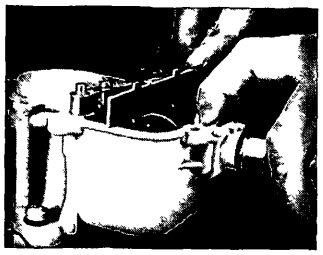
Then install needl . If n dl or seat shows wear, replac both parts.



41.

Install float and lever assembly, float pin and float lever pin retainer.

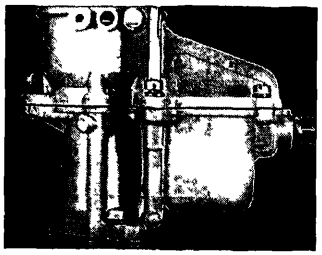
Check float for dents and for wear on float lip or float pin



42.

Set float level.

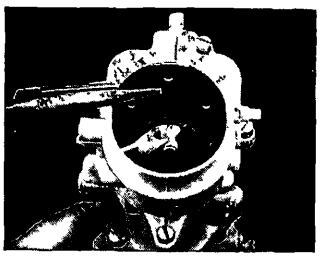
Set float level to specifications Bend lip not float



43.

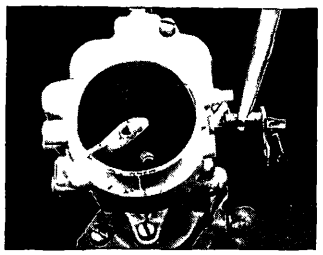
Install air horn assembly.

Use new gasket



44.

Install choke valve.



45.

Install choke shaft and lever assembly with spring attached.

Use new screws Center valve by tapping lightly before tightening screws



46.

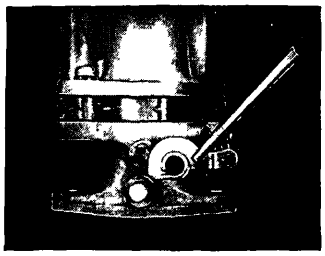
Install choke bracket assembly.

Attach spring

47.

Install fast idle rod and fast idle cam. Place cam on cast iron shaft.

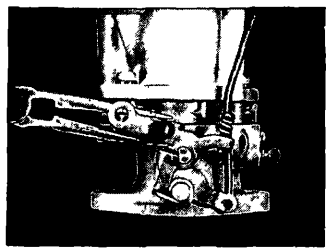
Check rod and cam for wear



48.

Install throttle lever assembly.

Tighten screws securely Protect your work with a Carter Airdome or Ceramic Filter



Note: New flange gasket should be used when Installing carbureter on manifold. On cars without governor, gasket with 4 slots should be used; on cars with governor, gasket with 4 small holes should be used between carbureter and governor, the original gasket with 4 slots to remain on manifold beneath governor.

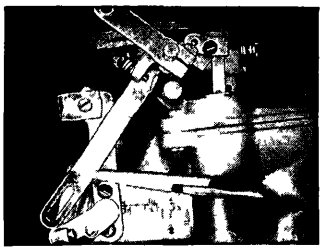
Always use complete new gasket assortment when servicing a Carter Carbureter.

NO CARBURETER CAN DELIVER GOOD MILEAGE OR PERFORMANCE UNLESS COMPRESSION IS NORMAL AND THE MOTOR IS PROPERLY TUNED.

CARBURETER
TRADE MARK REG U S PAT OFF
MARCA REGISTRADA

SERVICE PROCEDURE
BB UPDRAFT CARBURETER

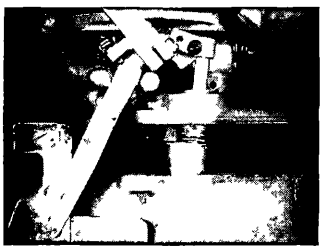
A fast, simple, Circuit method of servicing BB Updraft Carbureters. Use Carter Tool Kit. BE ACCURATE.



1.

Disconnect choke link.

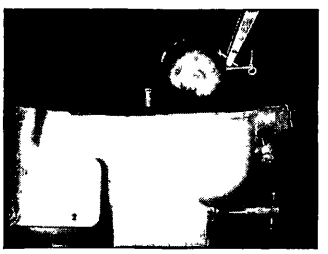
Do not lose choke link washer



2.

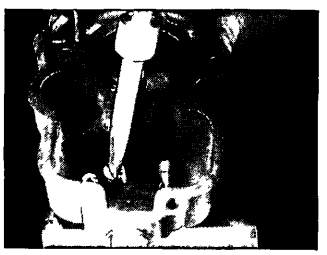
Remove bowl cover with parts intact.

Remove pump sleeve, step-up push rod, and gasket.



3.

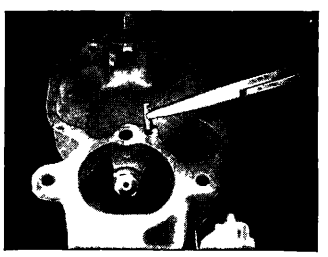
Remove float lever pin and plug assembly, and float and lever assembly.



4.

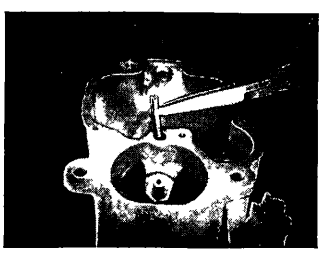
Remove step-up valve assembly, pump valve assembly and check valve assembly.

These three check valves are found at bottom of bowl.



5.

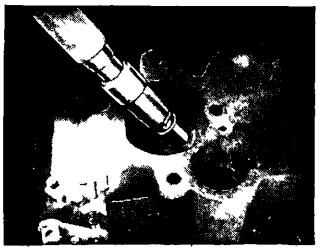
Remove vent tube.



6.

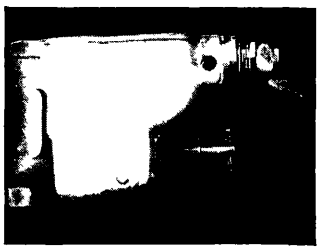
Remove idle orifice tube (low speed jet.)

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by Carter Carburetor Corporation
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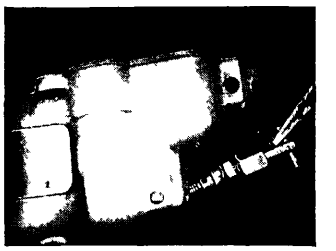
7.

Remove nozzle.



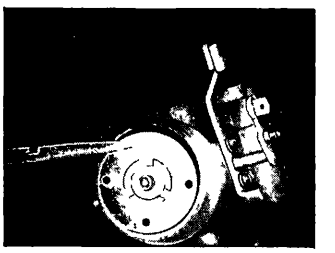
8.

Remove needle and seat assembly.



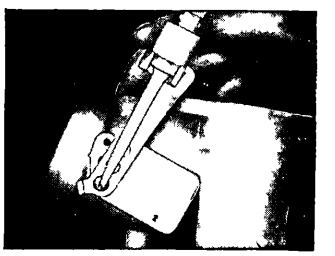
9.

Remove main metering screw.



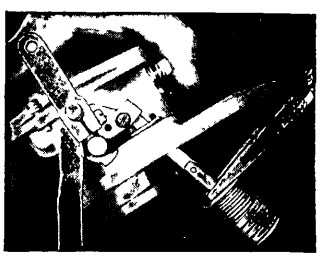
10.

Remove choke valve assembly and choke shafts.



11.

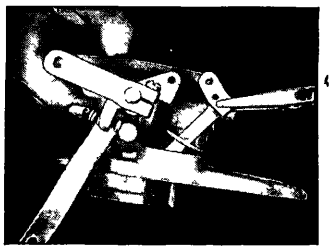
Remove choke tube bracket assembly.



12.

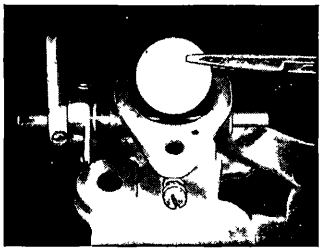
Remove complete pump assembly.

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13.

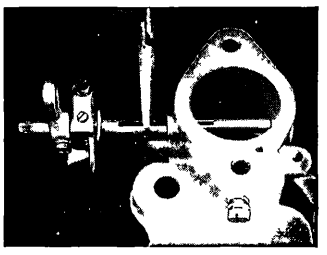
R mov pump link and coverplate.



14.

Remove throttle valve.

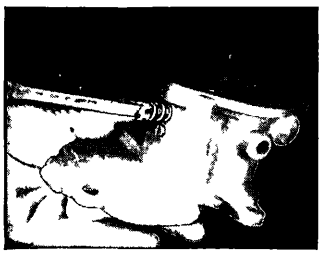
Then remove loose throttle lever and dog assembly from shaft



15.

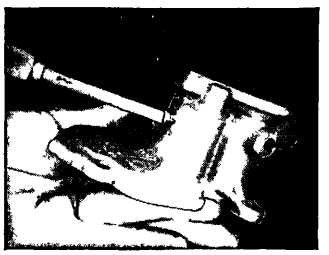
Remove throttle shaft with parts attached.

Remove choke link from shaft



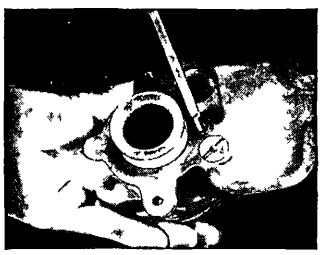
16.

Remove idle adjustment screw and spring.



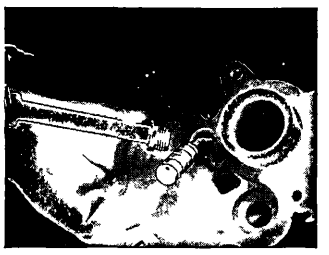
17.

Remove idle port plug.



18.

Remove idle passage tube.

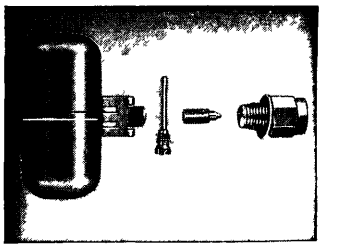


19.

Remove step-up piston plug to remove step-up piston and spring.

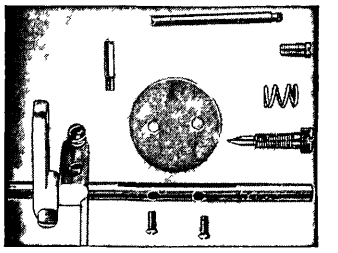
(See note at bottom of page)

TO REASSEMBLE



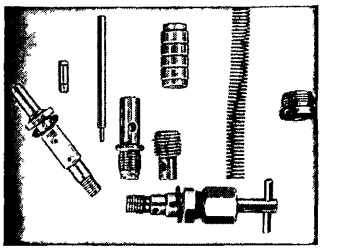
20.

Group parts controlling gasoline level.



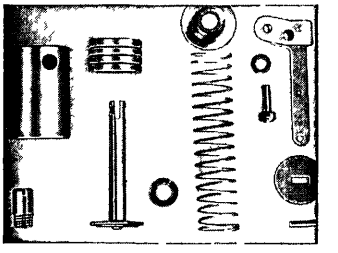
21.

Group parts controlling idle circuit.



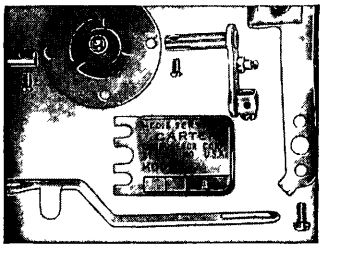
22.

Group parts controlling high speed circuit.



23.

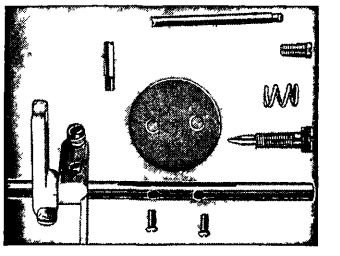
Group parts for pump circuit.



24.

Group parts for choke circuit.

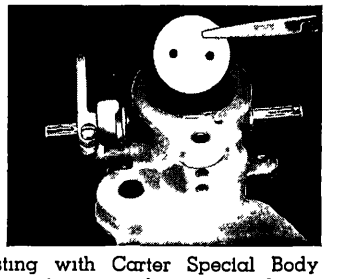
Examine each part in the five groups and replace any part that shows wear or does not meet specifications



25.

Assemble parts controlling idle circuit.

Install choke link on throttle shaft

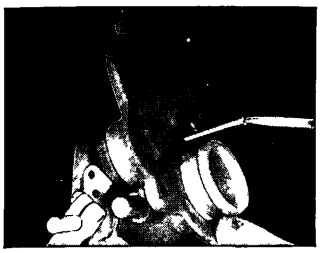


26.

Install throttle shaft with assembled parts and throttle valve.

Small "c" in circle or part number should be toward idle port when viewing casting from manifold side. Center throttle valve by tapping lightly and hold in place with finger before tightening screws Always use new screws

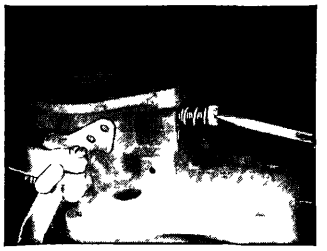
Not : Clean casting and all parts thoroughly with clean gasoline Paint outside of body casting with Carter Special Body Finish Be sure Finish does not restrict passag s. Special precaution should b taken that there is no carbon accumulation in air bleed through venturi to idle passag .



27.

Install idl passage tube.

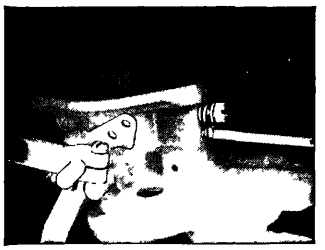
If there is carbon accumulation on tube, replace with new tube. Do not install tube too tightly. A snug fit will suffice.



28.

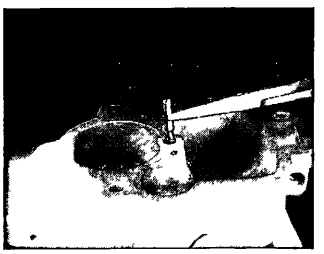
Install idle adjustment screw and spring.

Set screw to specifications.



29.

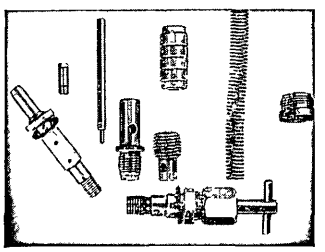
Install idle port plug.



30.

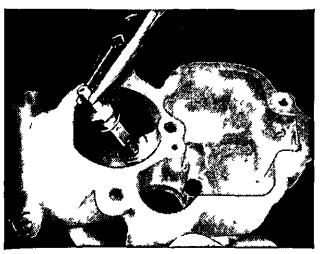
Install idle orifice tube.

Do not install too tightly.



31.

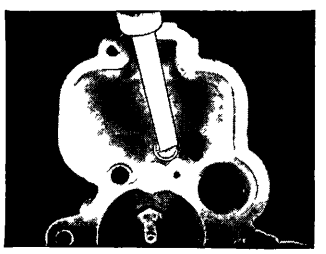
Assemble parts controlling high speed circuit.



32.

Install nozzle.

All carbureters use one nozzle gasket except 289S which should have two.



33.

Install pump valve assembly.

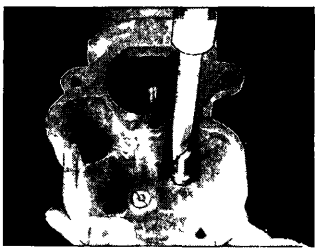
See that ball in valve operates freely as all fuel to idle and high speed circuits is fed through this port. Lower face of valve must seat in casting.



34.

Install new vent tube.

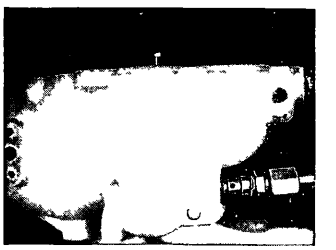
Use care when installing. Tube must be tight.



35.

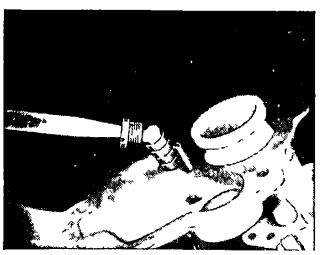
Install step-up valve assembly.

No gasket is used under this valve.



36.

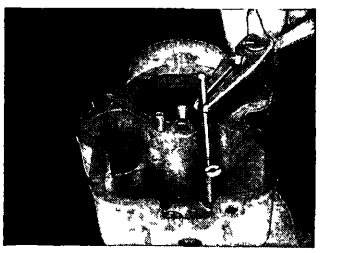
Install main metering screw.



37.

Install step-up spring, piston and piston plug.

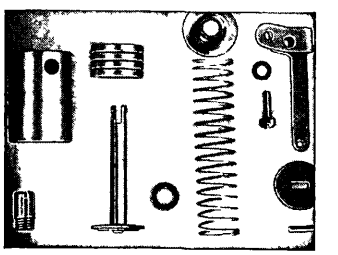
If piston shows slightest wear, replace. Always install new step-up piston spring.



38.

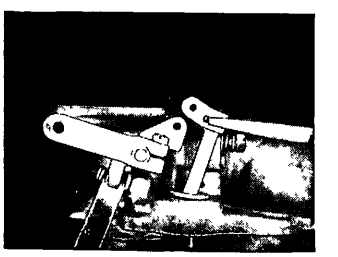
Install step-up push rod.

Small portion of pin must be down.



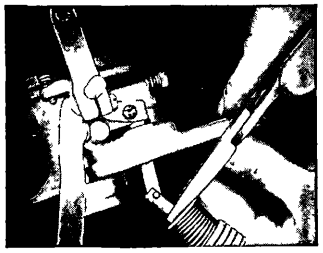
39.

Assemble parts for pump circuit.



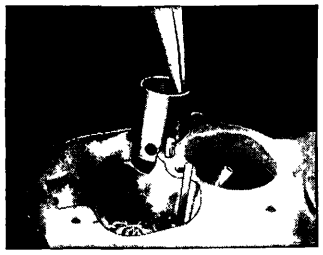
40.

Install pump link and coverplate.



41.

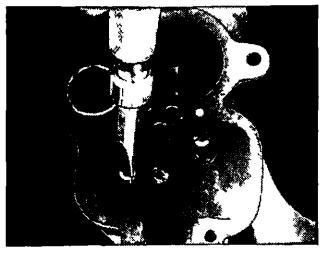
Install compl t pump ass m-bly.



42.

Install pump sleeve.

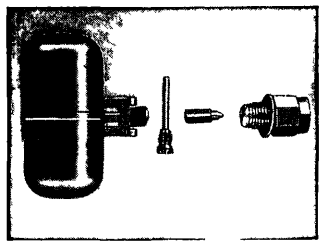
Install with holes toward bottom



43.

Install check valve assembly.

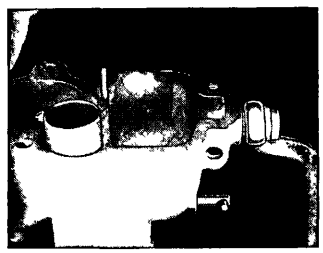
Ball must be free



44.

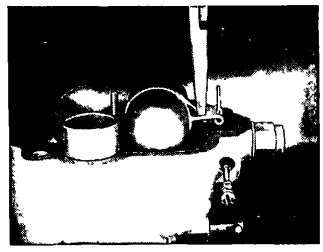
Assemble parts that control gasoline level.

Check float for dents and wear on lip, and float pin for wear If float is loaded with gas, replace. If needle shows groove on seating sur face replace both needle and seat



45.

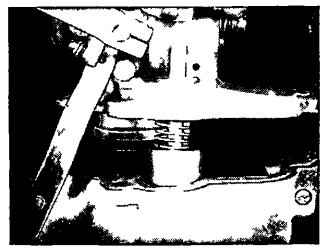
Install needle and seat assembly.



46.

Install float and lever assembly and float pin and plug assembly.

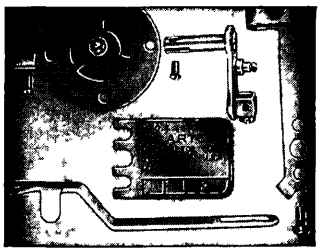
Set float level to specifica tions by bending lip not float



47.

Install upper casting as assembled.

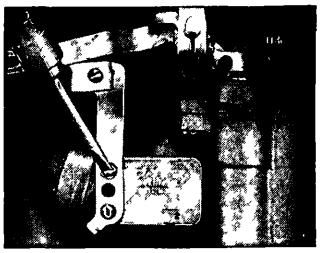
Use new body gasket



48.

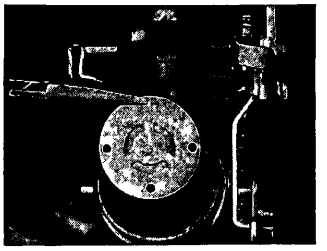
Ass mbl parts for choke circuit.

Choke link has already been installed



49.

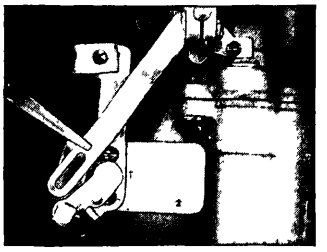
Install choke tube bracket assembly and tag.



50.

Install choke shafts and choke valve assembly.

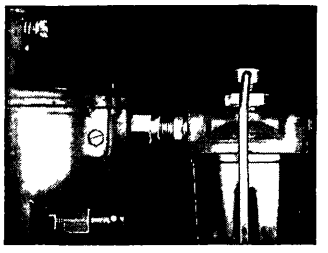
Assemble with valve in position as shown.



51.

Connect choke link.

Be sure to use choke link washer.



52.

Protect your work with a Carter Airdome Fuel Filter.

Note: New flange gasket should be used when installing carbureter on manifold. On cars without governor, gasket with 4 slots should be used; on cars with governor, install 26-12 plug in hole in bore and use gasket with 4 small holes. The original gasket with 4 slots to remain between manifold and governor.

Always use complete new gasket assortment when servicing a Carter Carbureter.

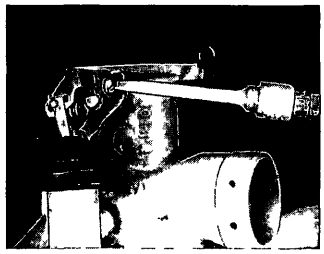
NO CARBURETER CAN DELIVER GOOD MILEAGE OR PERFORMANCE UNLESS COMPRESSION IS NORMAL AND THE MOTOR IS PROPERLY TUNED.

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST LOUIS, MO, U S A

SERVICE PROCEDURE

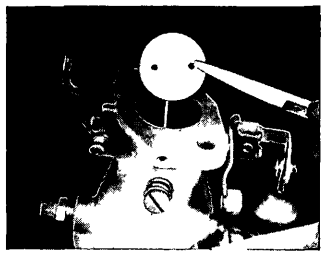
BRASS BOWL UPDRAFT CARBURETER

A fast, simple, Circuit method of servicing Carter Brass Bowl Carbureters. Use Carter Tool Kit. BE ACCURATE.



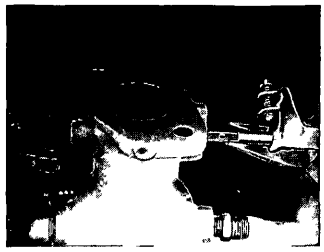
1.

Loosen pump arm assembly.



2.

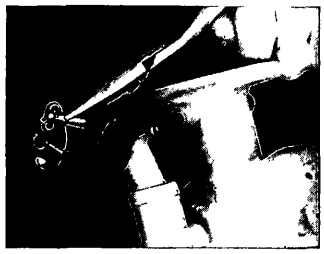
Remove throttle valve, bracket and rod assembly.



3.

Remove throttle shaft and lever assembly.

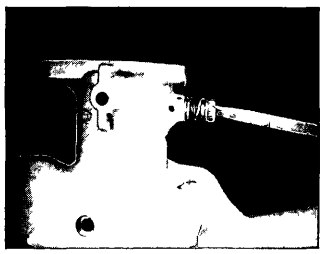
Loose lever will drop free If throttle shaft is worn, or lever is loose on shaft, or if connector rod hole in lever is worn, replace



4.

Remove plunger and boot assemblies.

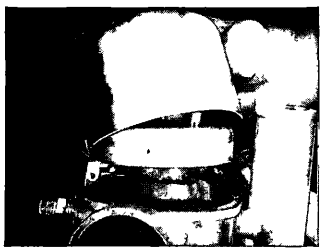
Disassemble all parts



5.

Remove idle adjustment screw and spring.

If seating surface is grooved or mutilated, replace



6.

Remove body and bowl nut assembly.

Remove gasket

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Copyright © 1948
by Carter Carburetor Corporation
All Rights Reserved

7.

Remove float lever pin, float and lever assembly and intake needle.

Check float for dents and wear on lip, and float pin for wear If float is loaded with gas, replace If needle shows groove on seating surface, replace both needle and seat



8.

Remove ball check housing assembly.

Check by blowing through assembly Ball must seat tight but move freely



9.

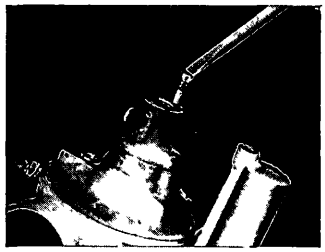
Remove pump cylinder plug



10.

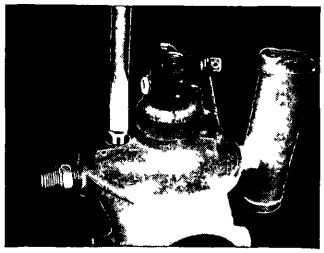
Remove low speed jet tube assembly.

Examine to see that tube has been seating at upper end If no seat mark shows, tapered seat in casting has been drilled out, and carbureter must be replaced



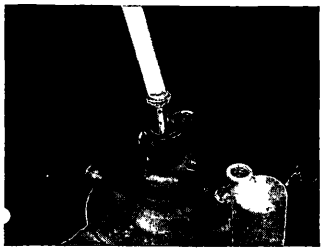
11.

Remove needle seat and gasket.

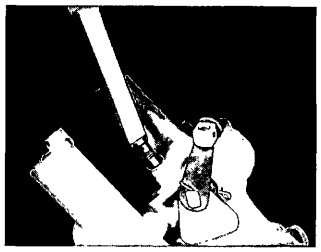


12.

Remove multiple jet nozzle.



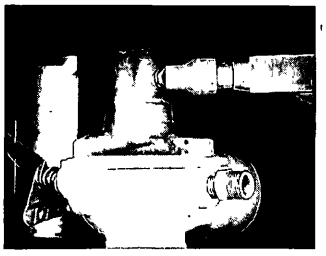
PRINTED IN U.S.A.



13.

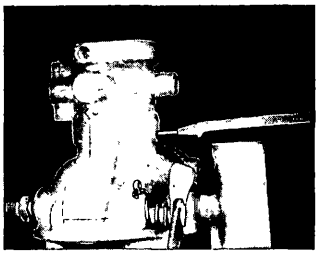
Remove pump jet assembly.

Examine and see that jet seats at both ends.



14.

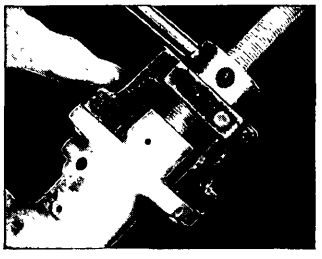
Remove well jet assembly.



15.

Remove venturi pin.

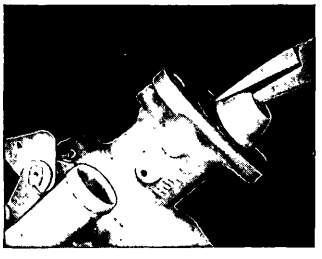
(See note, bottom of page 4.)



16.

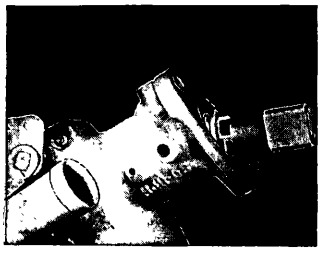
Remove venturi.

Illustration shows proper use of venturi puller.



17.

Remove venturi choke cone.



18.

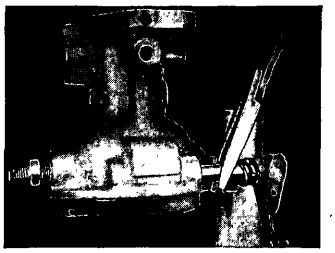
Remove stand pipe assembly.

When removing, be sure to hold choke lever in choke position to prevent injury to choke arm.

19.

Remove choke shaft and l v r assembly.

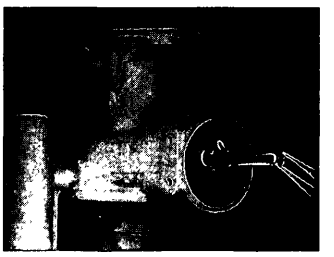
Check for loose lever and wear on shaft.



20.

Remove venturi choke arm.

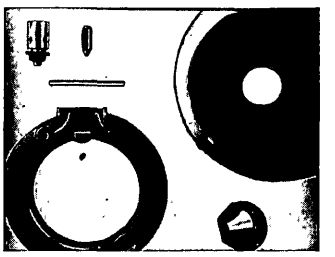
(See note at bottom of page)



TO REASSEMBLE

21.

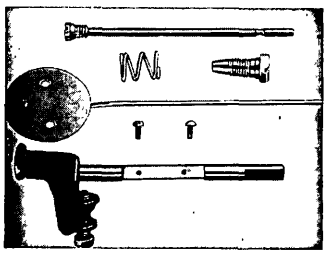
Group parts controlling gasoline level.



22.

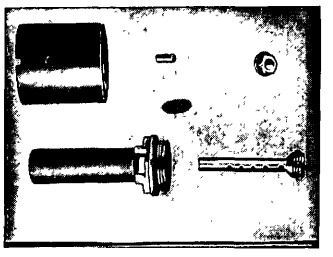
Group parts controlling idle circuit.

Check metering rod for wear. If worn, replace both rod and multiple jet nozzle.



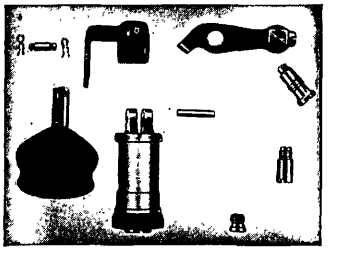
23.

Group parts controlling high speed circuit.

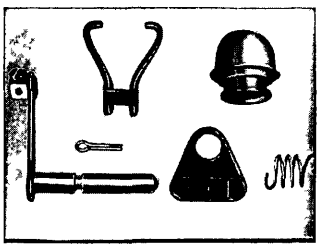


24.

Group parts for pump circuit.



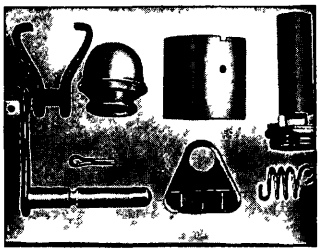
N t : Clean casting and all parts thoroughly with clean gasoline. Paint outside of body casting with Carter Special Body Finish. Be sur Finish does not restrict passag s.



25.

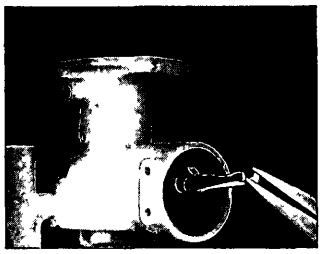
Group parts for chok circuit.

Examine each part in the five groups and replace any part that shows wear, or does not meet specifications



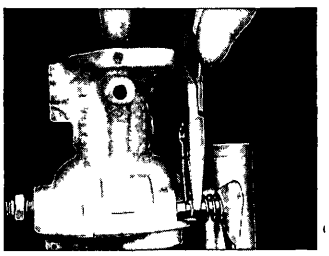
26.

Remove venturi, venturi pin and stand pipe from the high speed group and place them with the choke group for assembly.



27.

Install venturi choke arm.



28.

Install choke shaft and lever assembly.

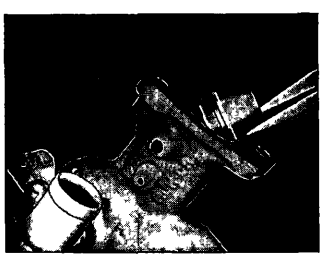
Centralize choke arm on shaft after assembly.



29.

Install stand pipe assembly.

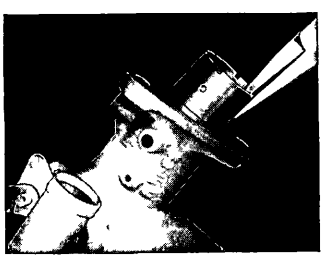
Hold choke lever in choke position while installing



30.

Install choke cone.

Be sure venturi choke arm fits freely into groove in choke cone.



31.

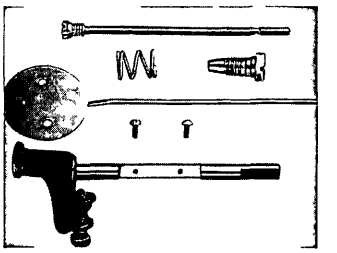
Install venturi.

Use new venturi pin.

32.

Assembl idl circuit parts as sh wn.

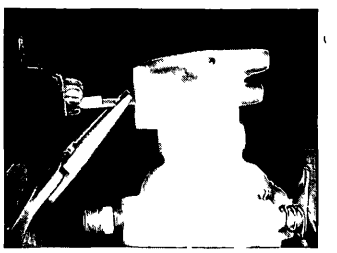
Never reinstall a used low speed jet Be sure to scrape all carbon from bore of casting



33.

Install throttle shaft and lever assembly.

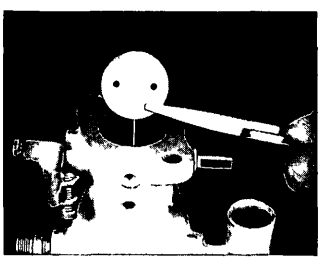
Back out throttle lever adjusting screw.



34.

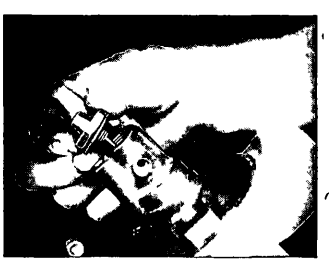
Install throttle valve, bracket and rod assembly.

Small "c" in circle or part number should be toward idle port when viewing casting from manifold side Center throttle valve by tapping lightly and hold in place with finger before tightening screws Always use new screws



35.

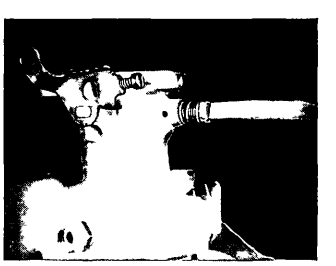
Install body and bowl nut assembly to protect metering rod.
This should be done before tightening screws in valve.



36.

Install idle adjusting screw and spring.

Set idle adjusting screw to specifications



37.

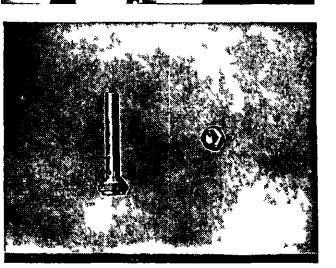
Install new low speed jet tube tightly.

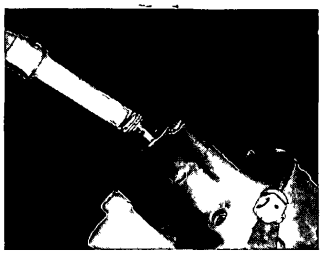


38.

Assemble remainder of high speed circuit parts.

Remove body and bowl nut assembly

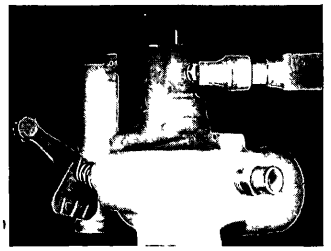




39.

Install multipl jet n zzl .

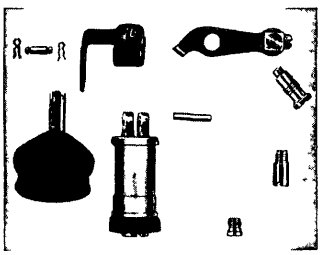
Seat firmly in casting.



40.

Install well jet assembly.

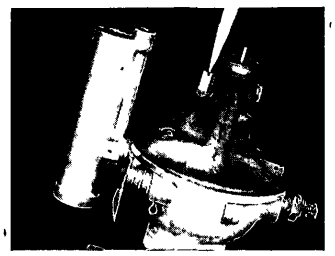
Do not install too tightly. A snug fit wil prevent distortion.



41.

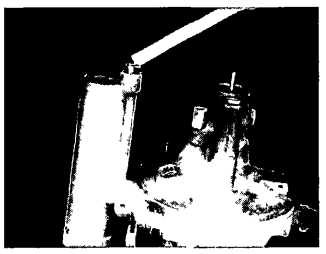
Assemple parts for pump circuit.

Replace both spring and leather if leather shows wear or mutilation. Test checks by blowing for free operation.



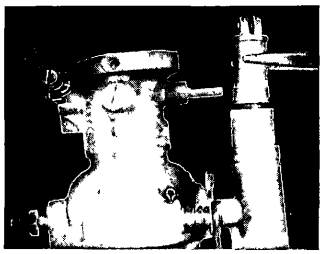
42.

Install ball check housing assembly.



43.

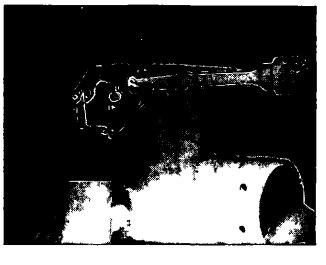
Install pump cylinder plug.



44.

Install pump plunger assembly.

Use loading cylinder to avoid damage to leather.



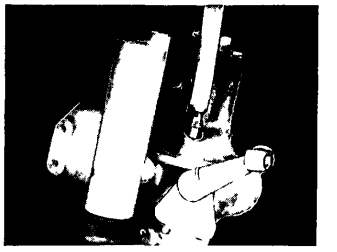
45.

Install pump boot assembly and pump arm assembly.

Loose lever should be installed on shaft before pump arm assembly.

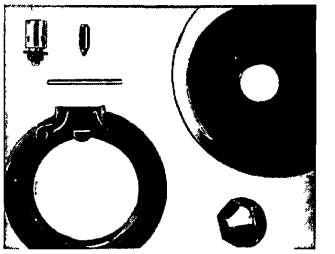
46.

Install pump j t assembly.



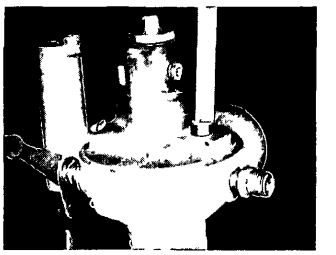
47.

Assemble parts controlling gasoline level.



48.

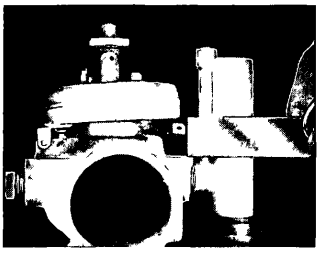
Install needle seat and gasket assembly.



49.

Install needle, float assembly and float pin. Set float level to specifications.

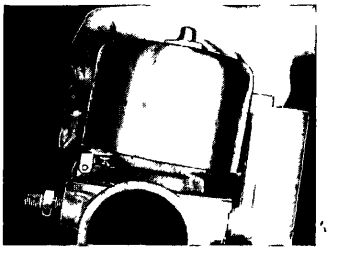
When setting float, be sure to bend lip, not float. This setting is made before bowl gasket is installed.



50.

Install bowl, and body and bowl nut.

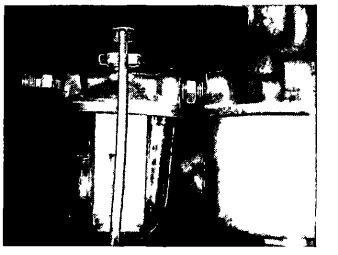
Use new gasket. Gasket should seal entirely around bowl.



51.

Protect your work with a Carter Airdome Fuel Filter.

NOTE: On carbureters having two-piece body castings, eliminate operations 15, 16 and 31.



Always use complete new gasket assortment when servicing a Carter Carbureter.

NO CARBURETER CAN DELIVER GOOD MILEAGE OR PERFORMANCE UNLESS COMPRESSION IS NORMAL AND THE MOTOR IS PROPERLY TUNED.

CARBURETER

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SERVICE PROCEDURE

CARTER ELECTRIC PUSHER PUMP—MODELS P600S-P602S-P603S-P604S-P804S

INSTRUCTIONS FOR TESTING, REMOVING AND OVERHAULING

The following test should be made in vehicle before removing pump·

(1) Turn off ignition switch Disconnect fuel line at carbureter Connect fuel pressure gauge to fuel line When servicing P604S and P804S pumps disconnect fuel line at fuel tank and connect fuel pressure gauge to outlet in cover plate

(2) Turn on ignition switch (If equipped with oil switch, shunt across terminals so that pump will operate with engine stopped) If the fuel pressure on the gauge is not less than 3 pounds for a 24 volt pump, 2½ pounds for 12 volt pumps and 1¾ pounds for a 6 volt pump, with battery fully charged, the pump is satisfactory.

If the above requirements are not met, the fuel pump must be overhauled This test assumes the vehicle battery is fully charged, the wiring and fuse are in good condition and sufficient fuel is in the tank During the test it is very important that any fuel line valves connecting the pump under test to other tanks remain closed Otherwise, fuel may circulate from one tank to another and a true reading would not be obtained

If pump requires overhauling

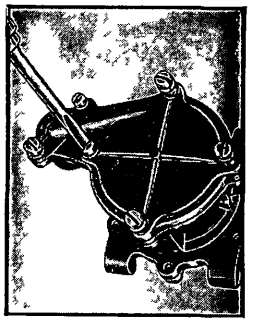
Disconnect battery and electrical connections and tape terminal of feed wire, as a precautionary measure, so that no spark can ignite fumes in the tank. Remove complete pump (New cover plate gasket should be used when reinstalling pumps in tanks)

It is not necessary to remove cable from pump unless it has been damaged Proceed as follows



1.

Remove attaching screws and wire strainer from lower section of pump.



2.

With pump inverted, remove volute plate attaching screws.

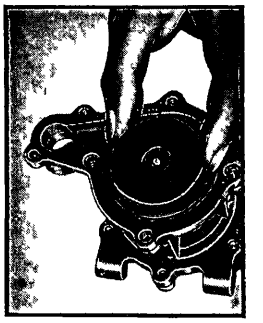


3.

Remove lower volute plate.

4

Lift out impeller and ball assembly.



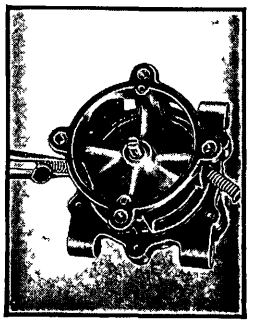
5.

Remove upper volute casting.



6.

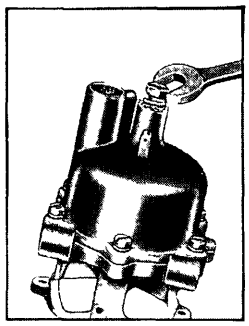
Remove both retaining screw plugs and brush assemblies.



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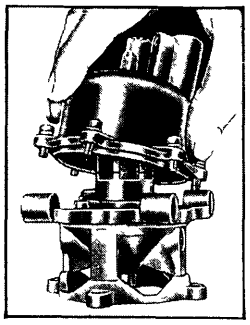
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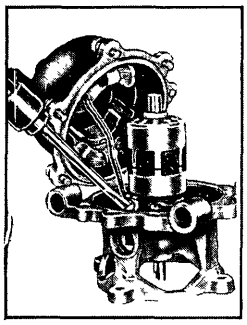
7.

Then remove hex lock nut, lock washer, keeper, and thrust bearing stud from upper body of pump.



8.

With pump top side up, remove the six attaching screws and lock washers and lift off upper body of pump.

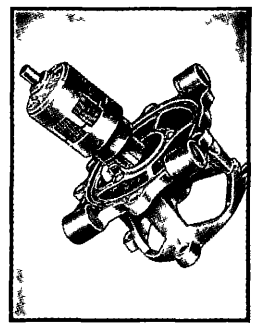


9.

Disconnect field pig tail.

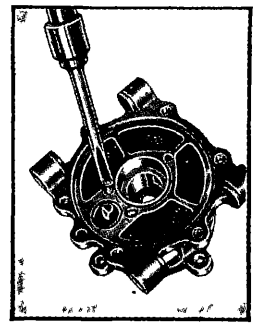
10.

Remove armature.



11.

Remove the three attaching screws from inside strainer—and then remove strainer plate and strainer.



NOTE: Carefully clean all parts in clean gasoline. DO NOT USE LACQUER THINNER OR OTHER SOLVENTS Carefully blow out each part with compressed air. Be sure that all passages are clear Extreme caution must be exercised to prevent damage to field coils. Clean commutator slots of armature with cardboard. Do not use metal tool

INSPECTION AND TESTING

Armature—If armature shaft bearing journals and commutator are in good condition, test as follows (this commutator operates in gasoline, therefore usual polished surface is not to be expected and noticeable threading does not indicate unsatisfactory operation)

(a) Test for ground with a test lamp **Do not attempt to repair a grounded or shorted armature since the armature is in dynamic balance and cannot be disassembled for repairs.**

(b) Check for shorts and open circuits in armature windings using meter and growler

Field Housing Assembly—If field housing, coils, and threads in tapped holes appear to be in good condition, test coils for continuity with test lamp, and if ohmeter is available check resistance of coils (Figure 1)

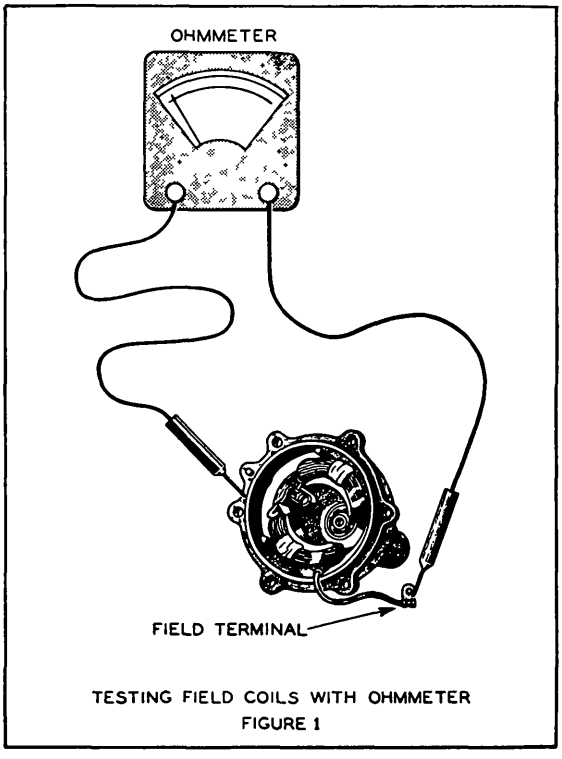
Resistance of field coils must be within following limits 6 volt pump—10 to 14 ohms 12 volt pump 25 to 32 ohms, and 24 volt pump—113 to 125 ohms. If these specifications are not met, use new field housing assembly.

Pump Body Assembly—Inspect insulated staked-in block to which the field pigtail is attached. If it is not tight and in good condition, if brush insulator is not in good condition, or if pump body assembly is damaged warped or otherwise unserviceable, replace with new assembly

Impeller—Inspect drive pin and ball in impeller If not in good condition, replace with new assembly

Cable Assembly—Inspect attachment of cable to field housing and make sure the collar screw plug is screwed down tight and locked with set screw. If cable assembly appears to be damaged and has been removed from pump, test as follows

Use a 6 volt test lamp and check cable assembly wire for continuity of circuit and for ground. If grounded or not continuous use a new cable assembly



TESTING FIELD COILS WITH OHMMETER
FIGURE 1

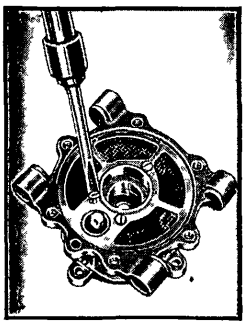
Miscellaneous Parts

Brush Assemblies—The minimum permissible brush length is 3/16 inch New brushes are 3/8 inch in length. If any doubt exists as to whether the brush lengths at the next overhaul will be less than 3/16 inch, replace both brush assemblies

Screws, Lock Washers, Strainers and Strainer Frame—Use new parts as required

Thrust Bearing Adjusting Screw and Ball Assembly—If threads are damaged or contact surface of ball is flat, use a new assembly

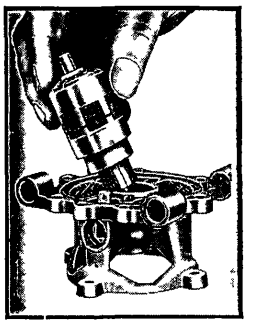
TO REASSEMBLE



1.

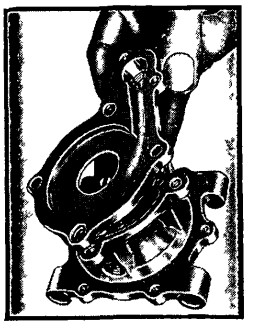
Install inside strainer and strainer plate in pump housing, and the three attaching screws.

(Strainer must be below strain er plate)



2.

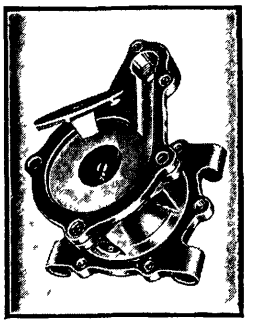
Install armature in pump housing.



3.

Hold armature in position and invert pump housing. Then install upper volute plate.

Be sure plate fits snugly against pump housing as one semi circular boss is larger than the other, thus allowing a tight fit in only one position (It should slide freely into place)



4.

Install impeller and ball assembly.

Hold armature securely and turn impeller until impeller key engages slot in armature shaft



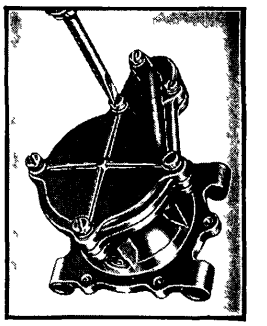
5.

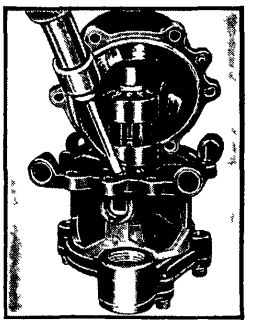
Install lower volute plate.

6.

Install attaching screws and lock washers.

Screws must be pulled down evenly No gasket is used between upper and lower vol ute castings

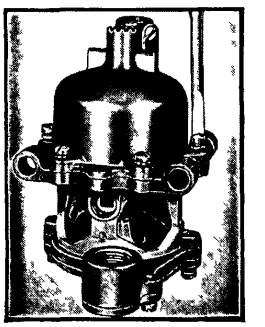




7.

Attach field pig tail. Install upper body.

Be sure that pig tail lead wire does not rub against armature but is between field coil and housing

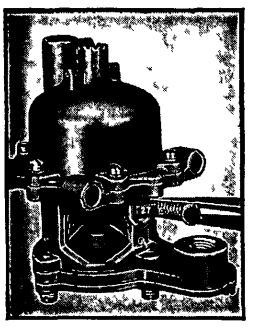


8.

Install the attaching screws and lock washers.

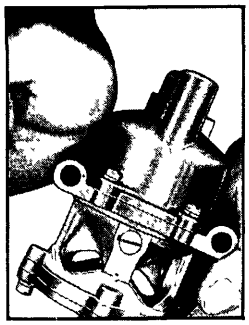
NOTE:

The brushes used are made of different materials and must not be interchanged (Note that one brush housing in casting is **insulated** and one is not) The brush with the fiber insulator terminal must be installed in the **insulated** brush pocket. Turn pump on its base until you are facing brush pocket. Number stamped on face of brush must go toward left side of hole. This method of installation insures matching of contour of face of brush to commutator.



9

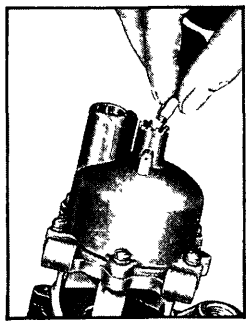
Install both brushes and screw plugs.



10.

Jar pump with h l f hand to insure bearing alignment.

The Carter Electric Pusher Pump is equipped with self-aligning bearings.

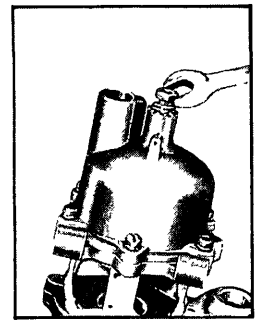


11.

With pump top side up install thrust bearing stud. Turn down finger tight against top end of armature shaft. Then place "three pronged keeper" on thrust bearing stud. Note position of prongs in relation to the notches in casting. Loosen screw until prongs fall into the nearest slots, THEN LOOSEN ONE MORE NOTCH.

12.

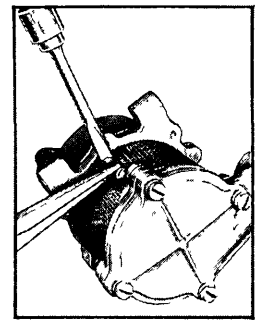
Install l ck washer and hex l ck nut.



13.

Install outer strainer. Start by placing end with screw holes closest to edge into offset in casting.

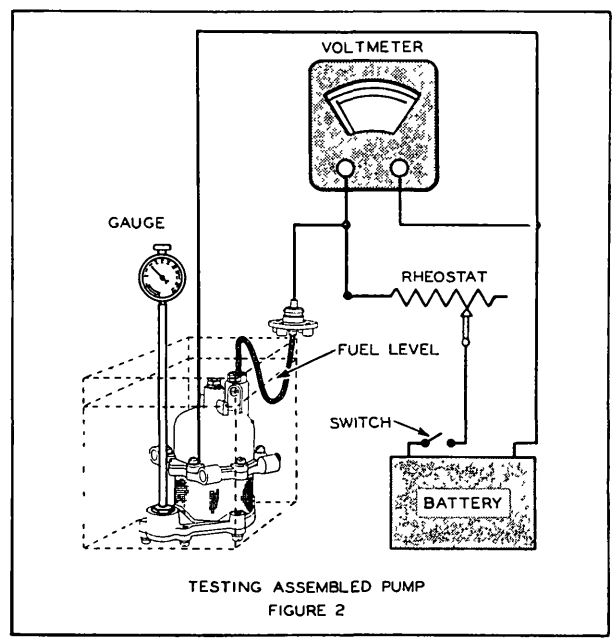
Be sure to take up all slack in screen. Tighten attaching screws securely.



TEST AFTER REASSEMBLY

Attach fuel pressure gauge to discharge port of pump (Figure 2). Use shortest convenient length of tube between pump and gauge avoiding dips and traps. Submerge entire pump in container of dry-cleaning fluid **(never run pump dry)** after connecting it as shown in figure 2 with switch open. Operate pump.

Minimum dead end pressure on gauge should be as follows:
P600S 6 volt pump operating at 6 volts—2 pounds
P602S-P603S 12 volt pumps operating at 12 volts—3¾ pounds
P804S 12 volt pump operating at 12 volts—3¼ pounds.
P604S 24 volt pump operating at 24 volts—3¾ pounds

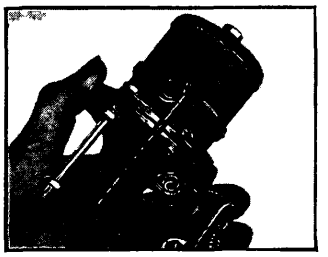


TESTING ASSEMBLED PUMP
FIGURE 2

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST LOUIS, MO, U. S A

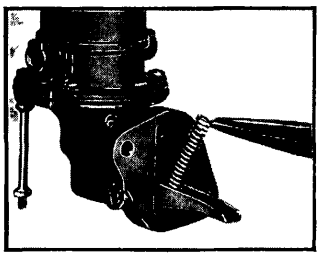
SERVICE PROCEDURE

CARTER MECHANICAL FUEL PUMP



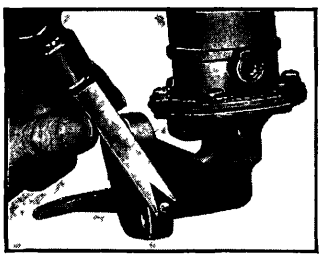
1.

Mark pump body and valve housing to facilitate correct reassembly.



2.

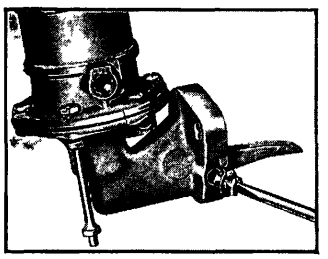
Remove cam lever return spring.



3.

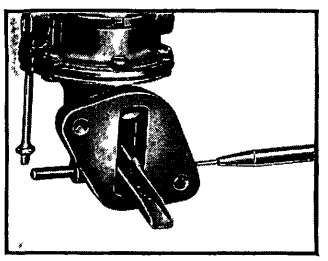
Remove rivet plug.

(Use tool T109-43.)



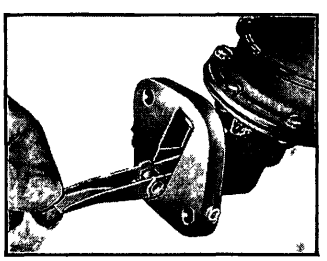
4.

Remove cam lever pin plug and washer.



5.

Remove cam lever pin.

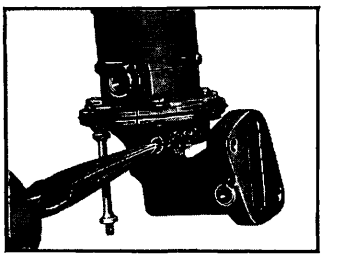


6.

Remove cam lever and spring retainer.

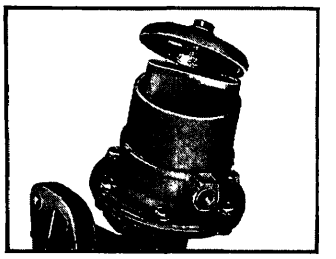
7.

Remove vent retainer ring and packing.



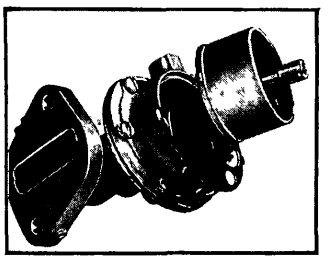
8.

Remove bowl cover, gasket and strainer.



9.

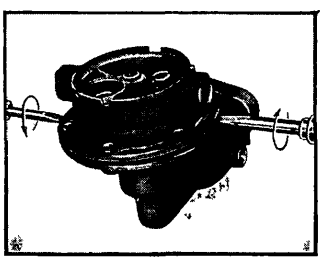
Remove bowl retaining screw, bowl and outlet airdome diaphragm.



10.

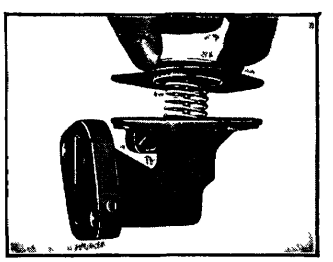
Remove pump valve housing.

Insert screw drivers between pump valve housing and body at flats of diaphragm Twist screw drivers as shown



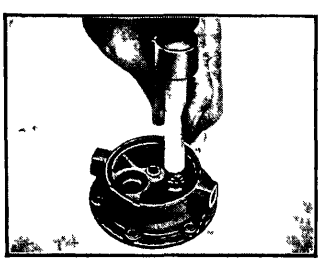
11.

Remove diaphragm assembly.



12.

Remove both valve cage assemblies.



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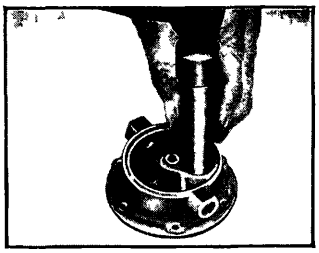
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MARCA REGISTRADA

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13.

Clean all parts in gasoline or solvent and dry with compressed air. Replace all worn or damaged parts.

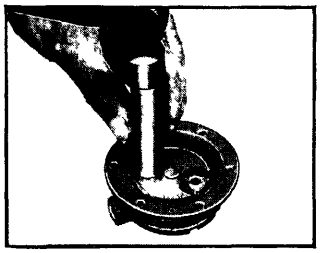
To Reassemble.



14.

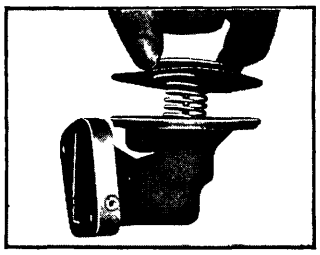
Install new intake valve cage assembly.

(Use tool T109-191.)



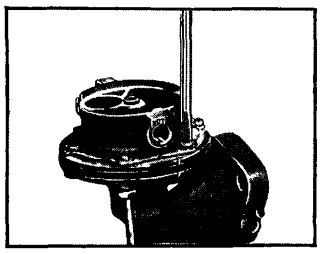
15.

Install new discharge valve cage assembly.



16.

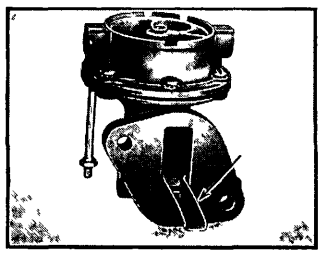
Install diaphragm assembly with flats toward ports.



17.

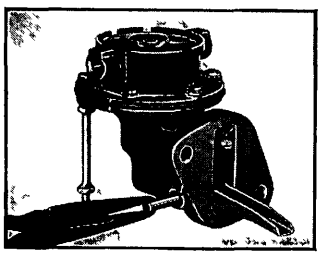
Install pump valve housing.

Align marks, then start all screws but **do not tighten.**



18.

Install cam lever and spring retainer.

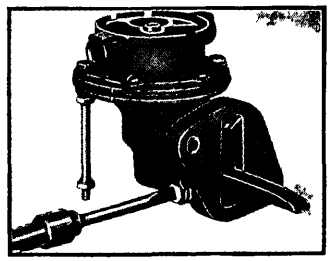


19.

Install cam lever pin.

20.

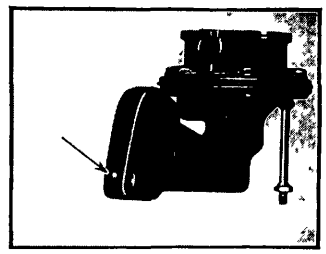
Install cam lever pin plug and washer.



21.

Install new rivet plug.

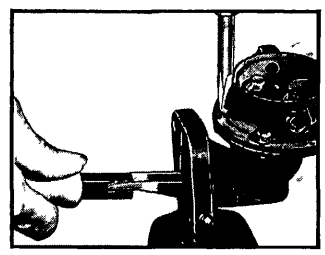
(Use tool T109 43)



22.

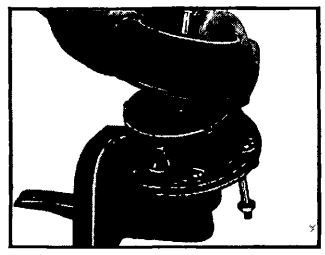
Flex diaphragm assembly to full downward position and hold in place while tightening valve housing attaching screws.

(Use tool T109 192)



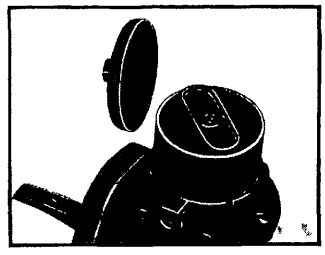
23.

Install outlet airdome diaphragm, bowl and bowl retaining screw and washer.



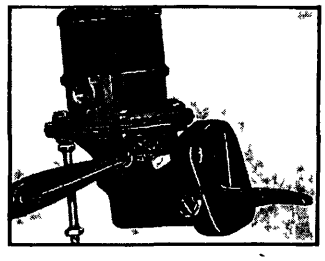
24.

Insert cap screw through gasket and bowl cover and install felt packing on screw. Then install strainer, bowl cover and ring gasket.



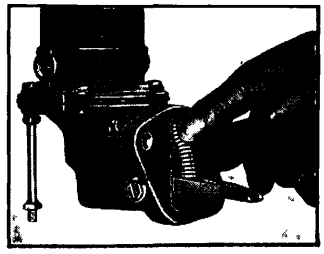
25.

Install vent packing and retainer.



26.

Install cam lever return spring.



CAUTION—When installing pump on engine be sure slot and stud holes in gasket are aligned with those in face of pump body.

Form 3469M

CARTER CARBURETOR
DIVISION OF ACF INDUSTRIES INCORPORATED
ST LOUIS, MO, U. S A.

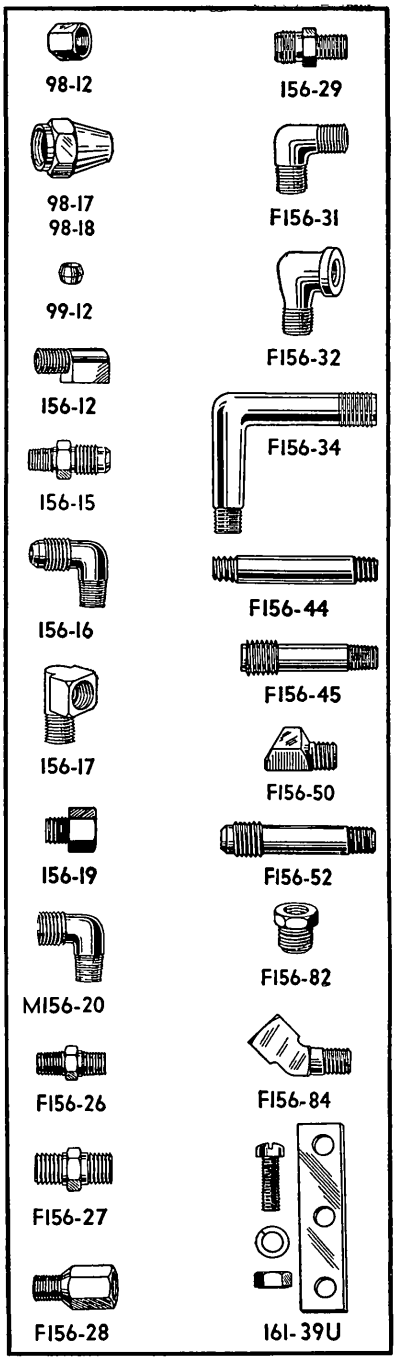
February, 1949
Revised October, 1957

CARTER FUEL FILTER INSTALLATIONS

INSTALL FILTER AT CARBURETER UNLESS OTHER LOCATION IS SUGGESTED

CAR, MODEL AND YEAR	FITTINGS REQUIRED Fittings listed in order used starting at carbureter or at fuel pump inlet or outlet	FILTER & REMARKS
BUICK		
1946-52 "40, 50, 60, 70"	**F156-26**	**F827S, F842S, F862S, F863S**
1953 "50" V-8	**F156-34** **Filter** **156-17**	**F827S, F862S**
1953-54 "50" (late without resistor on coil, "40" 1954 only)	**F156-26**	**F827S, F842S, F862S, F863S**
1953-54 "60" "70" 1954 only (Carter)	**156-17** **F156-45** **Filter** **156-17**	**F827S, F862S**
1953-54 "60" "70" 1954 only (Stromberg)	**F156-32** **F156-44** **Filter** **156-17**	**F827S, F862S**
1955 '40" Series	**F156-26**	**F827S, F2159S**
1955 "50-60-70" Series	**F156-26** **F156-44** **Filter** **156-17**	**F827S, F2159S**
1956 "40" Series (Carter)	**F156-26**	**F2159S**
1956 "40" Series (Stromberg)	**Use Old Fittings**	**F2159S**
1956 "40" Series—Power Steering (Carter)	**F156-44**	**F2159S**
1956 "50-60-70" Series (Carter)	**F156-31** **Filter** **156-17**	**F827S, F862S, F2159S, F2339S**
NOTE: Move starter wire retainer clip to opposite side of carbureter		
1956 "50-60-70" Series (Rochester)	**F156-26** **F156-32** **Filter** **156-17**	**F827S, F2159S**
1957 (All)	**Fuel Pump Outlet** **F156-44** **Filter** **F156-32** **Original Fitting**	**F827S, F862S, F2159S, F2339S**

FILTER FITTINGS



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CAR, MODEL AND YEAR	FITTINGS REQUIRED Fittings listed in order used starting at carbureter or at fuel pump inlet or outlet	FILTER & REMARKS
CADILLAC		
1946-48 (All)	**Fuel Pump Outlet F156-45 Filter 156-17**	**F827S, F862S**
1949 (All)	**156-17 F156-45 Filter 156-12**	**F827S, F862S**
1950 All equipped with flat type filter	**F156-32 F156-45 Filter F156-50**	**F827S, F862S**
1951 (All)	**Original Fittings**	**F827S, F862S**
1952-53 (All)	**F156-44 and old elbows**	**F827S, F862S (replace old nipple with F156-44)**
1954 (All)	**Original Fittings**	**F827S, F842S, F862S, F863S**
1955 (All)	**Original Fittings**	**F827S, F2159S**
1956 All except 2 carb inst	**Original Fittings**	**F827S, F2159S**
1956 All—2 carb inst	**Original Fittings**	**F842S**
NOTE: Remove baffle plate at carburerter, disassemble filter and install, replace baffle plate.		
1957 (Rochester Four Bore)	**Original Fittings**	**F2159S, F2339S (Bowl Upward)**
CHEVROLET		
1937-42 (All)	**F156-26**	**F827S, F862S**
NOTE: On 1938-39 using Carter carbureter, with large horn mounted on intake manifold, use Unitized Package No F161-39U		
1946-52 All except 1952 Powerglide	**F156-26**	**F827S, F842S, F862S, F863S**
1950-52 Truck (GM Carb)	**Weatherhead Fittings 1503 Filter 6100X5 6200X5**	**F827S, F828S (with horn mounted on intake manifold, cut and reshape fuel line)**
1952-54 Powerglide only 1952, All 1953-54	**F156-26 Filter 156-17**	**F827S, F862S**
1953-54 Truck	**F156-26**	**F827S, F842S, F862S, F863S**
1955-56 6 cylinder passenger cars	**F156-26 Filter 156-17**	**F827S, F2159S**
1955-56 6 cylinder trucks	**F156-26**	**F827S, F2159S**
1955 V-8 with oil filter	**156-17 F156-45**	**F827S, F2159S**
1955-56 V-8 (except 1955 with oil filter)	**F156-26**	**F827S, F2159S, F2339S**
1956 V-8 Super Powerkit (2 carbs) w/o twin oil bath air cleaners	**F156-50 at "T" connecti n**	**F827S, F2159S, F2339S**

CAR, MODEL AND YEAR	FITTINGS REQUIRED Fittings listed in order used starting at carbureter or at fuel pump inlet or outlet	FILTER & REMARKS
CHEVROLET (Continued)		
1956 V-8 Super Powerkit (2 carbs) with twin oil bath air cleaners	**F156-32 Filter 156-17**	**F2159S**
NOTE: F156-32 must be installed on "T" connection at approximately 15° from front Tilt filter body toward air cleaner for clearance		
1957 "6" (Rochester)	**156-29 Filter 156-17**	**F827S, F862S, F2159S, F2339S**
1957 V-8 (Rochester Dual)	**F156-26**	**F2159S (F827S or F862S tilted slightly)**
1957 V-8 (Carter four bore)	**F156-26**	**F863S, F2159S, F2339S or (F827S, F842S tilted slightly)**
1957 V-8 (Rochester four bore)	**156-29 Filter 156-17**	**F862S, F2159S, F2339S or (F827S tilted slightly)**
1957 Truck V-8	**F156-44**	**F827S, F862S, F2159S, F2339S, tilted slightly**
CHRYSLER		
1937-40-46-51-53-54 6 cylinder	**156-29 Filter 156-19**	**F827S, F842S, F862S, F863S**
1941-42 All 6 & 8 cylinder	**F156-50**	**F827S, F862S**
1951-54 8 cylinder dual carbureter	**F156-26 F156-32 Filter 156-17**	**F827S, F862S**
1952 6 cylinder	**156-29 Filter F156-50**	**F827S, F862S**
1955 Windsor	**156-29 Filter 156-17**	**F2159S**
1955 Windsor (Optional Inst)	**Fuel Pump Inlet F156-31**	**F827S (Bowl Upward)**
1956 To protect gas heater	**Heater Pump Outlet F156-26**	**F2159S (F827S disassembled for inst.)**
DE SOTO		
1937-40-46-53-54 All except early 1953	**156-29 Filter 156-19**	**F827S, F862S (156-19 not needed on F842S, F863S)**
1941-42 All	**F156-50**	**F827S, F862S**
1952-53 6 cylinder (early 1953 only)	**156-29 Filter F156-50**	**F827S, F862S**
1952 V-8 (WCD Carbureter)	**F156-26 F156-32 Filter 156-17**	**F827S, F862S**

CAR, MODEL AND YEAR	FITTINGS REQUIRED Fittings listed in order used starting at carbureter or at fuel pump inlet or outlet	FILTER & REMARKS
DE SOTO (Continued)		
1952-53 V-8, BBD Carbureter with pipe connections in flange	**F156-82 F156-31 F156-32 Filter 156-17**	**F827S, F862S**
1953-54 BBD Carbureter with hose connections in flange	**F156-82 F156-32 156-17 F156-45 Filter 156-17**	**F827S, F862S**
1955 Firedome	**156-29 Filter 156-17**	**F2159S**
1955 Firedome (Optional Inst)	**Fuel Pump Inlet F156-31**	**F827S (Bowl Upward)**
1956 Firedome	**Fuel Pump Inlet F156-26**	**F827S, F2159S (Bowl Upward)**
DODGE		
1946-48 All	**156-29 Filter F156-50**	**F827S, F862S**
1949-54 6 cylinder (Carter Carbureter), V-8 (Stromberg Carbureter)	**156-29 Filter 156-19**	**F827S, F862S (156-19 not needed on F842S, F863S)**
1949-52 6 cylinder (Stromberg Carbureter)	**F156-82 F156-32 156-29 F156-50 Filter 156-19**	**F827S, F862S (156-19 not needed on F842S, F863S - Filter to front of car— Twist end of fuel line ¼ turn)**
1955 "V-8" Dual Carbureter	**F156-45 Filter 156-19**	**F827S, F2159S, (F842S, 156-19 not needed)**
1955-56 6 cylinder	**F156-45 F156-32 Filter 156-19**	**F827S, F2159S, (F842S, 156-19 not needed)**
DODGE TRUCK		
All C O E Models see Footnote X on Last Page.		
1946-48 All	**F156-26 Filter F156-50**	**F827S, F862S (with engine Nos. VM-T88-2670 to 2752, use 156-19 and 156-29)**
1949-53 All	**156-19**	**F827S, F862S (F842S, F863S no fittings necessary)**
FORD		
1937-42 V-8 (Stromberg Carbureter)	**156-15 Filter F156-28**	**F827S, F862S**
1937-42 V-8	**F156-52 Filter F156-84**	**F827S, F862S**

CAR, MODEL AND YEAR	FITTINGS REQUIRED Fittings listed in order used starting at carbureter or at fuel pump inlet or outlet	FILTER & REMARKS
FORD (Continued)		
1941-42-46-50 6 & 8 (except 1941-42 V-8)	**Fuel Pump Outlet F156-52 Filter F156-28**	**F827S, F862S**
1951-53 V-8	**Fuel Pump Outlet 156-15 Filter F156-84**	**F827S, F862S**
1951 6 cylinder	**156-15 Filter F156-28**	**F827S, F862S**
1952-53 6 cylinder	**Fuel Pump Inlet F156-26**	**F827S, F862S**
1954 6 cylinder	**Fuel Pump Inlet F156-31 F156-32**	**F827S, F862S**
1954 V-8 without Power Steering	**Fuel Pump Inlet 156-29 F156-50**	**F827S, F862S**
1954 V-8 with Power Steering and Optional Inst on all other V-8	**156-15 F156-32 F156-32 Filter F156-28**	**F827S, F862S (P siti n filter t the rear of carbureter und air cleaner in- dentati n)**
1955 V-8 Dual Carbureter	**F156-45 Filter 156-19**	**F827S, F2159 (F842S, 156- n t needed)**
1955 V-8 four bore carbureter without Power Steering	**Fuel Pump Inlet F156-32 F156-26 F156-32**	**F827S, F2159**
1956 V-8 Dual Carbureter without Power Steering	**Fuel Pump Outlet 156-17**	**F827S, F842S, F2159S**
1956 V-8 Dual Carbureter with Power Steering	**156-29 F156-32 F156-32 Filter 156-19**	**F827S, F842S, F2159S**
1957 Ford V-8 (All)	**Pump Outlet 156-26**	**F827S, F842S, F862S, F863S, F2159S, F2339S**
With power steering—remove fuel line and place between power steering bracket and upper power steering hose—check clearance		
1957 Ford 6	**Pump Inlet Weatherhead 3327X2 Weatherhead 3400X2 Filter**	**F827S, F2159S Bend flexline ar und outlet line—check clearance**
FORD TRUCK		
All C O E Models see Footnote X on Last Page		
1946-49 V-8	**Fuel Pump Outlet F156-52 Filter F156-28**	**F827S, F862S**

CAR, MODEL AND YEAR	FITTINGS REQUIRED Fittings listed in order used starting at carbureter or at fuel pump inlet or outlet	FILTER & REMARKS
STUDEBAKER		
1937-49 All	**F156-26**	**F827S, F862S**
1950-54 Champion	**F156-26**	**F827S, F862S**
1950 Commander (Stromberg Carbureter)	**F156-26**	**F827S, F862S**
1950 Commander (Carter Carbureter)	**F156-26 Filter 156-19**	**F827S, F862S (156-19 not needed with F842S, F863S)**
1951-52 V-8	**F156-26**	**F827S, F862S**
1953-54 V-8	**F156-31 F156-32 Filter 156-12**	**F827S, F862S**
1955-57 Champion	**F156-26**	**F827S, F2159S**
WILLYS		
1937-49 All	**F156-26**	**F827S, F862S**
1950-53 6-73, CJ-3A	**F156-26**	**F827S, F862S**
1950-53 4-73	**F156-26 Filter 156-12**	**F827S, F862S**

CAR, MODEL AND YEAR	FITTINGS REQUIRED Fittings listed in order used starting at carbureter or at fuel pump inlet or outlet	FILTER & REMARKS
WILLYS (Continued)		
1952-54 6-85	**F156-26**	**F827S, F862S**
NOTE: Move plug wires over top of carbureter bowl. Check No. 5 wire for clearance of throttle linkage.		
1954 Custom Eagle	**F156-26**	**F827S, F842S, F862S, F863S**
1955 6 cylinder (4 wheel drive Jeep & Truck)	**Fuel Pump Inlet F156-26 Filter F156-32**	**F862S**
1955 6 cylinder (2 wheel drive Station Wagon & Truck)	**Fuel Pump Inlet F156-26**	**F862S**
1955 Passenger Cars	**F156-26 Filter 156-19**	**F827S, F2159S (156-19 not needed with F842S)**
1956 All 6 cylinder	**F156-26**	**F827S, F2159S**
1956 4 cylinder	**Fuel Pump Inlet F156-26**	**F827S, F2159S**
NOTE: Bowl upward on all 4 cylinder engines.		

Note X: Cab over engine (C.O.E.) trucks in most instances do not provide sufficient room in the engine compartment for filter installation. The following two possible installation points should be checked:

1. Outlet of fuel tank or tanks: Use F862S, F863S or F866S metal bowl filter if location is subject to flying stones from road.
2. Cut fuel line along accessible portion of truck frame and install foursome fuel filter F614S or F614SU ¼" fittings —F642S or 642SU ⅛" fittings.

Trucks or buses in fuel mileage range of 4 to 7 miles per gallon should be equipped with foursome filters F614S or F614SU —F642S or 642SU to permit longer periods between filter cleaning.

Filter installation at these points provide protection for the fuel pump as well as the carbureter.

CARBURETER
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CAR, MODEL AND YEAR	FITTINGS REQUIRED Fittings listed in order used starting at carbureter or at fuel pump inlet or outlet	FILTER & REMARKS
FORD TRUCK (Continued)		
1950-52 V-8 & 6 (F6-F8)	**F156-26**	**F827S, F862S (fuel pump outlet except 1951-52 "F6")**
1950-51 V-8 & 6 (F1-F2-F5)	**F156-52 Filter F156-28**	**F827S, F862S**
1952-54 6 cylinder	**Fuel Pump Inlet F156-26**	**F827S, F862S**
1954 All V-8	**Fuel Pump Inlet F156-31 F156-32**	**F862S**
1955 6 cylinder (F250), V-8 (C600)	**Fuel Pump Outlet F156-26**	**F827S, F842S, F2159S**
1955 V-8 (F100, F500)	**156-29 Filter 156-19**	**F827S, F2159S (F842S, 156-19 not needed)**
1955 V-8 (F800)	**Fuel Pump Outlet F156-31 Filter 156-17**	**F827S, F2159S (F842S, 156-17 not needed)**
1956 6 cylinder (F100, F350)	**Fuel Pump Outlet F156-26 Filter F156-17**	**F862S**
1956 V-8 (F100, F250, F500, F600)	**156-29 Filter 156-19**	**F827S, F2159S (F842S, 156-19 not needed)**
1956 V-8 (C600, C750, F750, T750)	**156-19 Filter 156-19**	**F827S, F2159S (F842S only one fitting needed)**
1956 V-8 (C600, C750, F750) (Optional Inst) (T750)	**Fuel Pump Inlet F156-26**	**F827S, F2159S**
GMC TRUCK		
All C O E Models see Footnote X on Last Page		
1937-42-46-49 All	**F156-26**	**F827S, F862S**
1950-54 All up to 3 Ton Series 100 to 450, 3½ ton 302-360 1953 Models	**F156-26**	**F827S, F862S**
1950 3½ Ton 500 Series and Up	**¼" Nipple x 2½"**	**F828S, F866S**
1952 3½ Ton 318 and 360	**F156-26 Filter 156-19**	**F827S, F862S (156-19 not needed on F842S, F863S)**
1953-54 4½ to 5 Ton 620-630	**F156-27**	**F828S, F866S**
HUDSON		
1937-49 All	**F156-26**	**F827S, F862S**
1950-52 Pacemaker	**F156-26**	**F827S, F842S, F862S, F863S**

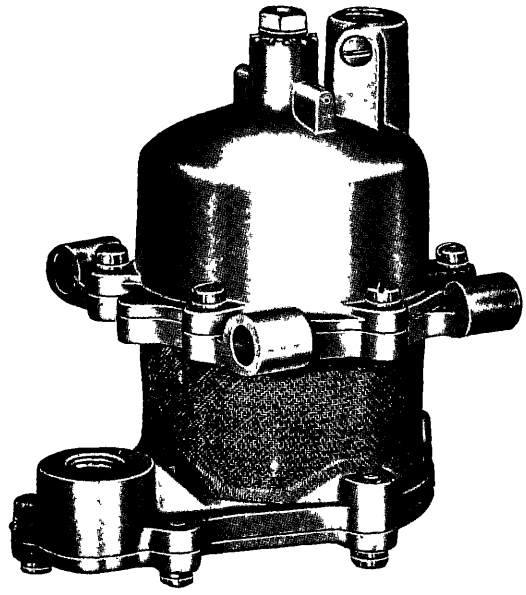
CAR, MODEL AND YEAR	FITTINGS REQUIRED Fittings listed in order used starting at carbureter or at fuel pump inlet or outlet	FILTER & REMARKS
HUDSON (Continued)		
1950-54 Commodore & Super 6 & 8 Wasp, Hornet and Jet	**F156-26**	**F827S, F842S, F862S, F863S**
1953-54 All 2 Carb. Inst. except Jet	**156-29 Filter 156-19**	**F827S, F862S (156-19 not needed with F842S, F863S)**
1953-54 Jet with 2 Carbs	**156-29 Filter 156-17**	**F827S, F862S**
1955 Hornet 6 (Single Carb)	**F156-26**	**F827S, F842S, F2159S**
1955 Hornet 6 (2 Carbs)	**F156-82 F156-31 Filter 156-17**	**F827S, F2159S (156-17 not needed with F842S)**
LINCOLN		
1946-48 All	**F156-52 Filter F156-28**	**F827S, F862S**
1949 All	**Fuel Pump Outlet 156-29 F156-50 Filter F156-50**	**F827S, F862S**
1950-51 All	**Fuel Pump Outlet F156-26**	**F827S, F862S**
1952-54 All	**Fuel Pump Inlet F156-26**	**F842S, F863S**
1955 All	**Original Fittings**	**F827S, F842S, F2159S**
MERCURY		
1946-49 All	**F156-52 Filter F156-28**	**F827S, F862S**
NOTE: Install at Fuel Pump Outlet on 1949 Models		
1950-52 All	**Fuel Pump Inlet F156-52 Filter F156-28**	**F827S, F862S**
1953-54 All	**Fuel Pump Inlet F156-31 F156-32**	**F827S, F862S**
1955 All	**Fuel Pump Inlet F156-26**	**F827S, F2159S**
1956 All	**Fuel Pump Outlet F156-26 F156-32**	**F827S, F2159S**
1957 All	**Fuel Pump Inlet F156-31 F156-32**	**F827S, F862S, F2159S, F2339S**

CAR, MODEL AND YEAR	FITTINGS REQUIRED Fittings listed in order used starting at carbureter or at fuel pump inlet or outlet	FILTER & REMARKS
NASH		
1946-48 4640, 4740, 4840	**F156-26**	**F827S, F862S**
1946-48 4660, 4760, 4860	**Fuel Pump 156-17 F156-45**	**F827S, F862S**
1949 4940	**F156-32 F156-26**	**F827S, F862S**
1949-50 4960, 5060	**F156-26**	**F827S, F862S**
1950-53 Statesman	**F156-26**	**F827S, F862S**
NOTE: 1953 Statesman use F862S only.		
1951 Ambassador	**156-17 F156-26**	**F827S, F862S**
1952-54 Ambassador (Single Carb.)	**F156-26 Filter F156-32 F156-50**	**F827S, F862S**
1952-54 Ambassador (Two Carbs.)	**Fuel Pump Inlet F156-26**	**F862S**
NOTE: 1953 Models equipped with united oil bath air cleaners, use F156-31 and F156-32.		
1950-54 Rambler	**F156-26**	**F827S, F862S**
1954 Statesman	**F156-45 Filter 156-17**	**F827S, F862S**
1955 Rambler	**F156-26**	**F827S, F862S**
OLDSMOBILE		
1937-48 All 6 & 8 cylinder	**F156-26**	**F827S, F862S**
1949 All 6 cylinder	**F156-26 F156-32 Filter F156-50**	**F827S, F862S**
1950 "76" "6" cylinder	**F156-26 F156-32 Filter 156-17**	**F827S, F862S**
NOTE: 156-17 and F156-32 needed only when oil filter equipped.		
1949-50 "88 & 98" Carter Equipped	**F156-34 156-19 Filter 156-19**	**F827S, F862S, F863S (Only one 156-19 needed with F842S)**
NOTE: Swing generator to left for insertion of F156-34 fitting.		
1949-50 "88 & 98" GM Carb.	**F156-26 Filter 156-17**	**F827S, F842S, F862S**
NOTE: Install in front inlet of carbureter.		
1951-54 "88 & 98"	**Fuel Pump Inlet F156-26**	**F827S, F862S**
1955 "88" Dual Carbureter	**156-29 Filter 156-19**	**F2159S**
1955 "88 & 98" (4 bore carbureter)	**156-29 Filter 156-19**	**F827S, F2159S (156-19 n t needed with F842S)**

CAR, MODEL AND YEAR	FITTINGS REQUIRED Fittings listed in order used starting at carbureter or at fuel pump inlet or outlet	FILTER & REMARKS
OLDSMOBILE (Continued)		
1955 All (Optional)	**Fuel Pump Inlet F156-26**	**F827S, F2159S**
1956 "88" Dual Carbureter	**F156-31 Filter F156-50**	**F2159S**
1956 "88 & 98" (4 bore carbureter)	**156-29 F156-32 Filter 156-17**	**F2159S, F2339S (Tilt f r air cleaner clearance)**
PACKARD		
1942-49 All	**F156-26**	**F827S, F862S**
1950-54 All	**F156-26**	**F827S, F842S, F862S, F863S**
PLYMOUTH		
1937-54 All except 1954 with BBS carbureter	**156-29 Filter 156-19**	**F827S, F862S (156-19 not needed with F842S, F863S)**
1954 BBS Carbureter	**156-29 F156-32 Filter 156-17**	**F827S, F862S**
1955 V-8 (Dual Carbureter)	**156-29 Filter 156-19**	**F827S, F2159S (156-19 n t needed with F842S)**
1955-56 6 cylinder	**156-29 Filter 156-19**	**F2159S**
1955-56 6 cylinder (Optional)	**156-29 F156-32 Filter 156-17**	**F827S**
1957 6 cylinder	**156-29 Filter 156-19**	**F2159S**
PONTIAC		
1937-49-51-54 All except 1953-54 6 cylinder	**F156-26**	**F827S, F862S**
1950 All	**F156-26**	**F827S, F842S, F862S, F863S**
1953-54 6 cylinder	**156-15 6200X5**	**F827S, F862S (6200X5 is weatherhead fitting)**
1955 Carter Dual Carbureter	**Original Fittings**	**F827S, F2159S**
1955-56 GM Dual and all 4 bore Carbureter	**Fuel Pump Inlet F156-26 Filter 156-17**	**F827S, F2159S (B wl Upward)**
1957 All	**Pump Inlet F156-26 Filter 156-17**	**F827S, F862S, F2159S, F2339S (Bowl Upward)**

CARTER CARBURETOR
DIVISION OF ACF INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

P600S-P602S-P603S-P804S
ELECTRIC PUSHER PUMPS
F bruary, 1946
Revised December, 1956



CARTER ELECTRIC PUSHER PUMPS

MODEL P600S

6 Volt—Positive or Negative Ground

MODEL P602S

12 Volt—Negative Ground

MODEL P603S

12 Volt—Positive Ground

MODEL P804S

12 Volt—Positive or Negative Ground
For Diesel Application

LIST PRICE (Pump Only)—$36.30

PRICES INCLUDE ALL PRICE ADJUSTMENTS TO DATE

The Carter Electric Pusher Pump is a motor driven centrifugal pump without valves. It is located inside and at the bottom of the fuel tank. Fuel flows through the pump providing cooling and lubrication. It is listed by "Underwriters' Laboratories, Inc."

A number of its outstanding advantages are:

- **Fuel is under pressure from the tank to the carbureter, eliminating vapor lock.**
- **As there are no valves between pump and carbureter the fuel drains back into th tank wh n engine is stopped, eliminating a pressure build up and consequent hard starting on a hot engine.**
- **Fuel for starting is immediately supplied to the carbureter.**
- **Delivery of fuel is steady and non-pulsating.**
- **The armature is balanced both statically and dynamically assuring quiet operation and long life.**
- **The pump is protected from road hazards and is easily removed for fast servicing.**

FOR DIESEL (P804S)

- **Elimination of air leaks on the suction line to the injector pump insuring solid fuel flow to the pump and on some make engines full flow to the distributor.**
- **Quick refilling of filters after servicing, eliminating priming or air purging.**

UNDER NO CONDITION DOES THE CARTER PUMP REPLACE OR ELIMINATE THE REGULAR INJECTOR PUMP.

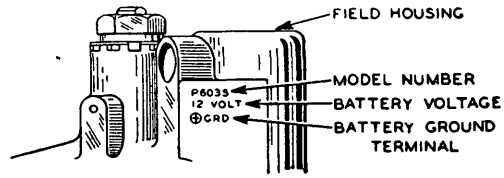
CAUTION

Always remove pump feed wire from terminal post on top of cover plate and insulate terminal on end of wire with tape as the **first** operation when removing pump from tank.

POLARITY

To insure long life, 12 volt pumps use brushes of dissimilar materials and are not interchangeable. Polarity of these pumps should not be reversed as rapid brush wear would result.

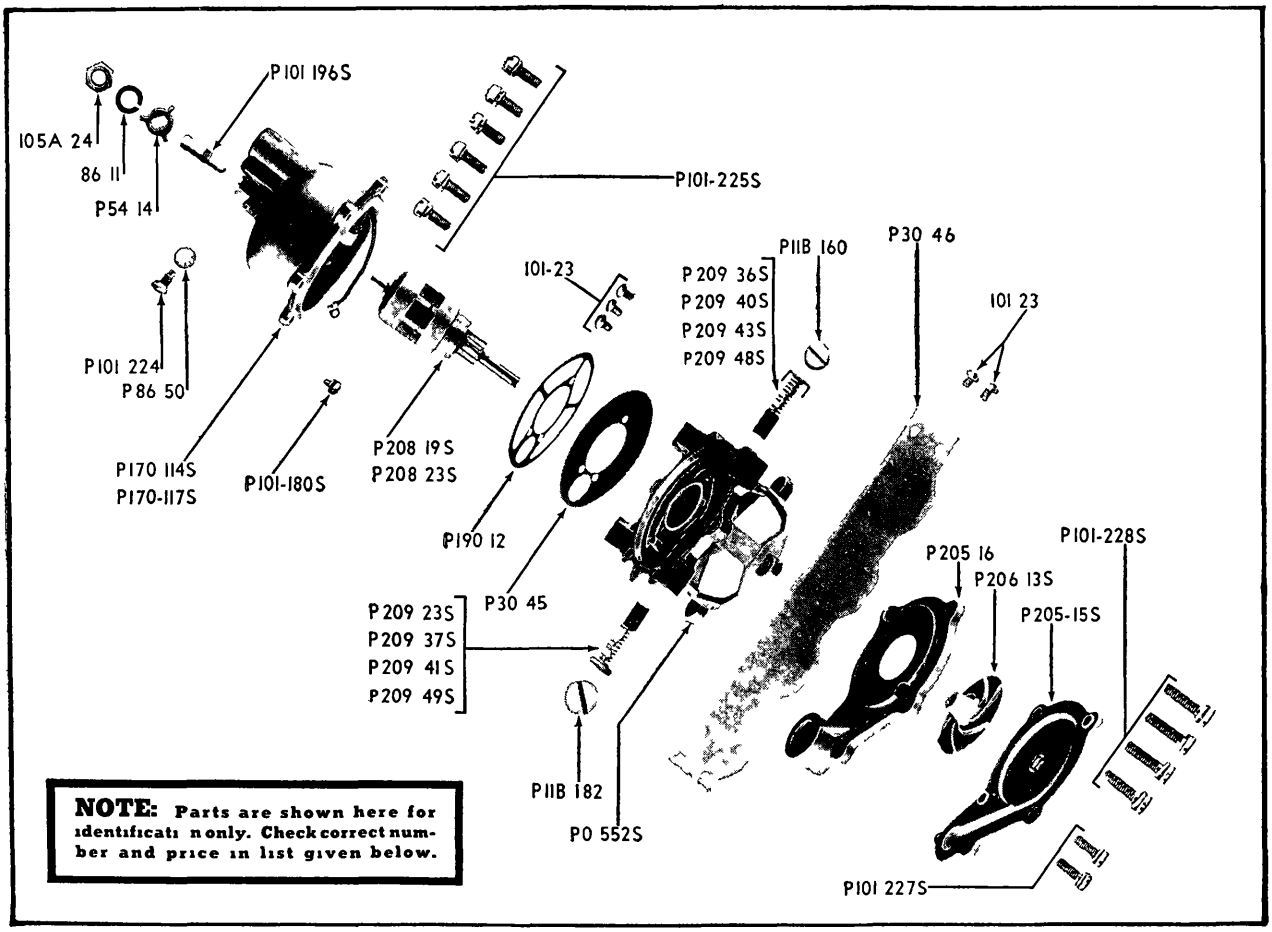
Each pump is identified as to model number, voltage and ground polarity as indicated.



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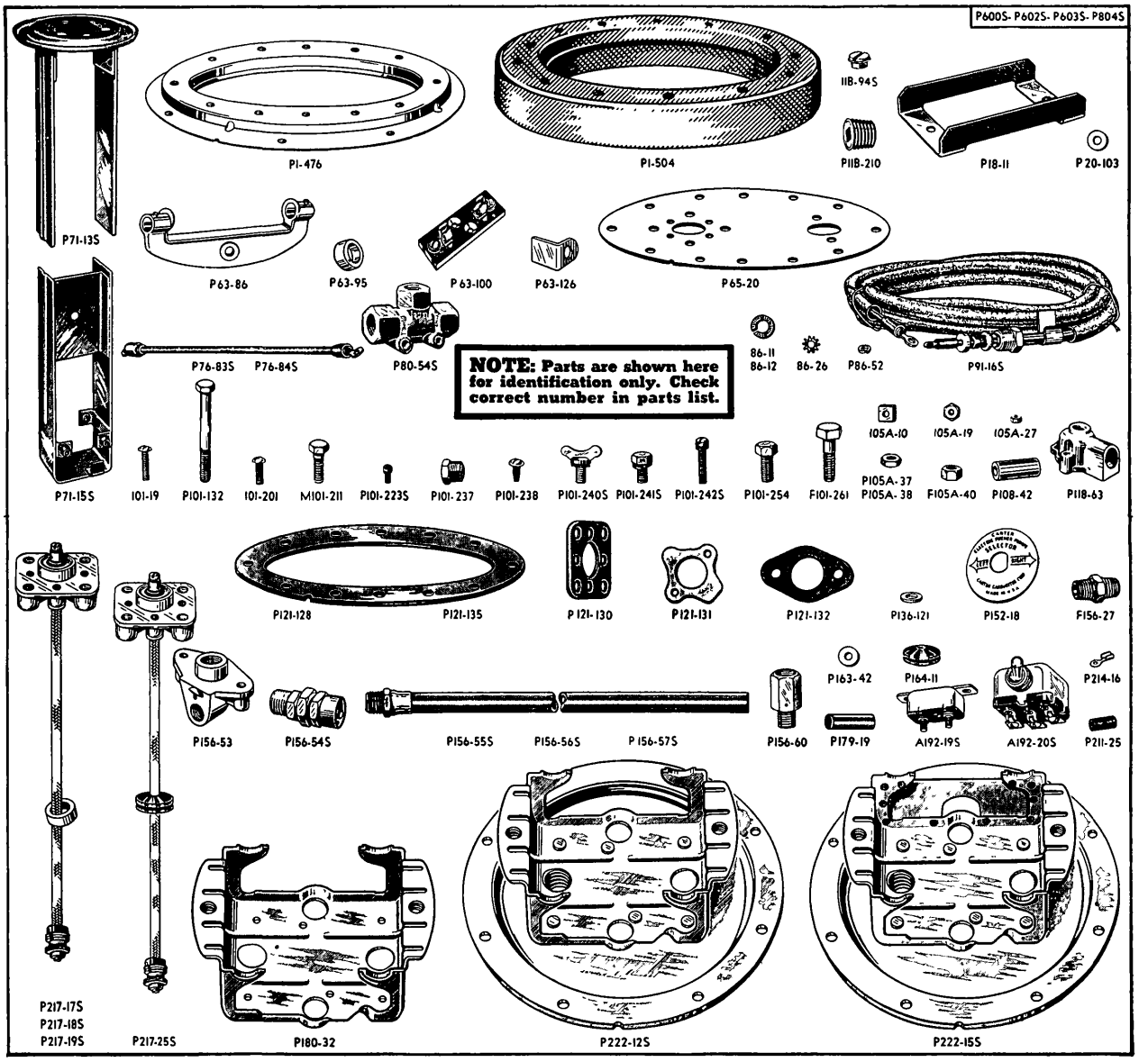


P600S-P602S-P603S-P804S Electric Fuel Pumps—List Price $36.30

WHEN SERVICING USE REPAIR PACKAGE No P1359 PRICE $20 88 FOR P600S No P1371 FOR P602S PRICE $20 88
No P1354A, PRICE $20 88 FOR P603S, No P1589 FOR P804S PRICE $20 88
PART NAMES IN CAPITAL LETTERS, LISTED BELOW INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	Part Name	List Price
PO-552S	Pump body, brush insulator and terminal assembly	$ 8.20
P11B-160	Screw plug (grounded brush)	.17
P11B-182	Screw plug (insulated brush)	.17
P30-45	INSIDE STRAINER	.69
P30-46	Outside strainer	.86
P54-14	Adjusting screw lock	.17
86-11	Lock Washer	.02
P86-50	Lock Washer	.02
101-23	Strainer attaching screw (5)	.03
P101-180S	Lead wire attaching screw and washer assembly (2)	.09
P101-196S	THRUST BEARING ADJUSTING SCREW AND BALL ASSEMBLY	.69
P101-224	Cable lock screw	.09
P101-225S	Attaching screw and washer assembly (6)	.09
P101-227S	Attaching screw and washer assembly (2)	.17
P101-228S	Attaching screw and washer assembly (4)	.17
105A-24	Hex nut	.09
P170-114S	Field housing, bearing and coil assembly (P602S) (P603S) (P804S)	16.39
P170-117S	Field housing, bearing and coil assembly (P600S)	16.39
P190-12	Strainer frame	.17
P205-15S	Lower volute and wear plate assembly	1.55
P205-16	Upper volute	1.30
P206-13S	Impeller and ball assembly	.86
P208-19S	ARMATURE AND CAP ASSEMBLY (P602S) (P603S) (P804S)	16.39
P208-23S	ARMATURE AND CAP ASSEMBLY (P600S)	16.39
P209-38U	BRUSH ASSEMBLY SET [1 P209-36S (No 14 pos) 1 P209 37S (No 27 neg)] (P603S)	3.11
P209-42U	BRUSH ASSEMBLY SET [1 P209-40S (No 39 ground) 1 P209 41S (No 39 insulated)] (P600S)	3.11
P209-44U	BRUSH ASSEMBLY SET [1 P209-43S (No 27 neg) 1 P209 23S (No 14 pos)] (P602S)	3.11
P209-50U	BRUSH ASSEMBLY SET [1 P209-49S (No 47 insulated) 1 P209 48S (No 47 ground)] (P804S)	3.11

PRICES INCLUDE ALL PRICE ADJUSTMENTS TO DATE



CABLE AND HOSE PACKAGES

PKG. No.	FOR TANK DEPTH	PRICE
P195-23U	7 to 12 inches	$11.21 List
P195-24U	12 to 18 inches	11 21 List
P195-25U	18 to 26 inches	11 21 List

One of these packages, depending on tank depth, must be used with ecch Installation Package P195-52U, P195-53U and P195-54U. Installation Packages for cylinder and saddle tank applications include this material.

PUMP INSTALLATION PACKAGES

PKG. No.		PRICE
P195-52U (Supersedes P195-26U)	For light gauge rectangular standard equipment tanks (with sump)....	..$29 42 List
P195-53U (Supersedes P195-27U)	For light gauge rectangular standard equipment tanks (without sump) .	26 40 List
P195-54U (Supersedes P195-38U)	For light gauge standard equipment truck tanks	32 61 List
P195-39U	For converting cylinder and saddle tanks for Carter pumps.	10.35 Net
P195-55U (Supersedes P195-40U)	For single cylindrical tanks equipped for Carter pumps	31.44 List
P195-56U (Supersedes P195-51U)	For set of cylindrical or one saddle tank equipped for Carter pumps. ..	63.42 List

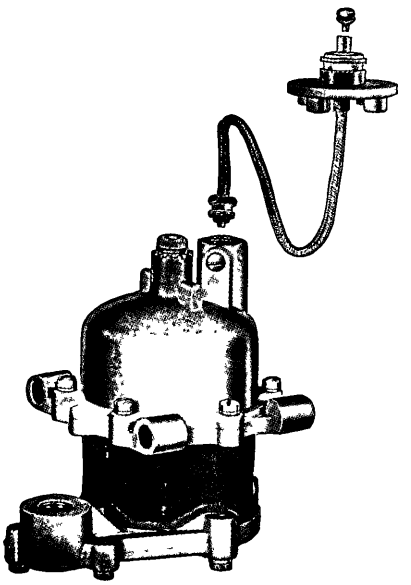
(See following page for contents of packages.)

PRICES INCLUDE ALL PRICE ADJUSTMENTS TO DATE

PARTS LIST FOR ALL PACKAGES

Part No.	Part Name	QUANTITY USED IN PACKAGE No. P195- 23U	24U	25U	52U	53U	54U	39U	55U	56U	List Price
A634S	Oil pressure switch				1	1	1		1	1	$4.80
P1-476	Cover plate flange				1	1	1				2.16
P1-504	Cover plate flange							1			6.90
11B-94S	Plug assembly (Sup. by 11B-125S)				1	1	1		1	2	
11B-125S	Plug assembly				1	1	1		1	2	.17
P11B-210	Pipe plug ½"				1		1				.35
P18-11	Mounting bracket support						1				1.47
P20-103	Terminal cover seal gasket				1	1	1				.03
P63-86	Mounting insulator retainer				2	2	2				.52
P63-95	Retainer (Part of pump cable assembly) Sold separately										.26
P63-100	Fuse retainer block				1	1	1		1		.69
P63-126	Retainer								4	8	.03
P65-20	Cover plate				1	1	1				2.16
P71-13S	Pump hanger assembly (upper)							1			8.20
P71-15S	Pump hanger assembly (lower)							1			5.61
P76-83S	Lead wire and terminal assembly									1	1.30
P76-84S	Lead wire and terminal assembly									1	1.30
P80-54S	Ball check assembly									1	1.47
86-11	Lock washer								1	2	.02
86-12	Lock washer									4	.02
86-16	Lock washer								2		.02
86-26	Lock washer								4	3	.02
P86-52	Lock washer									2	.02
P91-15S	Tubing and wire assembly								1		4.31
P91-16S	Tubing, wire and loom assembly									2	5.18
101-19	Round head screw									2	.09
P101-131	Screw, flat head								2		.03
P101-132	Cap screw (for service only)										.17
101-201	Mounting bracket attaching screw					8					.09
M101-211	Hex head cap screw								1	2	.17
P101-223S	Insulator retaining screw assembly				4	4	4		4	8	.09
P101-237	Terminal cover seal screw				1	1	1				.17
P101-238	Sump and flange attaching screw				17	8	17				.17
P101-240S	Wing screw and washer assembly				2	2	2				.26
P101-241S	Cover plate screw assembly				20	20	20		6	12	.03
P101-242S	Terminal cover screw assembly				2	2	2		2	4	.03
P101-254	Hex head cap screw							12			.17
F101-261	Hex head cap screw									4	.17
105A-10	Nut									2	.09
105A-19	Hex nut					8					.09
105A-27	Nut								2		.09
P105A-37	Hex nut									2	.09
P105A-38	Hex nut								1	2	.09
F105A-40	Hex nut									4	.09
P108-42	Spacer (for service only)										.35
P118-63	Terminal cover				1	1	1		1	2	.52
P121-128	Cover plate gasket				1	1	1				.44
P121-130	Terminal cap gasket	1	1	1					1	2	.06
P121-131	Terminal cover gasket				1	1	1		1	2	.09
P121-132	Gas line connection gasket				1	1	1		1	2	.06
P121-135	Cover plate gasket							1			1.30
P136-121	Washer (copper)							12			.06
P152-18	Name plate									1	.35
F156-27	Nipple									2	.26
P156-53	Gas line connection				1	1	1		1	2	.69
P156-54S	Gas line fitting assembly	1	1	1					1	2	1.30
P156-55S	Gasoline fitting and hose assembly	1									3.02
P156-56S	Gasoline fitting and hose assembly		1								3.02
P156-57S	Gasoline fitting and hose assembly			1					1	2	3.02
P156-60	Pressure reduction fitting (use only on 12 volt installation)				1	1	1				.61
P163-42	Terminal cover seal				1	1	1				.06
P164-11	Grommet										.86
P179-19	Mounting insulator				4	4	4		4	8	.17
P180-32	Mounting bracket					1					2.59
P188-47	Non-metallic loom								1		1.73
A192-15S	Relay switch				1	1	1		1	1	3.89
A192-19S	Circuit breaker									1	1.73
A192-20S	Toggle switch									1	6.04
P211-25	Insulator				1	1	1				.09
P214-16	Wire terminal				1	1	1				.06
P214-19	Wire terminal								3		.06
P217-17S	Pump cable assembly	1									6.90
P217-18S	Pump cable assembly		1								6.90
P217-19S	Pump cable assembly			1							6.90
P217-25S	Pump cable assembly								1	2	6.90
P222-12S	Sump and mounting bracket assembly				1						5.18
P222-15S	Sump and mounting bracket assembly						1				6.90
P223-10	Fuse				1	1	1		1		.17

PRICES INCLUDE ALL PRICE ADJUSTMENTS TO DATE



CARTER ELECTRIC PUSHER PUMPS

MODEL P602S

12 Volt—Negative Ground

MODEL P603S

12 Volt—Positive Ground

LIST PRICE (Pump Only)—$36.30

Cable Assemblies—List Price $6.90

PRICES INCLUDE ALL PRICE ADJUSTMENTS TO DATE.

PUMP APPLICATIONS

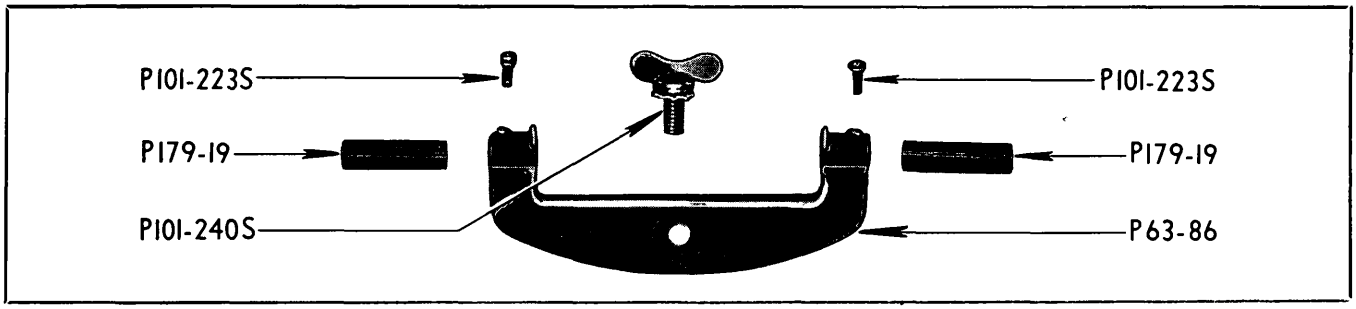
Mfr. & Coach Name	Model No.	Pump No.	Cable No.	Cable Length
ACF-Brill	SPL IC-41, their fuel tanks 647298R.S. and 647299L.S.	P603S	P217-29S	21½"
	SPL IC-41 with rear tank and side aux. tank	P603S	P217-26S P217-27S	17" (side) 23" (rear)
	C-48	P603S	P217-28S	11¾"
	C-44	P603S	P217-18S	16⅝"
	C-36	P603S	P217-20S	12½"
Canadian Car & Fdry.	C-36, C-40	P603S	P217-18S	16⅝"
		P603S	P217-20S	12½"
Transit Buses Inc. Checker Cab Mfg.	Chassis E and E1, 81 and 91	P603S	P217-17S	10⅝"
The Flxible Co.	"B" (21 to 37 pass. inc.) "C" (21 to 25 pass. inc.)	P602S	P217-18S	16⅝"
Ford Motor Co. Metropolitan Coach	8MB-27-29 8M2B-31-33	P603S	P217-17S	10⅝"
General American Aerocoach	P-371, P-374 T-361, 372M	P603S	P217-18S	16⅝"
Kenworth Motor Tk. Corp.		P603S	P217-19S	24⅝"
Mack Mfg. Corp.	C-41, C-45 (Opt. Equipment)	P603S	P217-18S	16⅝"
Reo Motors Inc.	29CA, 32CA, 33CA, 36CA, 37CA, 40CA, 29CB, 32CB, 33CB, 36CB, 37CB, 40CB, 29TA, 32TA, 33TA, 36TA, 37TA, 40TA, 29TB, 32TB, 33TB, 36TB, 37TB, 40TB	P603S	P217-24S	21½"
Southern Coach	All Models (Opt. Equipment)	P603S	P217-30S	15¼"
Sparton Coach Co.	SR12, SR16, SR21 (Opt. Equipment)	P602S	P217-17S	10⅝"
Twin Coach	80 gal. fuel tank	P603S	P217-15S	10"
	125 gal. fuel tank	P603S	P217-16S	18½"
The White Motor Co.	1136, 1140 1144	P603S	P217-17S	10⅝"

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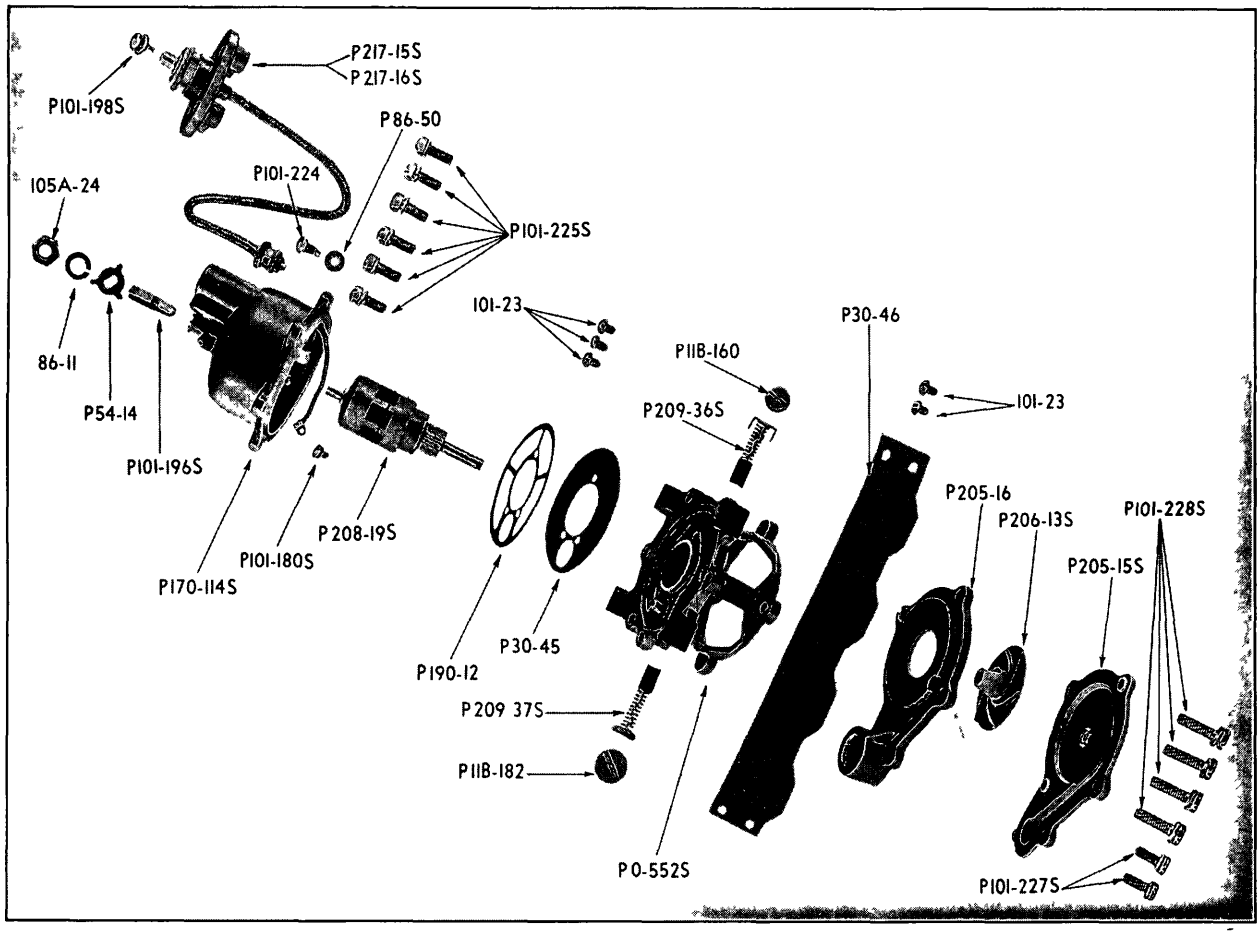
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INSTALLATION PARTS



Part No.	Part Name	List Price
P63-86	Mounting insulator retainer	(2) $0.52
P101-223S	Mounting insulator screw and washer assy	(4) .09
P101-240S	Wing screw assembly	(2) .26
P179-19	Mounting insulator	(4) .17
P180-32	Mounting bracket (Not shown on illustration)	1.04

PRICES INCLUDE ALL PRICE ADJUSTMENTS TO DATE.



P602S-P603S Electric Fuel Pumps—List Price $36.30

WHEN SERVICING, USE REPAIR PACKAGE No. P1371, PRICE $20.88 FOR P602S; No. P-1354A, PRICE $20.88 FOR P603S

PART NAMES IN CAPITAL LETTERS, LISTED BELOW, INDICATE CONTENTS OF REPAIR PACKAGE

Part No.	Part Name	List Price
PO-552S	Pump body, brush insulator and terminal assy	$8.20
P11B-160	Screw plug (grounded brush)	.17
P11B-182	Screw plug (insulated brush)	.17
P30-45	INSIDE STRAINER	.69
P30-46	Outside strainer	.86
P54-14	Adjusting screw lock	.17
86-11	Lock washer	.02
P86-50	Lock washer	.02
101-23	Strainer attaching screw (5)	.03
P101-180S	Lead wire attaching screw and washer assy (2)	.09
P101-196S	THRUST BEARING ADJUSTING SCREW AND BALL ASSY	.69
P101-224	Cable lock screw	.09
P101-225S	Attaching screw and washer assembly (6)	.09
P101-227S	Attaching screw and washer assembly (2)	.17
P101-228S	Attaching screw and washer assembly (4)	.17
105A-24	Hex Nut	.09
P170-114S	Field housing, bearing and coil assembly	16.39
P190-12	Strainer frame	.17
P205-15S	Lower volute and wear plate assembly	1.55
P205-16	Upper volute	1.30
P206-13S	Impeller and ball assembly	.86
P208-19S	ARMATURE AND CAP ASSEMBLY	16.39
P209-38U	BRUSH ASSEMBLY SET [1 P209-36S (No 14 pos) 1 P209-37S (No 27 neg)] (P603S)	3.11
P209-44U	BRUSH ASSEMBLY SET [1 P209-43S (No 27 neg), 1 P209 23S (No 14 pos)] (P602S)	3.11

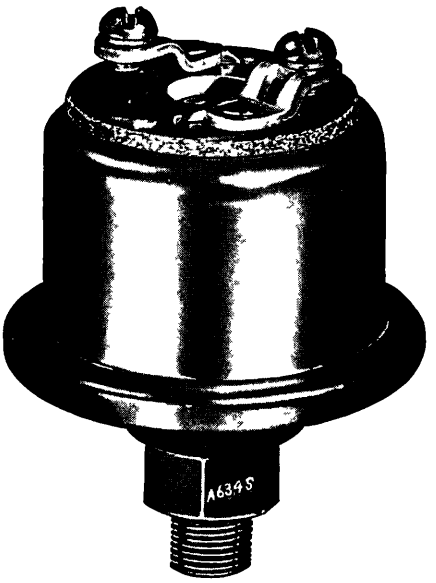
Form 4720D

CARTER CARBURETOR
DIVISION OF acf INDUSTRIES INCORPORATED
ST. LOUIS, MO., U. S. A.

March, 1947
Revised July, 1957

CARTER OIL PRESSURE SWITCH

For use with gasoline engines equipped with electric fuel pumps or with engine hour meters



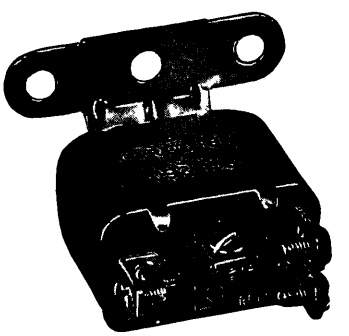
A634S PRESSURE SWITCH

An electrical switch actuated by oil pressure—equipped with silver contact points to insure long life — protected against moisture and corrosive elements.

STOPS PUMP IF ENGINE STOPS OR OIL PRESSURE FAILS

- With engine stopped and ignition on, eliminates flooding and loading of cylinders with resulting mechanical damage and fire hazard.
- Protects engine from burn-out by stopping fuel supply if oil pressure fails.
- No fuel flow or possibility of pump drain on battery if ignition switch is left on with engine not running.

RELAY FOR USE WITH A634S OIL PRESSURE SWITCH
A192-15S, 6-12 VOLT RELAY



This four terminal relay with non-grounded coil winding is to be used in conjunction with oil pressure switch as an electrical by-pass so that electric pump may supply fuel during cranking. It is designed for this purpose in both 6 and 12 volt electrical systems.

INSTALLATION

Pressure Switch—Should be mounted in an existing tapped hole or oil line fitting at an accessible place on the engine to which point direct oil pump pressure is applied. Switch should be installed in upright position to avoid possibility of sludge accumulation eventually making unit inoperative. Do not install in a crank case return line.

Relay—May be installed on engine side of dash panel at any accessible location. **(See following pages for wiring diagrams.)**

SOME OF ITS MANY USES ARE ON AUTOMOBILES, TRUCKS, BUSES, LIGHTING PLANTS, BOATS AND INDUSTRIAL ENGINES.

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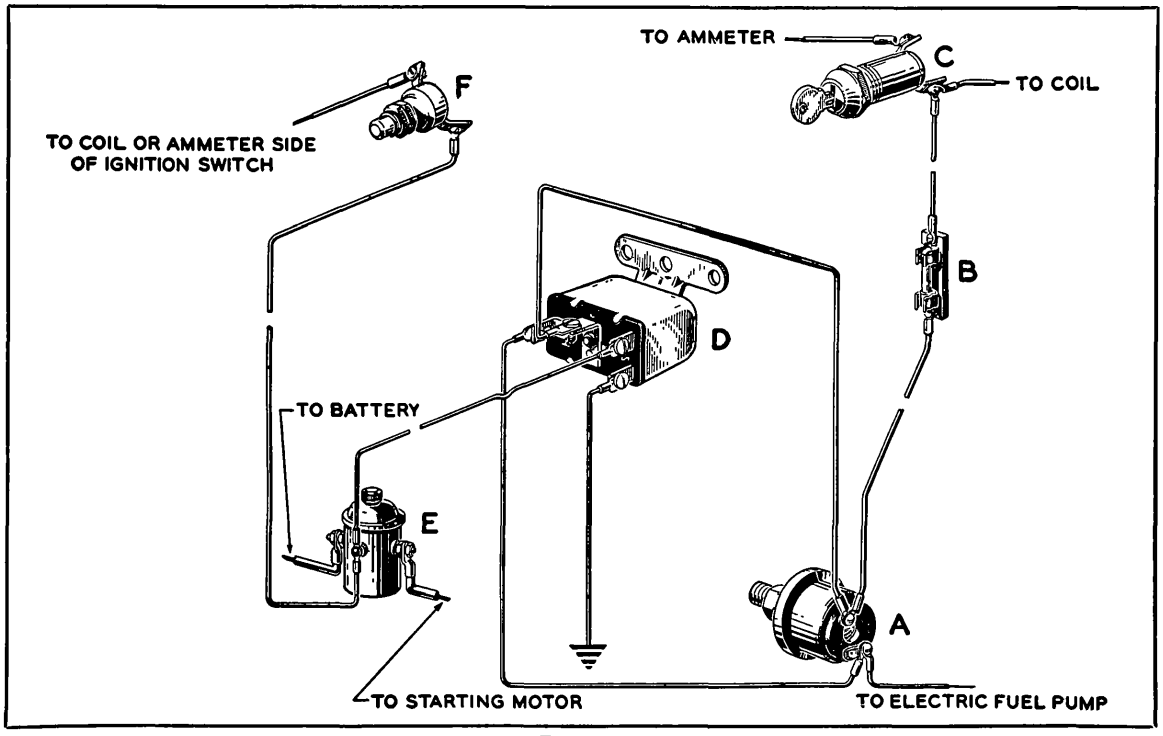
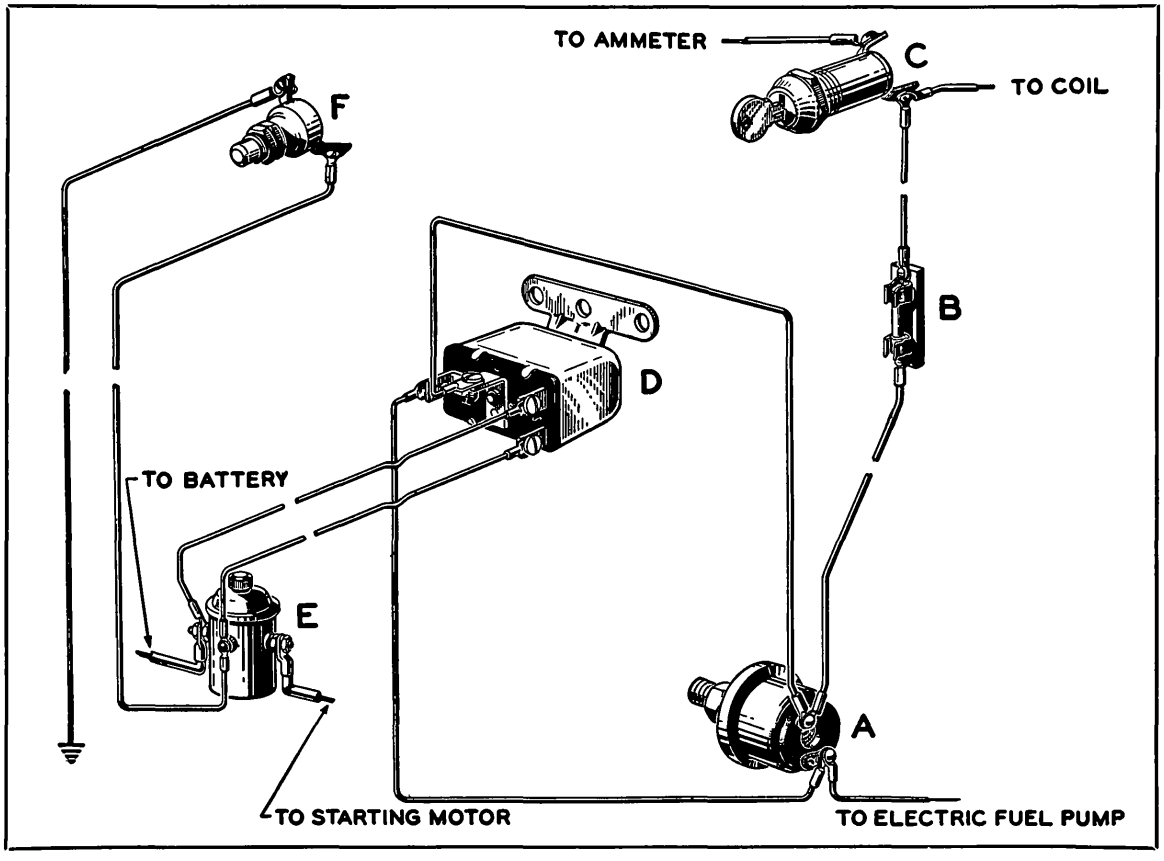


Figure 1

REF.	NAME OF PART	REF.	NAME OF PART
A	Pressure Switch (A634S)	D	Relay (A192-15S)
B	Fuse Block	E	Solenoid (Internally Grounded)
C	Ignition Switch	F	Starter Button

For Circuits with starting solenoid FED by starting push button (F).



Figur 2

REF.	NAME OF PART	REF.	NAME OF PART
A	Pressure Switch (A634S)	D	Relay (A192-15S)
B	Fuse Block	E	Sol noid (Externally Grounded)
C	Ignition Switch	F	Start r Button

For Circuits with starting sol noid GROUNDED by starting push button (F).

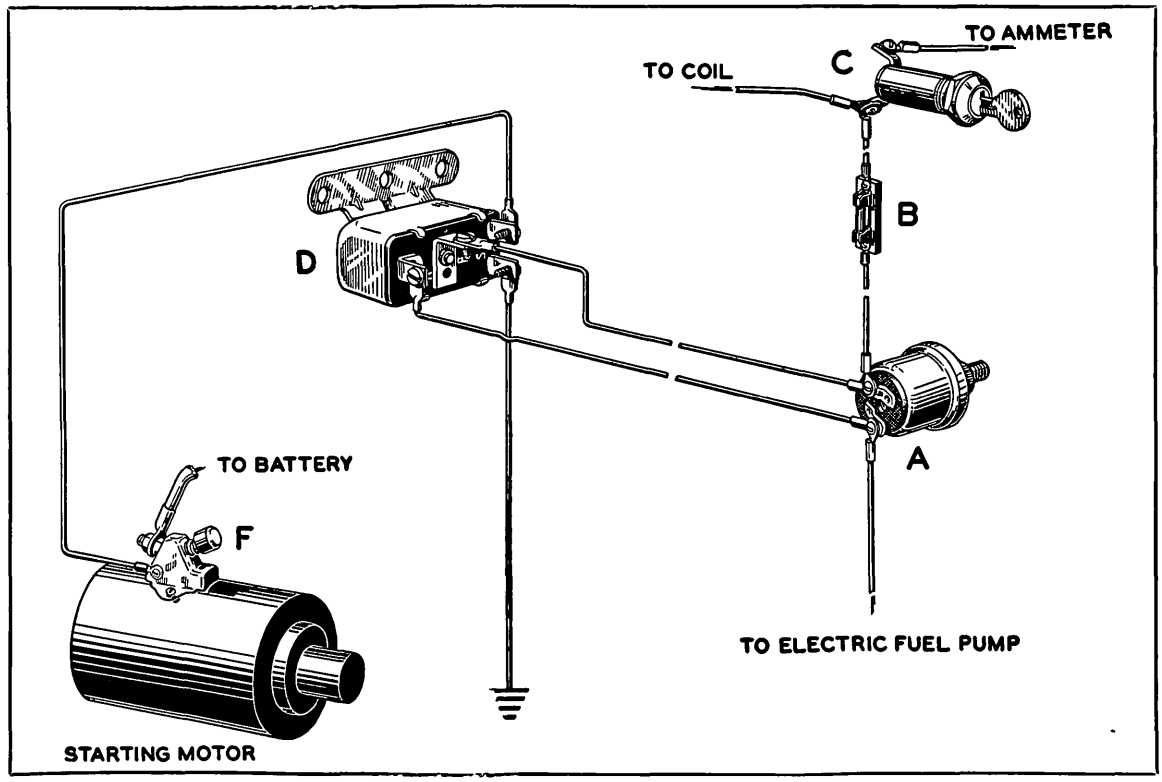


Figure 3

REF.	NAME OF PART	REF.	NAME OF PART
A	Pressure Switch (A634S)	D	Relay (A192-15S)
B	Fuse Block	F	Starter Switch (Manual)
C	Ignition Switch		

For Circuits with indirect foot-operated starting switch with extra terminal.

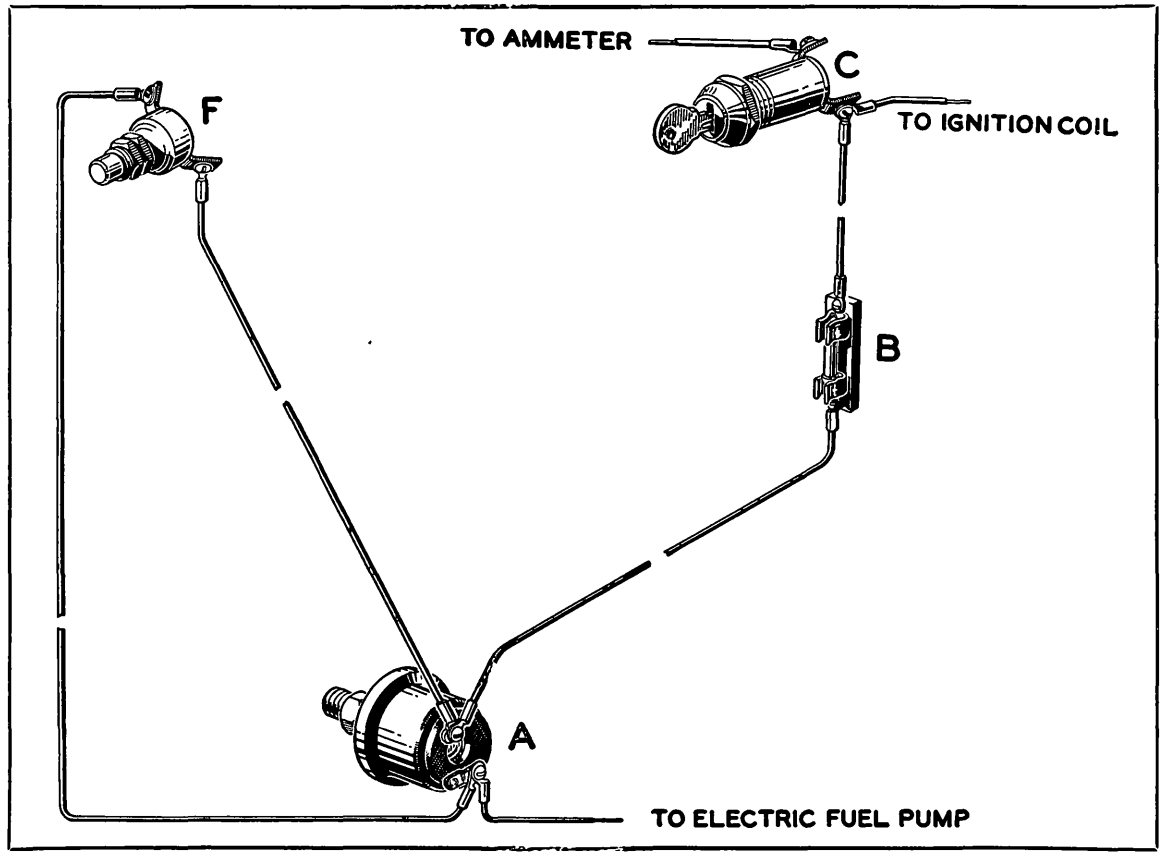


Figure 4

REF.	NAME OF PART	REF.	NAME OF PART
A	Pressure Switch (A634S)	C	Ignition Switch
B	Fuse Block	F	Starter Button (Deck Type)

For Circuits with indirect foot-operated starting switch without extra terminal.

For Circuits with indirect foot operated starting switch ("F" Fig. 3) equipped with extra terminal post for electrically operated choke. Switches with extra terminals are available and interchangeable on some makes of starting motors. Ask your dealer. When switches with extra terminals are not available a push button (F) must be used to supply current to pump when cranking as illustrated in Figure 4.

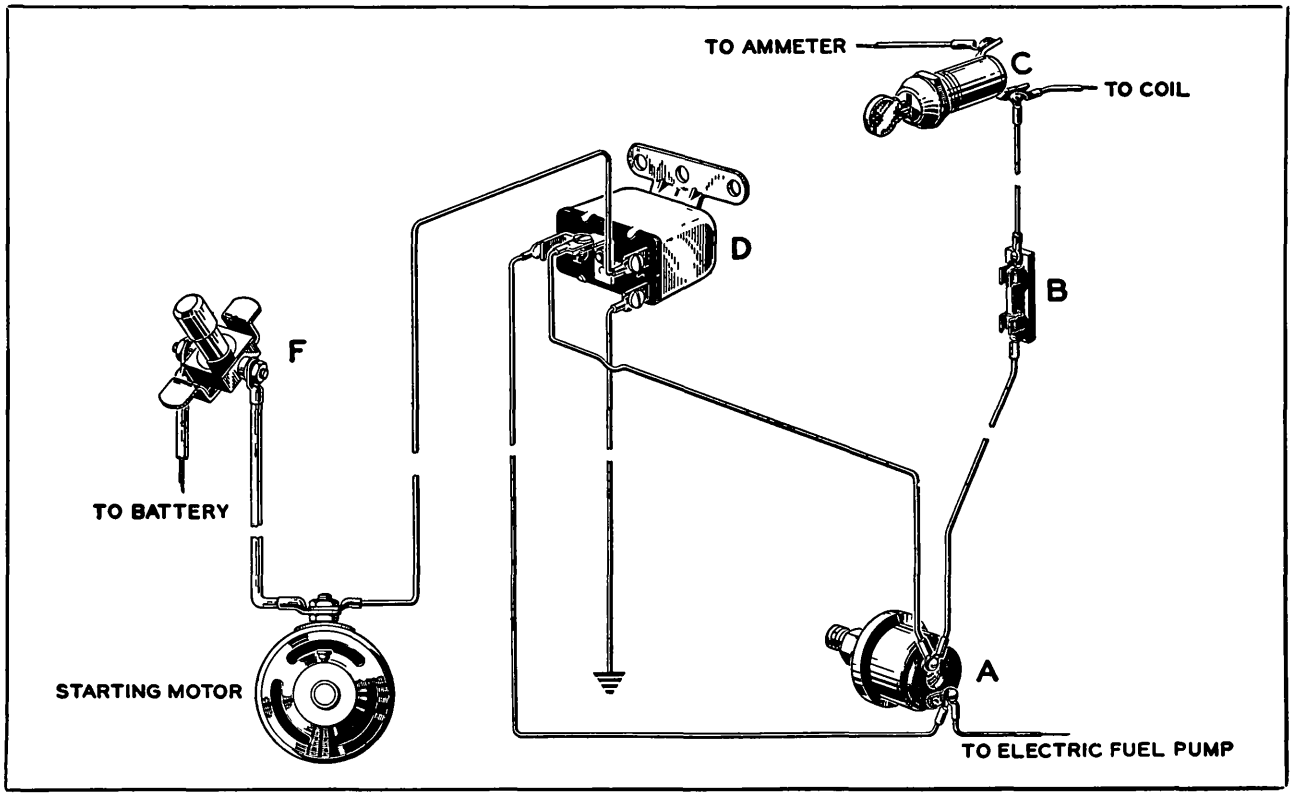


Figure 5

REF.	NAME OF PART
A	Pressure Switch (A634S)
B	Fuse Block
C	Ignition Switch
D	Relay (A192-15S)
F	Starter Switch (Manual)

For Circuits with direct foot operated starting switch (F).